Junos® OS

Layer 2 Port Mirroring Feature Guide

Modified: 2017-12-17

Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, California 94089
USA
408-745-2000
www.juniper.net

Junos® OS Layer 2 Port Mirroring Feature Guide

The information in this document is current as of the date on the title page.

YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. Junos OS has no known time-related limitations through the year 2038. However, the NTP application is known to have some difficulty in the year 2036.

END USER LICENSE AGREEMENT

The Juniper Networks product that is the subject of this technical documentation consists of (or is intended for use with) Juniper Networks software. Use of such software is subject to the terms and conditions of the End User License Agreement ("EULA") posted at http://www.juniper.net/support/eula/. By downloading, installing or using such software, you agree to the terms and conditions of that EULA.

Table of Contents

List of Figures

List of Tables

About the Documentation

Documentation and Release Notes

To obtain the most current version of all Juniper Networks® technical documentation, see the product documentation page on the Juniper Networks website at http://www.juniper.net/techpubs/.

If the information in the latest release notes differs from the information in the documentation, follow the product Release Notes.

Juniper Networks Books publishes books by Juniper Networks engineers and subject matter experts. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration. The current list can be viewed at http://www.juniper.net/books.

Supported Platforms

For the features described in this document, the following platforms are supported:

- MX Series

Using the Examples in This Manual

If you want to use the examples in this manual, you can use the **load merge** or the **load merge relative** command. These commands cause the software to merge the incoming configuration into the current candidate configuration. The example does not become active until you commit the candidate configuration.

If the example configuration contains the top level of the hierarchy (or multiple hierarchies), the example is a *full example*. In this case, use the **load merge** command.

If the example configuration does not start at the top level of the hierarchy, the example is a *snippet*. In this case, use the **load merge relative** command. These procedures are described in the following sections.

Merging a Full Example

To merge a full example, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration example into a text file, save the file with a name, and copy the file to a directory on your routing platform.

   For example, copy the following configuration to a file and name the file **ex-script.conf**. Copy the **ex-script.conf** file to the **/var/tmp** directory on your routing platform.

   ```
   system {
     scripts {
       commit {
         file ex-script.xsl;
       }
     }
   }
   interfaces {
     fxp0 {
       disable;
       unit 0 {
         family inet {
           address 10.0.0.1/24;
         }
       }
     }
   }
   ```

2. Merge the contents of the file into your routing platform configuration by issuing the **load merge** configuration mode command:

   ```
   [edit]
   user@host# load merge /var/tmp/ex-script.conf
   load complete
   ```

Merging a Snippet

To merge a snippet, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration snippet into a text file, save the file with a name, and copy the file to a directory on your routing platform.

   For example, copy the following snippet to a file and name the file **ex-script-snippet.conf**. Copy the **ex-script-snippet.conf** file to the **/var/tmp** directory on your routing platform.

   ```
   commit {
     file ex-script-snippet.xsl; }
   ```

2. Move to the hierarchy level that is relevant for this snippet by issuing the following configuration mode command:

```
[edit]
user@host# edit system scripts
[edit system scripts]
```

3. Merge the contents of the file into your routing platform configuration by issuing the **load merge relative** configuration mode command:

```
[edit system scripts]
user@host# load merge relative /var/tmp/ex-script-snippet.conf
load complete
```

For more information about the **load** command, see CLI Explorer.

Documentation Conventions

Table 1 on page xiii defines notice icons used in this guide.

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

Table 2 on page xiv defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the **configure** command: user@host> **configure**
`Fixed-width text like this`	Represents output that appears on the terminal screen.	`user@host>` **show chassis alarms** `No alarms currently active`
Italic text like this	• Introduces or emphasizes important new terms. • Identifies guide names. • Identifies RFC and Internet draft titles.	• A policy *term* is a named structure that defines match conditions and actions. • *Junos OS CLI User Guide* • RFC 1997, *BGP Communities Attribute*
Italic text like this	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: [edit] root@# **set system domain-name** *domain-name*
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	• To configure a stub area, include the **stub** statement at the **[edit protocols ospf area area-id]** hierarchy level. • The console port is labeled **CONSOLE**.
< > (angle brackets)	Encloses optional keywords or variables.	**stub <default-metric** *metric***>;**
| (pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	**broadcast | multicast** (***string1* | *string2* | *string3***)
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	**rsvp { # Required for dynamic MPLS only**
[ ] (square brackets)	Encloses a variable for which you can substitute one or more values.	**community name members [** ***community-ids*** **]**

Indention and braces ({ })	Identifies a level in the configuration hierarchy.	[edit]
		routing-options {
		static {
		route default {
		nexthop *address*;
		retain;
		}
		}
		}

; (semicolon)	Identifies a leaf statement at a configuration hierarchy level.	

GUI Conventions

Table 2: Text and Syntax Conventions *(continued)*

Convention	Description	Examples
Bold text like this	Represents graphical user interface (GUI) items you click or select.	• In the Logical Interfaces box, select **All Interfaces**. • To cancel the configuration, click **Cancel**.
> (bold right angle bracket)	Separates levels in a hierarchy of menu selections.	In the configuration editor hierarchy, select **Protocols>Ospf**.

Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can provide feedback by using either of the following methods:

- Online feedback rating system—On any page of the Juniper Networks TechLibrary site at http://www.juniper.net/techpubs/index.html, simply click the stars to rate the content, and use the pop-up form to provide us with information about your experience. Alternately, you can use the online feedback form at http://www.juniper.net/techpubs/feedback/.
- E-mail—Send your comments to **techpubs-comments@juniper.net**. Include the document or topic name, URL or page number, and software version (if applicable).

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf.
- Product warranties—For product warranty information, visit http://www.juniper.net/support/warranty/.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: http://www.juniper.net/customers/support/
- Search for known bugs: https://prsearch.juniper.net/
- Find product documentation: http://www.juniper.net/documentation/
- Find solutions and answer questions using our Knowledge Base: http://kb.juniper.net/
- Download the latest versions of software and review release notes: http://www.juniper.net/customers/csc/software/
- Search technical bulletins for relevant hardware and software notifications: http://kb.juniper.net/InfoCenter/
- Join and participate in the Juniper Networks Community Forum: http://www.juniper.net/company/communities/
- Open a case online in the CSC Case Management tool: http://www.juniper.net/cm/

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: https://entitlementsearch.juniper.net/entitlementsearch/

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at http://www.juniper.net/cm/.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see http://www.juniper.net/support/requesting-support.html.

PART 1

Understanding Layer 2 Port Mirroring

CHAPTER 1

Introduction to Layer 2 Port Mirroring

Understanding Layer 2 Port Mirroring

On routing platforms and switches that contain an Internet Processor II ASIC, you can send a copy of any incoming packet from the routing platform or switch to an external host address or a packet analyzer for analysis. This is known as *port mirroring*. In Junos OS Release 9.3 and later, Juniper Networks MX Series 3D Universal Edge Routers in a Layer 2 environment support port mirroring for Layer 2 bridging traffic and virtual private LAN service (VPLS) traffic. In Junos OS Release 9.4 and later, MX Series routers in a Layer 2 environment also support port mirroring for Layer 2 VPN traffic over a circuit cross-connect (CCC) that transparently connects logical interfaces of the same type. In Junos OS Release 12.3R2, Juniper Networks EX Series switches support port mirroring for Layer 2 bridging traffic.

Layer 2 port mirroring enables you to specify the manner in which incoming and outgoing packets at specified ports are monitored and the manner in which copies of selected packets are forwarded to another destination, where the packets can be analyzed. MX Series routers and EX Series switches support Layer 2 port mirroring by performing flow monitoring functions using a class-of-service (CoS) architecture that is in concept similar to, but in particulars different from, other routing platforms and switches.

Like the M120 Multiservice Edge Router and M320 Multiservice Edge Routers, MX Series routers and EX Series switches support port mirroring of IPv4, IPv6, and VPLS packets simultaneously. However, the *Junos OS Layer 2 Switching and Bridging Library* describes port mirroring only for Layer 2 bridging traffic (**family ethernet-switching**), Layer 2 VPLS traffic (**family vpls**) through an MX Series router, and Layer 2 VPN traffic that passes through a CCC (**family ccc**).

For general information about packet flow within MX Series routers and other routers, see the *Class of Service Feature Guide for Routing Devices and EX9200 Switches*.

In a Layer 3 environment, MX Series routers and EX Series switches support port mirroring of IPv4 (**family inet**) and IPv6 (**family inet6**) traffic. For information about Layer 3 port mirroring, see the *Routing Policies, Firewall Filters, and Traffic Policers Feature Guide*.

Related Documentation

- Understanding Layer 2 Port Mirroring Properties on page 4
- Restrictions on Layer 2 Port Mirroring on page 5
- Application of Layer 2 Port Mirroring Types on page 14
- Application of Layer 2 Port Mirroring Types on page 14

Understanding Layer 2 Port Mirroring Properties

Port mirroring specifies the following types of properties:

- Packet-Selection Properties on page 4
- Packet Address Family on page 4
- Mirror Destination Properties on page 5
- Mirror-Once Option on page 5

Packet-Selection Properties

The packet-selection properties of Layer 2 port-mirroring specify how the sampled packets are to be selected for mirroring:

- The number of packets in each sample.
- The number of packets to mirror from each sample.
- The length to which mirrored packets are to be truncated.

Packet Address Family

The packet address family type specifies the type of traffic to be mirrored. In a Layer 2 environment, MX Series routers and EX Series switches support port mirroring for the following packet address families:

- Family type **ethernet-switching**—For mirroring VPLS traffic when the physical interface is configured with encapsulation type **ethernet-bridge**.
- Family type **ccc**—For mirroring Layer 2 VPN traffic.
- Family type **vpls**—For mirroring VPLS traffic.

NOTE: In typical applications, you send mirrored packets directly to an analyzer or a workstation for analysis, not to another router or switch. If you must send mirrored packets over a network, you should use tunnels. For Layer 2 VPN implementations, you can use the Layer 2 VPN routing instance type l2vpn to tunnel the packets to a remote destination.

For information about configuring a routing instance for Layer 2 VPN, see the *Junos OS VPNs Library for Routing Devices*. For a detailed Layer 2 VPN example configuration, see

Junos OS. For information about tunnel interfaces, see the *Junos OS Network Interfaces Library for Routing Devices*.

Mirror Destination Properties

For a given packet address family, the mirror destination properties of a Layer 2 port-mirroring instance specify how the selected packets are to be sent on a particular physical interface:

- The physical interface on which to send the selected packets.
- Whether filter checking is to be disabled for the mirror destination interface. By default, filter checking is enabled on all interfaces.

NOTE: **If you apply a filter to an interface that is also a Layer 2 port-mirroring destination, a commit failure occurs unless you have disabled filter checking for that mirror destination interface.**

Mirror-Once Option

If port mirroring is enabled at both ingress and egress interfaces, you can prevent the MX Series router and an EX Series switch from sending duplicate packets to the same destination (which would complicate the analysis of the mirrored traffic).

NOTE: **The mirror-once port-mirroring option is a global setting. The option is independent of the packet selection properties and the packet family type-specific mirror destination properties.**

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Restrictions on Layer 2 Port Mirroring on page 5
- Application of Layer 2 Port Mirroring Types on page 14

Restrictions on Layer 2 Port Mirroring

The following restrictions apply to Layer 2 port mirroring:

- Only Layer 2 transit data (packets that contain chunks of data transiting the routing platform as they are forwarded from a source to a destination) can be mirrored. Layer 2 local data (packets that contain chunks of data that are destined for or sent by the Routing Engine, such as Layer 2 control packets) can be mirrored by configuring **set chassis host-outbound media-interface**.
- If you apply a port-mirroring filter to the output of a logical interface, only unicast packets are mirrored. To mirror broadcast packets, multicast packets, unicast packets with an unknown destination media access control (MAC) address, or packets with

MAC entry in the destination MAC (DMAC) routing table, apply a filter to the input to the flood table of a bridge domain or virtual private LAN service (VPLS) routing instance.

NOTE: **Starting with Junos OS Release 13.2R1, this is restricted only for DPCs. For MX series routers with MPCs and MICs, both unicast, and multicast packets can be mirrored.**

- Starting with Junos OS Release 13.2R1, the **family** any mirroring is supported in logical systems.
- Starting with Junos OS Release 13.2R1, the **family** any mirroring can be achieved by creating **port-mirroring** instance under the **[edit forwarding-options]** and applying **family** any filter on an interface belonging to logical systems.
- The mirror destination device should be on a dedicated bridge domain and should not participate in any bridging activity: The mirror destination device should not have a bridge to the ultimate traffic destination, and the mirror destination device should not send the mirrored packets back to the source address.
- For either the global port-mirroring instance or a named port-mirroring instance, you can configure only one mirror output interface per port-mirroring instance and packet address family. If you include more than one **interface** statement under the **family (bridge | ccc | vpls) output** statement, the previous **interface** statement is overridden.
- Layer 2 port-mirroring firewall filtering is supported for logical systems.

  In a Layer 2 port-mirroring firewall filter definition, the filter ***action-modifier*** (**port-mirror**) relies on port-mirroring properties defined in the global instance or named instances of Layer 2 port mirroring, which are configured under the **[edit forwarding-options port-mirroring]** hierarchy. Therefore, in Layer 2 port mirroring, the filter ***term*** is supported for logical systems.
- For a Layer 2 port mirroring firewall filter in which you implicitly reference Layer 2 port mirroring properties by including the **port-mirror** statement, if multiple named instances of Layer 2 port mirroring are bound to the underlying physical interface, then only the first binding in the stanza (or the only binding) is used at the logical interface. This is done mainly for backward compatibility.
- Layer 2 port-mirroring firewall filters support the use of next-hop subgroups for load-balancing mirrored traffic.
- If a **family ccc** mirror destination is a Logical Tunnel (**lt-**) interface hosted on a DPC and that **lt-** interface also has a **firewall filter** with action **next-hop-group** applied that redirects packets to MPC interfaces, then port-mirror instances must be created at the [**edit forwarding options port-mirroring instance**] with **family ccc output interface** destination of a **next-hop-group** member interface. One port-mirroring instance will be needed for each member interface in the **next-hop-group**. These port-mirroring instances do not need to be used anywhere in the configuration.

Release History Table

Release	Description
13.2R1	Starting with Junos OS Release 13.2R1, this is restricted only for DPCs.
13.2R1	Starting with Junos OS Release 13.2R1, the **family** any mirroring is supported in logical systems.
13.2R1	Starting with Junos OS Release 13.2R1, the **family** any mirroring can be achieved by creating **port-mirroring** instance under the **[edit forwarding-options]** and applying **family** any filter on an interface belonging to logical systems.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Application of Layer 2 Port Mirroring Types on page 14
- Precedence of Multiple Levels of Layer 2 Port Mirroring on a Physical Interface on page 19
- Understanding Layer 2 Port Mirroring of PE Router Logical Interfaces on page 45
- Understanding Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces on page 47

CHAPTER 2

Understanding Port Mirroring Types

Layer 2 Port Mirroring Global Instance

On an MX Series router and on an EX Series switch, you can configure a set of port-mirroring properties that implicitly apply to packets received on all ports in the router (or switch) chassis. This set of port-mirroring properties is the *global instance* of Layer 2 port mirroring for the router or switch.

Within the global instance configuration, you can specify a set of mirror destination properties for each packet address family supported by Layer 2 port mirroring.

For a general description of Layer 2 port-mirroring properties, see "Understanding Layer 2 Port Mirroring Properties" on page 4. For a comparison of the types of Layer 2 port mirroring available on an MX Series router and on an EX Series switch, see "Application of Layer 2 Port Mirroring Types" on page 14.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Configuring the Global Instance of Layer 2 Port Mirroring on page 20
- Examples: Layer 2 Port Mirroring at Multiple Levels of the Chassis on page 31
- Example: Layer 2 Port Mirroring with Multiple Instances on page 33
- Example: Layer 2 Port Mirroring to Multiple Destinations on page 71

Layer 2 Port Mirroring Named Instances

This topic describes the following information:

- Layer 2 Port Mirroring Named Instances Overview on page 10
- Mirroring at Ports Grouped at the FPC Level on page 10

Layer 2 Port Mirroring Named Instances Overview

On an MX Series router, you can define a set of port-mirroring properties that you can explicitly bind to physical ports on the router. This set of port-mirroring properties is known as a *named instance* of Layer 2 port mirroring.

You can bind a named instance of Layer 2 port mirroring to physical ports associated with MX Series router Packet Forwarding Engine components at different levels of the router chassis:

- At the FPC level—You can bind a named instance to the physical ports associated with a specific Dense Port Concentrator (DPC) or to the physical ports associated with a specific Flexible Port Concentrator (FPC).
- At the PIC level—You can bind a named instance of port mirroring to a specific Packet Forwarding Engine (on a specific DPC) or to a specific PIC.

NOTE: MX Series routers support DPCs as well as FPCs and PICs. Unlike FPCs, DPCs do not support PICs. In the Junos OS CLI, however, you use FPC and PIC syntax to configure or display information about DPCs and the Packet Forwarding Engines on the DPCs.

The following points summarize the behavior of Layer 2 port mirroring based on named instances:

- The scope of packet selection is determined by the target of the binding—At the ports (or port) bound to a named instance of Layer 2 port mirroring, the router selects input packets according to the packet-selection properties in the named instance.
- The destination of a selected packet is determined by the packet address family—Of the packets selected, the router mirrors only the packets belonging to an address family for which the named instance of Layer 2 port mirroring specifies a set of mirror destination properties. In a Layer 2 environment, MX Series routers support port mirroring of VPLS (**family bridge** or **family vpls**) traffic and Layer 2 VPN traffic with **family ccc**.

For a general description of Layer 2 port-mirroring properties, see "Understanding Layer 2 Port Mirroring Properties" on page 4. For a comparison of the types of Layer 2 port mirroring available on an MX Series router, see "Application of Layer 2 Port Mirroring Types" on page 14.

Mirroring at Ports Grouped at the FPC Level

On an MX Series router, you can bind a named instance of Layer 2 port mirroring to a specific DPC or FPC installed in the router chassis. The port-mirroring properties in the instance are applied to all Packet Forwarding Engines (and their associated ports) on the specified DPC or to all PICs (and their associated ports) installed in the specified

FPC. Port-mirroring properties that are bound to a DPC or FPC override any port-mirroring properties bound at the global level or the MX Series router chassis.

Mirroring at Ports Grouped at the PIC Level

On an MX Series router, you can bind a named instance of Layer 2 port mirroring to a specific Packet Forwarding Engine or PIC. The port-mirroring properties in that instance are applied to all ports associated with the specified Packet Forwarding Engine or PIC. Port-mirroring properties that are bound to a Packet Forwarding Engine or PIC override any port-mirroring properties bound at the DPC or FPC that contains them.

NOTE: **For MX960 routers, there is a one-to-one mapping of Packet Forwarding Engines to Ethernet ports. Therefore, on MX960 routers only, you can configure port-specific bindings of port-mirroring instances.**

Mirroring at a Group of Ports Bound to Multiple Named Instances

On an MX Series router, you can apply up to two named instances of Layer 2 port mirroring to the same group of ports within the router chassis. By applying two different port-mirroring instances to the same DPC, FPC, Packet Forwarding Engine, or PIC, you can bind two distinct Layer 2 port mirroring specifications to a single group of ports.

NOTE: **You can configure only one global instance of Layer 2 port mirroring on an MX Series router.**

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Defining a Named Instance of Layer 2 Port Mirroring on page 23
- Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level on page 27
- Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level on page 29
- Examples: Layer 2 Port Mirroring at Multiple Levels of the Chassis on page 31
- Example: Layer 2 Port Mirroring with Multiple Instances on page 33

Layer 2 Port Mirroring Firewall Filters

This topic describes the following information:

- Layer 2 Port Mirroring Firewall Filters Overview on page 12
- Mirroring of Packets Received or Sent on a Logical Interface on page 13
- Mirroring of Packets Forwarded or Flooded to a Bridge Domain on page 13
- Mirroring of Packets Forwarded or Flooded to a VPLS Routing Instance on page 13

Layer 2 Port Mirroring Firewall Filters Overview

On an MX Series router, you can configure a firewall filter *term* to specify that Layer 2 port mirroring is to be applied to all packets at the interface to which the firewall filter is applied.

You can apply a Layer 2 port-mirroring firewall filter to the input or output logical interfaces (including aggregated Ethernet logical interfaces), to traffic forwarded or flooded to a bridge domain, or traffic forwarded or flooded to a VPLS routing instance.

MX Series routers support Layer 2 port mirroring of VPLS (**family bridge** or **family vpls**) traffic and Layer 2 VPN traffic with **family ccc** n a Layer 2 environment.

Within a firewall filter **term**, you can specify the Layer 2 port-mirroring properties under the **then** statement in either of the following ways:

- Implicitly reference the Layer 2 port-mirroring properties in effect on the port.
- Explicitly reference a particular named instance of Layer 2 port mirroring.

NOTE: When configuring a Layer 2 port-mirroring firewall filter, do not include the optional **from** statement that specifies match conditions based on the route source address. Omit this statement so that all packets are considered to match and all *actions* and *action-modifiers* specified in the **then** statement are taken.

If you want to mirror all incoming packets, then you must not use the from statement; one configure filter terms with from if they are interested in mirroring only a subset of packet.

For a general description of Layer 2 port-mirroring properties, see "Understanding Layer 2 Port Mirroring Properties" on page 4. For a comparison of the types of Layer 2 port mirroring available on an MX Series router, see "Application of Layer 2 Port Mirroring Types" on page 14.

NOTE: If you associate integrated routing and bridging (IRB) with the bridge domain (or VPLS routing instance), and also configure within the bridge domain (or VPLS routing instance) a forwarding table filter with the **port-mirror** or **port-mirror-instance** action, then the IRB packet is mirrored as a Layer 2 packet. You can disable this behavior by configuring the *no-irb-layer-2-copy* statement in the bridge-domain (or VPLS routing instance).

For a detailed description of how to configure a Layer 2 port-mirroring firewall filter, see "Defining a Layer 2 Port-Mirroring Firewall Filter" on page 48.

For detailed information about how you can use Layer 2 port-mirroring firewall filters with MX Routers configured as provider edge (PE) routers, see "Understanding Layer 2 Port Mirroring of PE Router Logical Interfaces" on page 45. For detailed information about

configuring firewall filters in general (including in a Layer 3 environment), see the *Routing Policies, Firewall Filters, and Traffic Policers Feature Guide*.

Mirroring of Packets Received or Sent on a Logical Interface

To mirror Layer 2 traffic received or sent on a logical interface, apply a port-mirroring firewall filter to the input or output of the interface.

A port-mirroring firewall filter can also be applied to an aggregated-Ethernet logical interface. For details, see "Understanding Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces" on page 47.

NOTE: **If port-mirroring firewall filters are applied at both the input and output of a logical interface, two copies of each packet are mirrored. To prevent the router from forwarding duplicate packets to the same destination, you can enable the "mirror-once" option for Layer 2 port mirroring in the global instance for the Layer 2 packet address family.**

Mirroring of Packets Forwarded or Flooded to a Bridge Domain

To mirror Layer 2 traffic forwarded to or flooded to a bridge domain, apply a port-mirroring firewall filter to the input to the forwarding table or flood table. Any packet received for the bridge domain forwarding or flood table and that matches the filter conditions is mirrored.

For more information about bridge domains, see *Understanding Layer 2 Bridge Domains* . For information about flooding behavior in a bridge domain, see *Understanding Layer 2 Learning and Forwarding for Bridge Domains* .

NOTE: **When you configure port mirroring on any interface under one bridge domain, the mirrored packet can move to an external analyzer located under different bridge domains.**

Mirroring of Packets Forwarded or Flooded to a VPLS Routing Instance

To mirror Layer 2 traffic forwarded to or flooded to a VPLS routing instance, apply a port-mirroring firewall filter to the input to the forwarding table or flood table. Any packet received for the VPLS routing instance forwarding or flood table and that matches the filter condition is mirrored.

For more information about VPLS routing instances, see *Configuring a VPLS Routing Instance* and *Configuring VLAN Identifiers for Bridge Domains and VPLS Routing Instances*. For information about flooding behavior in VPLS, see the *Junos OS VPNs Library for Routing Devices*.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48

Application of Layer 2 Port Mirroring Types

You can apply different sets of Layer 2 port-mirroring properties to the VPLS packets at different ingress or egress points of an MX Series router.

Table 3 on page 14 describes the three types of Layer 2 port mirroring you can configure on an MX Series router: the global instance, named instances, and firewall filters.

Table 3: Application of Layer 2 Port Mirroring Types

Type of Layer 2 Port Mirroring Definition	Point of Application	Scope of Mirroring	Description	Configuration Details
Global Instance of Layer 2 Port Mirroring	All ports in the MX Series router chassis	VPLS packets received on all ports in the MX Series router chassis	If configured, the global port-mirroring properties implicitly apply to all VPLS packets received on all ports in the router chassis.	See "Configuring the Global Instance of Layer 2 Port Mirroring" on page 20.
Named Instance of Layer 2 Port Mirroring	Ports grouped at the FPC level See "Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level" on page 27.	VPLS packets received on ports associated with a specific DPC or FPC and its Packet Forwarding Engines.	Overrides any port-mirroring properties configured by the global port-mirroring instance.	See "Defining a Named Instance of Layer 2 Port Mirroring" on page 23. **NOTE:** The number of port-mirroring destinations supported for an MX Series router is limited to the number of Packet Forwarding Engines contained on the DPCs installed in the router chassis.
	Ports grouped at the PIC level See "Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level" on page 29.	VPLS packets received on ports associated with a specific Packet Forwarding Engine.	Overrides any port-mirroring properties configured at the FPC level or in the global port-mirroring instance.	

Table 3: Application of Layer 2 Port Mirroring Types *(continued)*

Type of Layer 2 Port Mirroring Definition	Point of Application	Scope of Mirroring	Description	Configuration Details
Layer 2 Port-Mirroring Firewall Filter	Logical interface (including an aggregated Ethernet interface) See "Applying Layer 2 Port Mirroring to a Logical Interface" on page 51.	VPLS packets received or sent on a logical interface.	In the firewall filter configuration, include *action* and *action-modifier* terms to apply to the packets selected for mirroring: 1. The **accept** action is recommended. 2. Specify port mirroring by Including one of the following modifiers: • The **port-mirror** modifier implicitly references the port-mirroring properties currently bound to the underlying physical interfaces. • The **port-mirror-instance** ***pm-instance-name*** modifier explicitly references a named instance of port mirroring. 3. (Optional) For tunnel interface input packets only, to mirror the packets to additional destinations, include the **next-hop-group** ***next-hop-group-name*** modifier. This modifier references a next-hop-group that specifies the next-hop addresses (for sending additional copies of packets to an analyzer).	See "Defining a Layer 2 Port-Mirroring Firewall Filter" on page 48. **NOTE:** Layer 2 port-mirroring firewall filters are not supported for logical systems. For mirroring tunnel interface input packets to multiple destinations, also see "Defining a Next-Hop Group for Layer 2 Port Mirroring" on page 70.
	Bridge domain forwarding table or flood table See "Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain" on page 54.	Layer 2 traffic forwarded or flooded to a bridge domain		
	VPLS routing instance forwarding table or flood table See "Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance" on page 56.	Layer 2 traffic forwarded or flooded to a VPLS routing instance		

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Restrictions on Layer 2 Port Mirroring on page 5
- Precedence of Multiple Levels of Layer 2 Port Mirroring on a Physical Interface on page 19
- Understanding Layer 2 Port Mirroring of PE Router Logical Interfaces on page 45
- Understanding Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces on page 47

PART 2

Configuring Layer 2 Port Mirroring

CHAPTER 3

Configuring Layer 2 Port Mirroring for Physical Interfaces

Precedence of Multiple Levels of Layer 2 Port Mirroring on a Physical Interface

You can bind different sets of Layer 2 port mirroring properties (the global instance and one or more named instances) at various levels of an MX Series router or of an EX Series switch chassis (at the chassis level, at the FPC level, or at the PIC level). Therefore, it is possible for a single group of physical interfaces to be bound to multiple Layer 2 port mirroring definitions.

If a group of ports (or, in the case of a PIC-level binding in an MX960 router, a single port) is bound to multiple Layer 2 port mirroring definitions, the router (or switch) applies the Layer 2 port-mirroring properties to those ports as follows:

1. **Chassis-level port-mirroring properties implicitly apply to all ports in the chassis.** If an MX Series router or an EX Series switch is configured with the global port-mirroring instance, those port mirroring properties apply to all ports. See "Configuring the Global Instance of Layer 2 Port Mirroring" on page 20.
2. **FPC-level port-mirroring properties override chassis-level properties.** If a DPC or FPC is bound to a named instance of port mirroring, those port mirroring properties apply to all ports associated with that DPC or FPC, overriding any port mirroring

properties bound at the chassis level. See "Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level" on page 27.

3. **PIC-level port-mirroring properties override FPC-level properties.** If a Packet Forwarding Engine or PIC is bound to a named instance of port-mirroring, those port mirroring properties apply to all ports associated with the Packet Forwarding Engine or PIC, overriding any port-mirroring properties bound to those ports at the FPC level. See "Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level" on page 29.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Restrictions on Layer 2 Port Mirroring on page 5
- Application of Layer 2 Port Mirroring Types on page 14
- Understanding Layer 2 Port Mirroring of PE Router Logical Interfaces on page 45
- Understanding Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces on page 47

Configuring the Global Instance of Layer 2 Port Mirroring

On an MX Series router, you can configure a set of Layer 2 port-mirroring properties that implicitly apply to packets received on all ports in the router chassis.

To configure the global instance of Layer 2 port mirroring on an MX Series router:

1. Enable configuration of the Layer 2 port mirroring:

```
[edit]
user@host# edit forwarding-options port-mirroring
```

2. Enable configuration of the packet-selection properties:

```
[edit forwarding-options port-mirroring]
user@host# edit input
```

3. Specify global-level packet-selection properties.

   a. Specify the number of packets to select:

      [edit forwarding-options port-mirroring input]
      user@host# **set rate** *number*

      The valid range is **1** through **65535**.

   b. Specify the number of packets to mirror from each selection:

      [edit forwarding-options port-mirroring input]
      user@host# **set run-length** *number*

      The valid range is **0** through **20**. The default value is **0**.

   c. Specify the length to which mirrored packets are to be truncated:

      [edit forwarding-options port-mirroring input]
      user@host# **set maximum-packet-length** *number*

      For MX-Series devices with Modular Port Concentrators (MPCs), port-mirrored or sampled packets can be truncated (or clipped) to any length in the range of 1 to 255 bytes. Only 1 to 255 are valid values for packet truncation on these devices. For other devices, the range is from 0 to 9216. A maximum-packet-length value of zero represents that truncation is disabled, and the entire packet is mirrored or sampled.

4. Specify the global-level Layer 2 address-type family from which traffic is to be selected for mirroring:

   [edit forwarding-options port-mirroring input]
   user@host# **up**
   [edit forwarding-options port-mirroring]
   user@host# **edit family** *family*

   The value of the *family* option can be **bridge**, **ccc**, or **vpls**.

   NOTE: Under the **[edit forwarding-options port-mirroring]** hierarchy level, the protocol family statement **family bridge** is an alias for **family vpls**. The command-line interface (CLI) displays Layer 2 port-mirroring configurations as **family vpls**, even for Layer 2 port-mirroring configured as **family bridge**. Use **family bridge** when the physical interface is configured with **encapsulation ethernet-bridge**.

5. Enable configuration of global-level mirror destination properties for this address family:

   [edit forwarding-options port-mirroring family *family*]
   user@host# **edit output**

6. Specify global-level mirror destination properties for this address family.

   a. Specify the physical interface on which to send the mirrored packets:

      [edit forwarding-options port-mirroring family *family* output]
      user@host# **set interface *interface-name***

      You can also specify an integrated routing and bridging (IRB) interface as the output interface.

   b. (Optional) Allow configuration of filters on the destination interface for the named port-mirroring instance:

      [edit forwarding-options port-mirroring family *family* output]
      user@host# **set no-filter-check**

7. (Optional) Specify that any packets selected for mirroring are to be mirrored only once to any mirroring destination:

   [edit forwarding-options port-mirroring family *family* output]
   user@host# **up 2**
   [edit forwarding-options port-mirroring]
   user@host# **set mirror-once**

   TIP: Enable the **mirror-once** option when an MX Series router is configured to perform Layer 2 port mirroring at both ingress and egress interfaces, which could result in sending duplicate packets to the same destination (which would complicate the analysis of the mirrored traffic).

8. Verify the minimum configuration of the global instance of Layer 2 port mirroring:

```
[edit forwarding-options ... ]
user@host# top
[edit]
user@host# show forwarding-options

forwarding-options {
  port-mirroring {
    input { # Global packet-selection properties.
      maximum-packet-length number; # Default is 0.
      rate number;
      run-length number;
    }
    family (ccc | vpls) { # Address- type 'bridge' displays as 'vpls'.
      output { # Global mirror destination properties.
        interface interface-name;
        no-filter-check; # Optional. Allow filters on interface.
      }
    }
    mirror-once; # Optional. Mirror destinations do not receive duplicate packets.
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Global Instance on page 9
- Examples: Layer 2 Port Mirroring at Multiple Levels of the Chassis on page 31
- Example: Layer 2 Port Mirroring with Multiple Instances on page 33

Defining a Named Instance of Layer 2 Port Mirroring

On an MX Series router, you can define a set of Layer 2 port-mirroring properties that you can bind to a particular Packet Forwarding Engine (at the PIC level of the router chassis) or to group of Packet Forwarding Engines (at the DPC or FPC level of the route chassis).

To define a named instance of Layer 2 port mirroring on an MX Series router:

1. Enable configuration of a named instance of Layer 2 port mirroring :

   [edit]
   user@host# **edit forwarding-options port-mirroring instance** ***pm-instance-name***

2. Enable configuration of the packet-sampling properties:

   [edit forwarding-options port-mirroring instance *pm-instance-name*]
   user@host# **edit input**

3. Specify packet-selection properties:

   a. Specify the number of packets to select:

      [edit forwarding-options port-mirroring instance *pm-instance-name* input]
      user@host# **set rate** *number*

      The valid range is **1** through **65535**.

   b. Specify the number of packets to mirror from each selection:

      [edit forwarding-options port-mirroring instance *pm-named-instance* input]
      user@host# **set run-length** *number*

      The valid range is **0** through **20**. The default value is **0**.

      NOTE: **The run-length statement is not supported on MX80 routers.**

   c. Specify the length to which mirrored packets are to be truncated:

      [edit forwarding-options port-mirroring instance *pm-instance-name* input]
      user@host# **set maximum-packet-length** *number*

      For MX-Series devices with Modular Port Concentrators (MPCs), port-mirrored or sampled packets can be truncated (or clipped) to any length in the range of 1 to 255 bytes. Only 1 to 255 are valid values for packet truncation on these devices. For other devices, the range is from 0 to 9216. A maximum-packet-length value of zero represents that truncation is disabled, and the entire packet is mirrored or sampled.

      NOTE: **The maximum-packet-length statement is not supported on MX80 routers.**

4. Enable configuration of the mirror destination properties for Layer 2 packets that are part of bridging domain, Layer 2 switching cross-connects, or virtual private LAN service (VPLS):

   a. Specify the Layer 2 address family type of traffic to be mirrored:

      [edit forwarding-options port-mirroring instance *pm-instance-name* input]
      user@host# **up**
      [edit forwarding-options port-mirroring instance *pm-instance-name*]
      user@host# **edit family** *family*

      The value of the *family* option can be **bridge**, **ccc**, or **vpls**.

NOTE: Under the **[edit forwarding-options port-mirroring]** hierarchy level, the protocol family statement **family bridge** is an alias for **family vpls**. The command-line interface (CLI) displays Layer 2 port-mirroring configurations as **family vpls**, even for Layer 2 port-mirroring configured as **family bridge**. Use **family bridge** when the physical interface is configured with **encapsulation ethernet-bridge**.

b. Enable configuration of the mirror destination properties:

```
[edit forwarding-options port-mirroring instance pm-instance-name family family]
user@host# edit output
```

5. Specify mirror destination properties.

a. Specify the physical interface on which to send the mirrored packets:

```
[edit forwarding-options port-mirroring instance pm-instance-name family family
  output]
user@host# set interface interface-name
```

b. (Optional) Allow configuration of filters on the destination interface for the global port-mirroring instance:

```
[edit forwarding-options port-mirroring instance pm-instance-name family family
  output]
user@host# set no-filter-check
```

NOTE: You cannot configure port-mirroring instances on MX80 routers. You can only configure port mirroring at the global level on MX80 routers.

6. (Optional) Specify that any packets selected for mirroring are to be mirrored only once to any mirroring destination:

```
[edit forwarding-options port-mirroring instance pm-instance-name family family
  output]
user@host# up 3
[edit forwarding-options port-mirroring]
user@host# set mirror-once
```

TIP: Enable the global **mirror-once** option when an MX Series router is configured to perform Layer 2 port mirroring at both ingress and egress interfaces, which could result in sending duplicate packets to the same destination (which in turn would complicate the analysis of the mirrored traffic).

7. To configure a mirroring destination for a different packet family type, repeat steps 4 through 6.

8. Verify the minimum configuration of the named instances of Layer 2 port mirroring:

```
[edit forwarding-options ... ]
user@host# top
[edit]
user@host# show forwarding-options

forwarding-options {
  port-mirroring {
    ... optional-global-port-mirroring-configuration ...
    instance {
      pm-instance-name ( # A named instance of port mirroring
        input { # Packet-selection properties
          maximum-packet-length number; # Default is 0.
          rate number;
          run-length number;
        }
        family (ccc | vpls) { # Address- type 'bridge' displays as 'vpls'.
          output { # Mirror destination properties
            interface interface-name;
            no-filter-check; # Optional. Allow filters on interface.
          }
        }
      }
    }
    mirror-once; # Optional. Mirror destinations do not receive duplicate packets.
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Named Instances on page 9
- Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level on page 27
- Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level on page 29
- Examples: Layer 2 Port Mirroring at Multiple Levels of the Chassis on page 31
- Example: Layer 2 Port Mirroring with Multiple Instances on page 33

Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level

On an MX Series router and on an EX Series switch, you can bind a named instance of Layer 2 port mirroring to a specific DPC or to a specific FPC in the router (or switch) chassis. This is known as binding a named instance of Layer 2 port mirroring *at the FPC level* of the router (or switch) chassis. The port mirroring properties specified in the named instance are applied to all physical ports associated with all Packet Forwarding Engines on the specified DPC or FPC.

NOTE: You can also bind a named instance of Layer 2 port mirroring to a specific Packet Forwarding Engine on a DPC or FPC in the router (or switch) chassis.

For any packet-type family supported by Layer 2 port mirroring

- Port-mirroring properties bound to a specific DPC or FPC override any port-mirroring properties configured at the global level.
- Port-mirroring properties bound to a specific Packet Forwarding Engine override any port-mirroring properties configured at the DPC or FPC level.

You can apply up to two named instances of Layer 2 port mirroring to the same group of ports within the router (or switch) chassis. By applying two different port-mirroring instances to the same DPC or FPC, you can bind two distinct Layer 2 port-mirroring specifications to a single group of ports.

Before you begin, complete the following tasks:

- Define a named instance of Layer 2 port mirroring. See "Defining a Named Instance of Layer 2 Port Mirroring" on page 23.
- Display information about the number and types of DPCs or FPCs in the MX Series router and in the EX Series switch, the number of Packet Forwarding Engines on each, and the number and types of ports per Packet Forwarding Engine.

To bind a named instance of Layer 2 port mirroring to a DPC or FPC and its Packet Forwarding Engines:

1. Enable configuration of the router (or switch) chassis properties:

   [edit]
   user@host# **edit chassis**

2. Enable configuration of a DPC (and its corresponding Packet Forwarding Engines) or an FPC (and its installed PICs):

   [edit chassis]
   user@host# **edit fpc *slot-number***

3. Bind a named instance of Layer 2 port mirroring (***pm-instance-name***) to the DPC or FPC:

   [edit chassis fpc *slot-number*]
   user@host# **set port-mirror-instance** ***pm-instance-name***

4. (Optional) To bind a second named instance of Layer 2 port mirroring to the same DPC or FPC, repeat step 3 and specify a different named instance of Layer 2 port mirroring.

5. Verify the minimum configuration of the binding:

```
[edit chassis fpc slot-number port-mirror-instance pm-instance-name]
user@host# top
[edit]
user@host# show chassis

chassis {
  fpc slot-number { # Bind two port mirroring named instances at the FPC level.
    port-mirror-instance pm-instance-name-1;
    port-mirror-instance pm-instance-name-2;
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Named Instances on page 9
- Defining a Named Instance of Layer 2 Port Mirroring on page 23
- Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level on page 29
- Examples: Layer 2 Port Mirroring at Multiple Levels of the Chassis on page 31
- Example: Layer 2 Port Mirroring with Multiple Instances on page 33

Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level

On an MX Series router and on an EX Series switch, you can bind a named instance of Layer 2 port mirroring to the ports associated with a specific Packet Forwarding Engine (on a DPC) or to the ports associated with a specific PIC (installed in an FPC). This is known as binding a named instance of Layer 2 port mirroring *at the PIC level* of the router (or switch) chassis. The port-mirroring properties specified in the named instance are applied to all physical ports associated with the specified Packet Forwarding Engine.

NOTE: You can also bind a named instance of Layer 2 port mirroring to a specific DPC or FPC in the router (or switch) chassis.

For any packet-type family supported by Layer 2 port mirroring:

- Port-mirroring properties bound to a specific Packet Forwarding Engine override any port-mirroring properties configured at the DPC or FPC level.
- Port-mirroring properties bound to a specific DPC or FPC override any port-mirroring properties configured at the global level.

You can apply up to two named instances of Layer 2 port-mirroring to the same group of ports within the router (or switch) chassis. By applying two different port-mirroring instances to the same Packet Forwarding Engine or PIC, you can bind two distinct Layer 2 port mirroring specifications to a single group of ports.

For MX960 routers, there is a one-to-one mapping of Packet Forwarding Engines to Ethernet ports. Therefore, on MX960 routers only, you can bind a named instance of Layer 2 port mirroring to a *specific port* by binding the instance to the Packet Forwarding Engine associated with the port.

Before you begin, complete the following tasks:

- Define a named instance of Layer 2 port mirroring. See "Defining a Named Instance of Layer 2 Port Mirroring" on page 23.
- Display information about the number and types of DPCs in the MX Series router or in the EX Series switch, the number of Packet Forwarding Engines on each DPC, and the number and types of ports per Packet Forwarding Engine.

To bind a named instance of Layer 2 port mirroring to a Packet Forwarding Engine:

1. Enable configuration of the router (or switch) chassis properties:

   [edit]
   user@host# **edit chassis**

2. Enable configuration of a Packet Forwarding Engine or PIC:

   [edit chassis]
   user@host# **edit fpc** ***slot-number***

```
user@host# edit pic slot-number
```

3. Bind a named instance of Layer 2 port mirroring (***pm-instance-name***) to the Packet Forwarding Engine or PIC:

```
[edit chassis fpc slot-number pic slot-number]
user@host# set port-mirror-instance pm-instance-name
```

4. (Optional) To bind a second named instance of Layer 2 port mirroring to the same Packet Forwarding Engine or PIC, repeat step 3 and specify a different named instance of Layer 2 port mirroring.

5. Verify the minimum configuration of the binding:

```
[edit forwarding-options ... ]
user@host# top
[edit]
user@host# show chassis
chassis {
  fpc slot-number {
    ... optional-binding-of-a-port-mirroring-instance-at-the-dpc-level ...
    pic slot-number { # Bind two port-mirroring named instances at the PIC level.
      port-mirror-instance pm-instance-name-1;
      port-mirror-instance pm-instance-name-2;
    }
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Named Instances on page 9
- Defining a Named Instance of Layer 2 Port Mirroring on page 23
- Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level on page 27
- Examples: Layer 2 Port Mirroring at Multiple Levels of the Chassis on page 31
- Example: Layer 2 Port Mirroring with Multiple Instances on page 33

Disabling Layer 2 Port Mirroring Instances

You can disable the global instance of Layer 2 port mirroring, a particular named instance, or all instances of port mirroring:

- To disable the global instance of Layer 2 port mirroring, include the **disable** statement at the **[edit *forwarding-options port-mirroring*]** hierarchy level:

```
[edit]
forwarding-options {
  port-mirroring {
    disable; Disables the global instance of Layer 2 port mirroring.
    ...global-instance-of-layer-2-port-mirroring-configuration...
```

```
    }
  }
```

- To disable the definition of a particular named instance of Layer 2 port mirroring, include the **disable** statement at the **[edit *forwarding-options port-mirroring* instance *instance-name*]** hierarchy level:

```
[edit]
forwarding-options {
  port-mirroring {
    ...optional-configuration-of-the-global-instance-of-layer-2-port-mirroring...
    instance {
      port-mirroring-instance-name {
        disable; Disables this named instance of Layer 2 port mirroring.
        ...definition-of-a-named-instance-of-layer-2-port-mirroring...
      }
    }
  }
}
```

- To disable the global instance and all named instances of Layer 2 port mirroring, include the **disable-all-instances** statement at the **[edit *forwarding-options port-mirroring*]** hierarchy level:

```
[edit]
forwarding-options {
  port-mirroring {
    disable-all-instances; Disables all instances of Layer 2 port mirroring.
    ...optional-configuration-of-the-global-instance-of-layer-2-port-mirroring...
    instance {
      port-mirroring-instance-name {
        ...definition-of-a-named-instance-of-layer-2-port-mirroring...
      }
    }
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Global Instance on page 9
- Layer 2 Port Mirroring Named Instances on page 9
- *Displaying Layer 2 Port-Mirroring Instance Settings and Status*

Examples: Layer 2 Port Mirroring at Multiple Levels of the Chassis

On an MX Series router or on an EX Series switch, you can apply named instances of Layer 2 port mirroring at the FPC or DPC level of the chassis or at the PIC level of the

chassis. However, you can configure (and implicitly apply) only one global instance of Layer 2 port mirroring to the entire chassis.

- Layer 2 Port Mirroring at the FPC Level on page 32
- Layer 2 Port Mirroring at the PIC Level on page 32
- Layer 2 Port Mirroring at the FPC and PIC Levels on page 32

Layer 2 Port Mirroring at the FPC Level

In this example configuration of an MX Series router or of an EX Series switch chassis, a named instance of Layer 2 port mirroring (**pm1**) is bound to physical ports grouped at the FPC level:

```
[edit]
chassis {
  fpc 2 {
    port-mirror-instance pm1;
  }
}
```

This is not a complete configuration. The physical interfaces associated with the FPC or DPC in slot 2 must be configured at the **[edit interfaces]** hierarchy level. The Layer 2 port mirroring named instance **pm1** must be configured at the **[edit forwarding-options port-mirroring instance]** hierarchy level.

Layer 2 Port Mirroring at the PIC Level

In this example configuration of an MX Series router or of an EX Series switch chassis, a named instance of Layer 2 port mirroring (**pm2**) is bound to the physical ports grouped at the PIC level:

```
[edit]
chassis {
  fpc 2 {
    pic 0 {
      port-mirror-instance pm2;
    }
  }
}
```

This is not a complete configuration. The physical interfaces associated with the FPC or DPC in slot 2 must be configured at the **[edit interfaces]** hierarchy level. The Layer 2 port mirroring named instance **pm2** must be configured at the **[edit forwarding-options port-mirroring instance]** hierarchy level.

Layer 2 Port Mirroring at the FPC and PIC Levels

In this example configuration of an MX Series router chassis or an EX Series switch, one named instance of Layer 2 port mirroring (**pm1**) is applied at the FPC level of the router (or switch) chassis. A second named instance (**pm2**) is applied at the PIC level:

```
[edit]
chassis {
  fpc 2 {
    port-mirror-instance pm1;
```

```
        pic 0 {
            port-mirror-instance pm2;
        }
    }
}
```

This is not a complete configuration. Physical interfaces associated with the FPC or DPC in slot 2, including physical interfaces associated with **pic 0**, must be configured at the **[edit interfaces]** hierarchy level. The Layer 2 port mirroring named instances **pm1** and **pm2** must be configured at the **[edit forwarding-options port-mirroring instance]** hierarchy level.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Global Instance on page 9
- Layer 2 Port Mirroring Named Instances on page 9
- Configuring the Global Instance of Layer 2 Port Mirroring on page 20
- Defining a Named Instance of Layer 2 Port Mirroring on page 23

Example: Layer 2 Port Mirroring with Multiple Instances

Because you can configure more than one port-mirroring instance, care is required when specifying which instance is meant. This topic contains the following information:

- Example: Configuring Multiple Instances of Layer 2 Port Mirroring on page 34
- Explicit Reference of a Port Mirroring Instance on page 36
- Implicit Reference of Port Mirroring on the Underlying Physical Interface on page 36

Example: Configuring Multiple Instances of Layer 2 Port Mirroring

This configuration example illustrates the configuration of Layer 2 port mirroring at the physical interfaces associated with FPC 2, PIC 0 and at two logical interfaces on one of those ports.

At the physical interface levels of the router chassis, two named instances of port mirroring are configured and then bound to the group of physical ports associated with FPC 2, PIC 0.

At two of the logical interfaces on physical interface **ge-2/0/1**, two Layer 2 port-mirroring firewall filters are applied to the input traffic. One filter *explicitly* references the port-mirroring properties specified in one of the named instances of port mirroring. The other filter *implicitly* references the port mirroring properties in effect on the underlying physical interface **ge-2/0/1**.

The resulting configuration is an example of the relationships that can exist between multiple instances of Layer 2 port mirroring applied to an MX Series router.

1. Configure two named instances of Layer 2 port mirroring (**pm_instance_1** and **pm_instance_2**), and include mirror destination properties for bridge domain traffic (**family bridge**):

```
[edit]
forwarding-options {
  port-mirroring {
    instance {
      pm_instance_1 {
        input {
          ... packet-selection-properties-configuration ...
        }
        family bridge {
          ... mirror-destination-properties-configuration ...
        }
      }
      pm_instance_2 {
        input {
          ... packet-selection-properties-configuration ...
        }
        family bridge {
          ... mirror-destination-properties-configuration ...
        }
      }
    }
  }
}
```

NOTE: In this example, no global port-mirroring properties are configured on the router.

2. Apply the Layer 2 port-mirroring instances to the same group of ports in the router chassis. In this example, the named instances of Layer 2 port mirroring are applied to the same group of physical interfaces specified at the PIC level of the chassis:

```
[edit]
chassis {
  fpc 2 {
    pic 0 {
      port-mirror-instance pm_instance_1;
      port-mirror-instance pm_instance_2;
    }
  }
}
```

   Note that, in this example, two named instances of Layer 2 port mirroring are bound to the PIC level of the chassis at the same group of ports.

3. Configure two Layer 2 port-mirroring firewall filters, both for bridge-domain traffic and with one of the filters explicitly referencing one of the named instances of Layer 2 port mirroring:

   - Configure the filter **pm_filter_1** to use the Layer 2 port-mirroring properties configured in the named port-mirroring instance **pm_instance_1**. To refer to the Layer 2 port-mirroring properties configured in a particular named instance of port mirroring, use the **port-mirror-instance** ***port-mirroring-instance-name*** statement.
   - Configure the filter **pm_filter_2** to use the Layer 2 port-mirroring properties in effect on the underlying physical interface of the logical interface to which the filter is applied. To refer to the Layer 2 port-mirroring properties in effect on the underlying physical interface, use the **port-mirror** statement. If two instances of port mirroring are bound to that port, then the firewall filter uses the first instance bound within the **[edit chassis fpc** ***slot-number*****]** or **[edit chassis fpc** ***slot-number*** **pic** ***slot-number*****]** hierarchy level.

```
[edit]
firewall {
  family bridge {
    filter pm_filter_1 {
      term pm {
        then port-mirror-instance pm_instance_1;
      }
    }
    filter pm_filter_2 {
      term pm {
        then port-mirror;
      }
    }
  }
}
```

NOTE: Because the **port-mirror** filter action modifier relies on the port-mirroring properties defined at the **[edit forwarding-options port-mirroring]** hierarchy level, the **port-mirror** filter action is not supported for logical systems.

4. Apply the two Layer 2 port-mirroring firewall filters to logical interfaces on interface **ge-2/0/1**:

```
[edit]
interfaces {
  ge-2/0/1 {
    flexible-vlan-tagging;
    encapsulation ethernet-bridge;
    unit 0 {
      vlan-id 201;
      family bridge {
        filter { # Explicitly references a named instance of port mirroring.
          input pm_filter_1;
        }
      }
    }
    unit 1 {
      vlan-id 202;
      family bridge {
        filter { # Implicitly references the underlying port mirroring.
          input pm_filter_2;
        }
      }
    }
  }
}
```

Explicit Reference of a Port Mirroring Instance

On logical interface **ge-2/0/1.0**, the **port-mirror-instance** statement explicitly references the Layer 2 port-mirroring properties in the named instance **pm_instance_1**. In this example, the port-mirroring properties specified in **pm_instance_1** remain in effect at logical interface **ge-2/0/1.0** under the following conditions:

- The firewall filter **pm_filter_1** remains configured (as shown in step 3).
- The named instance **pm_instance_1** remains configured (as shown in step 1).

Even if the named instance **pm_instance_1** is no longer configured or no longer bound to the router chassis at FPC 2, PIC 0, the port-mirroring properties specified in **pm_instance_1** remain in effect at logical interface **fe-2/0/1.0** through firewall filter **pm_filter_1**.

Implicit Reference of Port Mirroring on the Underlying Physical Interface

On logical interface **ge-2/0/1.1**, the **port-mirror** statement implicitly references the Layer 2 port-mirroring properties in effect at the underlying physical interface **ge-2/0/1**. In this example, the port-mirroring properties specified in **pm_instance_2** remain in effect at the ports associated with FPC 2, PIC 0 under the following conditions:

- The firewall filter **pm_filter_2** remains configured (as shown in step 3).
- The named instance **pm_instance_2** remains configured (as shown in step 1).
- The named instance **pm_instance_2** remains bound to the router chassis at FPC 2, PIC 0 (as shown in step 2).

If you disable the named instance **pm_instance_2** or delete its binding to the physical ports associated with FPC 2, PIC 0, then—if global Layer 2 port-mirroring properties had been configured—the global port-mirroring properties would be used at logical interface **ge-2/0/1.1** through firewall filter **pm_filter_2**.

NOTE: There is a limitation to a Layer 2 port mirroring firewall filter in which you implicitly reference Layer 2 port-mirroring properties by including the **port-mirror** statement. If multiple named instances of Layer 2 port mirroring are bound to the underlying physical interface, then only the first binding in the stanza (or the only binding) is used at the logical interface. This is done mainly for backward compatibility.

In the example above, filter **pmff_bd_filter_2** uses the **port-mirror** statement, and so the filter action uses the mirroring properties of the first port-mirroring instance applied to the router chassis at the **[edit chassis fpc 2 pic 0]** hierarchy level, which is the instance **pm_instance_1**.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Named Instances on page 9
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Named Instance of Layer 2 Port Mirroring on page 23
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48

Configuring Layer 2 Port Mirroring Over GRE Interface

Port mirroring is the ability of a router to send a copy of a packet to an external host address or a packet analyzer for analysis. One application for port mirroring sends a duplicate packet to a virtual tunnel. A next-hop group can then be configured to forward copies of this duplicate packet to several interfaces. Junos OS supports Layer 2 port mirroring to a remote collector over a GRE interface.

To configure layer 2 port-mirroring over GRE interface, do the following:

1. Configure GRE interface with the source and destination address.

   [edit interfaces *inteface-name* unit *unit-number* tunnel]
   set source *ip-address*
   set destination *ip-address*

2. Configure family bridge parameters on the GRE interface

   [edit interfaces *interface-name* unit *unit-number* family bridge]
   set interface-mode trunk
   set vlan-id *valn-id*

3. Configure the rate at which the input packets are port mirrored.

```
[edit forwarding-options port-mirroring]
set f input rate rate
```

4. Configure the output interface for family vpls for the GRE interface.

```
[edit forwarding-options family vpls]
set output interface gre-interface-name
```

5. Configure firewall filter term for family bridge to count packets arriving at the interface.

```
[edit firewall family bridge]
set filter f1 term term then count count
```

6. Configure firewall filter term for family bridge to port mirror the packets.

```
[edit firewall family bridge]
set filter filter-name term term then port-mirror
```

Related Documentation

- Example: Configuring Layer 2 Port Mirroring Over a GRE Interface on page 38
- *Tunnel Services Overview*

Example: Configuring Layer 2 Port Mirroring Over a GRE Interface

This example shows how to configure Layer 2 port mirroring over a GRE interface for analysis.

Requirements

This example uses the following hardware and software components:

- One MX Series router
- Junos OS Release 16.1 or later running on all devices

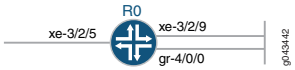
Overview

Port mirroring is the ability of a router to send a copy of a packet to an external host address or a packet analyzer for analysis. One application for port mirroring sends a duplicate packet to a virtual tunnel. A next-hop group can then be configured to forward copies of this duplicate packet to several interfaces. Starting with Junos OS Release 16.1, Layer 2 port mirroring to a remote collector over a GRE interface is supported.

Topology

Figure 1 on page 39 shows port mirroring configured over a GRE interface. The interface gr-4/0/0 is configured as family bridge. Firewall family bridge filter f1 is configured as port-mirror. Mirror destination is configured as gr-4/0/0. Firewall family bridge filter f1 is applied at the ingress and egress of the xe-3/2/5.0 interface, which mirrors packets to mirror destination gr-4/0/0.

Figure 1: Example Layer 2 Port Mirroring over GRE Interface



Configuration

CLI Quick Configuration

To quickly configure this example, copy the following commands, paste them into a text file, remove any line breaks, change any details necessary to match your network configuration, copy and paste the commands into the CLI at the **[edit]** hierarchy level, and then enter **commit** from configuration mode.

R0

```
set chassis fpc4 pic0 tunnel-services bandwidth 10g
set chassis network-services enhanced-ip
set interfaces ge-1/0/3 unit 0 family inet address 10.1.1.1/24 arp 10.1.1.2 mac
  00:11:22:33:44:55
set interfaces xe-3/2/5 flexible-vlan-tagging
set interfaces xe-3/2/5 encapsulation flexible-ethernet-services
set interfaces xe-3/2/5 unit 0 encapsulation vlan-bridge
set interfaces xe-3/2/5 unit 0 vlan-id 100
set interfaces xe-3/2/5 unit 0 family bridge filter input f1
set interfaces xe-3/2/5 unit 0 family bridge filter output f1
set interfaces xe-3/2/9 flexible-vlan-tagging
set interfaces xe-3/2/9 encapsulation flexible-ethernet-services
set interfaces xe-3/2/9 unit 0 encapsulation vlan-bridge
set interfaces xe-3/2/9 unit 0 vlan-id 100
set interfaces gr-4/0/0 unit 0 tunnel source 10.1.1.1
set interfaces gr-4/0/0 unit 0 tunnel destination 10.1.1.2
set interfaces gr-4/0/0 unit 0 family bridge interface-mode trunk
set interfaces gr-4/0/0 unit 0 family bridge vlan-id 100
set forwarding-options port-mirroring input rate 1
set forwarding-options family vpls output interface gr-4/0/0.0
set firewall family bridge filter f1 term t then count c
set firewall family bridge filter f1 term t then port-mirror
set bridge-domains b vlan-id 100
set bridge-domains b interface xe-3/2/5.0
set bridge-domains b interface xe-3/2/9.0
```

Configuring R0

Step-by-Step Procedure

The following example requires that you navigate various levels in the configuration hierarchy. For information about navigating the CLI, see "Using the CLI Editor in Configuration Mode" in the *CLI User Guide*.

To configure Device R0:

1. Configure flexible PIC concentrator parameters of the chassis.

```
[edit chassis]
user@R0# set fpc4 pic0 tunnel-services bandwidth 10g
user@R0# set network-services enhanced-ip
```

2. Configure enhanced-ip network services of the chassis.

```
[edit chassis]
user@R0# set network-services enhanced-ip
```

3. Configure the interfaces.

```
[edit interfaces]
user@R0# set ge-1/0/3 unit 0 family inet address 10.1.1.1/24 arp 10.1.1.2 mac
   00:11:22:33:44:55

user@R0# set xe-3/2/5 flexible-vlan-tagging
user@R0# set xe-3/2/5 encapsulation flexible-ethernet-services
user@R0# set xe-3/2/5 unit 0 encapsulation vlan-bridge
user@R0# set xe-3/2/5 unit 0 vlan-id 100
user@R0# set xe-3/2/5 unit 0 family bridge filter input f1
user@R0# set xe-3/2/5 unit 0 family bridge filter output f1

user@R0# set xe-3/2/9 flexible-vlan-tagging
user@R0# set xe-3/2/9 encapsulation flexible-ethernet-services
user@R0# set xe-3/2/9 unit 0 encapsulation vlan-bridge
user@R0# set xe-3/2/9 unit 0 vlan-id 100

user@R0# set gr-4/0/0 unit 0 tunnel source 10.1.1.1
user@R0# set gr-4/0/0 unit 0 tunnel destination 10.1.1.2
user@R0# set gr-4/0/0 unit 0 family bridge interface-mode trunk
user@R0# set gr-4/0/0 unit 0 family bridge vlan-id 100
```

4. Configure the rate of input packets to be sampled for port mirroring of traffic.

```
[edit forwarding-options]
user@R0# set port-mirroring input rate 1
```

5. Configure the output interface for the VPLS address family of packets to mirror.

```
[edit forwarding-options]
user@R0# set family vpls output interface gr-4/0/0.0
```

6. Configure protocol family BRIDGE for the firewall filter.

```
[edit firewall]
user@R0# set family bridge filter f1 term t then count c
user@R0# set family bridge filter f1 term t then port-mirror
```

7. Configure the VLAN ID for the bridge domain.

```
[edit bridge-domains]
user@R0# set b vlan-id 100
user@R0# set b interface xe-3/2/5.0
user@R0# set b interface xe-3/2/9.0
```

8. Configure the interface for the bridge domain.

```
[edit bridge-domains]
user@R0# set b interface xe-3/2/5.0
user@R0# set b interface xe-3/2/9.0
```

Results

From configuration mode, confirm your configuration by entering the **show bridge-domains**, **show chassis**, **show forwarding-options**, **show firewall**, and **show interfaces** commands. If the output does not display the intended configuration, repeat the instructions in this example to correct the configuration.

```
user@R0# show chassis
fpc 4 {
   pic 0 {
      tunnel-services {
         bandwidth 10g;
      }
   }
}
network-services enhanced-ip;
```

```
user@R0# show interfaces
ge-1/0/3 {
   unit 0 {
      family inet {
         address 10.1.1.1/24 {
            arp 10.1.1.2 mac 00:11:22:33:44:55;
         }
      }
   }
}
xe-3/2/5 {
   flexible-vlan-tagging;
   encapsulation flexible-ethernet-services;
   unit 0 {
      encapsulation vlan-bridge;
      vlan-id 100;
      family bridge {
         filter {
```

```
            input f1;
            output f1;
          }
        }
      }
    }
    xe-3/2/9 {
      flexible-vlan-tagging;
      encapsulation flexible-ethernet-services;
      unit 0 {
        encapsulation vlan-bridge;
        vlan-id 100;
      }
    }
    gr-4/0/0 {
      unit 0 {
        tunnel {
          source 10.1.1.1;
          destination 10.1.1.2;
        }
        family bridge {
          interface-mode trunk;
          vlan-id 100;
        }
      }
    }
```

```
user@R0# show forwarding-options
port-mirroring {
  input {
    rate 1;
  }
  family vpls {
    output {
      interface gr-4/0/0.0;
    }
  }
}
```

```
user@R0# show firewall
family bridge {
  filter f1 {
    term t {
      then {
        count c;
        port-mirror;
      }
    }
  }
}
```

```
user@R0# show bridge-domains
b {
  vlan-id 100;
  interface xe-3/2/5.0;
  interface xe-3/2/9.0;
}
```

Verification

Confirm that the configuration is working properly.

- Verifying Port Mirroring of Traffic on page 43

Verifying Port Mirroring of Traffic

Purpose Display port mirroring of traffic information.

Action On Device R0, from operational mode, run the **show forwarding-options port-mirroring** command to display port mirroring of traffic information.

```
user@R0> show forwarding-options port-mirroring
Instance Name: & globalinstance
  Instance Id: 1
  Input parameters:
    Rate                  : 1
    Run-length            : 0
    Maximum-packet-length : 0
  Output parameters:
    Family              State     Destination          Next-hop
    vpls                up        gr-4/0/0.0

Instance Name: pm_instance
  Instance Id: 2
  Input parameters:
    Rate                  : 10
    Run-length            : 0
    Maximum-packet-length : 0
  Output parameters:
    Family              State     Destination          Next-hop
    vpls                up        gr-4/0/0.0
```

Meaning The output shows the port mirroring of traffic information.

Related Documentation

- *Tunnel Services Overview*
- Configuring Layer 2 Port Mirroring Over GRE Interface on page 37

CHAPTER 4

Configuring Layer 2 Port Mirroring for Logical Interfaces

Understanding Layer 2 Port Mirroring of PE Router Logical Interfaces

For an MX Series router or an EX Series switch configured as a provider edge (PE) router or PE switch on the customer-facing edge of a service provider network, you can apply a Layer 2 port-mirroring firewall filter at the following ingress and egress points to mirror the traffic between the MX Series router (or an EX Series switch) and customer edge (CE) devices, such as routers and Ethernet switches.

Table 4 on page 46 describes the ways in which you can apply Layer 2 port-mirroring firewall filters to an MX Series router or an EX Series switch configured as a PE router or PE switch.

Table 4: Application of Layer 2 Port Mirroring Firewall Filters on PE Routers and PE Switches

Point of Application	Scope of Mirroring	Notes	Configuration Details
Ingress Customer-Facing Logical Interface	Packets originating within a service provider customer's network, sent first to a CE device, and sent next to an MX Series router or an EX Series switch acting as a PE router or PE switch.	You can also configure aggregated Ethernet interfaces between CE devices and PE routers or PE switches for VPLS routing instances. Traffic is load-balanced across all of the links in the aggregated interface. Traffic received on an aggregated Ethernet interface is forwarded over a different interface based on a lookup of the destination MAC (DMAC) address: • Packets destined for a local site are sent out of the load-balanced child interface. • Packets destined for the remote site are encapsulated and forwarded over a label-switched path (LSP).	See "Applying Layer 2 Port Mirroring to a Logical Interface" on page 51. For more information about VPLS routing instances, see *Configuring a VPLS Routing Instance* and *Configuring VLAN Identifiers for Bridge Domains and VPLS Routing Instances*.
Egress Customer-Facing Logical Interface	Unicast packets being forwarded by the MX Series router or the EX Series switch to another PE router or PE switch. **NOTE:** If you apply a port-mirroring filter to the output for a logical interface, only unicast packets are mirrored. To mirror multicast, unknown unicast, and broadcast packets, apply a filter to the input to the flood table of a bridge domain or VPLS routing instance.		See "Applying Layer 2 Port Mirroring to a Logical Interface" on page 51.
Input to a Bridge Domain Forwarding Table or Flood Table	Forwarding traffic or flood traffic sent to the bridge domain from a CE device.	Forwarding and flood traffic typically consists of broadcast packets, multicast packets, unicast packets with an unknown destination MAC address, or packets with a MAC entry in the DMAC routing table.	See "Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain" on page 54. For information about flooding behavior in VPLS, see the *Junos OS VPNs Library for Routing Devices*.
Input to a VPLS Routing Instance Forwarding Table or Flood Table	Forwarding traffic or flood traffic sent to the VPLS routing instance from a CE device.		See "Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance" on page 56. For information about flooding behavior in VPLS, see the *Junos OS VPNs Library for Routing Devices*.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- Example: Layer 2 Port Mirroring at a Logical Interface on page 60

Understanding Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces

An aggregated Ethernet interface is a virtual aggregated link that consists of a set of physical interfaces of the same speed and operating in full-duplex link connection mode. You can configure aggregated Ethernet interfaces between CE devices and PE routers for VPLS routing instances. Traffic is load-balanced across all of the links in the aggregated interface. If one or more links in the aggregated interface fails, the traffic is switched to the remaining links.

You can apply a Layer 2 port-mirroring firewall filter to an aggregated Ethernet interface to configure port-mirroring at the parent interface. However, if any child interfaces are bound to different Layer 2 port-mirroring instances, packets received at the child interfaces will be mirrored to the destinations specified by their respective port-mirroring instances. Thus, multiple child interfaces can mirror packets to multiple destinations.

For example, suppose the parent aggregated Ethernet interface instance **ae0** has two child interfaces:

- **xe-2/0/0**
- **xe-3/1/2**

Suppose that these child interfaces on **ae0** are bound to two different Layer 2 port-mirroring instances:

- **pm_instance_A**—A named instance of Layer 2 port-mirroring, bound to child interface **xe-2/0/0**.
- **pm_instance_B**—A named instance of Layer 2 port-mirroring, bound to child interface **xe-3/1/2**.

Now suppose you apply a Layer 2 port-mirroring firewall filter to the Layer 2 traffic sent on **ae0.0** (logical unit **0** on the aggregated Ethernet interface instance **0**). This enables port mirroring on **ae0.0**, which has the following effect on the processing of traffic received on the child interfaces for which Layer 2 port-mirroring properties are specified:

- The packets received on **xe-2/0/0.0** are mirrored to the output interfaces configured in port-mirroring instance **pm_instance_A**.
- The packets received on **xe-3/1/2.0** are mirrored to the output interfaces configured in port-mirroring instance **pm_instance_B**.

Because **pm_instance_A** and **pm_instance_B** can specify different packet-selection properties or mirror destination properties, the packets received on **xe-2/0/0.0** and **xe-3/1/2.0** can mirror different packets to different destinations.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- Example: Layer 2 Port Mirroring for a Layer 2 VPN on page 62

Defining a Layer 2 Port-Mirroring Firewall Filter

For virtual private LAN service (VPLS) traffic (**family bridge** or **family vpls**) and for Layer 2 VPNs with family **ccc**on MX Series routers and on EX Series switches only, you can define a firewall filter that specifies Layer 2 port mirroring as the action to be performed if a packet matches the conditions configured in the firewall filter term

You can use a Layer 2 port-mirroring firewall filter in the following ways:

- To mirror packets received or sent on a logical interface.
- To mirror packets forwarded or flooded to a bridge domain.
- To mirror packets forwarded or flooded to a VPLS routing instance.
- To mirror tunnel interface input packets only to multiple destinations.

For a summary of the three types of Layer 2 port-mirroring you can configure on an MX Series router, see "Application of Layer 2 Port Mirroring Types" on page 14.

For information about configuring firewall filters in general (including in a Layer 3 environment), see *Stateless Firewall Filter Overview* and *How Standard Firewall Filters Evaluate Packets* in the *Routing Policies, Firewall Filters, and Traffic Policers Feature Guide*.

To define a firewall filter with a Layer 2 port-mirroring action:

1. Enable configuration of firewall filters for Layer 2 packets that are part of a bridge domain, a Layer 2 switching cross-connect, or a virtual private LAN service (VPLS):

   [edit]
   user@host# **edit firewall family** ***family***

   The value of the ***family*** option can be **bridge**, **ccc**, or **vpls**.

2. Enable configuration of a firewall filter ***pm-filter-name***:

   [edit firewall family *family*]
   user@host# **edit filter** ***pm-filter-name***

3. Enable configuration of a firewall filter term ***pm-filter-term-name***:

   [edit firewall family *family* filter *pm-filter-name*]
   user@host# **edit term** ***pm-filter-term-name***

   For more information about firewall filter terms in general (including in a Layer 3 environment), see *Guidelines for Configuring Firewall Filters* in the *Routing Policies, Firewall Filters, and Traffic Policers Feature Guide*.

4. (Optional) Specify the firewall filter match conditions based on the route source address *only if* you want to mirror a subset of the sampled packets.

For information about configuring firewall filter match conditions in general (including in a Layer 3 environment), see *Firewall Filter Match Conditions Based on Numbers or Text Aliases*, *Firewall Filter Match Conditions Based on Bit-Field Values*, *Firewall Filter Match Conditions Based on Address Fields*, and *Firewall Filter Match Conditions Based on Address Classes*, in the *Routing Policies, Firewall Filters, and Traffic Policers Feature Guide*.

- For detailed information about Layer 2 bridging firewall filter match conditions (which are supported on MX Series routers only), see *Firewall Filter Match Conditions for Layer 2 Bridging Traffic*.
- For detailed information about VPLS firewall filter match conditions, see *Firewall Filter Match Conditions for VPLS Traffic*.
- For detailed information about Layer 2 circuit cross-connect (CCC) firewall filter match conditions, see *Firewall Filter Match Conditions for Layer 2 CCC Traffic*.

NOTE: **If you want all sampled packets to be considered to match (and be subjected to the actions specified in the then statement), then omit the from statement altogether.**

5. Enable configuration of the ***action*** and ***action-modifier*** to apply to matching packets:

   [edit firewall family *family* filter *pm-filter-name* term *pm-filter-term-name*]
   user@host# **edit then**

6. Specify the actions to be taken on matching packets:

   [edit firewall family *family* filter *pm-filter-name* term *pm-filter-term-name* then]
   user@host# **set** ***action***

   The recommended value for the ***action*** is **accept**. If you do not specify an action, or if you omit the **then** statement entirely, all packets that match the conditions in the **from** statement are accepted.

7. Specify Layer 2 port mirroring or a next-hop group as the ***action-modifier***:

   - To reference the Layer 2 port mirroring properties currently in effect for the Packet Forwarding Engine or PIC associated with the underlying physical interface, use the **port-mirror** statement:

     [edit firewall family *family* filter *pm-filter-name* term *pm-filter-term-name* then]
     user@host# **set port-mirror**

   - To reference the Layer 2 port mirroring properties configured in a specific named instance, use the **port-mirror-instance** ***pm-instance-name*** action modifier:

     [edit firewall family *family* filter *pm-filter-name* term *pm-filter-term-name* then]
     user@host# **set port-mirror-instance** ***pm-instance-name***

     If the underlying physical interface is not bound to a named instance of Layer 2 port mirroring but instead is implicitly bound to the global instance of Layer 2 port

mirroring, then traffic at the logical interface is mirrored according to the properties specified in the named instance referenced by the **port-mirror-instance** action modifier.

- To reference a next-hop group that specifies the next-hop addresses (for sending additional copies of packets to an analyzer), use the **next-hop-group** ***pm-next-hop-group-name*** action modifier:

  [edit firewall family *family* filter *pm-filter-name* term *pm-filter-term-name* then]
  user@host# **set next-hop-group** ***pm-next-hop-group-name***

  For configuration information about next-hop groups, see "Defining a Next-Hop Group for Layer 2 Port Mirroring" on page 70. If you specify a next-hop group for Layer 2 port mirroring, the firewall filter term applies to the tunnel interface input only.

8. Verify the minimum configuration of the Layer 2 port-mirroring firewall filter:

```
[edit firewall ... ]
user@host# top
[edit]
user@host# show firewall

family (bridge | ccc | mpls | vpls) { # Type of packets to mirror
  filter pm-filter-name { # Firewall filter name
    term pm-filter-term-name {
      from { # Do not specify match conditions based on route source address
      }
      then {
        action; # Recommended action is 'accept'
        action-modifier; # Three options for Layer 2 port mirroring
      }
    }
  }
}
```

In the firewall filter term **then** statement, the *action-modifier* can be **port-mirror**, **port-mirror-instance** ***pm-instance-name***, or **next-hop-group** ***pm-next-hop-group-name***.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Understanding Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 69
- Example: Layer 2 Port Mirroring at a Logical Interface on page 60
- Example: Layer 2 Port Mirroring for a Layer 2 VPN on page 62
- Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links on page 65
- Example: Layer 2 Port Mirroring to Multiple Destinations on page 71

Applying Layer 2 Port Mirroring to a Logical Interface

You can apply a Layer 2 port-mirroring firewall filter to the input or to the output of a logical interface, including an aggregated Ethernet logical interface. Only packets of the address-type family specified by the filter action are mirrored.

Before you begin, complete the following task:

- Define a Layer 2 port-mirroring firewall filter to be applied to the input to a logical interface or output to a logical interface. For details, see "Defining a Layer 2 Port-Mirroring Firewall Filter" on page 48.

> NOTE: **This configuration task shows two Layer 2 port-mirroring firewall filters: one filter applied to the logical interface ingress traffic, and one filter applied to the logical interface egress traffic.**

To apply a Layer 2 port-mirroring firewall filter to an input or output logical interface:

1. Configure the underlying physical interface for the logical interface.

   a. Enable configuration of the underlying physical interface:

      [edit]
      user@host# **edit interfaces** ***interface-name***

      > NOTE: **A port-mirroring firewall filter can also be applied to an aggregated-Ethernet logical interface.**

   b. For Fast Ethernet and Gigabit Ethernet interfaces and aggregated Ethernet interfaces configured for VPLS, enable the reception and transmission of 802.1Q VLAN-tagged frames on the interface:

      [edit interfaces *interface-name*]
      user@host# **set vlan-tagging**

   c. For Ethernet interfaces that have IEEE 802.1Q VLAN tagging and bridging enabled and that must accept packets carrying TPID 0x8100 or a user-defined TPID, set the logical link-layer encapsulation type:

      [edit interfaces *interface-name*]
      user@host# **set encapsulation extended-vlan-bridge**

2. Configure the logical interface to which you want to apply a Layer 2 port-mirroring firewall filter.

   a. Specify the logical unit number:

      [edit interfaces *interface-name*]

```
user@host# edit unit logical-unit-number
```

b. For a Fast Ethernet, Gigabit Ethernet, or Aggregated Ethernet interface, bind an 802.1Q VLAN tag ID to the logical interface:

```
[edit interfaces interface-name unit logical-unit-number]
user@host# set vlan-id number
```

3. Enable specification of an input or output filter to be applied to Layer 2 packets that are part of bridging domain, Layer 2 switching cross-connects, or virtual private LAN service (VPLS).

   - If the filter is to be evaluated when packets are received on the interface:

     ```
     [edit interfaces interface-name unit logical-unit-number]
     user@host# set family family filter input pm-filter-name-a
     ```

   - If the filter is to be evaluated when packets are sent on the interface:

     ```
     [edit interfaces interface-name unit logical-unit-number]
     user@host# set family family filter output pm-filter-name-b
     ```

   The value of the *family* option can be **bridge**, **ccc**, or **vpls**.

   NOTE: If port-mirroring firewall filters are applied at both the input and output of a logical interface, two copies of each packet are mirrored. To prevent the router from forwarding duplicate packets to the same destination, include the optional **mirror-once** statement at the **[edit forwarding-options]** hierarchy level.

4. Verify the minimum configuration for applying a named Layer 2 port-mirroring firewall filter to a logical interface:

```
[edit interfaces interface-name unit logical-unit-number family family filter ... ]
user@host# top
[edit]
user@host# show interfaces

interfaces {
  interface-name {
    vlan-tagging;
    encapsulation extended-vlan-bridge;
    unit number { # Apply a filter to the input of this interface
      vlan-id number;
      family (bridge | ccc | vpls) {
        filter {
          input pm-filter-for-logical-interface-input;
        }
      }
    }
    unit number { # Apply a filter to the output of this interface
      vlan-id number;
```

```
            family (bridge | ccc | vpls) {
              filter {
                output pm-filter-for-logical-interface-output;
              }
            }
          }
        }
      }
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain on page 54
- Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance on page 56
- Example: Layer 2 Port Mirroring at a Logical Interface on page 60
- Example: Layer 2 Port Mirroring for a Layer 2 VPN on page 62
- Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links on page 65

Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain

You can apply a Layer 2 port-mirroring firewall filter to traffic being forwarded or flooded to a bridge domain. Only packets of the specified family type and forwarded or flooded to that bridge domain are mirrored.

Before you begin, complete the following task:

- Define a Layer 2 port-mirroring firewall filter to be applied to the traffic being forwarded to a bridge domain or flooded to a bridge domain. For details, see "Defining a Layer 2 Port-Mirroring Firewall Filter" on page 48.

NOTE: **This configuration task shows two Layer_2 port-mirroring firewall filters: one filter applied to the bridge domain forwarding table ingress traffic, and one filter applied to the bridge domain flood table ingress traffic.**

To apply a Layer 2 port-mirroring firewall filter to the forwarding table or flood table of a bridge domain:

1. Enable configuration of the bridge domain ***bridge-domain-name*** to which you want to apply a Layer 2 port-mirroring firewall filter for forwarded or flooded traffic:

   - For a bridge domain:

     [edit]
     user@host# **edit bridge-domains** ***bridge-domain-name***

   - For a bridge domain under a routing instance:

     [edit]
     user@host# **edit routing-instances** ***routing-instance-name*** **bridge-domains** ***bridge-domain-name***
     user@host# **set instance-type virtual-switch**

   For more detailed configuration information, see *Configuring a VPLS Routing Instance*.

2. Configure the bridge domain:

   [edit]
   user@host# **set domain-type bridge**
   user@host# **set interface** ***interface-name***
   user@host# **set routing-interface** ***routing-interface-name***

   For more detailed configuration information, see *Configuring a Bridge Domain* and *Configuring VLAN Identifiers for Bridge Domains and VPLS Routing Instances*.

3. Enable configuration of traffic forwarding on the bridge domain:

   [edit ... bridge-domains *bridge-domain-name*]
   user@host# **edit forwarding-options**

4. Apply a Layer 2 port-mirroring firewall filter to the bridge domain forwarding table or flood table.

   - To mirror packets being forwarded to the bridge domain:

     [edit ... bridge-domains *bridge-domain-name* forwarding-options]
     user@host# **set filter input** ***pm-filter-for-bd-ingress-forwarded***

   - To mirror packets being flooded to the bridge domain:

     [edit ... bridge-domains *bridge-domain-name* forwarding-options]
     user@host# **set flood input** ***pm-filter-for-bd-ingress-flooded***

5. Verify the minimum configuration for applying a Layer 2 port-mirroring firewall filter to the forwarding table or flood table of the bridge domain.

   a. Navigate to the hierarchy level at which the bridge domain is configured:

      - **[edit]**
      - **[edit routing-instances *routing-instance-name*]**

   b. Display the bridge domain configurations:

```
user@host# show bridge domains

bridge-domains {
  bridge-domain-name {
    instance-type virtual-switch; # For a bridge domain under a routing instance.
    domain-type bridge;
    interface interface-name;
    forwarding-options {
      filter { # Mirror ingress forwarded traffic
        input pm-filter-for-bd-ingress-forwarded;
      }
      flood { # Mirror ingress flooded traffic
        input pm-filter-for-bd-ingress-flooded;
      }
    }
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- Applying Layer 2 Port Mirroring to a Logical Interface on page 51
- Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance on page 56
- Example: Layer 2 Port Mirroring at a Logical Interface on page 60
- Example: Layer 2 Port Mirroring for a Layer 2 VPN on page 62
- Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links on page 65

Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance

You can apply a Layer 2 port-mirroring firewall filter to traffic being forwarded or flooded to a VPLS routing instance. Only packets of the specified family type and forwarded or flooded to that VPLS routing instance are mirrored.

Before you begin, complete the following task:

- Define a Layer 2 port-mirroring firewall filter to be applied to the traffic being forwarded to a VPLS routing instance or flooded to a bridge domain. For details, see "Defining a Layer 2 Port-Mirroring Firewall Filter" on page 48.

> NOTE: This configuration task shows two Layer_2 port-mirroring firewall filters: one filter applied to the VPLS routing instance forwarding table ingress traffic, and one filter applied to the VPLS routing instance flood table ingress traffic.

To apply a Layer 2 port-mirroring firewall filter to the forwarding table or flood table of a VPLS routing instance:

1. Enable configuration of the VPLS routing instance to which you want to apply a Layer 2 port-mirroring firewall filter for forwarded or flooded traffic:

   [edit]
   user@host# **edit routing-instances** ***routing-instance-name***
   user@host# **set instance-type vpls**
   user@host# **set interface** ***interface-name***
   user@host# **set route-distinguisher (*as-number:number* | *ip-address:number*)**
   user@host# **set vrf-import [*policy-names*]**
   user@host# **set vrf-export [*policy-names*]**
   user@host# **edit protocols vpls**
   user@host@ **... *vpls-configuration* ...**

   For more detailed configuration information, see *Configuring a VPLS Routing Instance*.

2. Enable configuration of traffic forwarding on the VPLS routing instance:

   [edit routing-instances *routing-instance-name* protocols *vpls*]
   user@host# **up 2**
   [edit routing-instances *routing-instance-name*]
   user@host# **edit forwarding-options**

3. Apply a Layer 2 port-mirroring firewall filter to the VPLS routing instance forwarding table or flood table.

   - To mirror packets being forwarded to the VPLS routing instance:

     [edit routing-instances *routing-instance-name* forwarding-options]
     user@host# **set filter input** ***pm-filter-for-vpls-ri-forwarded***

- To mirror packets being flooded to the VPLS routing instance:

  ```
  [edit routing-instances routing-instance-name forwarding-options]
  user@host# set flood input pm-filter-for-vpls-ri-flooded
  ```

4. Verify the minimum configuration for applying a Layer 2 port-mirroring firewall filter to the forwarding table or flood table of the VPLS routing instance:

   ```
   [edit routing-instances routing-instance-name forwarding-options]
   user@host# top
   [edit]
   user@host# show routing-instances

   routing-instances {
     routing-instance-name {
       instance-type vpls;
       interface interface-name;
       route-distinguisher (as-number:number | ip-address:number);
       vrf-import [policy-names];
       vrf-export [policy-names];
       protocols {
         vpls {
           ...vpls-configuration...
         }
       }
       forwarding-options {
         family vpls {
           filter { # Mirror ingress forwarded traffic
             input pm-filter-for-vpls-ri-forwarded;
           }
           flood { # Mirror ingress flooded traffic
             input pm-filter-for-vpls-ri-flooded;
           }
         }
       }
     }
   }
   ```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- Applying Layer 2 Port Mirroring to a Logical Interface on page 51
- Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain on page 54
- Example: Layer 2 Port Mirroring at a Logical Interface on page 60
- Example: Layer 2 Port Mirroring for a Layer 2 VPN on page 62
- Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links on page 65

Configuring Protocol-Independent Firewall Filter for Port Mirroring

On MX Series routers with MPCs, you can configure a firewall filter to mirror Layer 2 and Layer 3 packets at a global level and at an instance level. When port mirror is configured at ingress or egress, the packet entering or exiting an interface is copied and the copies are sent to the local interface for local monitoring.

NOTE: Starting with Junos OS Release 13.3R6, only MPC interfaces support family any to do port mirroring. DPC interfaces do not support family any.

Typically, the firewall filter is configured such that it mirrors either Layer 2 or Layer 3 packets based on the family configured at the interface. However, in case of an integrated routing and bridging (IRB) interface, Layer 2 packets are not completely mirrored because IRB interfaces are configured to mirror only Layer 3 packets. On such an interface, you can configure a firewall filter and port mirroring parameters in the family **any** to ensure that a packet is completely mirrored irrespective of whether it is a Layer 2 or a Layer 3 packet.

NOTE:

- For port mirroring at an instance, you can configure one or more families such as **inet**, **inet6**, **ccc**, and **vpls** simultaneously for the same instance.
- In case of Layer 2 port mirroring, VLAN tags, MPLS headers are retained and can be seen in the mirrored copy at egress.
- For VLAN normalization, the information before normalization is seen for a mirrored packet at ingress. Similarly, at egress, the information after normalization is seen for the mirrored packet.

Before you begin configuring port mirroring, you must configure valid physical interfaces.

To configure a protocol-independent firewall filter for port mirroring:

1. Configure a global firewall filter for port-mirroring egress or ingress traffic.

```
[edit firewall family any]
user@host# set filter filter-name {
  term term-name {
    then {
      port-mirror;
      accept;
    }
  }
}
```

2. Configure a firewall filter to port-mirror traffic for an instance.

```
[edit firewall family any]
user@host# set filter filter-name {
```

```
    term term-name {
      then {
        port-mirror-instance instance-name;
        accept;
      }
    }
  }
```

3. Configure port-mirroring parameters for egress and ingress traffic.

```
[edit forwarding-options port-mirroring]
user@host# input {
  maximum-packet-length bytes
  rate rate;
}
family any {
  output {
    (next-hop-group group-name | interface interface-name);
  }
}
```

4. Configure port-mirroring parameters for an instance. In this configuration, you can specify the output or destination for the Layer 2 packets to be either a valid next-hop group or a Layer 2 interface.

```
[edit forwarding-options port-mirroring]
user@host#instance instance-name {
  family any{
    output {
      (next-hop-group group-name | interface interface-name);
    }
  }
}
```

5. Configure the firewall filter at the ingress or egress interface on which the packets are transmitted.

```
[edit interface interface-name unit]
user@host# filter {
  output filter-name;
  input filter-name;
}
```

Release History Table

Release	Description
13.3R6	Starting with Junos OS Release 13.3R6, only MPC interfaces support **family any** to do port mirroring.

Related Documentation

- *Configuring Ethernet Physical Interface Properties*
- *Configuring Port Mirroring*

Example: Layer 2 Port Mirroring at a Logical Interface

The following steps describe an example in which the global port-mirroring instance and a port-mirroring firewall filter are used to configure Layer 2 port mirroring for the input to a logical interface.

1. Configure the bridge domain **example-bd-with-analyzer**, which contains the external packet analyzer, and the bridge domain **example-bd-with-traffic**, which contains the source and destination of the Layer 2 traffic being mirrored:

```
[edit]
bridge-domains {
  example-bd-with-analyzer { # Contains an external traffic analyzer
    vlan-id 1000;
    interface ge-2/0/0.0; # External analyzer
  }
  example-bd-with-traffic { # Contains traffic input and output interfaces
    vlan-id 1000;
    interface ge-2/0/6.0; # Traffic input port
    interface ge-3/0/1.2; # Traffic output port
  }
}
```

   Assume that logical interface **ge-2/0/0.0** is associated with an external traffic analyzer that is to receive port-mirrored packets. Assume that logical interfaces **ge-2/0/6.0** and **ge-3/0/1.2** will be traffic input and output ports, respectively.

2. Configure Layer 2 port mirroring for the global instance, with the port-mirroring destination being the bridge domain interface associated with the external analyzer (logical interface **ge-2/0/0.0** on bridge domain **example-bd-with-analyzer**). Be sure to enable the option that allows filters to be applied to this port-mirroring destination:

```
[edit]
forwarding-options {
  port-mirroring {
    input {
      rate 10;
      run-length 5;
    }
    family bridge {
      output {
        interface ge-2/0/0.0; # Mirror packets to the external analyzer
        no-filter-check; # Allow filters on the mirror destination interface
      }
    }
  }
}
```

   The **input** statement at the **[edit forwarding-options port-mirroring]** hierarchy level specifies that sampling begins every tenth packet and that each of the first five packets selected are to be mirrored.

The **output** statement at the **[edit forwarding-options port-mirroring family bridge]** hierarchy level specifies the output mirror interface for Layer 2 packets in a bridging environment:

- Logical interface **ge-2/0/0.0**, which is associated with the external packet analyzer, is configured as the port-mirroring destination.
- The optional **no-filter-check** statement allows filters to be configured on this destination interface.

3. Configure the Layer 2 port-mirroring firewall filter **example-bridge-pm-filter**:

```
[edit]
firewall {
  family bridge {
    filter example-bridge-pm-filter {
      term example-filter-terms {
        then {
          accept;
          port-mirror;
        }
      }
    }
  }
}
```

When this firewall filter is applied to the input or output of a logical interface for traffic in a bridging environment, Layer 2 port mirroring is performed according to the input packet-sampling properties and mirror destination properties configured for the Layer 2 port mirroring global instance. Because this firewall filter is configured with the single, default filter action **accept**, all packets selected by the **input** properties (**rate** = **10** and **run-length** = **5**) match this filter.

4. Configure the logical interfaces:

```
[edit]
interfaces {
  ge-2/0/0 { # Define the interface to the external analyzer
    encapsulation ethernet-bridge;
    unit 0 {
      family bridge;
    }
  }
  ge-2/0/6 { # Define the traffic input port
    flexible-vlan-tagging;
    encapsulation extended-vlan-bridge;
    unit 0 {
      vlan-id 100;
      family bridge {
        filter {
          input example-bridge-pm-filter; # Apply the port-mirroring firewall filter
        }
      }
    }
  }
```

```
    ge-3/0/1 { # Define the traffic output port
      flexible-vlan-tagging;
      encapsulation extended-vlan-bridge;
      unit 2 {
        vlan-tags outer 10 inner 20;
        family bridge;
      }
    }
  }
```

Packets received at logical interface **ge-2/0/6.0** on bridge domain **example-bd-with-traffic** are evaluated by the port-mirroring firewall filter **example-bridge-pm-filter**. The firewall filter acts on the input traffic according to the filter actions configured in the firewall filter itself plus the input packet-sampling properties and mirror destination properties configured in the global port-mirroring instance:

- All packets received at **ge-2/0/6.0** are forwarded to their (assumed) normal destination at logical interface **ge-3/0/1.2**.
- For every ten input packets, copies of the first five packets in that selection are forwarded to the external analyzer at logical interface **ge-0/0/0.0** in the other bridge domain, **example-bd-with-analyzer**.

If you configure the port-mirroring firewall filter **example-bridge-pm-filter** to take the **discard** action instead of the **accept** action, all original packets are discarded while copies of the packets selected using the global port-mirroring **input** properties are sent to the external analyzer.

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48

Example: Layer 2 Port Mirroring for a Layer 2 VPN

The following example is not a complete configuration, but shows all the steps needed to configure port mirroring on an L2VPN using **family ccc**.

1. Configure the bridge domain **port-mirror-bd**, which contains the external packet analyzer:

```
[edit]
bridge-domains {
  port-mirror-bd { # Contains an external traffic analyzer
    interface ge-2/2/9.0; # External analyzer
  }
}
```

2. Configure the Layer 2 VPN CCC to connect logical interface **ge-2/0/1.0** and logical interface **ge-2/0/1.1**:

```
[edit]
protocols {
  mpls {
    interface all;
  }
  connections {
    interface-switch if_switch {
      interface ge-2/0/1.0;
      interface ge-2/0/1.1;
    }
  }
}
```

3. Configure Layer 2 port mirroring for the global instance, with the port-mirroring destination being the bridge domain interface associated with the external analyzer (logical interface **ge-2/2/9.0** on bridge domain **example-bd-with-analyzer**):

```
[edit]
forwarding-options {
  port-mirroring {
    input {
      rate 1;
      maximum-packet-length 200;
    }
    family ccc {
      output {
        interface ge-2/2/9.0; # Mirror packets to the external analyzer
      }
    }
    instance {
      inst1 {
        input {
          rate 1;
          maximum-packet-length 300;
        }
        family ccc {
          output {
            interface ge-2/2/9.0;
          }
        {
      }
    }
  }
}
```

4. Define the Layer 2 port-mirroring firewall filter **pm_filter_ccc** for **family ccc**:

```
[edit]
firewall {
  family ccc {
    filter pm_filter_ccc {
      term pm {
```

```
            then port-mirror;
        }
      }
    }
  }
```

5. Apply the port mirror instance to the chassis:

```
[edit]
chassis {
  fpc 2 {
    port-mirror-instance inst1;
  }
}
```

6. Configure interface **ge-2/2/9** for the VLANs, and configure interface **ge-2/0/1** for port mirroring with the **pm_filter_ccc** firewall filter:

```
[edit]
interfaces {
  ge-2/2/9 {
    encapsulation ethernet-bridge;
    unit 0 {
      family bridge;
    }
  }
  ge-2/0/1 {
    vlan-tagging;
    encapsulation extended-vlan-ccc;
    unit 0 {
      vlan-id 10;
      family ccc {
        filter {
          input pm_filter_ccc;
        }
      }
    }
    unit 1 {
      vlan-id 20;
      family ccc {
        filter {
          output pm_filter_ccc;
        }
      }
    }
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48

Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links

The following example is not a complete configuration, but shows all the steps needed to configure port mirroring on an L2VPN using **family ccc** and aggregated Ethernet links.

1. Configure the bridge domain **port_mirror_bd**, which contains the external packet analyzer:

```
[edit]
bridge-domains {
  port_mirror_bd { # Contains an external traffic analyzer
    interface ge-2/2/8.0; # External analyzer
  }
}
```

2. Configure the Layer 2 VPN CCC to connect interface **ae0.0** and interface **ae0.1**:

```
[edit]
protocols {
  mpls {
    interface all;
  }
  connections {
    interface-switch if_switch {
      interface ae0.0;
      interface ae0.1;
    }
  }
}
```

3. Configure Layer 2 port mirroring for the global instance, with the port-mirroring destination being the bridge domain interface associated with the external analyzer (logical interface **ge-2/2/9.0** on bridge domain **example_bd_with_analyzer**):

```
[edit]
forwarding-options {
  port-mirroring {
    input {
      rate 1;
      maximum-packet-length 200;
    }
    family ccc {
      output {
        interface ge-2/2/8.0; # Mirror packets to the external analyzer
      }
    }
    instance {
      pm_instance_1 {
        input {
          rate 1;
          maximum-packet-length 300;
        }
        family ccc {
          output {
```

```
                interface ge-2/2/8.0;
            }
        {
    }
  }
}
```

4. Configure the firewall filter **pm_ccc** for **family ccc**:

```
[edit]
firewall {
  family ccc {
    filter pm_ccc {
      term pm {
        then port-mirror;
      }
    }
  }
}
```

5. Apply the aggregated Ethernet interfaces and port mirror instance to the chassis:

```
[edit]
chassis {
  aggregated-devices {
    ethernet {
      device-count 10;
    }
  }
  fpc 2 {
    port-mirror-instance pm_instance_1;
  }
}
```

6. Configure interfaces **ae0** and **ge-2/0/2** (for aggregated Ethernet) and **ge-2/2/8** (for port mirroring) with the **pm_ccc** filter:

```
[edit]
interfaces {
  ae0 {
    vlan-tagging;
    encapsulation extended-vlan-ccc;
    unit 0 {
      vlan-id 10;
      family ccc {
        filter {
          input pm_ccc;
        }
      }
    }
    unit 1 {
      vlan-id 20;
      family ccc {
```

```
                filter {
                    output pm_ccc;
                }
            }
        }
    }
    ge-2/0/2 {
        gigether-options {
            802.3ad ae0;
        }
    }
    ge-2/2/8 {
        encapsulation ethernet-bridge;
        unit 0 {
            family bridge;
        }
    }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Layer 2 Port Mirroring Firewall Filters on page 11
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48

CHAPTER 5

Configuring Layer 2 Port Mirroring for Multiple Destinations

Understanding Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups

On an MX Series router and on an EX Series switch, you can mirror traffic to multiple destinations by configuring next-hop groups in Layer 2 port-mirroring firewall filters applied to tunnel interfaces. The mirroring of packets to multiple destinations is also known as *multipacket port mirroring*,

NOTE: **Junos OS Release 9.5 introduced support for Layer 2 port mirroring using next-hop groups on MX Series routers, but required installation of a Tunnel PIC. Beginning in Junos OS Release 9.6, Layer 2 port mirroring using next-hop groups on MX Series routers does not require Tunnel PICs.**

On MX Series routers and on EX Series switches, you can define a firewall filter for mirroring packets to a next-hop group. The next-hop group can contain Layer 2 members, Layer 3 members, and subgroups that are either unit list (mirroring packets to each interface) or load-balanced (mirroring packets to one of several interfaces). The MX Series router and the EX Series switch supports up to 30 next-hop groups. Each next-hop group supports up to 16 next-hop addresses. Each next-hop group must specify at least two addresses.

To enable port mirroring to the members of a next-hop group, you specify the next-hop group as the filter action of a firewall filter, and then you apply the firewall filter to logical tunnel interfaces (**lt-**) or virtual tunnel interfaces (**vt-**) on the MX Series router or on the EX Series switch.

NOTE: **The use of subgroups for load-balancing mirrored traffic is not supported.**

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3Understanding Layer 2 Port Mirroring on page 3
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- Defining a Next-Hop Group for Layer 2 Port Mirroring on page 70
- Example: Layer 2 Port Mirroring to Multiple Destinations on page 71

Defining a Next-Hop Group for Layer 2 Port Mirroring

On MX Series routers and EX Series switches, you can mirror tunnel interface input traffic to multiple destinations. To this form of *multipacket port mirroring*, you specify two or more additional destinations in a next-hop group, define a firewall filter that references the next-hop group as the filter action, and then apply the filter to a logical tunnel interface (**lt-**) or virtual tunnel interface (**vt-**) on the MX Series router and on an EX Series switch.

NOTE: This topic describes how to define a next-hop group for Layer 2 port mirroring to multiple destinations. For detailed information about defining a firewall filter for Layer 2 port mirroring to multiple destinations, see "Defining a Layer 2 Port-Mirroring Firewall Filter" on page 48.

To define a next-hop group for a Layer 2 port-mirroring firewall filter action:

1. Enable configuration of Layer 2 forwarding options.

   - To enable Layer 2 forwarding options at the top level:

     [edit]
     user@host **edit forwarding-options port-mirroring family (ccc | vpls) output**

   - To enable Layer 2 forwarding options for a routing instance:

     [edit]
     user@host **edit forwarding-options port-mirroring** instance ***instance-name***
     family (ccc | vpls) output

2. Enable configuration of a next-hop-group for Layer 2 port mirroring:

   [edit forwarding-options port-mirroring ... family (ccc | vpls) output]
   user@host# **edit next-hop-group** ***pm-next-hop-group-name***

3. Specify the type of addresses to be used in the next-hop group configuration. By default, the next-hop group is specified using Layer 3 addresses (**group-type inet**). To specify the next-hop group using Layer 2 addresses instead, you must include the **group-type layer-2** statement:

   [edit forwarding-options port-mirroring ... family (ccc | vpls) output next-hop-group
   pm-next-hop-group-name]
   user@host# **set group-type layer-2**

4. Specify the logical interfaces of the next-hop route (or switch):

```
[edit forwarding-options port-mirroring ... family (ccc | vpls) output next-hop-group
  pm-next-hop-group-name]
user@host# set interface logical-interface-name-1
user@host# set interface logical-interface-name-2
```

   The MX Series router and the EX Series switch supports up to 30 next-hop groups. Each next-hop group supports up to 16 next-hop addresses. Each next-hop group must specify at least two addresses.

5. Verify the configuration of the next-hop group:

```
[edit forwarding-options port-mirroring ... family (ccc | vpls) output next-hop-group
  pm-next-hop-group-name]
user@host# top
[edit]
user@host# show forwarding-options

...
next-hop-group pm-next-hop-group-name { # Next-hop group on a bridge domain.
  group-type layer-2;
  interface logical-interface-name-1;
  interface logical-interface-name-2;
}
...
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Understanding Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 69
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- *Displaying Next-Hop Group Settings and Status*
- Example: Layer 2 Port Mirroring to Multiple Destinations on page 71

Example: Layer 2 Port Mirroring to Multiple Destinations

On MX Series routers, you can mirror traffic to multiple destinations by configuring next-hop groups in Layer 2 port-mirroring firewall filters applied to tunnel interfaces.

1. Configure the chassis to support tunnel services at PIC 0 on FPC 2. This configuration includes two logical tunnel interfaces on FPC 2, PIC 0, port 10.

```
[edit]
chassis {
  fpc 2 {
    pic 0 {
      tunnel-services {
        bandwidth 1g;
      }
    }
```

```
    }
  }
```

2. Configure the physical and logical interfaces for three bridge domains and one Layer 2 VPN CCC:

   - Bridge domain **bd** will span logical interfaces **ge-2/0/1.0** and **ge-2/0/1.1**.
   - Bridge domain **bd_next_hop_group** will span logical interfaces **ge-2/2/9.0** and **ge-2/0/2.0**.
   - Bridge domain **bd_port_mirror** will use the logical tunnel interface **lt-2/0/10.2**.
   - Layer 2 VPN CCC **if_switch** will connect logical interfaces **ge-2/0/1.2** and **lt-2/0/10.1**.

```
[edit]
interfaces {
  ge-2/0/1 {
    flexible-vlan-tagging;
    encapsulation flexible-ethernet-services;
    unit 0 { # An interface on bridge domain 'bd'.
      encapsulation vlan-bridge;
      vlan-id 200;
      family bridge {
        filter {
          input pm_bridge;
        }
      }
    }
    unit 1 { # An interface on bridge domain 'bd'.
      encapsulation vlan-bridge;
      vlan-id 201;
      family bridge {
        filter {
          input pm_bridge;
        }
      }
    }
    unit 2 {
      encapsulation vlan-ccc;
      vlan-id 1000;
    }
  }
  ge-2/0/2 { # For 'bd_next_hop_group'
    encapsulation ethernet-bridge;
    unit 0 {
      family bridge;
    }
  }
  lt-2/0/10 {
    unit 1 {
      encapsulation ethernet-ccc;
      peer-unit 2;
    }
    unit 2 {
      encapsulation ethernet-bridge;
      peer-unit 1;
```

```
            family bridge {
              filter {
                output redirect_to_nhg;
              }
            }
          }
        }
        ge-2/2/9 {
          encapsulation ethernet-bridge;
          unit 0 { # For 'bd_next_hop_group'
            family bridge;
          }
        }
      }
```

3. Configure the three bridge domains and the Layer 2 VPN switching CCC:

   - Bridge domain **bd** spans logical interfaces **ge-2/0/1.0** and **ge-2/0/1.1**.
   - Bridge domain **bd_next_hop_group** spans logical interfaces **ge-2/2/9.0** and **ge-2/0/2.0**.
   - Bridge domain **bd_port_mirror** uses the logical tunnel interface **lt-2/0/10.2**.
   - Layer 2 VPN CCC **if_switch** connects interfaces **ge-2/0/1.2** and **lt-2/0/10.1**.

```
[edit]
bridge-domains {
  bd {
    interface ge-2/0/1.0;
    interface ge-2/0/1.1;
  }
  bd_next_hop_group {
    interface ge-2/2/9.0;
    interface ge-2/0/2.0;
  }
  bd_port_mirror {
    interface lt-2/0/10.2;
  }
}
protocols {
  mpls {
    interface all;
  }
  connections {
    interface-switch if_switch {
      interface ge-2/0/1.2;
      interface lt-2/0/10.1;
    }
  }
}
```

For detailed information about configuring the CCC connection for Layer 2 switching cross-connects, see the *Junos OS MPLS Applications Library for Routing Devices*.

4. Configure forwarding options:

   - Configure global port-mirroring properties to mirror **family vpls** traffic to an interface on the bridge domain **bd_port_mirror**.
   - Configure the next-hop group **nhg_mirror_to_bd** to forward Layer 2 traffic to the bridge domain **bd_next_hop_group**.

   Both of these forwarding options will be referenced by the port-mirroring firewall filter:

```
[edit]
forwarding-options {
  port-mirroring { # Global port mirroring properties.
    input {
      rate 1;
    }
    family vpls {
      output {
        interface lt-2/0/10.2; # Interface on 'bd_port_mirror' bridge domain.
        no-filter-check;
      }
    }
  }
  next-hop-group nhg_mirror_to_bd { # Configure a next-hop group.
    group-type layer-2; # Specify 'layer-2' for Layer 2; default 'inet' is for Layer 3.
    interface ge-2/0/2.0; # Interface on 'bd_next_hop_group' bridge domain.
    interface ge-2/2/9.0; # Interface on 'bd_next_hop_group' bridge domain.
  }
}
```

5. Configure two Layer 2 port-mirroring firewall filters for **family bridge** traffic:

   - **filter_pm_bridge**—Sends all **family bridge** traffic to the global port mirroring destination.
   - **filter_redirect_to_nhg**—Sends all **family bridge** traffic to the final next-hop group **nhg_mirror_to_bd**.

   Layer 2 port-mirroring firewall filters for **family bridge** traffic applies to traffic on a physical interface configured with encapsulation **ethernet-bridge**.

```
[edit]
firewall {
  family bridge {
    filter filter_pm_bridge {
      term term_port_mirror {
        then port-mirror;
      }
    }
    filter filter_redirect_to_nhg {
      term term_nhg {
        then next-hop-group nhg_mirror_to_bd;
      }
    }
  }
}
```

Related Documentation

- Understanding Layer 2 Port Mirroring on page 3
- Understanding Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 69
- Defining a Layer 2 Port-Mirroring Firewall Filter on page 48
- Defining a Next-Hop Group for Layer 2 Port Mirroring on page 70
- *Displaying Next-Hop Group Settings and Status*

CHAPTER 6

Configuring Layer 2 Port Mirroring Analyzers

Understanding Port Mirroring Analyzers

Port mirroring can be used for traffic analysis on routers and switches that, unlike hubs, do not broadcast packets to every port on the destination device. Port mirroring sends copies of all packets or policy-based sample packets to local or remote analyzers where you can monitor and analyze the data.

In the context of port mirroring analyzers, we use the term *switching device*. The term indicates that the device (including routers) is performing a switching function.

You can use analyzers on a packet level to help you:

- Monitor network traffic
- Enforce network usage policies
- Enforce file sharing policies
- Identify causes of problems
- Identify stations or applications with heavy or abnormal bandwidth usage

You can configure an analyzer to mirror:

- Bridged packets (Layer 2 packets)
- Routed packets (Layer 3 packets)

Mirrored packets can be copied to either a local interface for local monitoring or a VLAN or bridge domain for remote monitoring.

The following packets can be copied:

- **Packets entering or exiting a port**—You can mirror packets entering or exiting ports, in any combination, for up to 256 ports. For example, you can send copies of the packets entering some ports and the packets exiting other ports to the same local analyzer port or analyzer VLAN.
- **Packets entering or exiting a VLAN or bridge domain**—You can mirror the packets entering or exiting a VLAN or bridge domain to either a local analyzer port or to an analyzer VLAN or bridge domain. You can configure multiple VLANs (up to 256 VLANs) or bridge domains as ingress inputs to an analyzer, including a VLAN range and private VLANs (PVLANs).
- **Policy-based sample packets**—You can mirror a policy-based sample of packets that are entering a port, VLAN, or bridge domain. You configure a firewall filter with a policy to select the packets to be mirrored. You can send the sample to a port-mirroring instance or to an analyzer VLAN or bridge domain.

This topic describes:

- Analyzer Overview on page 79
- Statistical Analyzer Overview on page 79

Analyzer Overview

You can configure an analyzer to define both the input traffic and the output traffic in the same analyzer configuration. The input traffic to be analyzed can be either traffic that enters or traffic that exits an interface or VLAN. The analyzer configuration enables you to send this traffic to an output interface, instance, next-hop group, VLAN, or bridge domain. You can configure an analyzer at the **[edit forwarding-options analyzer]** hierarchy level.

Statistical Analyzer Overview

You can define a set of mirroring properties, such as mirroring rate and maximum packet length for traffic, that you can explicitly bind to physical ports on the router or switch. This set of mirroring properties constitutes a statistical analyzer (also called a nondefault analyzer). At this level, you can bind a named instance to the physical ports associated with a specific FPC.

Default Analyzer Overview

You can configure an analyzer without configuring any mirroring properties (such as mirroring rate or maximum packet length). By default, the mirroring rate is set to 1 and the maximum packet length is set to the complete length of the packet. These properties are applied at the global level and need not be bound to a specific FPC.

Port Mirroring at a Group of Ports Bound to Multiple Statistical Analyzers

You can apply up to two statistical analyzers to the same port groups on the switching device. By applying two different statistical analyzer instances to the same FPC or Packet Forwarding Engine, you can bind two distinct Layer 2 mirroring specifications to a single port group. Mirroring properties that are bound to an FPC override any analyzer (default analyzer) properties bound at the global level on the switching device. Default analyzer properties are overridden by binding a second analyzer instance on the same port group.

Port Mirroring Analyzer Terminology

Table 5 on page 79 lists some port mirroring analyzer terms and their descriptions.

Table 5: Analyzer Terminology

Term	Description
Analyzer	In a mirroring configuration, the analyzer includes: • The name of the analyzer • Source (input) ports, VLANs, or bridge domains

Table 5: Analyzer Terminology *(continued)*

Term	Description
	• A destination for mirrored packets (either a monitor port, VLAN, or bridge domain)
Analyzer output interface (Also known as a monitor port)	Interface to which mirrored traffic is sent and to which a protocol analyzer application is connected. NOTE: Interfaces used as output for an analyzer must be configured under the **forwarding-options** hierarchy level. Analyzer output interfaces have the following limitations: • They cannot also be a source port. • They do not participate in Layer 2 protocols, such as the Spanning Tree Protocol (STP), when part of a port-mirroring configuration. • If the bandwidth of the analyzer output interface is not sufficient to handle the traffic from the source ports, overflow packets are dropped.
Analyzer VLAN or bridge domain (Also known as a monitor VLAN or bridge domain)	VLAN or bridge domain to which mirrored traffic is sent. The mirrored traffic can be used by a protocol analyzer application. The member interfaces in the monitor VLAN or bridge domain are spread across the switching devices in your network.
Bridge-domain-based analyzer	An analyzer session whose configuration uses bridge domains for both input and output or for either input or output.
Default analyzer	An analyzer with default mirroring parameters. By default, the mirroring rate is 1 and the maximum packet length is the length of the complete packet.
Input interface (Also known as mirrored ports or monitored interfaces)	An interface on the switching device that is being mirrored. Traffic that is either entering or exiting this interface is mirrored.
LAG-based analyzer	An analyzer that has a link aggregation group (LAG) specified as the input (ingress) interface in the analyzer configuration.
Local mirroring	An analyzer configuration in which packets are mirrored to a local analyzer port.
Monitoring station	A computer running a protocol analyzer application.
Analyzer based on next-hop group	An analyzer session configuration that uses the next-hop group as the analyzer output.
Port-based analyzer	An analyzer session configuration that defines interfaces for both input and output.
Protocol analyzer application	An application used to examine packets transmitted across a network segment. Also commonly called a network analyzer, packet sniffer, or probe.
Remote mirroring	Functions the same way as local mirroring, except that the mirrored traffic is not copied to a local analyzer port but is flooded to an analyzer VLAN or bridge domain that you create specifically for the purpose of receiving mirrored traffic. Mirrored packets have an additional outer tag of the analyzer VLAN or bridge domain.

Table 5: Analyzer Terminology *(continued)*

Term	Description
Statistical analyzer (Also known as a nondefault analyzer)	You can define a set of mirroring properties that you can explicitly bind to physical ports on the switch. This set of analyzer properties is known as a statistical analyzer.
VLAN-based analyzer	An analyzer session whose configuration uses VLANs for both input and output or for either input or output.

Configuration Guidelines for Port Mirroring Analyzers

When you configure port mirroring analyzers. we recommend that you follow these guidelines to ensure optimum benefit. We recommend that you disable mirroring when you are not using it, and that you select specific interfaces as input to the analyzer rather than using the **all** keyword option, which enables mirroring on all interfaces. Mirroring only necessary packets reduces any potential performance impact.

You can also limit the amount of mirrored traffic by:

- Using statistical sampling
- Using a firewall filter
- Setting a ratio to select a statistical sample

With local mirroring, traffic from multiple ports is replicated to the analyzer output interface. If the output interface for an analyzer reaches capacity, packets are dropped. You must consider whether the traffic being mirrored exceeds the capacity of the analyzer output interface.

Table 6 on page 81 summarizes further configuration guidelines for analyzers.

Table 6: Configuration Guidelines for Port Mirroring Analyzers

Guideline	Value or Support Information	Comment
Number of analyzers that you can enable concurrently.	64—Default analyzers 2 per FPC—Statistical analyzer	• Statistical analyzers must be bound to an FPC for mirroring traffic on ports belonging to that FPC. NOTE: Default analyzer properties are implicitly bound on the last (or second to last) instance on all FPCs in the system. Therefore, when you explicitly bind a second statistical analyzer on the FPC, the default analyzer properties are overridden.
Number of interfaces, VLANs, or bridge domains that you can use as ingress input to an analyzer.	256	–

Table 6: Configuration Guidelines for Port Mirroring Analyzers *(continued)*

Guideline	Value or Support Information	Comment
Types of ports on which you cannot mirror traffic.	• Virtual Chassis ports (VCPs) • Management Ethernet ports (me0 or vme0) • Integrated routing and bridging (IRB) interfaces • VLAN-tagged Layer 3 interfaces	
Protocol families that you can include in an analyzer.	**ethernet-switching** for EX Series switches and **bridge** for MX Series routers.	Analyzer mirrors only bridged traffic. For mirroring routed traffic, use the port mirroring configuration with **family** as **inet** or **inet6**.
Packets with physical layer errors are not sent to the local or remote analyzer.	Applicable	Packets with these errors are filtered out and thus are not sent to the analyzer.
Analyzer does not support line-rate traffic.	Applicable	Mirroring for line-rate traffic is done on a best-effort basis.
Analyzer output on a LAG interface.	Supported	
Analyzer output interface mode as trunk mode.	Supported	• The trunk interface has to be a member of all VLANs or bridge domains that are related to the input configuration of analyzer. • You must use the **mirror-once** option if the input has been configured as VLAN or bridge domain and the output is a trunk interface. NOTE: With the mirror-once option, if the input is for both ingress and egress mirroring, only ingress traffic is mirrored. If both ingress and egress mirroring are required, the output interface cannot be a trunk. In such cases, configure the interface as an access interface.
Egress mirroring of host-generated control packets.	Not supported	
Configuring Layer 3 logical interfaces in the **input** stanza of an analyzer.	Not supported	
The analyzer input and output stanzas containing members of the same VLAN or the VLAN itself must be avoided.	Applicable	
Support for VLAN and its member interfaces in different analyzer sessions	Not supported	If mirroring is configured, either of the analyzers is active.

Table 6: Configuration Guidelines for Port Mirroring Analyzers *(continued)*

Guideline	Value or Support Information	Comment
Egress mirroring of aggregated Ethernet (ae) interfaces and its child logical interfaces configured for different analyzers.	Not supported	

Related Documentation

- Example: Configuring Port Mirroring Analyzers for Local Monitoring of Employee Resource Use on page 83
- Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on page 87
- *Configuring Mirroring on EX9200 Switches to Analyze Traffic (CLI Procedure)*

Example: Configuring Port Mirroring Analyzers for Local Monitoring of Employee Resource Use

Juniper Networks devices allow you to configure port mirroring to send copies of packets to either a local interface for local monitoring or to a VLAN or bridge domain for remote monitoring. You can use mirroring to copy these packets:

- Packets entering or exiting a port
- Packets entering or exiting a VLAN or bridge domain

You can then analyze the mirrored traffic locally or remotely using a protocol analyzer application. You can install analyzers on a system connected to the local destination interface, or running on a remote monitoring station if you are sending mirrored traffic to an analyzer VLAN or bridge domain.

This topic describes how to configure local mirroring on a switching device. The examples in this topic describe how to configure a switching device to mirror traffic entering interfaces connected to employee computers to an analyzer output interface on that same device.

Requirements

Use either one of the following hardware and software components:

- One EX9200 switch with Junos OS Release 13.2 or later
- One MX Series router with Junos OS Release 14.1 or later

Before you configure port mirroring, be sure you have an understanding of mirroring concepts. For information about analyzers, see "Understanding Port Mirroring Analyzers" on page 78. For information about port mirroring, see "Understanding Layer 2 Port Mirroring" on page 3.

Overview and Topology

This topic describes how to mirror all traffic entering ports on the switching device to a destination interface on the same device (local mirroring). In this case, the traffic is entering ports connected to employee computers.

NOTE: **Mirroring all traffic requires significant bandwidth and should only be done during an active investigation.**

The interfaces ge-0/0/0 and ge-0/0/1 serve as connections for employee computers.

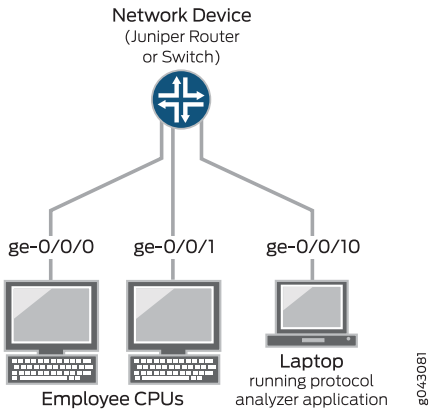
The interface ge-0/0/10 is reserved for analysis of mirrored traffic. Connect a PC running a protocol analyzer application to the analyzer output interface to analyze the mirrored traffic.

Connect a PC running a protocol analyzer application to the analyzer output interface to analyze the mirrored traffic.

NOTE: **Multiple ports mirrored to one interface can cause buffer overflow and dropped packets.**

Figure 2 on page 84 shows the network topology for this example.

Figure 2: Network Topology for Local Port Mirroring Example



Mirroring All Employee Traffic for Local Analysis

CLI Quick Configuration

To quickly configure local mirroring for ingress traffic sent to the two ports connected to employee computers, copy either the following commands for EX Series switches or for MX Series routers and paste them into the switching device's terminal window:

EX Series

```
[edit]
set interfaces ge-0/0/0 unit 0 family ethernet-switching
set interfaces ge-0/0/1 unit 0 family ethernet-switching
set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/0.0
set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/1.0
set forwarding-options analyzer employee-monitor output interface ge-0/0/10.0
```

MX Series

```
[edit]
set interfaces ge-0/0/0 unit 0 family bridge interface-mode access vlan-id 99
set interfaces ge-0/0/1 unit 0 family bridge interface-mode access vlan-id 98
set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/0.0
set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/1.0
set forwarding-options analyzer employee-monitor output interface ge-0/0/10.0
```

Step-by-Step Procedure

To configure an analyzer called **employee-monitor** and specify both the input (source) interfaces and the analyzer output interface:

1. Configure each interface you are to use in the analyzer configuration. Use the family protocol that is correct for your platform.

   EX Series

   ```
   [edit]
   set interfaces ge-0/0/0 unit 0 family ethernet-switching
   set interfaces ge-0/0/1 unit 0 family ethernet-switching
   ```

   MX Series

   To configure **family bridge** on an interface, you need to configure **interface-mode access** or **interface-mode trunk** as well. You also must configure **vlan-id**.

   ```
   [edit]
   set interfaces ge-0/0/0 unit 0 family bridge interface-mode access vlan-id 99
   set interfaces ge-0/0/1 unit 0 family bridge interface-mode access vlan-id 98
   ```

2. Configure each interface connected to employee computers as an input interface for the analyzer **employee-monitor**.

   ```
   [edit forwarding-options]
   set analyzer employee-monitor input ingress interface ge-0/0/0.0
   set analyzer employee-monitor input ingress interface ge-0/0/1.0
   ```

3. Configure the output analyzer interface for the **employee-monitor** analyzer.

   This will be the destination interface for the mirrored packets.

   ```
   [edit forwarding-options]
   ```

```
set analyzer employee-monitor output interface ge-0/0/10.0
```

Results Check the results of the configuration.

```
[edit]
user@device# show forwarding-options
analyzer {
  employee-monitor {
    input {
      ingress {
        interface ge-0/0/0.0;
        interface ge-0/0/1.0;
      }
    }
    output {
      interface ge-0/0/10.0;
    }
  }
}
```

Verification

Verifying That the Analyzer Has Been Correctly Created

Purpose Verify that the analyzer **employee-monitor** has been created on the switching device with the appropriate input interfaces and the appropriate output interface.

Action Use the **show forwarding-options analyzer** operational command to verify whether an analyzer is configured as expected.

```
user@device> show forwarding-options analyzer
Analyzer name                      : employee-monitor
  Mirror rate                      : 1
  Maximum packet length            : 0
  State                            : up
  Ingress monitored interfaces      : ge-0/0/0.0
  Output interface                 : ge-0/0/10.0
```

Meaning The output shows that the **employee-monitor** analyzer has a ratio of 1 (that is, mirroring every packet, the default setting), the maximum size of the original packet mirrored is 0 (which indicates that the entire packet is mirrored), the state of the configuration is **up**, and the analyzer is mirroring the traffic entering the ge-0/0/0 interface, and sending the mirrored traffic to the ge-0/0/10 interface.

If the state of the output interface is **down** or if the output interface is not configured, the value of **State** will be **down** and the analyzer will not be programmed for mirroring.

Related Documentation

- Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on page 87
- *Configuring Mirroring on EX9200 Switches to Analyze Traffic (CLI Procedure)*
- Understanding Port Mirroring Analyzers on page 78

Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use

Juniper Networks devices allow you to configure port mirroring to send copies of packets to either a local interface for local monitoring or to a VLAN or bridge domain for remote monitoring. You can use mirroring to copy these packets:

- Packets entering or exiting a port
- Packets entering or exiting a VLAN
- Packets entering or exiting a bridge domain

If you are sending mirrored traffic to an analyzer VLAN or bridge domain, you can analyze the mirrored traffic using a protocol analyzer application running on a remote monitoring station.

BEST PRACTICE: **Mirror only necessary packets to reduce potential performance impact. We recommend that you do the following:**

- **Disable your configured mirroring sessions when you are not using them.**
- **Specify individual interfaces as input to analyzers rather than specifying all interfaces as input.**
- **Limit the amount of mirrored traffic by:**
  - **Using statistical sampling.**
  - **Setting ratios to select statistical samples.**
  - **Using firewall filters.**

The examples in this topic describe how to configure remote port mirroring to analyze employee resource usage.

Requirements

This example uses one of the following pairs of hardware and software components:

- One EX9200 switch connected to another EX9200 switch, both running Junos OS Release 13.2 or later
- One MX Series router connected to another MX Series router, both running Junos OS Release 14.1 or later

Before you configure remote mirroring, be sure that:

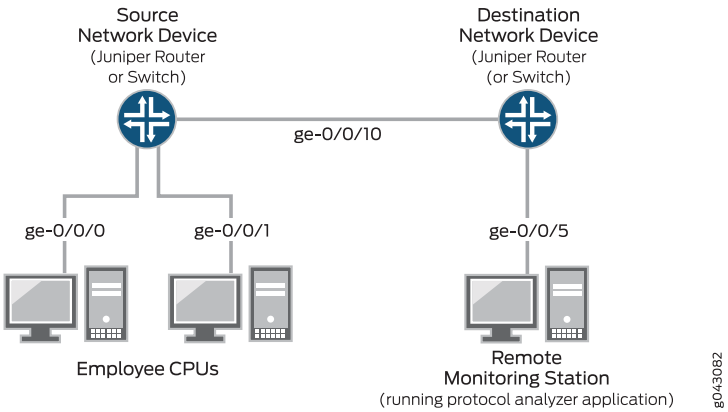
- You have an understanding of mirroring concepts. For information about analyzers, see "Understanding Port Mirroring Analyzers" on page 78. For information about port mirroring, see "Understanding Layer 2 Port Mirroring" on page 3.
- The interfaces that the analyzer will use as input interfaces have already been configured on the switching device.

Overview and Topology

This topic describes how to configure port mirroring to a remote analyzer VLAN or bridge domain so that analysis can be done from a remote monitoring station.

Figure 3 on page 88 shows the network topology for both the EX Series example and the MX Series example scenarios.

Figure 3: Network Topology for Remote Port Mirroring and Analysis



In this example:

- Interface ge-0/0/0 is a Layer 2 interface, and interface ge-0/0/1 is a Layer 3 interface (both interfaces on the source device) that serve as connections for employee computers.
- Interface ge-0/0/10 is a Layer 2 interface that connects the source switching device to the destination switching device.

- Interface ge-0/0/5 is a Layer 2 interface that connects the destination switching device to the remote monitoring station.
- The analyzer **remote-analyzer** is configured on all switching devices in the topology to carry the mirrored traffic. The topology can use either a VLAN or a bridge domain.

Mirroring Employee Traffic for Remote Analysis Using a Statistical Analyzer

To configure a statistical analyzer for remote traffic analysis for all incoming and outgoing employee traffic, select one of the following examples:

- Mirroring Employee Traffic for Remote Analysis for EX Series Switches on page 89
- Mirroring Employee Traffic for Remote Analysis for MX Series Routers on page 92

Mirroring Employee Traffic for Remote Analysis for EX Series Switches

CLI Quick Configuration

To quickly configure a statistical analyzer for remote traffic analysis of incoming and outgoing employee traffic, copy the following commands for EX Series switches and paste them into the correct switching device's terminal window.

- Copy and paste the following commands in the *source* switching device's terminal window:

  EX Series

  ```
  [edit]
  set vlans remote-analyzer vlan-id 999
  set interfaces ge-0/0/10 unit 0 family ethernet-switching interface-mode access
  set interfaces ge-0/0/10 unit 0 family ethernet-switching vlan members 999
  set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/0.0
  set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/1.0
  set forwarding-options analyzer employee-monitor input egress interface ge-0/0/0.0
  set forwarding-options analyzer employee-monitor input egress interface ge-0/0/1.0
  set forwarding-options analyzer employee-monitor output vlan remote-analyzer
  set forwarding-options analyzer employee-monitor input rate 2
  set forwarding-options analyzer employee-monitor input maximum-packet-length 128
  set chassis fpc 0 port-mirror-instance employee-monitor
  ```

- Copy and paste the following commands in the *destination* switching device's terminal window:

  EX Series

  ```
  [edit]
  set vlans remote-analyzer vlan-id 999
  set interfaces ge-0/0/10 unit 0 family ethernet-switching interface-mode access
  set interfaces ge-0/0/10 unit 0 family ethernet-switching vlan members 999
  set interfaces ge-0/0/5 unit 0 family ethernet-switching interface-mode access
  set forwarding-options analyzer employee-monitor input ingress vlan remote-analyzer
  set forwarding-options analyzer employee-monitor output interface ge-0/0/5.0
  ```

Step-by-Step Procedure

To configure basic remote mirroring:

1. On the source switching device, do the following:

- Configure the VLAN ID for the **remote-analyzer** VLAN.

  ```
  [edit]
  user@device# set vlans remote-analyzer vlan-id 999
  ```

- Configure the interface on the network port connected to the destination switching device for access mode and associate it with the **remote-analyzer** VLAN.

  ```
  [edit]
  user@device# set interfaces ge-0/0/10 unit 0 family ethernet-switching
    interface-mode access
  user@device# set interfaces ge-0/0/10 unit 0 family ethernet-switching vlan
    members 999
  ```

- Configure the statistical analyzer **employee-monitor**.

  ```
  [edit forwarding-options]
  user@device# set analyzer employee-monitor input ingress interface ge-0/0/0.0
  user@device# set analyzer employee-monitor input ingress interface ge-0/0/1.0
  user@device# set analyzer employee-monitor input egress interface ge-0/0/0.0
  user@device# set analyzer employee-monitor input egress interface ge-0/0/1.0
  user@device# set analyzer employee-monitor output vlan remote-analyzer
  user@device# set analyzer employee-monitor input rate 2
  user@device# set analyzer employee-monitor input maximum-packet-length 128
  ```

- Bind the statistical analyzer to the FPC that contains the input interface.

  ```
  [edit]
  user@device# set chassis fpc 0 port-mirror-instance employee-monitor
  ```

2. On the destination network device, do the following:

- Configure the VLAN ID for the **remote-analyzer** VLAN.

  ```
  [edit]
  user@device# set vlans remote-analyzer vlan-id 999
  ```

- Configure the interface on the destination switching device for access mode and associate it with the **remote-analyzer** VLAN.

  ```
  [edit interfaces]
  user@device# set ge-0/0/10 unit 0 family ethernet-switching interface-mode
    access
  user@device# set ge-0/0/10 unit 0 family ethernet-switching vlan members 999
  ```

- Configure the interface connected to the destination switching device for access mode.

  ```
  [edit interfaces]
  user@device# set ge-0/0/5 unit 0 family ethernet-switching interface-mode
    access
  ```

- Configure the **employee-monitor** analyzer.

  ```
  [edit forwarding-options]
  user@device# set analyzer employee-monitor input ingress vlan remote-analyzer
  user@device# set analyzer employee-monitor output interface ge-0/0/5.0
  ```

- Specify mirroring parameters such as rate and the maximum packet length for the **employee-monitor** analyzer.

  ```
  [edit]
  ```

```
user@device# set forwarding-options analyzer employee-monitor input rate 2
user@device# set forwarding-options analyzer employee-monitor input
  maximum-packet-length 128
```

- Bind the **employee-monitor** analyzer to the FPC containing the input ports.

```
[edit]
user@device# set chassis fpc 0 port-mirror-instance employee-monitor
```

Results Check the results of the configuration on the source switching device:

```
[edit]
user@device# show
forwarding-options {
  analyzer employee-monitor {
    input {
      ingress {
        interface ge-0/0/0.0;
        interface ge-0/0/1.0;
      }
      egress {
        interface ge-0/0/0.0;
        interface ge-0/0/1.0;
      }
      maximum-packet-length 128;
      rate 2;
    }
    output {
      vlan {
        remote-analyzer;
      }
    }
  }
}
interfaces {
  ge-0/0/10 {
    unit 0 {
      family ethernet-switching {
        interface-mode access;
        vlan {
          members 999;
        }
      }
    }
  }
}
vlans {
  remote-analyzer {
    vlan-id 999;
  }
}
```

Check the results of the configuration on the destination switching device.

```
[edit]
user@device# show
```

```
interfaces {
  ge0/0/5 {
    unit 0 {
      family ethernet-switching {
        interface-mode access;
      }
    }
  }
  ge-0/0/10 {
    unit 0 {
      family ethernet-switching {
        interface-mode access;
        vlan {
          members 999;
        }
      }
    }
  }
}
vlans {
  remote-analyzer {
    vlan-id 999;
    interface {
      ge-0/0/10.0;
    }
  }
}
forwarding-options {
  analyzer employee-monitor {
    input {
      ingress {
        vlan remote-analyzer;
      }
    }
    output {
      interface {
        ge-0/0/5.0;
      }
    }
  }
}
```

Mirroring Employee Traffic for Remote Analysis for MX Series Routers

CLI Quick Configuration

To quickly configure a statistical analyzer for remote traffic analysis of incoming and outgoing employee traffic, copy the following commands for MX Series routers and paste them into the correct switching device's terminal window.

- Copy and paste the following commands in the *source* switching device's terminal window:

  MX Series

  ```
  [edit]
  set bridge-domains remote-analyzer vlan-id 999
  ```

```
set interfaces ge-0/0/10 unit 0 family bridge interface-mode access
set interfaces ge-0/0/10 unit 0 family bridge vlan-id 999
set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/0.0
set forwarding-options analyzer employee-monitor input ingress interface ge-0/0/1.0
set forwarding-options analyzer employee-monitor input egress interface ge-0/0/0.0
set forwarding-options analyzer employee-monitor input egress interface ge-0/0/1.0
set forwarding-options analyzer employee-monitor output bridge-domain
  remote-analyzer
set forwarding-options analyzer employee-monitor input rate 2
set forwarding-options analyzer employee-monitor input maximum-packet-length 128
set chassis fpc 0 port-mirror-instance employee-monitor
```

- Copy and paste the following commands in the *destination* switching device's terminal window:

  MX Series

```
[edit]
set bridge-domains remote-analyzer vlan-id 999
set interfaces ge-0/0/10 unit 0 family bridge interface-mode access
set interfaces ge-0/0/10 unit 0 family bridge vlan-id 999
set interfaces ge-0/0/5 unit 0 family bridge interface-mode access
set forwarding-options analyzer employee-monitor input ingress bridge-domain
  remote-analyzer
set forwarding-options analyzer employee-monitor output interface ge-0/0/5.0
```

Step-by-Step Procedure

To configure basic remote mirroring using MX Series routers:

1. On the source switching device, do the following:

   - Configure the VLAN ID for the **remote-analyzer** bridge domain.

```
[edit]
user@device# set bridge-domains remote-analyzer vlan-id 999
```

   - Configure the interface on the network port connected to the destination switching device for access mode and associate it with the **remote-analyzer** bridge domain.

```
[edit]
user@device# set interfaces ge-0/0/10 unit 0 family bridge interface-mode access
user@device# set interfaces ge-0/0/10 unit 0 family bridge vlan members 999
```

   - Configure the statistical analyzer **employee-monitor**.

```
[edit forwarding-options]
user@device# set analyzer employee-monitor input ingress interface ge-0/0/0.0
user@device# set analyzer employee-monitor input ingress interface ge-0/0/1.0
user@device# set analyzer employee-monitor input egress interface ge-0/0/0.0
user@device# set analyzer employee-monitor input egress interface ge-0/0/1.0
user@device# set analyzer employee-monitor output bridge-domain
  remote-analyzer
user@device# set analyzer employee-monitor input rate 2
user@device# set analyzer employee-monitor input maximum-packet-length 128
```

   - Bind the statistical analyzer to the FPC that contains the input interface.

```
[edit]
user@device# set chassis fpc 0 port-mirror-instance employee-monitor
```

2. On the destination switching device, do the following:

   - Configure the VLAN ID for the **remote-analyzer** bridge domain.

     ```
     [edit bridge-domains]
     user@device# set remote-analyzer vlan-id 999
     ```

   - Configure the interface on the destination switching device for access mode and associate it with the **remote-analyzer** bridge domain.

     ```
     [edit interfaces]
     user@device# set ge-0/0/10 unit 0 family bridge interface-mode access
     user@device# set ge-0/0/10 unit 0 family bridge vlan members 999
     ```

   - Configure the interface connected to the destination switching device for access mode.

     ```
     [edit interfaces]
     user@device# set ge-0/0/5 unit 0 family bridge interface-mode access
     ```

   - Configure the **employee-monitor** analyzer.

     ```
     [edit forwarding-options]
     user@device# set analyzer employee-monitor input ingress bridge-domain
       remote-analyzer
     user@device# set analyzer employee-monitor output interface ge-0/0/5.0
     ```

   - Specify mirroring parameters such as rate and the maximum packet length for the **employee-monitor** analyzer.

     ```
     [edit]
     user@device# set forwarding-options analyzer employee-monitor input rate 2
     user@device# set forwarding-options analyzer employee-monitor input
       maximum-packet-length 128
     ```

   - Bind the **employee-monitor** analyzer to the FPC containing the input ports.

     ```
     [edit]
     user@device# set chassis fpc 0 port-mirror-instance employee-monitor
     ```

Results Check the results of the configuration on the source switching device:

```
[edit]
user@device# show
bridge-domains {
   remote-analyzer {
      vlan-id 999;
   }
}
forwarding-options {
   analyzer {
      employee-monitor {
         input {
            ingress {
               interface ge-0/0/0.0;
               interface ge-0/0/1.0;
            }
            egress {
               interface ge-0/0/0.0;
```



```
                interface ge-0/0/1.0;
            }
            maximum-packet-length 128;
            rate 2;
        }
        output {
            bridge-domain {
                remote-analyzer;
            }
        }
    }
  }
}
interfaces {
  ge-0/0/0 {
    unit 0 {
      family bridge {
        interface-mode access;
        vlan-id 99;
      }
    }
  }
  ge-0/0/1 {
    unit 0 {
      family bridge {
        interface-mode access;
        vlan-id 98;
      }
    }
  }
  ge-0/0/10 {
    unit 0 {
      family bridge {
        interface-mode access;
        vlan-id 999;
      }
    }
  }
}
```

Check the results of the configuration on the destination switching device.

```
[edit]
user@device# show
bridge-domains {
  remote-analyzer {
    vlan-id 999;
  }
}
forwarding-options {
  analyzer {
    employee-monitor {
      input {
        ingress {
          interface ge-0/0/0.0;
          interface ge-0/0/1.0;
```

```
                bridge-domain remote-analyzer;
            }
        }
        output {
            interface ge-0/0/5.0;
        }
    }
  }
}
interfaces {
  ge-0/0/5 {
    unit 0 {
      family bridge {
        interface-mode access;
      }
    }
  }
}
```

Verification

Verifying That the Analyzer Has Been Correctly Created

Purpose Verify that the analyzer named **employee-monitor** has been created on the device with the appropriate input interfaces and appropriate output interface.

Action To verify that the analyzer is configured as expected while monitoring all employee traffic on the source switching device, run the **show forwarding-options analyzer** command on the source switching device. The following output is displayed for this configuration example.

```
user@device> show forwarding-options analyzer

Analyzer name                     : employee-monitor
  Mirror rate                       : 2
  Maximum packet length             : 128
  State                             : up
  Ingress monitored interfaces      : ge-0/0/0.0
  Ingress monitored interfaces      : ge-0/0/1.0
  Egress monitored interfaces       : ge-0/0/0.0
  Egress monitored interfaces       : ge-0/0/1.0
  Output VLAN                       : default-switch/remote-analyzer
```

Meaning This output shows that the **employee-monitor** instance has a ratio of 2, the maximum size of the original packet that were mirrored is 128, the state of the configuration is **up**, which indicates proper state and that the analyzer is programmed, and the analyzer is mirroring the traffic entering ge-0/0/0.0 and ge-0/0/1.0, and is sending the mirrored traffic to the VLAN called remote-analyzer.

If the state of the output interface is **down** or if the output interface is not configured, the value of **State** will be down and the analyzer will not be able to mirror traffic.

Related Documentation

- Example: Configuring Port Mirroring Analyzers for Local Monitoring of Employee Resource Use on page 83
- *Example: Configuring Mirroring to Multiple Interfaces for Remote Monitoring of Employee Resource Use on EX9200 Switches*
- *Configuring Mirroring on EX9200 Switches to Analyze Traffic (CLI Procedure)*
- Understanding Port Mirroring Analyzers on page 78

PART 3

Configuration Statements and Operational Commands

CHAPTER 7

Configuration Statements

family (Port Mirroring)

Syntax

```
family (ccc | inet | inet6 | vpls) {
  output {
    interface interface-name {
      next-hop address;
    }
    next-hop-group group-name{
      group-type inet6;
      interface interface-name {
        next-hop ipv6-address;
      }
      next-hop-subgroup group-name{
        interface interface-name {
          next-hop ipv6-address;
        }
      }
    }
    no-filter-check;
    server-profile server-profile-name;
  }
}
```

Hierarchy Level

[edit forwarding-options port-mirroring],
[edit forwarding-options port-mirroring instance *instance-name*]

Release Information

Statement introduced before Junos OS Release 7.4.
vpls and **ccc** options introduced in Junos OS Release 9.3 for MX Series routers only.
vpls support extended to M7i, M10i, M120, and M320 routers in Junos OS Release 9.5.
ccc option introduced in Junos OS Release 9.6 for M120 and M320 routers only.
Statement introduced in Junos OS Release 12.1 for PTX Series Packet Transport Switches.
ccc option introduced in Junos OS Release 12.3R2 for EX Series switches.
next-hop-group option for **family inet6** introduced in Junos OS Release 14.2 for MX Series routers only.

Description

Configure the address type family to sample for port mirroring.

Options

ccc—Sample Layer 2 VPN traffic.

inet—Sample IPv4 traffic.

inet6—Sample IPv6 traffic.

vpls—Sample VPLS traffic.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*
- *Configuring Active Flow Monitoring on PTX Series Packet Transport Routers*

interface (Port Mirroring)

Syntax

```
interface interface-name {
   next-hop address;
}
```

Hierarchy Level

[edit forwarding-options port-mirroring output],
[edit forwarding-options port-mirroring family (inet | inet6) output]

Release Information

Statement introduced before Junos OS Release 7.4.

Description

Specify the output interface for sending copies of packets elsewhere to be analyzed.

Options

interface-name—Name of the interface.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*

input (Port Mirroring)

Syntax

```
input {
  maximum-packet-length bytes;
  rate number;
  run-length number;
}
```

Hierarchy Level

[edit forwarding-options port-mirroring],
[edit forwarding-options port-mirroring instance *instance-name*]

Release Information

Statement introduced before Junos OS Release 7.4.
maximum-packet-length option introduced in Junos OS Release 9.6 for M120 and M320 routers only.
Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.

Description

Configure input packet properties for port mirroring.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*

maximum-packet-length

Syntax maximum-packet-length *bytes*;

Hierarchy Level [edit forwarding-options analyzer analyzer-name input],
[edit forwarding-options port-mirroring input],
[edit forwarding-options port-mirroring instance *instance-name* input],
[edit forwarding-options sampling input],
[edit forwarding-options sampling instance *instance-name* input]

Release Information Statement introduced in Junos OS Release 9.6.
Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport routers.
Support at the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level introduced in Junos OS Release 14.1 for MX Series routers.
Statement introduced in Junos OS Release 17.2R1 for QFX10002 switches.
Statement introduced in Junos OS Release 17.4R1 for QFX10008 and QFX10016 switches.

Description Set the maximum length of the packet used for port mirroring or traffic sampling. Packets with lengths greater than the specified maximum are truncated.

NOTE: The **maximum-packet-length** statement is not supported when you configure inline flow monitoring (by including the **inline-jflow** statement at the **[edit forwarding-options sampling instance *instance-name* family (inet | inet6) output]** hierarchy level).

NOTE: The **maximum-packet-length** statement is not supported on MX80 Series routers.

NOTE: For MX Series routers with Modular Port Interface Concentrators (MPCs), when **maximum-packet-length** (clip length) is configured for port-mirrored packets and the mirror-destination interface is a next-hop-group, the clip length is effective only for the first member interface of the next-hop-group. The mirrored packet copy sent to the rest of the interfaces is not clipped.

Native analyzer sessions (that is, the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level for MX Series routers) can be configured without specifying input parameters, which means that the instance uses default input values: rate = 1 and maximum-packet-length = 0.

NOTE: For PTX Series routers with third-generation FPCs installed, the **maximum-packet-length** statement at the **[edit forwarding-options sampling input]** and **[edit forwarding-options sampling instance *instance-name* input]** hierarchy levels is not supported.

Options *bytes*—Maximum length (in bytes) of the mirrored packet or the sampled packet.

BEST PRACTICE: Juniper Networks recommends that you configure the packet length equal to or greater than the IP header. For IPv4, set the maximum length to at least 20, and for IPv6, set the maximum length to at least 40.

Range: 0 through 9216

Default: 0

For MX Series routers with Modular Port Concentrators (MPCs) and EX9200 switches, port-mirrored or sampled packets can be truncated (or clipped) to any length in the range of 1 through 255 bytes.

For other devices, the range is from 0 through 9216. A maximum-packet-length value of zero represents that truncation is disabled, and the entire packet is mirrored or sampled.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*
- *Configuring Traffic Sampling*

no-filter-check

Syntax

no-filter-check;

Hierarchy Level

[edit forwarding-options port-mirroring output],
[edit forwarding-options port-mirroring family (inet | inet6 | ccc | vpls) output]

Release Information

Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.

Description

Disable filter checking on the port-mirroring interface.

This statement is required when you send port-mirrored traffic to a Tunnel Services PIC that has a filter applied to it.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*

output (Port Mirroring)

Syntax

```
output {
  interface interface-name {
    next-hop address;
  }
  next-hop-group group-name{
    group-type inet6;
    interface interface-name {
      next-hop ipv6-address;
    }
    next-hop-subgroup group-name{
      interface interface-name {
        next-hop ipv6-address;
      }
    }
  }
  no-filter-check;
  server-profile server-profile-name;
}
```

Hierarchy Level

[edit forwarding-options port-mirroring family (ccc | inet | inet6 | mpls | vpls)],
[edit forwarding-options port-mirroring instance *instance-name* family (ccc | inet | inet6 | mpls | vpls)]

Release Information

Statement introduced before Junos OS Release 7.4.
vpls option introduced in Junos OS Release 9.3 for MX Series routers only; support extended to M7i, M10i, M120, and M320 routers in Junos OS Release 9.5.
ccc option introduced in Junos OS Release 9.6 for M120 and M320 routers only.
server-profile option introduced in Junos OS Release 13.2 for PTX Series Packet Transport Routers only.
next-hop-group option introduced for **family inet6** in Junos OS Release 14.2 for MX Series routers only.

Description

Configure the port mirroring destination properties.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*
- *Configuring Active Flow Monitoring on PTX Series Packet Transport Routers*

port-mirroring

Syntax

```
port-mirroring {
  input {
    maximum-packet-length bytes;
    rate number;
    run-length number;
  }
  family (ccc | inet | inet6 | vpls) {
    output {
      interface interface-name {
        next-hop address;
      }
      next-hop-group group-name{
        group-type inet6;
        interface interface-name {
          next-hop ipv6-address;
        }
        next-hop-subgroup group-name{
          interface interface-name {
            next-hop ipv6-address;
          }
        }
      }
      no-filter-check;
    }
  }
  instance {
    instance-name {
      input {
        maximum-packet-length bytes;
        rate number;
        run-length number;
      }
      family (ccc | inet | inet6 | vpls) {
        output {
          interface interface-name {
            next-hop address;
          }
          no-filter-check;
          server-profile server-profile-name;
        }
      }
    }
  }
  mirror-once;
  traceoptions {
    file filename <files number> <size bytes> <world-readable | no-world-readable>;
  }
}
```

Hierarchy Level [edit forwarding-options]

Release Information

Statement introduced before Junos OS Release 7.4.
family vpls statement introduced in Junos OS Release 9.3 (MX Series routers only); support extended to M7i, M10, M120, and M320 routers in Junos OS Release 9.5.
instance ***port-mirroring-instance-name*** statement introduced in Junos OS Release 9.3 (MX Series routers only); support extended to M120 and M320 routers in Junos OS Release 9.5.
mirror-once statement introduced in Junos OS Release 9.3 (MX Series routers only); support extended to M120 routers in Junos OS Release 9.5.
family ccc statement introduced in Junos OS Release 9.6 (M120 and M320 routers only). Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.
family inet6 and **next-hop-group** statements introduced in Junos OS Release 14.2 (MX Series routers only).

Description

Specify the address family, rate, run length, interface, and next-hop address for sending copies of packets to an analyzer.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*
- *Configuring Active Flow Monitoring on PTX Series Packet Transport Routers*

rate (Forwarding Options)

Syntax

rate *number*;

Hierarchy Level

[edit forwarding-options analyzer *analyzer-name* input],
[edit forwarding-options port-mirroring family (inet | inet6) input],
[edit forwarding-options port-mirroring input],
[edit forwarding-options sampling input],
[edit forwarding-options sampling instance *instance-name* input]

Release Information

Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport routers.
Support at the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level for MX Series routers introduced in Junos OS Release 14.1.
Statement introduced in Junos OS Release 17.2R1 for QFX10002 switches.
Statement introduced in Junos OS Release 17.4R1 for QFX10008 and QFX10016 switches.

Description

Set the ratio of the number of packets to be sampled. For example, if you specify a rate of 10, every tenth packet (1 packet out of 10) is sampled.

Native analyzer sessions (that is, the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level for MX Series routers) can be configured without specifying input parameters, which means that the instance uses default input values: rate = 1 and maximum-packet-length = 0.

Options

number—Denominator of the ratio.

Range: 1 through 16000000(16M)

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*
- *Configuring Traffic Sampling*

run-length

Syntax run-length *number*;

Hierarchy Level [edit forwarding-options port-mirroring input],
[edit forwarding-options port-mirroring instance *port-mirroring-instance-name* input],
[edit forwarding-options port-mirroring family (inet|inet6) input],
[edit forwarding-options sampling input],
[edit forwarding-options sampling instance *instance-name* input]

Release Information Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport routers.
Statement introduced in Junos OS Release 17.2R1 for QFX10002 switches.
Statement introduced in Junos OS Release 17.4R1 for QFX10008 and QFX10016 switches.

Description Set the number of samples following the initial trigger event. The configuration enables you to sample packets following those already being sampled.

NOTE: The **run-length** statement is not supported when you configure inline flow monitoring (by including the **inline-jflow** statement at the **[edit forwarding-options sampling instance** *instance-name* **family (inet | inet6) output]** hierarchy level).

Options *number*—Number of samples.

Range: 0 through 20

Default: 0

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Applying Forwarding Table Filters*
- *Configuring Port Mirroring*
- *Configuring Traffic Sampling*

analyzer (Port Mirroring)

Syntax

```
analyzer {
  analyzer-name {
    input {
      egress {
        bridge-domain bridge-domain-name;
        interface (all | interface-name);
        routing-instance {
          instance-name {
            bridge-domain bridge-domain-name;
          }
        }
      }
      ingress {
        bridge-domain bridge-domain-name;
        interface (all | interface-name);
        routing-instance {
          instance-name {
            bridge-domain bridge-domain-name;
          }
          vlan (vlan-id | vlan-name);
        }
        vlan (vlan-id | vlan-name);
      }
      maximum-packet-length bytes;
      rate number;
    }
    output {
      bridge-domain bridge-domain-name;
      interface interface-name;
      next-hop-group next-hop-group-name;
      routing-instance {
        instance-name {
          bridge-domain {
            bridge-domain-name;
          }
        }
        vlan (vlan-id | vlan-name);
      }
      vlan (vlan-id | vlan-name);
    }
  }
}
```

Hierarchy Level [edit forwarding-options]

Release Information Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Statement introduced in Junos OS Release 14.1 for MX Series routers.

Description Configure port mirroring.

Default Port mirroring is disabled and Junos OS creates no default analyzers.

Options ***analyzer-name***—Name that identifies the analyzer. The name can be up to 125 characters long, must begin with a letter, and can include uppercase letters, lowercase letters, numbers, dashes, and underscores. No other special characters are allowed.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- Understanding Port Mirroring Analyzers on page 78
- Example: Configuring Port Mirroring Analyzers for Local Monitoring of Employee Resource Use on page 83
- Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on page 87

bridge-domain (Analyzer)

Syntax bridge-domain *bridge-domain-name*;

Hierarchy Level [edit forwarding-options analyzer *analyzer-name* input egress],
[edit forwarding-options analyzer *analyzer-name* input egress routing-instance *instance-name*],
[edit forwarding-options analyzer *analyzer-name* input ingress],
[edit forwarding-options analyzer *analyzer-name* input ingress routing-instance *instance-name*],
[edit forwarding-options analyzer *analyzer-name* output],
[edit forwarding-options analyzer *analyzer-name* output routing-instance *instance-name*]

Release Information Statement introduced in Junos OS Release 14.1.

Description Configure the bridge domain to monitor outgoing traffic.

Options ***bridge-domain-name***—Name of the bridge domain that monitors outgoing traffic.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on page 87
- *Example: Configuring Mirroring to Multiple Interfaces for Remote Monitoring of Employee Resource Use on EX9200 Switches*

egress (Analyzer)

Syntax

```
egress {
  bridge-domain bridge-domain-name;
  interface (all | interface-name);
  routing-instance {
    instance-name {
      bridge-domain bridge-domain-name;
    }
  }
}
```

Hierarchy Level

[edit forwarding-options analyzer *analyzer-name* input]

Release Information

Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Statement introduced in Junos OS Release 14.1 for MX Series routers.

Description

Specify ports where traffic exiting the interface is to be mirrored in a mirroring configuration.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Example: Configuring Mirroring for Remote Monitoring of Employee Resource Use Through a Transit Switch on EX9200 Switches*

ingress (Analyzer)

Syntax

```
ingress {
  bridge-domain bridge-domain-name;
  interface (all | interface-name);
  routing-instance {
    instance-name {
      bridge-domain bridge-domain-name;
    }
    vlan (vlan-id | vlan-name);
  }
  vlan (vlan-id | vlan-name);
}
```

Hierarchy Level

[edit forwarding-options analyzer *analyzer-name* input]

Release Information

Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Statement introduced in Junos OS Release 14.1 for MX Series routers.

Description

Configure ports, routing instances, VLANs, or bridge domains for which the entering traffic is mirrored as part of a mirroring configuration.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Example: Configuring Mirroring for Remote Monitoring of Employee Resource Use Through a Transit Switch on EX9200 Switches*

instance (Port Mirroring)

Syntax

```
instance instance-name {
   disable;
   input {
      rate number;
      maximum-packet-length bytes
   }
   family (any | inet | inet6 | vpls) {
      output {
         (next-hop-group group-name | interface interface-name);
      }
   }
}
```

Hierarchy Level [edit forwarding-options port-mirroring]

Release Information Statement introduced in Junos OS Release 9.6.

Description Configure a port-mirroring instance.

The remaining statements are explained separately. See CLI Explorer.

Usage Guidelines See *Sampling Instance Configuration*.

Required Privilege Level
interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

input (Analyzer)

Syntax

```
input {
  egress {
    bridge-domain bridge-domain-name;
    interface (all | interface-name);
    routing-instance {
      instance-name {
        bridge-domain bridge-domain-name;
      }
    }
  }
  ingress {
    bridge-domain bridge-domain-name;
    interface (all | interface-name);
    routing-instance {
      instance-name {
        bridge-domain bridge-domain-name;
      }
      vlan (vlan-id | vlan-name);
    }
    vlan (vlan-id | vlan-name);
  }
  maximum-packet-length bytes;
  rate number;
}
```

Hierarchy Level

[edit forwarding-options analyzer *analyzer-name*]

Release Information

Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Statement introduced in Junos OS Release 14.1 for MX Series routers.

Description

Define the traffic to be mirrored in a mirroring configuration—the definition can be a combination of:

- Packets entering or exiting a port
- Packets entering or exiting a VLAN
- Packets entering or exiting a bridge domain

The remaining statements are explained separately. See CLI Explorer.

Native analyzer sessions (that is, the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level for MX Series routers) can be configured without specifying input parameters, which would mean that the instance uses default input values: rate = 1 and maximum-packet-length = 0.

Default

No default.

Required Privilege Level
interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation
- Example: Configuring Port Mirroring Analyzers for Local Monitoring of Employee Resource Use on page 83
- Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on page 87
- Understanding Port Mirroring Analyzers on page 78

interface (Analyzer)

Syntax
interface (all | *interface-name*);

Hierarchy Level
[edit forwarding-options analyzer *analyzer-name* input egress],
[edit forwarding-options analyzer *analyzer-name* input ingress],
[edit forwarding-options analyzer *analyzer-name* output]

Release Information
Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Statement introduced in Junos OS Release 14.1 for MX Series routers.

Description
Configure the interfaces for which traffic is mirrored.

Options
all—Apply mirroring to all interfaces on the network device. Mirroring a high volume of traffic can be performance intensive for the device. Therefore, you should generally select specific input interfaces in preference to using the **all** keyword, or use the **all** keyword in combination with setting a ratio for statistical sampling. The **all** keyword is not available for the **[edit forwarding-options analyzer *analyzer-name* output]** hierarchy level.

interface-name—Apply mirroring to the specified interface only.

Required Privilege Level
interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation
- Example: Configuring Port Mirroring Analyzers for Local Monitoring of Employee Resource Use on page 83
- Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on page 87
- Understanding Port Mirroring Analyzers on page 78

next-hop-group (Analyzer)

Syntax next-hop-group *next-hop-group-name*;

Hierarchy Level [edit forwarding-options analyzer *analyzer-name* ouput]

Release Information Statement introduced in Junos OS Release 14.1 for MX Series routers.

Description Configure next-hop group through which the port-mirrored traffic is sent.

Options ***next-hop-group-name***—Name of the next-hop group through which the port-mirrored traffic is sent.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Example: Configuring Mirroring to Multiple Interfaces for Remote Monitoring of Employee Resource Use on EX9200 Switches*

output (Mirroring)

Syntax

```
output {
  bridge-domain bridge-domain-name;
  interface interface-name;
  next-hop-group next-hop-group-name;
  routing-instance {
    instance-name {
      bridge-domain {
        bridge-domain-name;
      }
    }
    vlan (vlan-id | vlan-name);
  }
  vlan (vlan-id | vlan-name);
}
```

Hierarchy Level

[edit forwarding-options analyzer *analyzer-name*]

Release Information

Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Statement introduced in Junos OS Release 14.1 for MX Series routers.

Description

Configure the destination for mirrored traffic, either an interface on the network device for local monitoring, or a VLAN or bridge domain, for remote monitoring.

The remaining statements are explained separately. See CLI Explorer.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- Example: Configuring Port Mirroring Analyzers for Local Monitoring of Employee Resource Use on page 83
- Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on page 87

maximum-packet-length

Syntax maximum-packet-length *bytes*;

Hierarchy Level [edit forwarding-options analyzer analyzer-name input],
[edit forwarding-options port-mirroring input],
[edit forwarding-options port-mirroring instance *instance-name* input],
[edit forwarding-options sampling input],
[edit forwarding-options sampling instance *instance-name* input]

Release Information Statement introduced in Junos OS Release 9.6.
Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport routers.
Support at the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level introduced in Junos OS Release 14.1 for MX Series routers.
Statement introduced in Junos OS Release 17.2R1 for QFX10002 switches.
Statement introduced in Junos OS Release 17.4R1 for QFX10008 and QFX10016 switches.

Description Set the maximum length of the packet used for port mirroring or traffic sampling. Packets with lengths greater than the specified maximum are truncated.

NOTE: The **maximum-packet-length** statement is not supported when you configure inline flow monitoring (by including the **inline-jflow** statement at the **[edit forwarding-options sampling instance *instance-name* family (inet | inet6) output]** hierarchy level).

NOTE: The **maximum-packet-length** statement is not supported on MX80 Series routers.

NOTE: For MX Series routers with Modular Port Interface Concentrators (MPCs), when **maximum-packet-length** (clip length) is configured for port-mirrored packets and the mirror-destination interface is a next-hop-group, the clip length is effective only for the first member interface of the next-hop-group. The mirrored packet copy sent to the rest of the interfaces is not clipped.

Native analyzer sessions (that is, the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level for MX Series routers) can be configured without specifying input parameters, which means that the instance uses default input values: rate = 1 and maximum-packet-length = 0.

NOTE: For PTX Series routers with third-generation FPCs installed, the **maximum-packet-length** statement at the **[edit forwarding-options sampling input]** and **[edit forwarding-options sampling instance *instance-name* input]** hierarchy levels is not supported.

Options *bytes*—Maximum length (in bytes) of the mirrored packet or the sampled packet.

BEST PRACTICE: Juniper Networks recommends that you configure the packet length equal to or greater than the IP header. For IPv4, set the maximum length to at least 20, and for IPv6, set the maximum length to at least 40.

Range: 0 through 9216

Default: 0

For MX Series routers with Modular Port Concentrators (MPCs) and EX9200 switches, port-mirrored or sampled packets can be truncated (or clipped) to any length in the range of 1 through 255 bytes.

For other devices, the range is from 0 through 9216. A maximum-packet-length value of zero represents that truncation is disabled, and the entire packet is mirrored or sampled.

Required Privilege Level
interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*
- *Configuring Traffic Sampling*

rate (Forwarding Options)

Syntax

rate *number*;

Hierarchy Level

[edit forwarding-options analyzer *analyzer-name* input],
[edit forwarding-options port-mirroring family (inet | inet6) input],
[edit forwarding-options port-mirroring input],
[edit forwarding-options sampling input],
[edit forwarding-options sampling instance *instance-name* input]

Release Information

Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport routers.
Support at the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level for MX Series routers introduced in Junos OS Release 14.1.
Statement introduced in Junos OS Release 17.2R1 for QFX10002 switches.
Statement introduced in Junos OS Release 17.4R1 for QFX10008 and QFX10016 switches.

Description

Set the ratio of the number of packets to be sampled. For example, if you specify a rate of 10, every tenth packet (1 packet out of 10) is sampled.

Native analyzer sessions (that is, the **[edit forwarding-options analyzer analyzer-name input]** hierarchy level for MX Series routers) can be configured without specifying input parameters, which means that the instance uses default input values: rate = 1 and maximum-packet-length = 0.

Options

number—Denominator of the ratio.

Range: 1 through 16000000(16M)

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

- *Configuring Port Mirroring*
- *Configuring Traffic Sampling*

routing-instance

Syntax

```
routing-instance {
  instance-name {
    bridge-domain bridge-domain-name;
  }
  vlan (vlan-id | vlan-name);
}
```

Hierarchy Level

[edit forwarding-options ananlyzer *analyzer-name* input egress],
[edit forwarding-options ananlyzer *analyzer-name* input ingress],
[edit forwarding-options ananlyzer *analyzer-name* output]

Release Information

Statement introduced in Junos OS Release 14.1.

Description

Configure routing instance.

Options

instance-name—Name of the routing instance.

Required Privilege Level

interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

Related Documentation

CHAPTER 8

Operational Commands

show chassis fabric fpcs

List of Syntax

Syntax

show chassis fabric fpcs
<lcc *number*>

Syntax (MX Series Routers)

show chassis fabric fpcs
<extended>
<all-members>
<local>
<member *member-id*>

Syntax (MX2010, MX2020, MX10003, and MX2008 3D Universal Edge Routers)

show chassis fabric fpcs

Syntax (T4000 Core Router)

show chassis fabric fpcs

Syntax (PTX Series Packet Transport Routers)

show chassis fabric fpcs <slot *fpc-slot*>

Syntax (TX Matrix Plus Router)

show chassis fabric fpcs
<lcc *number*>

Syntax (QFX Series Switches)

show chassis fabric fpcs <slot *fpc-slot*>

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.4 for EX Series switches.
Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.
Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.
Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.
Command introduced in Junos OS Release 15.1X53-D30 for QFX Series switches.
extended option introduced in JunosOS Release 16.1 for MX2020 and MX2010 Routers.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.

Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.

Description Display the state of the electrical switch fabric links between the Flexible PIC Concentrators (FPCs) and the Switch Interface Boards (SIBs).

Options

none—Display the switch fabric link state. On a TX Matrix router, display the switching fabric link states for the FPCs in all T640 routers connected to the TX Matrix router. On a TX Matrix Plus router, display the switching fabric link states for the FPCs in all routers connected to the TX Matrix Plus router.

extended—(MX2020 and MX2010 Routers with SFB2) (Optional) Display the fabric link state for all 24 fabric planes.

all-members—(MX Series routers only) (Optional) Display the switching fabric link states for the FPCs in all members of the Virtual Chassis configuration.

lcc *number*—(TX Matrix router and TX Matrix Plus router only) (Optional) On a TX Matrix router, display the switch fabric link state for the FPCs in the specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display the switch fabric link state for the FPCs in the specified router (line-card chassis) that is connected to the TX Matrix Plus router. Replace ***number*** with a following value depending on the LCC configurations:

- From **0** through **3** on a T640 router on the routing matrix with TX Matirx routers.
- From **0** through **3** on a T1600 router on the routing matrix with TX Matirx Plus routers.
- From **0** through **7** on a T1600 router in a routing matrix with TX Matrix Plus router with 3D SIBs.
- **0**, **2**, **4**, **6** on a T4000 router in a routing matrix with TX Matrix Plus router with 3D SIBs.

local—(MX Series routers only) (Optional) Display the switching fabric link states for the FPCs in the local Virtual Chassis member.

member *member-id*—(MX Series routers only) (Optional) Display the switching fabric link states for the FPCs in the specified member of the Virtual Chassis configuration. Replace ***member-id*** with a value of 0 or 1.

slot *fpc-slot*—(PTX Series Packet Transport Routers and QFX Series switches only) (Optional) Display the fabric state of the specified FPC slot. If no value is provided, display the status of all FPCs.

Required Privilege Level view

Related Documentation

- *request chassis fabric fpc*
- show chassis fpc on page 177

- *Displaying Information About DPCs or FPCs in an MX Series Router*

List of Sample Output

Output Fields

Table 7 on page 131 lists the output fields for the **show chassis fabric fpcs** command. Output fields are listed in the approximate order in which they appear.

Table 7: show chassis fabric fpcs Output Fields

Field Name	Field Description

Fabric management FPC state	Switching fabric link (link from SIB to FPC) state for each FPC:
	• **Unused**—FPC is not present.
	(On MX240 and MX480 routers with AS- MLC modular carrier card or MPC4E only) the fabric plane from the pair that share physical links (1 and 5, and 3 and 7) is inactive.
	• **Destination error on PFEs *list of PFE numbers***—Destination errors to the listed Packet Forwarding Engines. Indicates that the link is not carrying traffic to the listed Packet Forwarding Engines.
	NOTE: In Junos OS Release 9.6 and later, the list of Packet Forwarding Engines with destination errors is displayed in the output.
	In Junos OS Releases before 9.6, the output only indicates that there are destination errors. However, the list of Packet Forwarding Engines with destination errors is not displayed.
	• **Links ok**—Link between the spare SIB and FPC is eligible to carry traffic.
	• **Link error**—Link between the SIB and FPC has CRC errors. However, the link is still eligible to carry traffic.
	• **Plane disabled**—Fabric plane has been disabled for the following reasons:
	  • Destination errors have exceeded the thresholds.
	  • Run-time link errors have exceeded the thresholds.
	  • Initialization time link errors detected, and link training was unsuccessful.
	  • **Plane Disabled, Links Error** (PTX Series Packet Transport Routers and QFX Series switches only)—The plane is disabled because of link errors detected at the FPC RX.
	• **Plane Disabled, Links Down** (PTX Series Packet Transport Routers and QFX Series switches only)—The plane is disabled because of link errors detected at the SIB RX.
	• **Plane enabled**—Link between the active SIB and FPC is eligible to carry traffic.
	NOTE: On the Enhanced MX SCB with MPC, a maximum of 4 planes are operational and running. On all the other SCBs with MPC, all the planes are operational and running.
	• **Plane Enabled, Links OK** (PTX Series Packet Transport Routers and QFX Series switches only)—The FPC CCL RX link is eligible to carry traffic.
	• **Plane Enabled, Links OK** (TX Matrix and TX Matrix Plus routers only)—The FPC HSL RX link is eligible to carry traffic.

Sample Output

show chassis fabric fpcs (M320 Router)

```
user@host> show chassis fabric fpcs
```

```
Fabric management FPC state:
FPC #2
  PFE #1
    SIB #0
             Plane enabled
    SIB #1
             Plane enabled
    SIB #2
             Plane enabled
    SIB #3
             Plane enabled
```

show chassis fabric fpcs (MX240 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 2
  PFE #0
       Plane 0: Plane enabled
       Plane 1: Plane enabled
       Plane 2: Plane enabled
       Plane 3: Plane enabled
       Plane 4: Links ok
       Plane 5: Links ok
       Plane 6: Links ok
       Plane 7: Links ok
  PFE #1
       Plane 0: Plane enabled
       Plane 1: Plane enabled
       Plane 2: Plane enabled
       Plane 3: Plane enabled
       Plane 4: Links ok
       Plane 5: Links ok
       Plane 6: Links ok
       Plane 7: Links ok
  PFE #2
       Plane 0: Plane enabled
       Plane 1: Plane enabled
       Plane 2: Plane enabled
       Plane 3: Plane enabled
       Plane 4: Links ok
       Plane 5: Links ok
       Plane 6: Links ok
       Plane 7: Links ok
  PFE #3
       Plane 0: Plane enabled
       Plane 1: Plane enabled
       Plane 2: Plane enabled
       Plane 3: Plane enabled
       Plane 4: Links ok
       Plane 5: Links ok
       Plane 6: Links ok
       Plane 7: Links ok
```

show chassis fabric fpcs (MX480 Router)

```
user@host> show chassis fabric fpcs

FPC 0
  PFE #0
```

```
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
  PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
  PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
FPC 1
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
```

show chassis fabric fpcs (MX960 Router)

```
user@host> show chassis fabric fpcs
FPC 0
  PFE #0
        Plane 0: Plane enabled
```

```
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
  PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
  PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
FPC 1
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
FPC 2
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
  PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
```

```
        Plane 4: Links ok
...
```

show chassis fabric fpcs (MX240 with AS MLC Modular Carrier Card)

In the following output, FPC 1 is the AS MLC modular carrier card (AS MCC).

```
user@host>show chassis fabric fpcs
FPC 1
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Unused
      Plane 6: Plane enabled
      Plane 7: Unused
FPC 2
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
```

show chassis fabric fpcs (MX480 with AS MLC Modular Carrier Card)

In the following output, FPC 5 is the AS MLC modular carrier card (AS MCC).

```
user@host>show chassis fabric fpcs
FPC 2
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
FPC 4
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
      Plane 6: Links ok
      Plane 7: Links ok
  PFE #2
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
```

```
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
FPC 5
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Unused
        Plane 6: Plane enabled
        Plane 7: Unused
```

show chassis fabric fpcs (MX480 Router with MPC4E)

In the following output, **FPC4** is the MPC4E (MPC4E-3D-32XGE-SFPP) card.

```
user@host > show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Links ok
        Plane 6: Plane enabled
        Plane 7: Links ok
  PFE #1
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Links ok
        Plane 6: Plane enabled
        Plane 7: Links ok
FPC 1
  PFE #0
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Links ok
        Plane 6: Plane enabled
        Plane 7: Links ok
  PFE #1
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Links ok
        Plane 6: Plane enabled
        Plane 7: Links ok
  PFE #2
        Plane 0: Links ok
        Plane 1: Links ok
```

```
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Links ok
        Plane 6: Plane enabled
        Plane 7: Links ok
    PFE #3
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Links ok
        Plane 6: Plane enabled

FPC 3
    PFE #0
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Links ok
        Plane 6: Plane enabled
        Plane 7: Links ok
FPC 4
    PFE #0
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Unused
        Plane 6: Plane enabled
        Plane 7: Unused
    PFE #1
        Plane 0: Links ok
        Plane 1: Links ok
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Unused
        Plane 6: Plane enabled
        Plane 7: Unused
```

show chassis fabric fpcs (MX960 with AS MLC Modular Carrier Card

In the following output, FPC 5 is the AS MLC modular carrier card (AS MCC).

```
user@host>show chassis fabric fpcs
Fabric management FPC state:
FPC 0
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
    PFE #1
        Plane 0: Plane enabled
```

```
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
FPC 1
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
FPC 4
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
  PFE #2
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
  PFE #3
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
FPC 5
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
FPC 8
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
```



```
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
    PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
```

show chassis fabric fpcs (MX2010 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane disabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane disabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
FPC 1
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane disabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
FPC 2
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane disabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
```

```
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  FPC 3
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
   Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  FPC 4
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  FPC 5
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
```



```
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
FPC 6
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
FPC 7
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
```

```
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
   Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  FPC 8
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  FPC 9
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane disabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
```

show chassis fabric fpcs (MX2020 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
```

```
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  FPC 1
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  FPC 2
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
```

```
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
FPC 3
    PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
```



```
  PFE #3
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
FPC 4
...
```

show chassis fabric fpcs (MX2020 Router with MPC4E)

```
user@host > show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
FPC 9
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
FPC 10
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
```

```
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
FPC 14
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
FPC 19
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
  PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
```

show chassis fabric fpcs (MX2020 Router with SFB2)

```
user@host> show chassis fabric fpcs extended
Fabric management FPC state:
FPC 0
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Destination error
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
      Plane 8: Destination error
      Plane 9: Destination error
      Plane 10: Destination error
      Plane 11: Destination error
      Plane 12: Plane enabled
      Plane 13: Plane enabled
      Plane 14: Plane enabled
      Plane 15: Plane enabled
      Plane 16: Plane enabled
      Plane 17: Plane enabled
      Plane 18: Plane disabled
      Plane 19: Plane disabled
      Plane 20: Plane disabled
      Plane 21: Destination error
      Plane 22: Plane enabled
      Plane 23: Plane enabled
FPC 1
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
      Plane 8: Plane enabled
      Plane 9: Plane enabled
      Plane 10: Plane enabled
      Plane 11: Plane enabled
      Plane 12: Plane enabled
      Plane 13: Plane enabled
      Plane 14: Plane enabled
      Plane 15: Plane enabled
      Plane 16: Plane enabled
      Plane 17: Plane enabled
      Plane 18: Plane disabled
      Plane 19: Plane disabled
      Plane 20: Plane disabled
      Plane 21: Plane enabled
      Plane 22: Plane enabled
      Plane 23: Plane enabled
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
```

```
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
    Plane 9: Plane enabled
    Plane 10: Plane enabled
    Plane 11: Plane enabled
    Plane 12: Plane enabled
    Plane 13: Plane enabled
    Plane 14: Plane enabled
    Plane 15: Plane enabled
    Plane 16: Plane enabled
    Plane 17: Plane enabled
    Plane 18: Plane disabled
    Plane 19: Plane disabled
    Plane 20: Plane disabled
    Plane 21: Plane enabled
    Plane 22: Plane enabled
    Plane 23: Plane enabled
PFE #2
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
    Plane 9: Plane enabled
    Plane 10: Plane enabled
    Plane 11: Plane enabled
    Plane 12: Plane enabled
    Plane 13: Plane enabled
    Plane 14: Plane enabled
    Plane 15: Plane enabled
    Plane 16: Plane enabled
    Plane 17: Plane enabled
    Plane 18: Plane disabled
    Plane 19: Plane disabled
    Plane 20: Plane disabled
    Plane 21: Plane enabled
    Plane 22: Plane enabled
    Plane 23: Plane enabled
PFE #3
    Plane 0: Plane enabled
    Plane 1: Plane enabled
    Plane 2: Plane enabled
    Plane 3: Plane enabled
    Plane 4: Plane enabled
    Plane 5: Plane enabled
    Plane 6: Plane enabled
    Plane 7: Plane enabled
    Plane 8: Plane enabled
    Plane 9: Plane enabled
    Plane 10: Plane enabled
    Plane 11: Plane enabled
    Plane 12: Plane enabled
    Plane 13: Plane enabled
    Plane 14: Plane enabled
```



```
      Plane 15: Plane enabled
      Plane 16: Plane enabled
      Plane 17: Plane enabled
      Plane 18: Plane disabled
      Plane 19: Plane disabled
      Plane 20: Plane disabled
      Plane 21: Plane enabled
      Plane 22: Plane enabled
      Plane 23: Plane enabled
...

FPC 19
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
      Plane 8: Plane enabled
      Plane 9: Plane enabled
      Plane 10: Plane enabled
      Plane 11: Plane enabled
      Plane 12: Plane enabled
      Plane 13: Plane enabled
      Plane 14: Plane enabled
      Plane 15: Plane enabled
      Plane 16: Plane enabled
      Plane 17: Plane enabled
      Plane 18: Unused
      Plane 19: Unused
      Plane 20: Unused
      Plane 21: Plane enabled
      Plane 22: Plane enabled
      Plane 23: Plane enabled
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Plane enabled
      Plane 5: Plane enabled
      Plane 6: Plane enabled
      Plane 7: Plane enabled
      Plane 8: Plane enabled
      Plane 9: Plane enabled
      Plane 10: Plane enabled
      Plane 11: Plane enabled
      Plane 12: Plane enabled
      Plane 13: Plane enabled
      Plane 14: Plane enabled
      Plane 15: Plane enabled
      Plane 16: Plane enabled
      Plane 17: Plane enabled
     Plane 18: Unused
      Plane 19: Unused
      Plane 20: Unused
      Plane 21: Plane enabled
      Plane 22: Plane enabled
```

```
        Plane 23: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
        Plane 12: Plane enabled
        Plane 13: Plane enabled
        Plane 14: Plane enabled
        Plane 15: Plane enabled
        Plane 16: Plane enabled
        Plane 17: Plane enabled
        Plane 18: Unused
        Plane 19: Unused
        Plane 20: Unused
        Plane 21: Plane enabled
        Plane 22: Plane enabled
        Plane 23: Plane enabled
    PFE #3
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
        Plane 12: Plane enabled
      Plane 13: Plane enabled
        Plane 14: Plane enabled
        Plane 15: Plane enabled
        Plane 16: Plane enabled
        Plane 17: Plane enabled
        Plane 18: Unused
        Plane 19: Unused
        Plane 20: Unused
        Plane 21: Plane enabled
        Plane 22: Plane enabled
        Plane 23: Plane enabled
```

show chassis fabric fpcs (MX2008 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC 0
  PFE #0
      Plane 0: Plane disabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
```

```
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
    PFE #1
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
    PFE #2
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
    PFE #3
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
FPC 1
    PFE #0
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
    PFE #1
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
    PFE #2
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
    PFE #3
```

```
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
FPC 3
  PFE #0
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
FPC 5
  PFE #0
        Plane 0: Plane disabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane disabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane disabled
```

show chassis fabric fpcs (MX10003 Router)

```
user@host> show chassis fabric fpcs

Fabric management FPC state:
FPC 1
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
        Plane 12: Plane enabled
        Plane 13: Plane enabled
        Plane 14: Plane enabled
        Plane 15: Plane enabled
        Plane 16: Plane enabled
        Plane 17: Plane enabled
        Plane 18: Plane enabled
        Plane 19: Plane enabled
        Plane 20: Plane enabled
        Plane 21: Plane enabled
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
```



```
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
        Plane 12: Plane enabled
        Plane 13: Plane enabled
        Plane 14: Plane enabled
        Plane 15: Plane enabled
        Plane 16: Plane enabled
        Plane 17: Plane enabled
        Plane 18: Plane enabled
        Plane 19: Plane enabled
        Plane 20: Plane enabled
        Plane 21: Plane enabled
    PFE #2
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Plane enabled
        Plane 5: Plane enabled
        Plane 6: Plane enabled
        Plane 7: Plane enabled
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
        Plane 12: Plane enabled
        Plane 13: Plane enabled
        Plane 14: Plane enabled
        Plane 15: Plane enabled
        Plane 16: Plane enabled
        Plane 17: Plane enabled
        Plane 18: Plane enabled
        Plane 19: Plane enabled
        Plane 20: Plane enabled
        Plane 21: Plane enabled
```

show chassis fabric fpcs (T320 Router)

```
user@host> show chassis fabric fpcs
FPC #3
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
FPC #5
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Plane enabled
```

```
    SIB #2
            Plane enabled
FPC #7
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
```

show chassis fabric fpcs (T640 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:

FPC #2
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
FPC #3
  PFE #1
    SIB #2
           Plane enabled
    SIB #3
           Link error
           Destination error on PFEs       0    1    2    3    4    5    6    7
             8    9   10   11   12   13   14   15   16   17   18   19   20   21
    SIB #4
           Destination error on PFEs       0    1    2    3    4    5    6    7
             8    9   10   11   12   13   14   15   16   17   18   19   20   21
...
```

show chassis fabric fpcs (TX Matrix Router)

```
user@host> show chassis fabric fpcs
lcc0-re0:
--------------------------------------------------------------------------
Fabric management FPC state:
FPC #0
  PFE #1
    SIB #0
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #2
  PFE #1
    SIB #0
```

```
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok  FPC #3
      PFE #1
        SIB #2
               Plane enabled
        SIB #3
               Link error
               Destination error on PFEs       0    1    2    3    4    5    6    7
                 8    9   10   11   12   13   14   15   16   17   18   19   20   21
        SIB #4
               Destination error on PFEs       0    1    2    3    4    5    6    7
                 8    9   10   11   12   13   14   15   16   17   18   19   20   21
    ...
    FPC #4
      PFE #0
        SIB #4 Links ok
      PFE #1
        SIB #4 Links ok
    FPC #5
      PFE #1
        SIB #4 Links ok
    FPC #6
      PFE #1
        SIB #4 Links ok

    lcc2-re0:
    --------------------------------------------------------------------------
    Fabric management FPC state:
    FPC #0
      PFE #1
        SIB #4 Links ok
    FPC #1
      PFE #1
        SIB #4 Links ok
    FPC #2
      PFE #0
        SIB #4 Links ok
      PFE #1
        SIB #4 Links ok
    FPC #4
      PFE #0
        SIB #4 Links ok
      PFE #1
        SIB #4 Links ok
    FPC #5
      PFE #1
        SIB #4 Links ok
```

show chassis fabric fpcs (TX Matrix Router with 3D SIBs)

```
user@host> show chassis fabric fpcs
lcc0-re0:
--------------------------------------------------------------------------
Fabric management FPC state:
FPC #0
  PFE #0
```

```
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #3
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #4
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
```

```
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #5
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #6
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok

lcc2-re0:
--------------------------------------------------------------------------

lcc4-re0:
--------------------------------------------------------------------------
Fabric management FPC state:
FPC #2
  PFE #0
```

```
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #3
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok

lcc6-re0:
--------------------------------------------------------------------------
```

show chassis fabric fpcs lcc (TX Matrix Router with 3D SIBs)

```
user@host> show chassis fabric fpcs lcc 4
lcc4-re0:
--------------------------------------------------------------------------
Fabric management FPC state:
FPC #2
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
```

```
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
    PFE #1
      SIB #0
                Links ok
      SIB #1
                Links ok
      SIB #2
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
  FPC #3
    PFE #0
      SIB #0
                Links ok
      SIB #1
                Links ok
      SIB #2
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
    PFE #1
      SIB #0
                Links ok
      SIB #1
                Links ok
      SIB #2
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
```

show chassis fabric fpcs (T1600 Router)

```
user@host> show chassis fabric fpcs
Fabric management FPC state:
FPC #0
  PFE #0
    SIB #0
                Links ok
    SIB #1
                Plane enabled
    SIB #2
                Plane enabled
    SIB #3
                Plane enabled
    SIB #4
                Plane enabled
  PFE #1
    SIB #0
                Links ok
    SIB #1
                Plane enabled
```

```
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
FPC #1
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
FPC #2
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
FPC #4
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
```



```
                Plane enabled
        SIB #4
                Plane enabled
    FPC #3
      PFE #1
        SIB #2
               Plane enabled
        SIB #3
               Link error
               Destination error on PFEs       0    1    2    3    4    5    6    7
                 8    9   10   11   12   13   14   15   16   17   18   19   20   21
        SIB #4
               Destination error on PFEs       0    1    2    3    4    5    6    7
                 8    9   10   11   12   13   14   15   16   17   18   19   20   21
```

show chassis fabric fpcs (T4000 Core Router)

```
    Fabric management FPC state:
    FPC #2
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Plane enabled
        SIB #2
                Plane enabled
        SIB #3
                Plane enabled
        SIB #4
                Plane enabled
    FPC #3
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Plane enabled
        SIB #2
                Plane enabled
        SIB #3
                Plane enabled
        SIB #4
                Plane enabled
    FPC #5
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Plane enabled
        SIB #2
                Plane enabled
        SIB #3
                Plane enabled
        SIB #4
                Plane enabled
      PFE #1
        SIB #0
                Links ok
        SIB #1
                Plane enabled
        SIB #2
                Plane enabled
```

```
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
FPC #6
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Plane enabled
    SIB #2
            Plane enabled
    SIB #3
            Plane enabled
    SIB #4
            Plane enabled
```

show chassis fabric fpcs (TX Matrix Plus Router)

```
user@host> show chassis fabric fpcs
lcc0-re0:
--------------------------------------------------------------------------
Fabric management FPC state:
FPC #0
  PFE #1
    SIB #0
            Unused
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #2
  PFE #0
    SIB #0
            Unused
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Unused
```

```
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #3
  PFE #1
    SIB #2
           Plane enabled
    SIB #3
           Link error
           Destination error on PFEs       0    1    2    3    4    5    6    7
             8    9   10   11   12   13   14   15   16   17   18   19   20   21
    SIB #4
           Destination error on PFEs       0    1    2    3    4    5    6    7
             8    9   10   11   12   13   14   15   16   17   18   19   20   21
FPC #4
  PFE #0
    SIB #0
            Unused
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Unused
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #6
  PFE #0
    SIB #0
            Unused
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Unused
    SIB #1
            Links ok
    SIB #2
            Links ok
```

```
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #7
  PFE #0
    SIB #0
            Unused
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok

lcc1-re0:
--------------------------------------------------------------------------
Fabric management FPC state:
FPC #2
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #4
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
```

```
                Links ok
        SIB #3
                Destination error on PFEs       1    8    9   29   40   65   72   73

                 93  104
        SIB #4
                Links ok
    FPC #6
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok
      PFE #1
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok
    FPC #7
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok

    lcc2-re0:
    --------------------------------------------------------------------------
    Fabric management FPC state:
    FPC #0
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok
      PFE #1
        SIB #0
                Links ok
```

```
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #2
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #4
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #5
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
```

```
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok
    FPC #6
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok
      PFE #1
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok
    FPC #7
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok

    lcc3-re0:
    --------------------------------------------------------------------------
    Fabric management FPC state:
    FPC #0
      PFE #0
        SIB #0
                Links ok
        SIB #1
                Links ok
        SIB #2
                Links ok
        SIB #3
                Links ok
        SIB #4
                Links ok
      PFE #1
        SIB #0
                Links ok
        SIB #1
                Links ok
```

```
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #2
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #4
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
  PFE #1
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
            Links ok
    SIB #4
            Links ok
FPC #5
  PFE #0
    SIB #0
            Links ok
    SIB #1
            Links ok
    SIB #2
            Links ok
    SIB #3
```

```
                Links ok
      SIB #4
                Links ok
    PFE #1
      SIB #0
                Links ok
      SIB #1
                Links ok
      SIB #2
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
  FPC #6
    PFE #0
      SIB #0
                Links ok
      SIB #1
                Links ok
      SIB #2
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
    PFE #1
      SIB #0
                Links ok
      SIB #1
                Links ok
      SIB #2
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
  FPC #7
    PFE #0
      SIB #0
                Links ok
      SIB #1
                Links ok
      SIB #2
                Links ok
      SIB #3
                Links ok
      SIB #4
                Links ok
```

show chassis fabric fpcs lcc (TX Matrix Plus Router)

```
user@host> show chassis fabric fpcs lcc 0
lcc0-re1:
--------------------------------------------------------------------------
Fabric management FPC state:
FPC #3
  PFE #1
    SIB #2
            Plane enabled
    SIB #3
```

```
            Link error
            Destination error on PFEs       0    1    2    3    4    5    6    7
              8    9   10   11   12   13   14   15   16   17   18   19   20   21
    SIB #4
            Destination error on PFEs       0    1    2    3    4    5    6    7
              8    9   10   11   12   13   14   15   16   17   18   19   20   21
FPC #4
  PFE #0
    SIB #0 Links ok
    SIB #1 Links ok
    SIB #2 Links ok
    SIB #3 Links ok
    SIB #4 Links ok
  PFE #1
    SIB #0 Links ok
    SIB #1 Links ok
    SIB #2 Links ok
    SIB #3 Links ok
    SIB #4 Links ok
FPC #6
  PFE #0
    SIB #0 Links ok
    SIB #1 Links ok
    SIB #2 Links ok
    SIB #3 Links ok
    SIB #4 Links ok
  PFE #1
    SIB #0 Links ok
    SIB #1 Links ok
    SIB #2 Links ok
    SIB #3 Links ok
    SIB #4 Links ok
FPC #7
  PFE #0
    SIB #0 Links ok
    SIB #1 Links ok
    SIB #2 Links ok
    SIB #3 Links ok
    SIB #4 Links ok
```

show chassis fabric fpcs (EX8200 Switch)

```
user@host> show chassis fabric fpcs
Fabric management FPC state
FPC 6
  PFE #0
      Plane 0: Plane enabled
      Plane 1: Plane enabled
      Plane 2: Plane enabled
      Plane 3: Plane enabled
      Plane 4: Links ok
      Plane 5: Links ok
      Plane 6: Links ok
      Plane 7: Links ok
      Plane 8: Plane enabled
      Plane 9: Plane enabled
      Plane 10: Plane enabled
      Plane 11: Plane enabled
  PFE #1
      Plane 0: Plane enabled
      Plane 1: Plane enabled
```

```
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
FPC 7
  PFE #0
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
  PFE #1
        Plane 0: Plane enabled
        Plane 1: Plane enabled
        Plane 2: Plane enabled
        Plane 3: Plane enabled
        Plane 4: Links ok
        Plane 5: Links ok
        Plane 6: Links ok
        Plane 7: Links ok
        Plane 8: Plane enabled
        Plane 9: Plane enabled
        Plane 10: Plane enabled
        Plane 11: Plane enabled
```

show chassis fabric fpcs (PTX3000 Router)

```
user@host> show chassis fabric fpcs slot 8
Fabric management FPC state:
FPC #8
    PFE #0
        SIB0_Fcore0 (plane  0)   Plane Enabled, Links OK
        SIB0_Fcore1 (plane  1)   Plane Enabled, Links OK
        SIB1_Fcore0 (plane  2)   Plane Enabled, Links OK
        SIB1_Fcore1 (plane  3)   Plane Enabled, Links OK
        SIB2_Fcore0 (plane  4)   Plane Enabled, Links OK
        SIB2_Fcore1 (plane  5)   Plane Enabled, Links OK
        SIB3_Fcore0 (plane  6)   Plane Enabled, Links OK
        SIB3_Fcore1 (plane  7)   Plane Enabled, Links OK
        SIB4_Fcore0 (plane  8)   Plane Enabled, Links OK
        SIB4_Fcore1 (plane  9)   Plane Enabled, Links OK
        SIB5_Fcore0 (plane 10)   Plane Enabled, Links OK
        SIB5_Fcore1 (plane 11)   Plane Enabled, Links OK
        SIB6_Fcore0 (plane 12)   Plane Enabled, Links OK
        SIB6_Fcore1 (plane 13)   Plane Enabled, Links OK
        SIB7_Fcore0 (plane 14)   Plane Enabled, Links OK
        SIB7_Fcore1 (plane 15)   Plane Enabled, Links OK
        SIB8_Fcore0 (plane 16)   Plane Enabled, Links OK
```

```
        SIB8_Fcore1 (plane 17)   Plane Enabled, Links OK
    PFE #1
        SIB0_Fcore0 (plane  0)   Plane Enabled, Links OK
        SIB0_Fcore1 (plane  1)   Plane Enabled, Links OK
        SIB1_Fcore0 (plane  2)   Plane Enabled, Links OK
        SIB1_Fcore1 (plane  3)   Plane Enabled, Links OK
        SIB2_Fcore0 (plane  4)   Plane Enabled, Links OK
        SIB2_Fcore1 (plane  5)   Plane Enabled, Links OK
        SIB3_Fcore0 (plane  6)   Plane Enabled, Links OK
        SIB3_Fcore1 (plane  7)   Plane Enabled, Links OK
        SIB4_Fcore0 (plane  8)   Plane Enabled, Links OK
        SIB4_Fcore1 (plane  9)   Plane Enabled, Links OK
        SIB5_Fcore0 (plane 10)   Plane Enabled, Links OK
        SIB5_Fcore1 (plane 11)   Plane Enabled, Links OK
        SIB6_Fcore0 (plane 12)   Plane Enabled, Links OK
        SIB6_Fcore1 (plane 13)   Plane Enabled, Links OK
        SIB7_Fcore0 (plane 14)   Plane Enabled, Links OK
        SIB7_Fcore1 (plane 15)   Plane Enabled, Links OK
        SIB8_Fcore0 (plane 16)   Plane Enabled, Links OK
        SIB8_Fcore1 (plane 17)   Plane Enabled, Links OK
```

show chassis fabric fpcs (PTX10008 Router)

```
user@host> show chassis fabric fpcs slot 8
Fabric management FPC state:
FPC #0
    PFE #0
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
    PFE #1
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
    PFE #2
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
FPC #5
    PFE #0
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
    PFE #1
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
    PFE #2
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
    PFE #3
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
```

```
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
        PFE #4
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
        PFE #5
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
    FPC #6
        PFE #0
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
        PFE #1
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
        PFE #2
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
        PFE #3
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
        PFE #4
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
        PFE #5
            SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
            SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
            SIB1_FASIC0 (plane  2)   Plane Enabled, Links OK
            SIB1_FASIC1 (plane  3)   Plane Enabled, Links OK
```

show chassis fabric fpcs (PTX10016 Router)

```
user@host> show chassis fabric fpcs slot 8
Fabric management FPC state:
FPC #8
    PFE #0
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB0_FASIC2 (plane  2)   Plane Enabled, Links OK
        SIB0_FASIC3 (plane  3)   Plane Enabled, Links OK
        SIB0_FASIC4 (plane  4)   Plane Enabled, Links OK
        SIB0_FASIC5 (plane  5)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  6)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  7)   Plane Enabled, Links OK
        SIB1_FASIC2 (plane  8)   Plane Enabled, Links OK
        SIB1_FASIC3 (plane  9)   Plane Enabled, Links OK
        SIB1_FASIC4 (plane 10)   Plane Enabled, Links OK
        SIB1_FASIC5 (plane 11)   Plane Enabled, Links OK
```

```
    SIB2_FASIC0 (plane 12)   Plane Enabled, Links OK
    SIB2_FASIC1 (plane 13)   Plane Enabled, Links OK
    SIB2_FASIC2 (plane 14)   Plane Enabled, Links OK
    SIB2_FASIC3 (plane 15)   Plane Enabled, Links OK
    SIB2_FASIC4 (plane 16)   Plane Enabled, Links OK
    SIB2_FASIC5 (plane 17)   Plane Enabled, Links OK
    SIB3_FASIC0 (plane 18)   Plane Enabled, Links OK
    SIB3_FASIC1 (plane 19)   Plane Enabled, Links OK
    SIB3_FASIC2 (plane 20)   Plane Enabled, Links OK
    SIB3_FASIC3 (plane 21)   Plane Enabled, Links OK
    SIB3_FASIC4 (plane 22)   Plane Enabled, Links OK
    SIB3_FASIC5 (plane 23)   Plane Enabled, Links OK
    SIB4_FASIC0 (plane 24)   Plane Enabled, Links OK
    SIB4_FASIC1 (plane 25)   Plane Enabled, Links OK
    SIB4_FASIC2 (plane 26)   Plane Enabled, Links OK
    SIB4_FASIC3 (plane 27)   Plane Enabled, Links OK
    SIB4_FASIC4 (plane 28)   Plane Enabled, Links OK
    SIB4_FASIC5 (plane 29)   Plane Enabled, Links OK
    SIB5_FASIC0 (plane 30)   Plane Enabled, Links OK
    SIB5_FASIC1 (plane 31)   Plane Enabled, Links OK
    SIB5_FASIC2 (plane 32)   Plane Enabled, Links OK
    SIB5_FASIC3 (plane 33)   Plane Enabled, Links OK
    SIB5_FASIC4 (plane 34)   Plane Enabled, Links OK
    SIB5_FASIC5 (plane 35)   Plane Enabled, Links OK
PFE #1
    SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
    SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
    SIB0_FASIC2 (plane  2)   Plane Enabled, Links OK
    SIB0_FASIC3 (plane  3)   Plane Enabled, Links OK
    SIB0_FASIC4 (plane  4)   Plane Enabled, Links OK
    SIB0_FASIC5 (plane  5)   Plane Enabled, Links OK
    SIB1_FASIC0 (plane  6)   Plane Enabled, Links OK
    SIB1_FASIC1 (plane  7)   Plane Enabled, Links OK
    SIB1_FASIC2 (plane  8)   Plane Enabled, Links OK
    SIB1_FASIC3 (plane  9)   Plane Enabled, Links OK
    SIB1_FASIC4 (plane 10)   Plane Enabled, Links OK
    SIB1_FASIC5 (plane 11)   Plane Enabled, Links OK
    SIB2_FASIC0 (plane 12)   Plane Enabled, Links OK
    SIB2_FASIC1 (plane 13)   Plane Enabled, Links OK
    SIB2_FASIC2 (plane 14)   Plane Enabled, Links OK
    SIB2_FASIC3 (plane 15)   Plane Enabled, Links OK
    SIB2_FASIC4 (plane 16)   Plane Enabled, Links OK
    SIB2_FASIC5 (plane 17)   Plane Enabled, Links OK
    SIB3_FASIC0 (plane 18)   Plane Enabled, Links OK
    SIB3_FASIC1 (plane 19)   Plane Enabled, Links OK
    SIB3_FASIC2 (plane 20)   Plane Enabled, Links OK
    SIB3_FASIC3 (plane 21)   Plane Enabled, Links OK
    SIB3_FASIC4 (plane 22)   Plane Enabled, Links OK
    SIB3_FASIC5 (plane 23)   Plane Enabled, Links OK
    SIB4_FASIC0 (plane 24)   Plane Enabled, Links OK
    SIB4_FASIC1 (plane 25)   Plane Enabled, Links OK
    SIB4_FASIC2 (plane 26)   Plane Enabled, Links OK
    SIB4_FASIC3 (plane 27)   Plane Enabled, Links OK
    SIB4_FASIC4 (plane 28)   Plane Enabled, Links OK
    SIB4_FASIC5 (plane 29)   Plane Enabled, Links OK
    SIB5_FASIC0 (plane 30)   Plane Enabled, Links OK
    SIB5_FASIC1 (plane 31)   Plane Enabled, Links OK
    SIB5_FASIC2 (plane 32)   Plane Enabled, Links OK
    SIB5_FASIC3 (plane 33)   Plane Enabled, Links OK
    SIB5_FASIC4 (plane 34)   Plane Enabled, Links OK
    SIB5_FASIC5 (plane 35)   Plane Enabled, Links OK
```

```
    PFE #2
        SIB0_FASIC0 (plane  0)   Plane Enabled, Links OK
        SIB0_FASIC1 (plane  1)   Plane Enabled, Links OK
        SIB0_FASIC2 (plane  2)   Plane Enabled, Links OK
        SIB0_FASIC3 (plane  3)   Plane Enabled, Links OK
        SIB0_FASIC4 (plane  4)   Plane Enabled, Links OK
        SIB0_FASIC5 (plane  5)   Plane Enabled, Links OK
        SIB1_FASIC0 (plane  6)   Plane Enabled, Links OK
        SIB1_FASIC1 (plane  7)   Plane Enabled, Links OK
        SIB1_FASIC2 (plane  8)   Plane Enabled, Links OK
        SIB1_FASIC3 (plane  9)   Plane Enabled, Links OK
        SIB1_FASIC4 (plane 10)   Plane Enabled, Links OK
        SIB1_FASIC5 (plane 11)   Plane Enabled, Links OK
        SIB2_FASIC0 (plane 12)   Plane Enabled, Links OK
        SIB2_FASIC1 (plane 13)   Plane Enabled, Links OK
        SIB2_FASIC2 (plane 14)   Plane Enabled, Links OK
        SIB2_FASIC3 (plane 15)   Plane Enabled, Links OK
        SIB2_FASIC4 (plane 16)   Plane Enabled, Links OK
        SIB2_FASIC5 (plane 17)   Plane Enabled, Links OK
        SIB3_FASIC0 (plane 18)   Plane Enabled, Links OK
        SIB3_FASIC1 (plane 19)   Plane Enabled, Links OK
        SIB3_FASIC2 (plane 20)   Plane Enabled, Links OK
        SIB3_FASIC3 (plane 21)   Plane Enabled, Links OK
        SIB3_FASIC4 (plane 22)   Plane Enabled, Links OK
        SIB3_FASIC5 (plane 23)   Plane Enabled, Links OK
        SIB4_FASIC0 (plane 24)   Plane Enabled, Links OK
        SIB4_FASIC1 (plane 25)   Plane Enabled, Links OK
        SIB4_FASIC2 (plane 26)   Plane Enabled, Links OK
        SIB4_FASIC3 (plane 27)   Plane Enabled, Links OK
        SIB4_FASIC4 (plane 28)   Plane Enabled, Links OK
        SIB4_FASIC5 (plane 29)   Plane Enabled, Links OK
        SIB5_FASIC0 (plane 30)   Plane Enabled, Links OK
        SIB5_FASIC1 (plane 31)   Plane Enabled, Links OK
        SIB5_FASIC2 (plane 32)   Plane Enabled, Links OK
        SIB5_FASIC3 (plane 33)   Plane Enabled, Links OK
        SIB5_FASIC4 (plane 34)   Plane Enabled, Links OK
        SIB5_FASIC5 (plane 35)   Plane Enabled, Links OK
```

show chassis fabric fpcs (QFX10008 Switch)

```
user@host> show chassis fabric fpcs slot 0
Fabric management FPC state:
FPC #0
    PFE #0
        SIB0_PF0 (plane  0)   Plane Enabled, Links OK
        SIB0_PF1 (plane  1)   Plane Enabled, Links OK
        SIB1_PF0 (plane  2)   Plane Enabled, Links OK
        SIB1_PF1 (plane  3)   Plane Enabled, Links OK
        SIB2_PF0 (plane  4)   Plane Enabled, Links OK
        SIB2_PF1 (plane  5)   Plane Enabled, Links OK
        SIB3_PF0 (plane  6)   Plane Enabled, Links OK
        SIB3_PF1 (plane  7)   Plane Enabled, Links OK
        SIB4_PF0 (plane  8)   Plane Enabled, Links OK
        SIB4_PF1 (plane  9)   Plane Enabled, Links OK
        SIB5_PF0 (plane 10)   Plane Enabled, Links OK
        SIB5_PF1 (plane 11)   Plane Enabled, Links OK
    PFE #1
        SIB0_PF0 (plane  0)   Plane Enabled, Links OK
        SIB0_PF1 (plane  1)   Plane Enabled, Links OK
        SIB1_PF0 (plane  2)   Plane Enabled, Links OK
        SIB1_PF1 (plane  3)   Plane Enabled, Links OK
```

```
    SIB2_PF0 (plane  4)   Plane Enabled, Links OK
    SIB2_PF1 (plane  5)   Plane Enabled, Links OK
    SIB3_PF0 (plane  6)   Plane Enabled, Links OK
    SIB3_PF1 (plane  7)   Plane Enabled, Links OK
    SIB4_PF0 (plane  8)   Plane Enabled, Links OK
    SIB4_PF1 (plane  9)   Plane Enabled, Links OK
    SIB5_PF0 (plane 10)   Plane Enabled, Links OK
    SIB5_PF1 (plane 11)   Plane Enabled, Links OK
PFE #2
    SIB0_PF0 (plane  0)   Plane Enabled, Links OK
    SIB0_PF1 (plane  1)   Plane Enabled, Links OK
    SIB1_PF0 (plane  2)   Plane Enabled, Links OK
    SIB1_PF1 (plane  3)   Plane Enabled, Links OK
    SIB2_PF0 (plane  4)   Plane Enabled, Links OK
    SIB2_PF1 (plane  5)   Plane Enabled, Links OK
    SIB3_PF0 (plane  6)   Plane Enabled, Links OK
    SIB3_PF1 (plane  7)   Plane Enabled, Links OK
    SIB4_PF0 (plane  8)   Plane Enabled, Links OK
    SIB4_PF1 (plane  9)   Plane Enabled, Links OK
    SIB5_PF0 (plane 10)   Plane Enabled, Links OK
    SIB5_PF1 (plane 11)   Plane Enabled, Links OK
PFE #3
    SIB0_PF0 (plane  0)   Plane Enabled, Links OK
    SIB0_PF1 (plane  1)   Plane Enabled, Links OK
    SIB1_PF0 (plane  2)   Plane Enabled, Links OK
    SIB1_PF1 (plane  3)   Plane Enabled, Links OK
    SIB2_PF0 (plane  4)   Plane Enabled, Links OK
    SIB2_PF1 (plane  5)   Plane Enabled, Links OK
    SIB3_PF0 (plane  6)   Plane Enabled, Links OK
    SIB3_PF1 (plane  7)   Plane Enabled, Links OK
    SIB4_PF0 (plane  8)   Plane Enabled, Links OK
    SIB4_PF1 (plane  9)   Plane Enabled, Links OK
    SIB5_PF0 (plane 10)   Plane Enabled, Links OK
    SIB5_PF1 (plane 11)   Plane Enabled, Links OK
```

show chassis fpc

List of Syntax

Syntax

show chassis fpc
<detail <*slot*>> | <pic-status <*slot*>>

Syntax (EX Series Switches)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*fpc-slot*>

Syntax (T4000 Routers)

show chassis fpc
<detail <*fpc-slot*>>
<pic-status <*fpc-slot*>>

Syntax (TX Matrix and TX Matrix Plus Routers)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*slot*>

Syntax (MX Series Routers and EX Series switches)

show chassis fpc
<detail <*slot*>> | <pic-status <*slot*>>
<all-members>
<local>
<member *member-id*>

Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 3D Universal Edge Routers)

show chassis fpc
<*slot*> detail | <detail <*slot*>> | <pic-status <*slot*>>
<*fpc-slot*>

Syntax (QFX Series)

show chassis fpc
<detail>
<interconnect-device *name* <fpc-slot *fpc-slot*>>
<node-device *name*>

Syntax (OCX Series)

show chassis fpc
<detail>

Syntax (PTX Series Packet Transport Routers)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*fpc-slot*>

Syntax (ACX Series Universal Access Routers)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*fpc-slot*>

Syntax (ACX500 Routers)

show chassis fpc
<*fpc-slot*>
detail <*fpc-slot*>
pic-status <*fpc-slot*>

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for QFX Series.
Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.
Command introduced in Junos OS Release 12.2 for ACX Series Universal Access Routers.
Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.
Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.
Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.
Command introduced in Junos OS Release 17.4 for MX204 3D Universal Edge Routers.

Description

Display status information about the installed Flexible PIC Concentrators (FPCs)and PICs.

Options

none—Display status information for all FPCs. On a TX Matrix router, display status information for all FPCs on the attached T640 routers in the routing matrix. On a TX Matrix Plus router, display status information for all FPCs on the attached routers in the routing matrix.

NOTE: In EX8200 switches, line cards initialize Packet Forwarding Engine during startup. If an error occurs during hardware initialization, the FPCs with bad hardware parts power down after transferring the debug information to the Routing Engine. The Routing Engine marks the FPC offline, logs the error in system log messages (/var/log/messages), and generates an alarm to inform the user.

See the following sample output:

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap
  Buffer
  0  Empty
  1  Empty
  2  Empty
  3  Empty
  4  Empty
  5  Offline         ---Hard FPC error---
  6  Empty
  7  Online            26      4          0       1024        0
     32
```

The following sample output shows the alarm raised for the failed FPCs:

```
user@host> show chassis alarms
4 alarms currently active
Alarm time               Class  Description
2011-03-24 00:52:51 UTC  Major  FPC 5 Hard errors
2011-03-24 00:52:31 UTC  Major  Fan Tray Failure
2011-03-24 00:52:31 UTC  Major  Fan Tray Failure
2011-03-24 00:51:26 UTC  Minor  Loss of communication with Backup
RE
```

NOTE: On T4000 routers, when you include the **enhanced-mode** statement at the **[edit chassis network-services]** hierarchy level and reboot the system, only the T4000 Type 5 FPCs present on the router become online while the remaining FPCs are offline, and FPC misconfiguration alarms are generated. The **show chassis alarm** command output displays FPC misconfiguration (**FPC *fpc-slot* misconfig**) as the reason for the generation the alarms.

The following sample output shows the FPC status after the **enhanced-mode** statement is configured on the T4000 router. The T4000 Type 5 FPC present in slot 5 becomes online while the remaining FPCs are offline.

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   Memory
Utilization (%)
Slot State           (C)  Total  Interrupt      DRAM (MB) Heap
  Buffer
  0  offline        ---FPC misconfiguration---
  1  offline        ---FPC misconfiguration---
  2  offline        ---FPC misconfiguration---
  3  Empty
  4  Empty
  5  Online           66      50          0       2816       29
    27
```

The following sample output shows FPC misconfiguration alarms:

```
user@host> show chassis alarms
3 alarms currently active
Alarm time               Class  Description
2011-03-24 00:52:51 PST  Major  FPC 1 misconfig
2011-03-24 00:52:31 PST  Major  FPC 2 misconfig
2011-03-24 00:52:31 PST  Major  FPC 3 misconfig
```

detail—(Optional) Display detailed status information for all FPCs or for the FPC in the specified slot (see ***fpc-slot*** or ***slot***).

all-members—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on all members of the Virtual Chassis configuration.

interconnect-device *name*—(QFabric systems only) (Optional) Display status information for all FPCs on the Interconnect device.

fpc-slot—(Optional) FPC slot number:

- (TX Matrix and TX Matrix Plus routers only)—On a TX Matrix router, if you specify the number of the T640 router (line-card chassis) by using the **lcc *number*** option (the recommended method), replace ***fpc-slot*** with a value from **0** through **7**. Otherwise, replace ***fpc-slot*** with a value from **0** through **31**. Likewise, on a TX Matrix

Plus router, if you specify the number of the specified router (line-card chassis) by using the **lcc** ***number*** option (the recommended method), replace ***fpc-slot*** with a value from **0** through **7**. Otherwise, replace ***fpc-slot*** with a value from **0** through **31**. For example, the following commands have the same result:

```
user@host> show chassis fpc detail 1 lcc 1
user@host> show chassis fpc detail 9
```

- M120 router—Replace ***fpc-slot*** with a value from **0** through **5**.
- MX80 router—Replace ***fpc-slot*** with a value from **0** through **1**.
- MX104 and MX104-40G routers—Replace ***fpc-slot*** with a value from **0** through **2**.
- MX240 router—Replace ***fpc-slot*** with a value from **0** through **2**.
- MX480 router—Replace ***fpc-slot*** with a value from **0** through **5**.
- MX-960 router—Replace ***fpc-slot*** with a value from **0** through **11**.
- MX2010 router—Replace ***fpc-slot-number*** with a value from **0** through **9**.
- MX2008 router—Replace ***fpc-slot-number*** with a value from **0** through **9**.
- MX2020 router—Replace ***fpc-slot-number*** with a value from **0** through **19**.
- Other routers—Replace ***fpc-slot*** with a value from **0** through **7**.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—Replace ***fpc-slot*** with **0**.
  - EX4200 switches in a Virtual Chassis configuration—Replace ***fpc-slot*** with a value from **0** through **9**.
  - EX6210 switches—Replace ***fpc-slot*** with a value from **0** through **9**.
  - EX8208 switches—Replace ***fpc-slot*** with a value from **0** through **7**.
  - EX8216 switches—Replace ***fpc-slot*** with a value from **0** through **15**.
  - EX9204 switches—Replace ***fpc-slot*** with a value from **0** through **2**.
  - EX9208 switches—Replace ***fpc-slot*** with a value from **0** through **5**.
  - EX9214 switches—Replace ***fpc-slot*** with a value from **0** through **11**.
- QFX Series:
  - QFXSeries and OCX Series switches—Replace ***fpc-slot*** with 0.
  - QFabric systems—Replace ***fpc-slot*** with 0 through 31 on the Interconnect device.
- PTX Series Packet Transport Routers:
  - PTX5000 Packet Transport Router—Replace ***fpc-slot*** with a value from **0** through **7**.
- ACX Series Universal Access Routers:

- ACX1000 and ACX2000 Universal Access Routers—Replace ***fpc-slot*** with **0**.

local—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the local Virtual Chassis member.

member ***member-id***—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the specified member of the Virtual Chassis configuration. Replace ***member-id*** with a value of 0 or 1.

node-device ***name***—(QFabric systems only) (Optional) Display status information for each Node device. Each Node device is equivalent to an FPC.

pic-status—(Optional) Display status information for all PICs or for the PIC in the specified slot (see ***fpc-slot***).

NOTE: On T1600 routers, Type 4 FPCs with ASICs based on the SL2.0 chipset do not support the 10-Gigabit Ethernet LAN/WAN PIC with SFP+ (10x10GE [LAN/WAN] SFPP). If you issue the **show chassis fpc** command with the **pic-status** option, the CLI displays the string "Not Supported" for 10x10GE(LAN/WAN) SFPP PICs installed on such FPCs. The following is a sample output:

```
user@host> show chassis fpc pic-status
Slot 0   Online       E2-FPC Type 1
  PIC 0  Online       1x G/E SFP, 1000 BASE
  PIC 1  Online       Adaptive Services-II
  PIC 2  Online       1x G/E IQ, 1000 BASE
  PIC 3  Online       1x G/E IQ, 1000 BASE
Slot 1   Online       FPC Type 3-ES
  PIC 0  Present      UNUSED- Not Supported
Slot 2   Online       FPC Type 4-ES
  PIC 0  Offline      4x OC-192 SONET XFP
  PIC 1  Present      10x10GE(LAN/WAN) SFPP- Not Supported
<<<<<<
Slot 4   Offline      FPC Type 1-ES
Slot 5   Offline      FPC Type 2-ES
Slot 6   Online       E2-FPC Type 3
  PIC 0  Online       1x OC-192 SONET XFP
  PIC 1  Online       4x OC-48 SONET
  PIC 2  Online       4x OC-48 SONET
  PIC 3  Online       MultiServices 500
Slot 7   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
```

In addition, an entry is logged in the system log messages (/var/log/messages) that the PIC is not supported. The following is a sample message logged in the system log:

```
Apr  5 08:47:36  router1 chassisd[2770]: CHASSISD_UNSUPPORTED_PIC:
 PIC 1 in FPC 2 (type 763, version 257) is not supported
```

If you see this issue, contact Juniper Networks Technical Assistance Center (JTAC) for a possible fix. For more information about this issue and a possible solution, see PSN-2010-03-696.

NOTE: When there is a double-bit ECC error in a network processor's memory, the Channelized OC3/STM1 (Multi-Rate) Circuit Emulation MIC with SFP or Channelized E1/T1 Circuit Emulation MIC is switched to the offline state.

```
user@host> show chassis fpc pic-status
Slot 1   Online       MPC Type 2 3D Q
PIC 0  Offline      1xCOC12/4xCOC3 CH-CE- ECC error detected
```

lcc *number*—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

Required Privilege Level

view

Related Documentation

- *request chassis fpc*
- *show chassis fpc-feb-connectivity*
- show chassis fabric fpcs on page 128
- *Configuring the Junos OS to Resynchronize FPC Sequence Numbers with Active FPCs when an FPC Comes Online*
- *MX960 Flexible PIC Concentrator Description*
- *ACX2000 and ACX2100 Routers Hardware and CLI Terminology Mapping*
- *enhanced-mode*

List of Sample Output

Output Fields Table 8 on page 187 lists the output fields for the **show chassis fpc** command. Output fields are listed in the approximate order in which they appear.

Table 8: show chassis fpc Output Fields

Field Name	Field Description	Level of Output

Slot or **Slot State**	Slot number and state. The state can be one of the following conditions:
	• **Dead**—Held in reset because of errors.
	• **Diag**—Slot is being ignored while the FPC is running diagnostics.
	• **Dormant**—Held in reset.
	• **Empty**—No FPC is present.
	• **Offline**—(PTX Series Packet Transport Routers only) One of the following two states is displayed:
	  ◦ **FPC offlined due to unreachable destinations**
	  ◦ **FPC Offlined due to degraded FPC action**
	• **Online**—FPC is online and running.
	• **Present**—FPC is detected by the chassis daemon but either is not supported by the current version of Junos OS or is inserted in the wrong slot. The output also states either **Hardware Not Supported** or **Hardware Not In Right Slot**. The FPC is coming up but not yet online.
	• **Probed**—Probe is complete; awaiting restart of the Packet Forwarding Engine.
	• **Probe-wait**—Waiting to be probed.
		all levels

Logical slot	Slot number.	all levels
Temp (C) or Temperature	Temperature of the air passing by the FPC, in degrees Celsius or in both Celsius and Fahrenheit.	all levels all levels
Temperature (PTX Series)	On PTX Series Packet Transport Routers, temperature details are provided in degrees Celsius and Fahrenheit. Output includes: • Temperature (PMB)—Temperature of the air passing by the Processor Mezzanine Board (PMB) at the bottom of the FPC. • Temperature (Intake)—Temperature of the air flowing into the chassis. • Temperature (Exhaust)—Exhaust temperatures for multiple zones (Exhaust A and Exhaust B). • Temperature (TL*n*)-–Temperature of the specified Lookup ASIC (TL) of the packet forwarding engine on the FPC. • Temperature (TQ*n*)-–Temperature of the specified Queuing and Memory Interface ASIC (TQ) of the packet forwarding engine on the FPC.	**detail**
Total CPU Utilization (%)	Total percentage of CPU being used by the FPC's processor.	all levels
Interrupt CPU Utilization (%)	Of the total CPU being used by the FPC's processor, the percentage being used for interrupts.	none specified

Table 8: show chassis fpc Output Fields *(continued)*

Field Name	Field Description	Level of Output
1 min CPU utilization (%) NOTE: Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 1 minute.	none specified
5 min CPU utilization (%) NOTE: Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 5 minutes.	none specified
15 min CPU utilization (%) NOTE: Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 15 minutes.	none specified
Memory DRAM (MB)	Total DRAM, in megabytes, available to the FPC's processor.	none specified
Heap Utilization (%)	Percentage of heap space (dynamic memory) being used by the FPC's processor. If this number exceeds 80 percent, there may be a software problem (memory leak). NOTE: On MX Series routers and EX Series switches in a broadband edge environment, heap utilization levels higher than 70 percent can affect unified ISSU, router stability, or scaling capability.	none specified
Buffer Utilization (%)	Percentage of buffer space being used by the FPC's processor for buffering internal messages.	none specified
Total CPU DRAM	Amount of DRAM available to the FPC's CPU.	**detail**
Total RLDRAM	Amount of reduced latency dynamic random access memory (RLDRAM) available to the FPC CPU.	**detail**
Total DDR DRAM	Amount of double data rate dynamic random access memory (DDR DRAM) available to the FPC CPU.	**detail**
Total SRAM	Amount of static RAM (SRAM) used by the FPC's CPU.	**detail**
Total SDRAM	Total amount of memory used for storing packets and notifications.	**detail**

Table 8: show chassis fpc Output Fields *(continued)*

Field Name	Field Description	Level of Output
I/O Manager ASICs information	I/O Manager version number, manufacturer, and part number.	**detail**
Start time	Time when the Routing Engine detected that the FPC was running.	**detail**
Uptime	How long the Routing Engine has been connected to the FPC and, therefore, how long the FPC has been up and running.	**detail**
PIC type	(**pic-status** output only) Type of PIC.	none specified
GNF (Node slicing)	GNF identifier associated with each line card. (**pic-status** output only) GNF identifier associated with each PIC.	all levels

Sample Output

show chassis fpc (EX6210 Switch)

```
user@switch> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online             7      5          0       1024        0         32
  2  Empty
  3  Empty
  4  Online            25     17          2       2048        0         30
  5  Online            25      3          0       2048        0         24
  6  Online             6      5          0       1024        0         32
  7  Empty
  8  Empty
  9  Online             8      7          0       1024        0         32
```

show chassis fpc (M10 Router)

```
user@host> show chassis fpc
FPC status:
               Temp
Slot State      (C)
  0  Online      27
  1  Online      28
```

show chassis fpc (M20 Router)

```
user@host> show chassis fpc
FPC status:
               Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State      (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty        0      0          0         0         0          0
  1  Online      38      0          0         8         0          4
  2  Online      35      0          0         8         0          3
  3  Empty        0      0          0         0         0          0
```

show chassis fpc detail (M Series Routers)

```
user@host> show chassis fpc detail 1
Slot 1 information:
  State                                 Online
  Temperature                        48 degrees C
  Total CPU DRAM                     32 MB
  Total SRAM                          4 MB
  Total SDRAM                       256 MB
  I/O Manager ASICs information         Version 2.0, Foundry IBM, Part number 0
  I/O Manager ASICs information         Version 2.0, Foundry IBM, Part number 0
  Start time                            2000-02-08 02:18:49 UTC
  Uptime                                14 hours, 41 minutes, 41 seconds
```

show chassis fpc detail (MX150)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                        42 degrees C / 107 degrees F
  Total CPU DRAM                   2048 MB
  Total RLDRAM                       10 MB
  Total DDR DRAM                      0 MB
  Start time                            2017-04-04 04:44:04 PDT
  Uptime                                7 days, 19 hours, 45 minutes, 50 seconds
```

show chassis fpc detail (MX80 Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                        47 degrees C / 116 degrees F
  Total CPU DRAM                   1024 MB
  Total SRAM                        331 MB
  Total SDRAM                      1280 MB
  Start time                            2010-02-08 12:25:33 PST
  Uptime                                2 hours, 13 minutes, 19 seconds
Slot 1 information:
  State                                 Online
  Temperature                        47 degrees C / 116 degrees F
  Total CPU DRAM                   1024 MB
  Total SRAM                        331 MB
  Total SDRAM                      1280 MB
  Start time                            2010-02-08 12:25:33 PST
  Uptime                                2 hours, 13 minutes, 19 seconds
```

show chassis fpc (MX104 Router)

```
user@host> show chassis fpc
Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            32     15          5       2048       22         13
  1  Online            32     15          5       2048       22         13
  2  Online            32     15          5       2048       22         13
```

show chassis fpc detail (MX104 Router)

```
user@host> show chassis fpc detail
```

```
Slot 0 information:
  State                                 Online
  Temperature                        32 (C)
  Total CPU DRAM                   2048 MB
  Total SRAM                        403 MB
  Total SDRAM                      1316 MB
  Start time                            2013-05-23 14:39:18 IST
  Uptime                                1 hour, 20 minutes, 22 seconds
Slot 1 information:
  State                                 Online
  Temperature                        32 (C)
  Total CPU DRAM                   2048 MB
  Total SRAM                        403 MB
  Total SDRAM                      1316 MB
  Start time                            2013-05-23 14:39:18 IST
  Uptime                                1 hour, 20 minutes, 22 seconds
Slot 2 information:
  State                                 Online
  Temperature                        32 (C)
  Total CPU DRAM                   2048 MB
  Total SRAM                        403 MB
  Total SDRAM                      1316 MB
  Start time                            2013-05-23 14:39:18 IST
  Uptime                                1 hour, 20 minutes, 22 seconds
```

show chassis fpc pic-status (MX104 Router)

```
user@host> show chassis fpc pic-status
Slot 0   Online
Slot 1   Online
  PIC 0  Online       10x 1GE(LAN) -E  SFP
  PIC 1  Online       10x 1GE(LAN) -E  SFP
Slot 2   Online
  PIC 0  Online       4x 10GE(LAN) SFP+
```

show chassis fpc (MX240 Router)

```
user@host> show chassis fpc
                Temp    CPU Utilization (%)     Memory       Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            34      6          0       1024       18         30
  2  Online            33      9          0       1024       24         30
```

show chassis fpc (MX480 Router)

```
user@host> show chassis fpc
                      Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            36      9          0       1024       17         57
  2  Empty
  3  Empty
  4  Empty
  5  Empty
```

show chassis fpc detail (EX9200 Switch)

```
user@switch> show chassis fpc detail
```

```
Slot 2 information:
  State                                 Online
  Temperature                        37
  Total CPU DRAM                   2048 MB
  Total RLDRAM                      331 MB
  Total DDR DRAM                   1536 MB
  Start time:                           2014-03-12 15:35:28 UTC
  Uptime:                               1 hour, 4 minutes, 29 seconds
  Max Power Consumption             239 Watts
Slot 3 information:
  State                                 Online
  Temperature                        39
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   6656 MB
  Start time:                           2014-03-12 15:00:18 UTC
  Uptime:                               1 hour, 39 minutes, 39 seconds
  Max Power Consumption             520 Watts
```

show chassis fpc (MX480 Router)

```
user@host> show chassis fpc
                Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online                    1          0        1      2      3    1024
  4         56
  1  Online                    1          0        2      2      3    1024
  4         56
```

show chassis fpc (MX480 Router with 100-Gigabit Ethernet CFP)

```
user@host> show chassis fpc
        Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State     (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
 0  Online      33   4      0              2048      10       13
 1  Online      36   7      0              2048      16       13
 2  Online      29   6      0              1024      27       29
 3  Online      33   0      0                 0       0        0
 4  Online      36   7      0              2048      19       13
 5  Online      34  31     11              2048      14       13
```

show chassis fpc pic-status (MX480 Router with 100-Gigabit Ethernet CFP)

```
user@host> show chassis fpc pic-status
Slot 1   Online       MPC Type 3
  PIC 2  Online       1X100GE CFP
 Slot 2  Online       DPCE 40x 1GE R EQ
  PIC 0  Online       10x 1GE(LAN) EQ
  PIC 1  Online       10x 1GE(LAN) EQ
  PIC 2  Online       10x 1GE(LAN) EQ
  PIC 3  Online       10x 1GE(LAN) EQ
 Slot 3  Online       MPC Type 3
  PIC 0  Online       1X100GE CFP
  PIC 2  Online       1X100GE CFP
 Slot 4  Online       MPC Type 3
  PIC 0  Online       1X100GE CFP
  PIC 2  Online       1X100GE CFP
 Slot 5  Online       MPC Type 2 3D EQ
```

```
  PIC 0  Online       2x 10GE  XFP
  PIC 1  Online       2x 10GE  XFP
  PIC 2  Online       10x 1GE(LAN) SFP
  PIC 3  Online       10x 1GE(LAN) SFP
```

show chassis fpc pic-status (EX Series Switch)

```
user@host> show chassis fpc pic-status
Slot 1   Online       EX9200 32x10G SFP
  PIC 0  Online       8X10GE SFPP
  PIC 1  Online       8X10GE SFPP
  PIC 2  Online       8X10GE SFPP
  PIC 3  Online       8X10GE SFPP
Slot 2   Online       EX9200 32x10G SFP
  PIC 0  Online       8X10GE SFPP
  PIC 1  Online       8X10GE SFPP
  PIC 2  Online       8X10GE SFPP
  PIC 3  Online       8X10GE SFPP
```

show chassis fpc (MX480 Router with MPC4E)

```
user@host> show chassis fpc
       Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online            38      7          0       2048       19         14
  3  Online            39      8          0       2048       18         14
  4  Online            39      7          0       2048       17         14
  5  Empty
```

show chassis fpc detail (MX480 Router with MPC4E)

```
user@host> show chassis fpc detail
Slot 2 information:
  State                                 Online
  Temperature                        38
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2013-02-18 05:06:57 PST
  Uptime:                               17 hours, 41 minutes, 9 seconds
  Max Power Consumption             610 Watts
Slot 3 information:
  State                                 Online
  Temperature                        38
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2013-02-18 05:07:00 PST
  Uptime:                               17 hours, 41 minutes, 6 seconds
  Max Power Consumption             610 Watts
Slot 4 information:
  State                                 Diagnostics
  Temperature                        37
  Total CPU DRAM                      0 MB
  Total RLDRAM                        0 MB
  Total DDR DRAM                      0 MB
  Max Power Consumption             520 Watts
```

show chassis fpc (MX480 Router with MPC4E)

```
user@host> show chassis fpc
                   Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online            38      7          0       2048       19         14
  3  Online            39      8          0       2048       18         14
  4  Online            39      7          0       2048       17         14
  5  Empty
```

show chassis fpc detail (MX480 Router with MPC4E)

```
user@host> show chassis fpc detail
Slot 2 information:
  State                                 Online
  Temperature                        38
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2013-02-18 05:06:57 PST
  Uptime:                               17 hours, 41 minutes, 9 seconds
  Max Power Consumption             610 Watts
Slot 3 information:
  State                                 Online
  Temperature                        38
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2013-02-18 05:07:00 PST
  Uptime:                               17 hours, 41 minutes, 6 seconds
  Max Power Consumption             610 Watts
Slot 4 information:
  State                                 Diagnostics
  Temperature                        37
  Total CPU DRAM                      0 MB
  Total RLDRAM                        0 MB
  Total DDR DRAM                      0 MB
  Max Power Consumption             520 Watts
```

show chassis fpc (MX960 Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State       (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
 0  Empty
 1  Empty
 2  Empty
 3  Online       25     19          0       1024       15         57
 4  Empty
 5  Online       26     27          0       1024       15         57
 6  Empty
 7  Empty
 8  Empty
 9  Empty
 10  Empty
 11  Empty
```

show chassis fpc (MX960 Router with MPC5EQ)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            38     16          0       3584        7         13
  1  Online            31     15          0       2048       17         13
  2  Empty
  3  Online            31     14          0       2048       20         13
  4  Online            34     16          0       3584        7         13
  5  Online            34     16          0       3584        7         13
  6  Empty
  7  Online            32      9          0       2048       18         14
  8  Online            36     19          0       3584        7         13
  9  Online            31      9          0       2048       13         13
 10  Online            35     14          0       3584        7         13
 11  Online            33     11          0       2048       18         14
```

show chassis fpc detail (MX960 Router with MPC5EQ)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                        38
  Total CPU DRAM                   3584 MB
  Total XR2                         291 MB
  Total DDR DRAM                  24960 MB
  Start time:                           2014-04-22 10:01:46 PDT
  Uptime:                               1 hour, 23 minutes, 40 seconds
  Max Power Consumption             607 Watts
Slot 1 information:
  State                                 Online
  Temperature                        31
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   6656 MB
  Start time:                           2014-04-22 10:01:50 PDT
  Uptime:                               1 hour, 23 minutes, 36 seconds
  Max Power Consumption             520 Watts
Slot 3 information:
  State                                 Online
  Temperature                        31
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1324 MB
  Total DDR DRAM                   5120 MB
  Start time:                           2014-04-22 10:01:50 PDT
  Uptime:                               1 hour, 23 minutes, 36 seconds
  Max Power Consumption             440 Watts
Slot 4 information:
  State                                 Online
  Temperature                        34
  Total CPU DRAM                   3584 MB
  Total XR2                         291 MB
  Total DDR DRAM                  24960 MB
  Start time:                           2014-04-22 10:01:54 PDT
  Uptime:                               1 hour, 23 minutes, 32 seconds
  Max Power Consumption             607 Watts
Slot 5 information:
  State                                 Online
  Temperature                        34
```

```
  Total CPU DRAM                    3584 MB
  Total XR2                          291 MB
  Total DDR DRAM                   24960 MB
  Start time:                           2014-04-22 10:01:56 PDT
  Uptime:                               1 hour, 23 minutes, 30 seconds
  Max Power Consumption              607 Watts
Slot 7 information:
  State                                 Online
  Temperature                         32
  Total CPU DRAM                    2048 MB
  Total RLDRAM                      1036 MB
  Total DDR DRAM                    11264 MB
  Start time:                           2014-04-22 10:02:02 PDT
  Uptime:                               1 hour, 23 minutes, 24 seconds
  Max Power Consumption              608 Watts
Slot 8 information:
  State                                 Online
  Temperature                         36
  Total CPU DRAM                    3584 MB
  Total XR2                          291 MB
  Total DDR DRAM                   24960 MB
  Start time:                           2014-04-22 10:02:07 PDT
  Uptime:                               1 hour, 23 minutes, 19 seconds
  Max Power Consumption              607 Watts
Slot 9 information:
  State                                 Online
  Temperature                         31
  Total CPU DRAM                    2048 MB
  Total RLDRAM                       734 MB
  Total DDR DRAM                    3108 MB
  Start time:                           2014-04-22 10:02:05 PDT
  Uptime:                               1 hour, 23 minutes, 21 seconds
  Max Power Consumption              368 Watts
Slot 10 information:
  State                                 Online
  Temperature                         35
  Total CPU DRAM                    3584 MB
  Total XR2                          291 MB
  Total DDR DRAM                   24960 MB
  Start time:                           2014-04-22 10:02:11 PDT
  Uptime:                               1 hour, 23 minutes, 15 seconds
  Max Power Consumption              607 Watts
Slot 11 information:
  State                                 Online
  Temperature                         33
  Total CPU DRAM                    2048 MB
  Total RLDRAM                      1036 MB
  Total DDR DRAM                    11264 MB
  Start time:                           2014-04-22 10:02:16 PDT
  Uptime:                               1 hour, 23 minutes, 10 seconds
  Max Power Consumption              608 Watts
```

show chassis fpc pic-status(MX960 Router with MPC5EQ)

```
user@host> show chassis fpc pic-status
Slot 0   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
```

```
Slot 1   Online       MPCE Type 3 3D
  PIC 0  Online       10X10GE SFPP
  PIC 2  Online       1X100GE CXP
Slot 3   Online       MPC 3D 16x 10GE
  PIC 0  Online       4x 10GE(LAN) SFP+
  PIC 1  Online       4x 10GE(LAN) SFP+
  PIC 2  Online       4x 10GE(LAN) SFP+
  PIC 3  Online       4x 10GE(LAN) SFP+
Slot 4   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 5   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 7   Online       MPC4E 3D 2CGE+8XGE
  PIC 0  Online       4x10GE SFPP
  PIC 1  Online       1X100GE CFP
  PIC 2  Online       4x10GE SFPP
  PIC 3  Online       1X100GE CFP
Slot 8   Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Offline      12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Online       3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
Slot 9   Online       MPCE Type 2 3D P
  PIC 0  Online       2x 10GE  XFP
  PIC 1  Online       2x 10GE  XFP
Slot 10  Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online       12X10GE SFPP
  PIC 1  Online       12X10GE SFPP
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Offline      3X40GE QSFPP
Slot 11  Online       MPC4E 3D 2CGE+8XGE
  PIC 0  Online       4x10GE SFPP
  PIC 1  Online       1X100GE CFP
  PIC 2  Online       4x10GE SFPP
  PIC 3  Online       1X100GE CFP
```

show chassis fpc (MX240, MX480, MX960 Routers with Application Services Modular Line Card

```
user@host> show chassis fpc 1
    Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  1  Online            34      5          0       3072        5         13
```

show chassis fpc (MX240, MX480, MX960 with Application Services Modular Line Card

```
user@host> show chassis fpc 1 detail
Slot 1 information:
  State                                 Online
  Temperature                        34
  Total CPU DRAM                   3072 MB
  Total RLDRAM                      259 MB
  Total DDR DRAM                   4864 MB
  Start time:                           2012-06-19 10:51:43 PDT
```

```
  Uptime:                                 16 minutes, 48 seconds
  Max Power Consumption              550 Watts
```

show chassis fpc (MX240, MX480, MX960, MX2010, MX2020, and MX2008 3D Universal Edge Routers with Dynamic Power Management)

```
user@host> show chassis fpc 2 detail

Slot 2 information:
  State                                   Online
  Temperature                          37
  Total CPU DRAM                     3584 MB
  Total XR2                           275 MB
  Total DDR DRAM                    20352 MB
  Start time:                             2014-07-18 02:51:23 PDT
  Uptime:                                 5 minutes, 19 seconds
  Max MPC Base Power Consumption   485 Watts
  Max MIC0 Power Consumption        50 Watts
  Max MIC1 Power Consumption        50 Watts
  Max MPC Total Power Consumption  585 Watts
```

show chassis fpc (MX2010 Routers)

```
user@host> show chassis fpc
     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            34      9          0       2048       18         13
  1  Online            32      9          0       2048       15         13
  2  Empty
  3  Empty
  4  Empty
  5  Empty
  6  Empty
  7  Empty
  8  Online            31     13          0       2048       11         13
  9  Online            33     10          0       2048       18         13
```

show chassis fpc (MX2010 Router with Fabric Grant Bypass Enabled)

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass is enabled by default. All MPCs power on.

```
user@host> show chassis fpc
Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            34     20          0       2048        9         14
  1  Offline           33     22       0       2048        9         14
  2  Online            33     17          0       2048        9         14
  3  Offline           34     25       0       2048        9         14
  4  Online            32     27          0       2048        9         14
  5  Offline           32     26       0      2048        9         14
  6  Empty
  7  Empty
  8  Empty
  9  Empty
```

show chassis fpc (MX2010 Router with Fabric Grant Bypass Disabled)

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass and reboot the router. Also, FPC misconfiguration alarms are generated.

```
user@host> show chassis fpc
 Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            34     20          0       2048        9         14
  1  Offline         ---FPC misconfiguration---
  2  Online            33     17          0       2048        9         14
  3  Offline         ---FPC misconfiguration---
  4  Online            32     27          0       2048        9         14
  5  Offline         ---FPC misconfiguration---
  6  Empty
  7  Empty
  8  Empty
  9  Empty
```

show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Enabled)

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been enabled by default. All MPCs power on.

```
user@host> show chassis fpc pic-status
Slot 0   Present      MPCE Type 3 3D
Slot 1   Present      MPC Type 2 3D EQ
Slot 2   Present      MPCE Type 3 3D
Slot 3   Present      MPC 3D 16x 10GE
Slot 4   Present      MPCE Type 3 3D
Slot 5   Present      MPCE Type 1 3D Q
```

show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Disabled)

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass mode and reboot the router.

```
user@host> show chassis fpc pic-status
Slot 0   Present      MPCE Type 3 3D
Slot 1   Offline      MPC Type 2 3D EQ
Slot 2   Present      MPCE Type 3 3D
Slot 3   Offline      MPC 3D 16x 10GE
Slot 4   Present      MPCE Type 3 3D
Slot 5   Offline      MPCE Type 1 3D Q
```

show chassis fpc (MX2020 Routers)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
```

```
  0  Online            10     12          0       2048       18         13
  1  Online             8      9          0       2048       18         13
  2  Online             7      9          0       2048       18         13
  3  Online             8     10          0       2048       18         13
  4  Online             9     10          0       2048       18         13
  5  Online             8      9          0       2048       18         13
  6  Online             8     10          0       2048       18         13
  7  Online             9      9          0       2048       18         13
  8  Online             9     10          0       2048       18         13
  9  Online            10      9          0       2048       18         13
 10  Online            16      8          0       2048       18         13
 11  Online            11     10          0       2048       18         13
 12  Online            10     10          0       2048       18         13
 13  Online            11      9          0       2048       18         13
 14  Online            12     10          0       2048       18         13
 15  Online            13      9          0       2048       18         13
 16  Online            13      9          0       2048       18         13
 17  Online            12      9          0       2048       18         13
 18  Online            12      8          0       2048       18         13
 19  Online            14     10          0       2048       18         13
```

show chassis fpc (MX2020 Router with MPC4E)

```
user@host> show chassis fpc
     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            33     12          2       2048       11         13
  1  Empty
  2  Empty
  3  Empty
  4  Empty
  5  Empty
  6  Empty
  7  Empty
  8  Empty
  9  Online            31     10          0       2048       11         13
 10  Online            32      7          0       2048       14         13
 11  Empty
 12  Empty
 13  Empty
 14  Online            28     12          0       2048       15         14
 15  Empty
 16  Empty
 17  Empty
 18  Empty
 19  Online            38      8          0       2048       18         13
```

show chassis fpc (MX10003 Router)

```
user@host> show chassis fpc

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online            59     25          0       25     24     23    3136
 12         11
  1  Online            62     29          0       26     24     23    3136
 12         11
```

show chassis fpc detail (MX10003 Router)

```
user@host> show chassis fpc detail

Slot 0 information:
  State                                 Online
  Total CPU DRAM                  3136 MB
  Total RLDRAM                     771 MB
  Total DDR DRAM                  18432 MB
  Temperature                        60 degrees C / 140 degrees F
  Start time                            2017-07-19 20:49:58 PDT
  Uptime                                2 hours, 29 minutes, 22 seconds
  Max MPC base power consumption   910 Watts
  Max MIC1 power consumption        95 Watts
  Max MPC total power consumption 1005 Watts
Slot 1 information:
  State                                 Online
  Total CPU DRAM                  3136 MB
  Total RLDRAM                     771 MB
  Total DDR DRAM                  18432 MB
  Temperature                        63 degrees C / 145 degrees F
  Start time                            2017-07-19 20:48:01 PDT
  Uptime                                2 hours, 31 minutes, 19 seconds
  Max MPC base power consumption   910 Watts
  Max MIC1 power consumption       155 Watts
  Max MPC total power consumption 1065 Watts
```

show chassis fpc <fpc-slot> (MX10003 Router)

```
user@host> show chassis fpc 0

                      Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online            49     26          0       22     22     23    3136
 12         11
```

show chassis fpc (MX204 Router)

```
user@host> show chassis fpc

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online           Absent   8          0        8      8      8    3136
  8          8
```

show chassis fpc detail (MX204 Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Total CPU DRAM                  3136 MB
  Total RLDRAM                     257 MB
  Total DDR DRAM                  4096 MB
  Temperature                      Absent
  Start time                            2017-11-05 22:14:01 PST
  Uptime                                2 days, 8 hours, 5 minutes, 55 seconds
```

show chassis fpc <fpc-slot> (MX204 Router)

```
user@host> show chassis fpc 0

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online           Absent   8          0        8      8      8    3136
  8          8
```

show chassis fpc detail (MX2020 Router with MPC4E)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                        34
  Total CPU DRAM                   2048 MB
  Total RLDRAM                      806 MB
  Total DDR DRAM                   2632 MB
  Start time:                           2013-02-17 08:17:35 PST
  Uptime:                               1 day, 14 hours, 50 minutes, 39 seconds
  Max Power Consumption             368 Watts
Slot 9 information:
  State                                 Online
  Temperature                        32
  Total CPU DRAM                   2048 MB
  Total RLDRAM                      806 MB
  Total DDR DRAM                   2632 MB
  Start time:                           2013-02-17 08:17:43 PST
  Uptime:                               1 day, 14 hours, 50 minutes, 31 seconds
  Max Power Consumption             368 Watts
Slot 10 information:
  State                                 Online
  Temperature                        37
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   6656 MB
  Start time:                           2013-02-17 08:17:54 PST
  Uptime:                               1 day, 14 hours, 50 minutes, 20 seconds
  Max Power Consumption             520 Watts
Slot 14 information:
  State                                 Online
  Temperature                        32
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2013-02-17 08:18:01 PST
  Uptime:                               1 day, 14 hours, 50 minutes, 13 seconds
  Max Power Consumption             610 Watts
Slot 19 information:
  State                                 Online
  Temperature                        38
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1324 MB
  Total DDR DRAM                   5120 MB
  Start time:                           2013-02-17 08:18:08 PST
  Uptime:                               1 day, 14 hours, 50 minutes, 6 seconds
  Max Power Consumption             440 Watts
```

show chassis fpc (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            31     20          0       3584        7         13
  1  Online            28     19          0       2048       17         13
  2  Online            27     10          0       2048       18         14
  3  Online            26     10          0       2048       13         13
  4  Online            29     19          0       3584        7         13
  5  Online            28     68          0       2048       20         13
  6  Empty
  7  Empty
  8  Empty
  9  Online            36     19          0       3584       10         13
 10  Online            37     26          0       3584       10         13
 11  Empty
 12  Empty
 13  Empty
 14  Empty
 15  Empty
 16  Empty
 17  Online            28     43          0       3584       10         13
 18  Online            29     19          0       3584        7         13
 19  Online            31     19          0       3584        7         13
```

show chassis fpc detail (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                        31
  Total CPU DRAM                   3584 MB
  Total XR2                         291 MB
  Total DDR DRAM                  24960 MB
  Start time:                           2014-04-22 23:33:19 PDT
  Uptime:                               6 minutes, 24 seconds
  Max Power Consumption             607 Watts
Slot 1 information:
  State                                 Online
  Temperature                        28
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   6656 MB
  Start time:                           2014-04-22 23:33:24 PDT
  Uptime:                               6 minutes, 19 seconds
  Max Power Consumption             520 Watts
Slot 2 information:
  State                                 Online
  Temperature                        27
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2014-04-22 23:33:34 PDT
  Uptime:                               6 minutes, 9 seconds
  Max Power Consumption             608 Watts
Slot 3 information:
  State                                 Online
  Temperature                        26
```

```
  Total CPU DRAM                    2048 MB
  Total RLDRAM                       734 MB
  Total DDR DRAM                    3108 MB
  Start time:                           2014-04-22 23:33:39 PDT
  Uptime:                               6 minutes, 4 seconds
  Max Power Consumption              368 Watts
Slot 4 information:
  State                                 Online
  Temperature                         29
  Total CPU DRAM                    3584 MB
  Total XR2                          291 MB
  Total DDR DRAM                   24960 MB
  Start time:                           2014-04-22 23:33:51 PDT
  Uptime:                               5 minutes, 52 seconds
  Max Power Consumption              607 Watts
Slot 5 information:
  State                                 Online
  Temperature                         28
  Total CPU DRAM                    2048 MB
  Total RLDRAM                      1324 MB
  Total DDR DRAM                    5120 MB
  Start time:                           2014-04-22 23:33:57 PDT
  Uptime:                               5 minutes, 46 seconds
  Max Power Consumption              440 Watts
Slot 9 information:
  State                                 Online
 Temperature                         25
  Total CPU DRAM                    3584 MB
  Total XR2                          518 MB
  Total DDR DRAM                   49920 MB
  Start time:                           2014-04-22 23:31:20 PDT
  Uptime:                               8 minutes, 23 seconds
  Max Power Consumption             1130 Watts
Slot 10 information:
  State                                 Online
  Temperature                         32
  Total CPU DRAM                    3584 MB
  Total XR2                          518 MB
  Total DDR DRAM                   49920 MB
  Start time:                           2014-04-22 23:31:25 PDT
  Uptime:                               8 minutes, 18 seconds
  Max Power Consumption             1130 Watts
Slot 17 information:
  State                                 Online
  Temperature                         25
  Total CPU DRAM                    3584 MB
  Total XR2                          518 MB
  Total DDR DRAM                   49920 MB
  Start time:                           2014-04-22 23:31:29 PDT
  Uptime:                               8 minutes, 14 seconds
  Max Power Consumption             1130 Watts
Slot 18 information:
  State                                 Online
  Temperature                         29
  Total CPU DRAM                    3584 MB
  Total XR2                          291 MB
  Total DDR DRAM                   24960 MB
  Start time:                           2014-04-22 23:34:11 PDT
  Uptime:                               5 minutes, 32 seconds
  Max Power Consumption              607 Watts
Slot 19 information:
```

```
  State                                 Online
  Temperature                        32
  Total CPU DRAM                   3584 MB
  Total XR2                         291 MB
  Total DDR DRAM                  24960 MB
  Start time:                           2014-04-22 23:34:20 PDT
  Uptime:                               5 minutes, 23 seconds
  Max Power Consumption             607 Watts
```

show chassis fpc detail (MX2008 Router)

```
user@host>show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                       33 degrees C / 91 degrees F
  Total CPU DRAM                  2048 MB
  Total RLDRAM                     734 MB
  Total DDR DRAM                  2596 MB
  Start time                            2017-04-14 07:14:26 PDT
  Uptime                                15 hours, 29 minutes, 20 seconds
  Max power consumption             347 Watts
Slot 3 information:
  State                                 Online
  Temperature                       31 degrees C / 87 degrees F
  Total CPU DRAM                  3584 MB
  Total RLDRAM                     259 MB
  Total DDR DRAM                 20352 MB
  Start time                            2017-04-14 07:14:38 PDT
  Uptime                                15 hours, 29 minutes, 8 seconds
  Max MPC base power consumption   376 Watts
  Max MIC0 power consumption         0 Watts
  Max MIC1 power consumption         0 Watts
  Max MPC total power consumption  376 Watts
Slot 5 information:
  State                                 Online
  Temperature                       32 degrees C / 89 degrees F
  Total CPU DRAM                  3584 MB
  Total RLDRAM                     275 MB
  Total DDR DRAM                 20352 MB
  Start time                            2017-04-14 07:14:46 PDT
  Uptime                                15 hours, 29 minutes
  Max MPC base power consumption   422 Watts
  Max MIC0 power consumption        18 Watts
  Max MIC1 power consumption         0 Watts
  Max MPC total power consumption  440 Watts
Slot 7 information:
  State                                 Online
  Temperature                       28 degrees C / 82 degrees F
  Total CPU DRAM                  2048 MB
  Total RLDRAM                     403 MB
  Total DDR DRAM                  1572 MB
  Start time                            2017-04-14 07:14:50 PDT
  Uptime                                15 hours, 28 minutes, 56 seconds
  Max power consumption             347 Watts
Slot 9 information:
  State                                 Online
  Temperature                       29
  Total CPU DRAM                  3584 MB
  Total XR2                        518 MB
  Total DDR DRAM                 49920 MB
  Start time                            2017-04-14 07:13:16 PDT
```

```
  Uptime                              15 hours, 30 minutes, 30 seconds
  Max MPC base power consumption   834 Watts
  Max MIC0 power consumption        56 Watts
  Max MIC1 power consumption         0 Watts
  Max MPC total power consumption  890 Watts
```

show chassis fpc pic-status (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis fpc pic-status
Slot 0   Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online       12X10GE SFPP OTN
  PIC 1  Online       12X10GE SFPP OTN
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Offline      3X40GE QSFPP
Slot 1   Online       MPCE Type 3 3D
  PIC 0  Online       10X10GE SFPP
  PIC 2  Online       1X100GE CXP
Slot 2   Online       MPC4E 3D 2CGE+8XGE
  PIC 0  Online       4x10GE SFPP
  PIC 1  Online       1X100GE CFP
  PIC 2  Online       4x10GE SFPP
  PIC 3  Online       1X100GE CFP
Slot 3   Online       MPCE Type 2 3D P
  PIC 0  Online       2x 10GE  XFP
  PIC 1  Online       2x 10GE  XFP
Slot 4   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 5   Online       MPC 3D 16x 10GE
  PIC 0  Online       4x 10GE(LAN) SFP+
  PIC 1  Online       4x 10GE(LAN) SFP+
  PIC 2  Online       4x 10GE(LAN) SFP+
  PIC 3  Online       4x 10GE(LAN) SFP+
Slot 9   Online       MPC6E 3D
  PIC 0  Online       2X100GE CFP2 OTN
  PIC 1  Online       2X100GE CFP2 OTN
Slot 10  Online       MPC6E 3D
  PIC 0  Online       24X10GE SFPP OTN
  PIC 1  Online       4X100GE CXP
Slot 17  Online       MPC6E 3D
  PIC 0  Online       24X10GE SFPP
  PIC 1  Online       4X100GE CXP
Slot 18  Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Offline      12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Online       3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
Slot 19  Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online       12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
```

show chassis fpc detail (MX Series Routers)

```
user@host> show chassis fpc detail 2
Slot 0 information:
  State                                 Online
```

```
  Temperature                        36 degrees C / 96 degrees F
  Total CPU DRAM                   1024 MB
  Total RLDRAM                      256 MB
  Total DDR DRAM                   4096 MB
  Start time:                           2009-08-11 21:20:30 PDT
  Uptime:                               2 hours, 8 minutes, 50 seconds
  Max Power Consumption             335 Watts
```

show chassis fpc detail (EX Series Switches)

```
user@host> show chassis fpc detail 2
Slot 1 information:
  State                                 Online
  Temperature                        41
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2013-04-02 00:04:52 PDT
  Uptime:                               7 days, 9 hours, 47 minutes, 46 seconds
  Max Power Consumption             610 Watts
Slot 2 information:
  State                                 Online
  Temperature                        41
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1036 MB
  Total DDR DRAM                   11264 MB
  Start time:                           2013-04-02 00:04:56 PDT
  Uptime:                               7 days, 9 hours, 47 minutes, 42 seconds
  Max Power Consumption             610 Watts
```

show chassis fpc (Hardware Not Supported)

```
user@host> show chassis fpc
show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
 Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online          -------------------- CPU less FPC --------------------
  1  Present         ------ Hardware Not In Right Slot ------
  2  Online                   0          0         0         0          0
  3  Present         ------ Hardware Not Supported ------
  4  Empty
  5  Empty
  6  Online                   0          0         0         0          0
```

show chassis fpc detail (Hardware Not Supported)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Total CPU DRAM                        ---- CPU less FPC ----
  Start time                            2006-07-07 03:21:00 UTC
  Uptime                                27 minutes, 51 seconds
 Slot 1 information:
  State                                 Present
  Reason                                --- Hardware Not In Right Slot ---
 Slot 2 information:
  State                                 Online
  Total CPU DRAM                    32 MB
  Start time                            2006-07-07 03:20:59 UTC
  Uptime                                27 minutes, 52 seconds
```

```
 Slot 3 information:
  State                                   Present
  Reason                                  --- Hardware Not Supported ---
  Total CPU DRAM                       0 MB
 Slot 6 information:
  State                                   Online
  Total CPU DRAM                      32 MB
  Start time                              2006-07-07 03:21:01 UTC
  Uptime                                  27 minutes, 50 seconds
```

show chassis fpc pic-status

```
user@host> show chassis fpc pic-status
Slot 0 Online
  PIC 1    1x OC-12 ATM, MM
  PIC 2    1x OC-12 ATM, MM
  PIC 3    1x OC-12 ATM, MM
Slot 1 Online
  PIC 0    1x OC-48 SONET, SMIR
Slot 2 Online
  PIC 0    1x OC-192 SONET, SMSR
```

show chassis fpc pic-status (M Series Routers)

```
user@host> show chassis fpc pic-status
Slot 1   Online       FPC Type 1
  PIC 0  Present      2x OC-3 ATM, MM- Hardware Error
  PIC 1  Online       4x OC-3 SONET, SMIR
Slot 2   Online       E-FPC Type 2
  PIC 0  Online       4x G/E, 1000 BASE-SX
  PIC 1  Online       2x G/E SFP, 1000 BASE
  PIC 3  Online       1x Tunnel
Slot 3   Online       E-FPC Type 1
  PIC 0  Online       1x G/E IQ, 1000 BASE
  PIC 2  Online       1x G/E SFP, 1000 BASE
Slot 4   Online       E-FPC Type 2
  PIC 0  Online       4x G/E SFP, 1000 BASE
  PIC 1  Online       4x G/E SFP, 1000 BASE
  PIC 2  Online       4x G/E SFP, 1000 BASE
  PIC 3  Online       4x G/E SFP, 1000 BASE
Slot 5   Online       FPC Type 2
...
```

show chassis fpc pic-status (M120 Router)

```
user@host> show chassis fpc pic-status
Slot 1   Online       M120 CFPC 10GE
  PIC 0  Online       1x 10GE(LAN/WAN) XFP
Slot 3   Online       M120 FPC Type 2 (proto)
  PIC 0  Online       2x G/E IQ, 1000 BASE
  PIC 1  Online       4x OC-3 SONET, SMIR
  PIC 2  Online       2x G/E IQ, 1000 BASE
  PIC 3  Online       8x 1GE(LAN), IQ2
Slot 4   Online       M120 FPC Type 3 (proto)
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
Slot 5   Online       M120 FPC Type 1 (proto)
  PIC 0  Present      1x G/E, 1000 BASE-LX- Not Supported
  PIC 1  Online       1x CHOC3 IQ SONET, SMLR
```

```
  PIC 2  Online       4x CHDS3 IQ
  PIC 3  Online       1x G/E SFP, 1000 BASE
```

show chassis fpc pic-status (MX240, MX480, and MX960 Routers with Application Services Modular Line Card)

In the following output **Slot 1 and Slot 5** are the Application Services Modular Carrier Cards (AS MCC), **PIC 0** is the Application Services Modular Storage Card (AS MSC), and **PIC 2** is the Application Services Modular Processing Card (AS MXC).

```
user@host>show chassis fpc pic-status
Slot 2   Online       MPC Type 1 3D Q
  Slot 1   Online       AS-MCC
  PIC 0  Online       AS-MSC
  PIC 2  Online       AS-MXC
Slot 4   Offline      MPC 3D 16x 10GE
Slot 5   Offline      AS-MCC
```

show chassis fpc lcc (TX Matrix Router)

```
user@host> show chassis fpc lcc 0
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU       Utilization (%)  Memory    Utilization (%)
Slot State      (C)  Total  Interrupt     DRAM (MB)       Heap   Buffer
  0  Empty
  1  Online      27      2          0       256         8         44
  2  Online      27      3          0        256        15         44
  3  Empty
  4  Empty
  5  Empty
  6  Empty
  7  Empty
```

show chassis fpc pic-status (TX Matrix Router)

```
user@host> show chassis fpc pic-status
lcc0-re0:
--------------------------------------------------------------------------
Slot 0   Online       FPC Type 3
  PIC 0  Online       1x OC-192 SM SR1
  PIC 1  Online       1x OC-192 SM SR2
  PIC 2  Online       1x OC-192 SM SR1
  PIC 3  Online       1x Tunnel
Slot 1   Online       FPC Type 2
  PIC 0  Online       1x OC-48 SONET, SMSR
  PIC 1  Online       1x OC-48 SONET, SMSR

lcc1-re0:
--------------------------------------------------------------------------

lcc2-re0:
--------------------------------------------------------------------------
Slot 1   Online       FPC Type 3
  PIC 0  Online       1x OC-192 SM SR1
Slot 5   Online       FPC Type 2
  PIC 0  Online       1x OC-48 SONET, SMSR
  PIC 1  Online       2x G/E, 1000 BASE-LX
  PIC 2  Online       2x G/E, 1000 BASE-LX
  PIC 3  Online       1x OC-48 SONET, SMSR
```

```
lcc3-re0:
--------------------------------------------------------------------------
```

show chassis fpc pic-status lcc (TX Matrix Router)

```
user@host> show chassis fpc pic-status lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Slot 0   Online       FPC Type 3
  PIC 0  Online       1x OC-192 SM SR2
Slot 1   Online       FPC Type 2
  PIC 0  Online       2x OC-12 ATM2 IQ, MM
  PIC 1  Online       1x OC-48 SONET, SMSR
  PIC 2  Online       1x OC-48 SONET, SMSR
  PIC 3  Online       4x G/E, 1000 BASE-SX
```

show chassis fpc (TX Matrix Plus Router)

```
user@host> show chassis fpc
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            38      4          0       2048        3         24
  2  Online            43      8          0       2048        6         24
  3  Empty
  4  Online            43      6          0       2048        6         24
  5  Empty
  6  Online            42     13          0       2048        6         24
  7  Online            45      7          0       2048        3         24

lcc2-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            42     10          0       2048        6         24
  1  Empty
  2  Online            42     11          0       2048        6         24
  3  Online            40      5          0       2048        3         24
  4  Online            33     26          0       1024        8         49
  5  Empty
  6  Online            43      8          0       2048        6         24
  7  Online            46      6          0       2048        3         24

lcc3-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online            39     30          0       2048        7         24
  3  Empty
  4  Online            41      8          0       2048        6         24
  5  Online            41     12          0       2048        6         24
  6  Online            40      8          0       2048        6         24
  7  Online            42      4          0       2048        3         24
```

show chassis fpc lcc (TX Matrix Plus Router)

```
user@host> show chassis fpc lcc 0
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            38      4          0       2048        3         24
  2  Online            43      8          0       2048        6         24
  3  Empty
  4  Online            43      6          0       2048        6         24
  5  Empty
  6  Online            42     14          0       2048        6         24
  7  Online            45      6          0       2048        3         24
```

show chassis fpc detail (TX Matrix Plus Router)

```
user@host> show chassis fpc details

lcc0-re0:
--------------------------------------------------------------------------
Slot 1 information:
  State                                 Online
  Temperature                        38 degrees C / 100 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                         64 MB
  Total SDRAM                      1280 MB
  Start time                            2010-10-04 20:06:22 PDT
  Uptime                                1 hour, 32 minutes, 51 seconds
Slot 2 information:
  State                                 Online
  Temperature                        43 degrees C / 109 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                            2010-10-04 20:06:37 PDT
  Uptime                                1 hour, 32 minutes, 36 seconds
Slot 4 information:
  State                                 Online
  Temperature                        43 degrees C / 109 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                            2010-10-04 20:06:40 PDT
  Uptime                                1 hour, 32 minutes, 33 seconds
Slot 6 information:
  State                                 Online
  Temperature                        42 degrees C / 107 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                            2010-10-04 20:06:42 PDT
  Uptime                                1 hour, 32 minutes, 31 seconds
Slot 7 information:
  State                                 Online
  Temperature                        45 degrees C / 113 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                         64 MB
  Total SDRAM                      1280 MB
```

```
  Start time                          2010-10-04 20:06:43 PDT
  Uptime                              1 hour, 32 minutes, 30 seconds

lcc2-re0:
--------------------------------------------------------------------------
Slot 0 information:
  State                               Online
  Temperature                      42 degrees C / 107 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 20:06:35 PDT
  Uptime                              1 hour, 32 minutes, 38 seconds
Slot 2 information:
  State                               Online
  Temperature                      42 degrees C / 107 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 20:06:37 PDT
  Uptime                              1 hour, 32 minutes, 36 seconds
Slot 3 information:
  State                               Online
  Temperature                      40 degrees C / 104 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 20:06:28 PDT
  Uptime                              1 hour, 32 minutes, 45 seconds
Slot 4 information:
  State                               Online
  Temperature                      33 degrees C / 91 degrees F
  Total CPU DRAM                 1024 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 20:08:03 PDT
  Uptime                              1 hour, 31 minutes, 10 seconds
Slot 6 information:
  State                               Online
  Temperature                      43 degrees C / 109 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 20:06:44 PDT
  Uptime                              1 hour, 32 minutes, 29 seconds
Slot 7 information:
  State                               Online
  Temperature                      46 degrees C / 114 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 20:06:46 PDT
  Uptime                              1 hour, 32 minutes, 27 seconds

lcc3-re0:
--------------------------------------------------------------------------
Slot 2 information:
  State                               Online
  Temperature                      38 degrees C / 100 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
```



```
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 20:17:31 PDT
  Uptime                              1 hour, 21 minutes, 42 seconds
Slot 4 information:
  State                               Online
  Temperature                      41 degrees C / 105 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 20:17:34 PDT
  Uptime                              1 hour, 21 minutes, 39 seconds
Slot 5 information:
  State                               Online
  Temperature                      41 degrees C / 105 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 20:17:36 PDT
  Uptime                              1 hour, 21 minutes, 37 seconds
Slot 6 information:
  State                               Online
  Temperature                      40 degrees C / 104 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 20:17:39 PDT
  Uptime                              1 hour, 21 minutes, 34 seconds
Slot 7 information:
  State                               Online
  Temperature                      42 degrees C / 107 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 20:17:41 PDT
  Uptime                              1 hour, 21 minutes, 32 seconds
```

show chassis fpc pic-status (TX Matrix Plus Router)

```
user@host> show chassis fpc pic-status

lcc0-re0:
--------------------------------------------------------------------------
Slot 1   Online       FPC Type 2-ES
  PIC 0  Online       8x 1GE(LAN), IQ2
Slot 2   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
Slot 4   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
Slot 6   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 7   Online       FPC Type 3-ES
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
  PIC 2  Online       1x OC-192 SM SR2
  PIC 3  Online       10x 1GE(LAN), 1000 BASE

lcc2-re0:
--------------------------------------------------------------------------
Slot 0   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
Slot 2   Online       FPC Type 4-ES
```

```
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 3   Online       FPC Type 2-ES
  PIC 0  Online       8x 1GE(LAN), IQ2
Slot 4   Online       FPC Type 4
  PIC 0  Online       10x10GE(LAN/WAN) SFPP
Slot 6   Online       FPC Type 4-ES
  PIC 0  Online       4x OC-192 SONET XFP
Slot 7   Online       FPC Type 3-ES
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
  PIC 1  Offline      1x 10GE(LAN/WAN) IQ2E
  PIC 2  Online       1x OC-192 SM SR2
  PIC 3  Online       1x Tunnel

lcc3-re0:
--------------------------------------------------------------------------
Slot 2   Online       FPC Type 4-ES
  PIC 0  Online       10x10GE(LAN/WAN) SFPP
Slot 4   Online       FPC Type 4-ES
  PIC 0  Online       4x OC-192 SONET XFP
Slot 5   Online       FPC Type 4-ES
  PIC 0  Online       4x OC-192 SONET XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 6   Online       FPC Type 4-ES
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 7   Online       FPC Type 3-ES
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
  PIC 1  Online       8x 1GE(TYPE3), IQ2E
  PIC 2  Online       4x OC-48 SONET
```

show chassis fpc (T1600 Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online            49      3          0       2048        3         24
  3  Online            46      6          0       2048        6         24
  4  Empty
  5  Online            46      5          0       2048        3         24
  6  Empty
  7  Online            44      8          0       1024        7         49
```

show chassis fpc detail (T1600 Router)

```
user@host> show chassis fpc detail

show chassis fpc detail
Slot 2 information:
  State                               Online
  Temperature                      49 degrees C / 120 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 21:12:52 PDT
  Uptime                              32 minutes, 9 seconds
Slot 3 information:
  State                               Online
  Temperature                      47 degrees C / 116 degrees F
```

```
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                           2010-10-04 21:13:06 PDT
  Uptime                               31 minutes, 55 seconds
Slot 5 information:
  State                                Online
  Temperature                      46 degrees C / 114 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                           2010-10-04 21:12:56 PDT
  Uptime                               32 minutes, 5 seconds
Slot 7 information:
  State                                Online
  Temperature                      44 degrees C / 111 degrees F
  Total CPU DRAM                 1024 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                           2010-10-04 21:14:34 PDT
  Uptime                               30 minutes, 27 seconds
```

show chassis fpc <fpc-slot> (EX Series Switch)

```
user@host> show chassis fpc 2

                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  2  Online            40     12          0       2048       19         14
```

show chassis fpc slot (T1600 Router)

```
user@host> show chassis fpc slot 2

                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  2  Online            49      3          0       2048        3         24
```

show chassis fpc pic-status (T1600 Router)

```
user@host> show chassis fpc pic-status

Slot 2   Online       FPC Type 1-ES
  PIC 0  Online       Load Type 1
  PIC 1  Online       4x 1GE(LAN), IQ2E
  PIC 3  Online       1x OC-12-3 SFP
Slot 3   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x OC-192 SONET XFP
Slot 5   Online       FPC Type 2-ES
  PIC 0  Online       Load Type 2
  PIC 1  Online       8x 1GE(LAN), IQ2E
  PIC 2  Online       8x 1GE(LAN), IQ2E
  PIC 3  Online       1x OC-48-12-3 SFP
Slot 7   Online       FPC Type 4
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
```

show chassis fpc (T4000 Router)

```
user@host> show chassis fpc

                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            48     15          0       2816       21         27
  1  Empty
  2  Empty
  3  Online            51     15          0       2816       21         27
  4  Empty
  5  Online            39      8          0       2048        6         23
  6  Online            49     15          0       2816       21         27
  7  Empty
```

show chassis fpc detail (T4000 Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                       48 degrees C / 118 degrees F
  Total CPU DRAM                  2816 MB
  Total SRAM                      1554 MB
  Total SDRAM                     10752 MB
  Start time                          2012-02-09 22:56:25 PST
  Uptime                              2 hours, 40 minutes, 52 seconds
Slot 3 information:
  State                               Online
  Temperature                       51 degrees C / 123 degrees F
  Total CPU DRAM                  2816 MB
  Total SRAM                      1554 MB
  Total SDRAM                     10752 MB
  Start time                          2012-02-09 22:56:22 PST
  Uptime                              2 hours, 40 minutes, 55 seconds
Slot 5 information:
  State                               Online
  Temperature                       39 degrees C / 102 degrees F
  Total CPU DRAM                  2048 MB
  Total SRAM                       128 MB
  Total SDRAM                     2560 MB
  Start time                          2012-02-09 22:51:27 PST
  Uptime                              2 hours, 45 minutes, 50 seconds
Slot 6 information:
  State                               Online
  Temperature                       49 degrees C / 120 degrees F
  Total CPU DRAM                  2816 MB
  Total SRAM                      1554 MB
  Total SDRAM                     10752 MB
  Start time                          2012-02-09 22:56:29 PST
  Uptime                              2 hours, 40 minutes, 48 seconds
```

show chassis fpc pic-status (T4000 Router)

```
user@host> show chassis fpc pic-status
Slot 0   Online       FPC Type 5-3D
  PIC 0  Online       12x10GE (LAN/WAN) SFPP
  PIC 1  Online       12x10GE (LAN/WAN) SFPP
Slot 3   Online       FPC Type 5-3D
  PIC 0  Online       1x100GE
  PIC 1  Online       12x10GE (LAN/WAN) SFPP
```

```
Slot 5   Online       FPC Type 4-ES
  PIC 0  Online       100GE
  PIC 1  Online       100GE CFP
Slot 6   Online       FPC Type 5-3D
  PIC 0  Online       12x10GE (LAN/WAN) SFPP
  PIC 1  Online       12x10GE (LAN/WAN) SFPP
```

show chassis fpc (QFX Series and OCX Series)

```
user@switch> show chassis fpc
Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
0  Online            26      2          0       2820        0         49
```

show chassis fpc detail (QFX3500 Switches)

```
user@switch> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                        28 degrees C / 82 degrees F
  Total CPU DRAM                   2820 MB
  Total SRAM                          0 MB
  Total SDRAM                         0 MB
  Start time                            2010-09-20 01:34:13 PDT
  Uptime                                3 days, 3 hours, 31 minutes, 48 seconds
```

show chassis fpc pic-status (QFX3500 Switches)

```
user@switch> show chassis fpc pic-status
Slot 0   Online       QFX 48x10G 4x40G Switch
  PIC 0  Online       48x 10G-SFP+
  PIC 1  Online       15x 10G-SFP+
```

show chassis fpc interconnect-device (QFabric System)

```
user@switch> show chassis fpc interconnect-device interconnect1
FPC status:
                     Temp
Slot State            (C)
  0  Online             0
  1  Online             0
  2  Online             0
  3  Online             0
  4  Online             0
  5  Online             0
  6  Online             0
  7  Online             0
  8  Online             0
  9  Online             0
 10  Online             0
 11  Online             0
 12  Online             0
 13  Online             0
 14  Online             0
 15  Online             0
```

show chassis fpc interconnect-device (QFabric System)

```
user@switch> show chassis fpc interconnect-device interconnect1 3
```

```
FPC status:
                          Temp
Slot State                 (C)
  3  Online                  0
```

show chassis fpc interconnect-device detail (QFabric System)

```
user@switch> show chassis fpc interconnect-device interconnect1 3 detail
Slot 3 information:
  State                                 Online
  Temperature                       0 degrees C / 32 degrees F
  Start time                            2011-08-18 10:45:04 PDT
  Uptime                                1 minute, 49 seconds
```

show chassis fpc pic-status interconnect-device (QFabric System)

```
user@switch> show chassis fpc pic-status interconnect-device interconnect1
Slot 0   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 1   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
 PIC 1  Online       16x 40G-GE
Slot 2   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 3   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 4   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 5   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 6   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 7   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 8   Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 9   Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 10  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 11  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 12  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 13  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 14  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 15  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
```

show chassis fpc pic-status node-device (QFabric System)

```
user@switch> show chassis fpc pic-status node-device node1
Slot node1 Online      QFX 48x10G 4x40G Switch
  PIC 0  Online       48x 10G-SFP+
  PIC 1  Online       4x 40G-QSFP+
```

show chassis fpc (PTX5000 Packet Transport Router)

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State           (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online           50      6          0       2816        5         27
  3  Empty
  4  Empty
  5  Online           48      9          0       2816        5         27
  6  Empty
  7  Online           49      8          0       2816        5         27
```

show chassis fpc detail (PTX5000 Packet Transport Router)

```
user@host> show chassis fpc detail
Slot 2 information:
  State                                 Online
  Temperature                        35 degrees C / 95 degrees F (PMB)
  Temperature                        35 degrees C / 95 degrees F (Intake)
  Temperature                        50 degrees C / 122 degrees F (Exhaust A)
  Temperature                        54 degrees C / 129 degrees F (Exhaust B)
  Temperature                        54 degrees C / 129 degrees F (TL0)
  Temperature                        52 degrees C / 125 degrees F (TQ0)
  Temperature                        61 degrees C / 141 degrees F (TL1)
  Temperature                        58 degrees C / 136 degrees F (TQ1)
  Temperature                        57 degrees C / 134 degrees F (TL2)
  Temperature                        58 degrees C / 136 degrees F (TQ2)
  Temperature                        62 degrees C / 143 degrees F (TL3)
  Temperature                        61 degrees C / 141 degrees F (TQ3)
  Total CPU DRAM                   2816 MB
  Total SRAM                          0 MB
  Total SDRAM                         0 MB
  Start time                          2012-01-12 12:05:42 PST
  Uptime                              3 hours, 14 minutes, 7 seconds
Slot 5 information:
  State                                 Online
  Temperature                        35 degrees C / 95 degrees F (PMB)
  Temperature                        34 degrees C / 93 degrees F (Intake)
  Temperature                        48 degrees C / 118 degrees F (Exhaust A)
  Temperature                        53 degrees C / 127 degrees F (Exhaust B)
  Temperature                        54 degrees C / 129 degrees F (TL0)
  Temperature                        52 degrees C / 125 degrees F (TQ0)
  Temperature                        69 degrees C / 156 degrees F (TL1)
  Temperature                        56 degrees C / 132 degrees F (TQ1)
  Temperature                        54 degrees C / 129 degrees F (TL2)
  Temperature                        56 degrees C / 132 degrees F (TQ2)
  Temperature                        59 degrees C / 138 degrees F (TL3)
  Temperature                        60 degrees C / 140 degrees F (TQ3)
  Total CPU DRAM                   2816 MB
  Total SRAM                          0 MB
```

```
  Total SDRAM                        0 MB
  Start time                           2012-01-12 12:05:43 PST
  Uptime                               3 hours, 14 minutes, 6 seconds
Slot 7 information:
  State                                Online
  Temperature                       35 degrees C / 95 degrees F (PMB)
  Temperature                       33 degrees C / 91 degrees F (Intake)
  Temperature                       50 degrees C / 122 degrees F (Exhaust A)
  Temperature                       55 degrees C / 131 degrees F (Exhaust B)
  Temperature                       56 degrees C / 132 degrees F (TL0)
  Temperature                       56 degrees C / 132 degrees F (TQ0)
  Temperature                       61 degrees C / 141 degrees F (TL1)
  Temperature                       57 degrees C / 134 degrees F (TQ1)
  Temperature                       55 degrees C / 131 degrees F (TL2)
  Temperature                       59 degrees C / 138 degrees F (TQ2)
  Temperature                       62 degrees C / 143 degrees F (TL3)
  Temperature                       62 degrees C / 143 degrees F (TQ3)
  Total CPU DRAM                  2816 MB
  Total SRAM                         0 MB
  Total SDRAM                        0 MB
  Start time                           2012-01-12 12:05:44 PST
  Uptime                               3 hours, 14 minutes, 5 seconds
```

show chassis fpc pic-status (PTX5000 Packet Transport Router)

```
user@host> show chassis fpc pic-status
Slot 2   Online       FPC
  PIC 0  Online       24x 10GE(LAN) SFP+
  PIC 1  Online       24x 10GE(LAN) SFP+
Slot 5   Online       FPC
  PIC 0  Online       24x 10GE(LAN) SFP+
  PIC 1  Online       2x 40GE CFP
Slot 7   Online       FPC
  PIC 0  Online       24x 10GE(LAN) SFP+
  PIC 1  Online       2x 40GE CFP
```

show chassis fpc (PTX10008 Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online            38     26          2       26     26     26    1953
 20         32
  1  Empty
  2  Empty
  3  Empty
  4  Empty
  5  Online            67     26          2       26     26     26    1953
 25         32
  6  Online            52     26          2       26     26     26    1953
 25         32
  7  Empty
```

show chassis fpc (PTX10016 Router)

```
user@host> show chassis fpc

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
```

```
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Empty
  1  Online            36     27          2       27     27     27    1953
 22         32
  2  Empty
  3  Online            36     27          2       27     27     27    1953
 22         32
  4  Empty
  5  Empty
  6  Online            35     27          2       27     27     27    1953
 22         32
  7  Empty
  8  Online            34     27          2       27     27     27    1953
 22         32
  9  Online            46     24          2       24     24     24    1953
 26         32
 10  Empty
 11  Empty
 12  Empty
 13  Empty
 14  Empty
 15  Empty
```

show chassis fpc (ACX2000 Universal Access Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            61     17          6       512        21         37
```

show chassis fpc 0 (ACX2000 Universal Access Router)

```
user@host> show chassis fpc 0
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            61     17          6       512        21         37
```

show chassis fpc detail (ACX2000 Universal Access Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                 Online
  Temperature                        61 degrees C / 141 degrees F
  Total CPU DRAM                    512 MB
  Start time                            2012-05-29 02:52:06 PDT
  Uptime                                27 minutes, 17 seconds
```

show chassis fpc pic-status (ACX2000 Universal Access Router)

```
user@host> show chassis fpc pic-status
Slot 0   Online
  PIC 0  Online       16x CHE1T1, RJ48
  PIC 1  Online       8x 1GE(LAN) RJ45
  PIC 2  Online       2x 1GE(LAN) SFP
  PIC 3  Online       2x 10GE(LAN) SFP+
```

show chassis FPC 1 (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis fpc 1
                   Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  1  Online            34      5          0       3072        5         13
```

show chassis FPC 1 detail (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis fpc 1 detail
Slot 1 information:
  State                                 Online
  Temperature                             34
  Total CPU DRAM                        3072 MB
  Total RLDRAM                           259 MB
  Total DDR DRAM                        4864 MB
  Start time:                           2012-06-19 10:51:43 PDT
  Uptime:                               16 minutes, 48 seconds
  Max Power Consumption                 550 Watts
```

Sample Output

show chassis fpc (Node Slicing)

```
user@router>show chassis fpc
                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer    GNF
  0  Online            45     12          0       12     12     12    3584
  6         25       3
  1  Online            57     22          0       20     20     20    3136
 16         22       2
  2  Online            50     19          0       17     17     16    3584
  6         25       3
  3  Online            28     10          0       11     11     11    2048
 10         20       6
  4  Online            42     20          0       20     19     19    3584
  8         25       6
  5  Online            58     22          0       21     20     20    3136
 16         22       4
  6  Online            49     17          0       15     16     16    3136
 13         20       1
  7  Online            44     11          0       10     10     10    3584
  6         25       5
  8  Online            40     19          0       18     18     18    3584
  8         25       5
  9  Online            44     19          0       20     20     20    3584
  8         25       5
```

Sample Output

show chassis fpc pic-status (Node Slicing)

```
user@router> show chassis fpc pic-status
```

```
Slot 0   Online       MPC5E 3D 24XGE+6XLGE                          GNF 3
  PIC 0  Online       12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
Slot 1   Online       MPC9E 3D                                      GNF 2
  PIC 1  Online       MRATE-12xQSFPP-XGE-XLGE-CGE
Slot 2   Online       MPC5E 3D Q 2CGE+4XGE                          GNF 3
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 3   Online       MPCE Type 2 3D EQ                             GNF 6
Slot 4   Online       MPC6E 3D                                      GNF 6
  PIC 0  Online       24X10GE SFPP
  PIC 1  Online       2X100GE CFP2 OTN
Slot 5   Online       MPC9E 3D                                      GNF 4
  PIC 0  Online       MRATE-12xQSFPP-XGE-XLGE-CGE
Slot 6   Online       MPC7E 3D MRATE-12xQSFPP-XGE-XLGE-CGE          GNF 1
  PIC 0  Online       MRATE-6xQSFPP-XGE-XLGE-CGE
  PIC 1  Online       MRATE-6xQSFPP-XGE-XLGE-CGE
Slot 7   Online       MPC5E 3D 2CGE+4XGE                            GNF 5
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 8   Online       MPC6E 3D                                      GNF 5
  PIC 0  Online       24X10GE SFPP OTN
Slot 9   Online       MPC6E 3D                                      GNF 5
  PIC 0  Online       24X10GE SFPP
  PIC 1  Online       4X100GE CXP
```

show chassis hardware

List of Syntax

Syntax

```
show chassis hardware
<detail | extensive>
<clei-models>
<models>
```

Syntax (EX Series)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
<satellite [slot-id slot-id |device-alias alias-name]>
```

Syntax (T4000 Router)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
```

Syntax (TX Matrix Router)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
<lcc number | scc>
```

Syntax (TX Matrix Plus Router)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
<lcc number | sfc number>
```

Syntax (MX Series Routers)

```
show chassis hardware
<detail | extensive>
<clei-models>
<models>
```

<all-members>
<local>
<member *member-id*>

Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 3D Universal Edge Routers)

show chassis hardware
<clei-models>
<detail | extensive>
<models>
<satellite [slot-id *slot-id* |device-alias *alias-name*]>

Syntax (QFX Series)

show chassis hardware
<detail | extensive>
<clei-models>
<interconnect-device *name*>
<node-device *name*>
<models>

Syntax (OCX Series)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (PTX Series Packet Transport Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (ACX Series Universal Access Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (ACX5048 and ACX5096 Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (ACX500 Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Release Information

Command introduced before Junos OS Release 7.4.
models option introduced in Junos OS Release 8.2.
Command introduced in Junos OS Release 9.0 for EX Series switches.
sfc option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.
Command introduced in Junos OS Release 11.1 for QFX Series.

Command introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.
Command introduced in Junos OS Release 12.2 for ACX Series Universal Access Routers.
Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 3D Universal Edge Routers.
Information for **disk** and **usb** introduced in Junos OS Release 15.1X53-D60 for QFX10002, QFX10008, and QFX10016 switches.
Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.
Command introduced in Junos OS Release 17.4 for MX204 Routers.

Description Display a list of all Flexible PIC Concentrators (FPCs) and PICs installed in the router or switch chassis, including the hardware version level and serial number.

In the EX Series switch command output, FPC refers to the following:

- On EX2200 switches, EX3200 switches, EX4200 standalone switches, and EX4500 switches—Refers to the switch; FPC *number* is always 0.
- On EX4200 switches in a Virtual Chassis configuration—Refers to the member of a Virtual Chassis; FPC *number* equals the member ID, from 0 through 9.
- On EX8208 and EX8216 switches—Refers to a line card; FPC *number* equals the slot number for the line card.

On QFX3500, QFX5100, and OCX Series standalone switches, and PTX1000 routers both the FPC and FPC *number* are always **0**.

On T4000 Type 5 FPCs, there are no **top temperature sensor** or **bottom temperature sensor** parameters. Instead, **fan intake temperature sensor** and **fan exhaust temperature sensors** parameters are displayed.

Starting from Junos OS Release 11.4, the output of the **show chassis hardware models** operational mode command displays the enhanced midplanes FRU model numbers (CHAS-BP3-MX240-S, CHAS-BP3-MX480-S or CHAS-BP3-MX960-S) based on the router. Prior to release 11.4, the FRU model numbers are left blank when the router has enhanced midplanes. Note that the enhanced midplanes are introduced through the Junos OS Release 13.3, but can be supported on all Junos OS releases.

Starting with Junos OS Release 14.1, the output of the **show chassis hardware detail | extensive | clei-models | models** operational mode command displays the new DC power supply module (PSM) and power distribution unit (PDU) that are added to provide power to the high-density FPC (FPC2-PTX-P1A) and other components in a PTX5000 Packet Transport Router.

Options

none—Display information about hardware. For a TX Matrix router, display information about the TX Matrix router and its attached T640 routers. For a TX Matrix Plus router, display information about the TX Matrix Plus router and its attached routers.

clei-models—(Optional) Display Common Language Equipment Identifier (CLEI) barcode and model number for orderable field-replaceable units (FRUs).

detail—(Optional) Include RAM and disk information in output.

extensive—(Optional) Display ID EEPROM information.

all-members—(MX Series routers only) (Optional) Display hardware-specific information for all the members of the Virtual Chassis configuration.

interconnect-device *name*—(QFabric systems only) (Optional) Display hardware-specific information for the Interconnect device.

lcc *number*—(TX Matrix routers and TX Matrix Plus router only) (Optional) On a TX Matrix router, display hardware information for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display hardware information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(MX Series routers only) (Optional) Display hardware-specific information for the local Virtual Chassis members.

member *member-id*—(MX Series routers and EX Series switches) (Optional) Display hardware-specific information for the specified member of the Virtual Chassis configuration. Replace *member-id* variable with a value 0 or 1.

models—(Optional) Display model numbers and part numbers for orderable FRUs and, for components that use ID EEPROM format v2, the CLEI code.

node-device *name*—(QFabric systems only) (Optional) Display hardware-specific information for the Node device.

satellite [slot-id *slot-id* | device-alias *alias-name*]—(Junos Fusion only) (Optional) Display hardware information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

scc—(TX Matrix router only) (Optional) Display hardware information for the TX Matrix router (switch-card chassis).

sfc *number*—(TX Matrix Plus router only) (Optional) Display hardware information for the TX Matrix Plus router (switch-fabric chassis). Replace *number* variable with **0**.

Additional Information

The **show chassis hardware detail** command now displays DIMM information for the following Routing Engines, as shown in Table 9 on page 228.

Table 9: Routing Engines Displaying DIMM Information

Routing Engines	Routers
RE-S-1800x2 and RE-S-1800x4	MX240, MX480, and MX960 routers
RE-A-1800x2	M120 and M320 routers

In Junos OS Release 11.4 and later, the output for the **show chassis hardware models** operational mode command for MX Series routers display the enhanced midplanes FRU model numbers—CHAS-BP3-MX240-S, CHAS-BP3-MX480-S, or CHAS-BP3-MX960-S—based on the router. In releases before Junos OS Release 11.4, the FRU model numbers are left blank when the router has enhanced midplanes. Note that the enhanced midplanes are introduced through Junos OS Release 13.3, but can be supported on all Junos OS releases.

Starting with Junos OS Release 17.3R1, the output of the **show chassis hardware** command displays the mode in which vMX is running (performance mode or lite mode) in the part number field for the FPC. **RIOT-PERF** indicates performance mode and **RIOT-LITE** indicates lite mode.

Required Privilege Level

view

Related Documentation

- *show chassis power*

List of Sample Output

Output Fields Table 10 on page 233 lists the output fields for the **show chassis hardware** command. Output fields are listed in the approximate order in which they appear.

Table 10: show chassis hardware Output Fields

Field Name	Field Description	Level of Output
Item	Chassis component: • (EX Series switches)—Information about the chassis, Routing Engine (SRE and Routing Engine modules in EX8200 switches), power supplies, fan trays, and LCD panel. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs). Information about the backplane, midplane, and SIBs (SF modules) is displayed for EX8200 switches. • (MX Series routers and EX Series switches)—Information about the backplane, Routing Engine, Power Entry Modules (PEMs), and fan trays. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs), Modular Port Concentrators (MPCs) and associated Modular Interface Cards (MICs), or Dense Port Concentrators (DPCs). MX80 routers have a single Routing Engine and a built-in Packet Forwarding Engine that attaches directly to MICs. The Packet Forwarding Engine has two "pseudo" FPCs (FPC 0 and FPC1). MX80 routers also have a Forwarding Engine Board (FEB). MX104 routers have a built-in Packet forwarding Engine and a Forwarding Engine Board (FEB). The Packet Forwarding Engine of the MX104 router has three "pseudo" FPCs (FPC0, FPC1, and FPC2). • (M Series routers, except for the M320 router)—Information about the backplane; power supplies; fan trays; Routing Engine; maxicab (the connection between the Routing Engine and the backplane, for the M40 router only); SCB, SSB, SFM, or FEB; MCS and PCG (for the M160 router only); each FPC and PIC; and each fan, blower, and impeller. • (M120, M320, and T Series routers)—Information about the backplane, power supplies, fan trays, midplane, FPM (craft interface), CIP, PEM, SCG, CB, FPC, PIC, SFP, SPMB, and SIB. • (QFX Series)—Information about the chassis, Pseudo CB, Routing Engine, power supplies, fan trays, Interconnect devices, and Node devices. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs). • (PTX Series)—Information about the chassis, midplane, craft interface (FPM), power distribution units (PDUs) and Power Supply Modules (PSMs), Centralized Clock Generators (CCGs), Routing Engines, Control Boards (CBs) and Switch Processor Mezzanine Boards (SPMBs), Flexible PIC Concentrators (FPCs), PICs, Switch Interface Boards (SIBs), and fan trays (vertical and horizontal). • (MX2010, MX2020, and MX2008 routers)—Information about the chassis, midplane, craft interface (FPM), power midplane (PMP), Power Supply Modules (PSMs), Power Distribution Modules (PDMs), Routing Engines, Control Boards (CBs) and Switch Processor Mezzanine Boards (SPMBs), Switch Fabric Boards (SFBs), Flexible PIC Concentrators (FPCs), PICs, adapter cards (ADCs) and fan trays. • (vMX routers)—Information about the chassis, midplane, Routing Engines, and Control Boards (CBs). Also displays information about Flexible PIC Concentrators (FPCs) and associated Modular Interface Cards (MICs) and Physical Interface Cards (PICs).	All levels
Version	Revision level of the chassis component.	All levels
Part number	Part number of the chassis component.	All levels

Table 10: show chassis hardware Output Fields *(continued)*

Field Name	Field Description	Level of Output
Serial number	Serial number of the chassis component. The serial number of the backplane is also the serial number of the router chassis. Use this serial number when you need to contact Juniper Networks Customer Support about the router or switch chassis.	All levels
Assb ID or **Assembly ID**	(**extensive** keyword only) Identification number that describes the FRU hardware.	**extensive**
Assembly Version	(**extensive** keyword only) Version number of the FRU hardware.	**extensive**
Assembly Flags	(**extensive** keyword only) Flags.	**extensive**
FRU model number	(**clei-models**, **extensive**, and **models** keyword only) Model number of the FRU hardware component.	none specified
CLEI code	(**clei-models** and **extensive** keyword only) Common Language Equipment Identifier code. This value is displayed only for hardware components that use ID EEPROM format v2. This value is not displayed for components that use ID EEPROM format v1.	none specified
EEPROM Version	ID EEPROM version used by the hardware component: **0x00** (version 0), **0x01** (version 1), or **0x02** (version 2).	**extensive**

Description	Brief description of the hardware item:
	• Type of power supply.
	• Type of PIC. If the PIC type is not supported on the current software release, the output states **Hardware Not Supported**.
	• Type of FPC: **FPC Type 1**, **FPC Type 2**, **FPC Type 3**, **FPC Type 4** , or **FPC TypeOC192**.
	On EX Series switches, a brief description of the FPC.
	The following list shows the PIM abbreviation in the output and the corresponding PIM name.
	  • **2x FE**—Either two built-in Fast Ethernet interfaces (fixed PIM) or dual-port Fast Ethernet PIM
	  • **4x FE**—4-port Fast Ethernet ePIM
	  • **1x GE Copper**—Copper Gigabit Ethernet ePIM (one 10-Mbps, 100-Mbps, or 1000-Mbps port)
	  • **1x GE SFP**—SFP Gigabit Ethernet ePIM (one fiber port)
	  • **2x Serial**—Dual-port serial PIM
	  • **2x T1**—Dual-port T1 PIM
	  • **2x E1**—Dual-port E1 PIM
	  • **2x CT1E1**—Dual-port channelized T1/E1 PIM
	  • **1x T3**—T3 PIM (one port)
	  • **1x E3**—E3 PIM (one port)
	  • **4x BRI S/T**—4-port ISDN BRI S/T PIM
	  • **4x BRI U**—4-port ISDN BRI U PIM
	  • **1x ADSL Annex A**—ADSL 2/2+ Annex A PIM (one port, for POTS)
		All levels

Table 10: show chassis hardware Output Fields *(continued)*

Field Name	Field Description	Level of Output
	• **1x ADSL Annex B**—ADSL 2/2+ Annex B PIM (one port, for ISDN) • **2x SHDSL (ATM)**—G SHDSL PIM (2-port two-wire module or 1-port four-wire module) • **1x TGM550**—TGM550 Telephony Gateway Module (Avaya VoIP gateway module with one console port, two analog **LINE** ports, and two analog **TRUNK** ports) • **1x DS1 TIM510**—TIM510 E1/T1 Telephony Interface Module (Avaya VoIP media module with one E1 or T1 trunk termination port and ISDN PRI backup) • **4x FXS, 4xFXO, TIM514**—TIM514 Analog Telephony Interface Module (Avaya VoIP media module with four analog **LINE** ports and four analog **TRUNK** ports) • **4x BRI TIM521**—TIM521 BRI Telephony Interface Module (Avaya VoIP media module with four ISDN BRI ports) • **Crypto Accelerator Module**—For enhanced performance of cryptographic algorithms used in IP Security (IPsec) services • **MPC M 16x 10GE**—16-port 10-Gigabit Module Port Concentrator that supports SFP+ optical transceivers. (Not on EX Series switches.) • For hosts, the Routing Engine type. • For small form-factor pluggable transceiver (SFP) modules, the type of fiber: **LX**, **SX**, **LH**, or **T**. • LCD description for EX Series switches (except EX2200 switches). • **MPC2**—1-port MPC2 that supports two separate slots for MICs. • **MPC3E**—1-port MPC3E that supports two separate slots for MICs (MIC-3D-1X100GE-CFP and MIC-3D-20GE-SFP) on MX960, MX480, and MX240 routers. The MPC3E maps one MIC to one PIC (1 MIC, 1 PIC), which differs from the mapping of legacy MPCs. • 100GBASE-LR4, pluggable CFP optics • Supports the Enhanced MX Switch Control Board with fabric redundancy and existing SCBs without fabric redundancy. • Interoperates with existing MX Series line cards, including Flexible Port Concentrators (FPC), Dense Port Concentrators (DPCs), and Modular Port Concentrators (MPCs). • **MPC4E**—Fixed configuration MPC4E that is available in two flavors: MPC4E-3D-32XGE-SFPP and MPC4E-3D-2CGE-8XGE on MX2020, MX960, MX480, and MX240 routers. • LCD description for MX Series routers	

Sample Output

show chassis hardware (EX8216 Switch)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis          REV 06                CY0109220035      EX8216
Midplane         REV 06   710-016845   BA0909120112      EX8216-MP
CB 0             REV 22   710-020771   AX0109197723      EX8216-RE320
CB 1             REV 22   710-020771   AX0109197726      EX8216-RE320
  Routing Engine 1        BUILTIN      BUILTIN           RE-EX8216
```

```
FPC 3            REV 19   710-020683   BC0109083125      EX8200-48F
  CPU            REV 13   710-020598   BF0109144549      EX8200-CPU
FPC 4            REV 17   710-020683   BC0108500127      EX8200-48F
  CPU            REV 10   710-020598   BF0108460510      EX8200-CPU
  PIC 0                   BUILTIN      BUILTIN           48x 100 Base-QFX/1000
Base-X
    Xcvr 1       REV 01   740-011613   PE70V89           SFP-SX
    Xcvr 11      REV 01   740-011613   PE70YCE           SFP-SX
    Xcvr 12      REV 01   740-011613   PE70VSH           SFP-SX
    Xcvr 13      REV 01   740-011613   E08C02063         SFP-SX
    Xcvr 14      REV 01   740-011613   PE70VKU           SFP-SX
    Xcvr 15      REV 01   740-011613   E08E03372         SFP-SX
    Xcvr 21      REV 01   740-011613   PE70VAD           SFP-SX
    Xcvr 22      REV 01   740-011613   E08E01228         SFP-SX
    Xcvr 23      REV 01   740-011613   PE70VSL           SFP-SX
    Xcvr 24      REV 01   740-011613   E08E03409         SFP-SX
    Xcvr 25      REV 01   740-011613   PE70VL4           SFP-SX
    Xcvr 26      REV 01   740-011613   PDQ4L2Z           SFP-SX
    Xcvr 27      REV 01   740-011613   PE70WFK           SFP-SX
    Xcvr 28      REV 01   740-011782   PBD2B5U           SFP-SX
    Xcvr 29      REV 01   740-011613   PE70UQX           SFP-SX
    Xcvr 30      REV 01   740-011613   PE70VL5           SFP-SX
    Xcvr 31      REV 01   740-011613   PE70V0F           SFP-SX
    Xcvr 32      REV 01   740-011613   E08C02052         SFP-SX
    Xcvr 33      REV 01   740-011613   E08C02197         SFP-SX
    Xcvr 34      REV 01   740-011613   PE70V0L           SFP-SX
    Xcvr 35      REV 01   740-011613   E08E03390         SFP-SX
    Xcvr 36      REV 01   740-011613   PDQ4VL9           SFP-SX
    Xcvr 37      REV 01   740-011613   E08E03370         SFP-SX
    Xcvr 38      REV 01   740-011613   E08E03362         SFP-SX
    Xcvr 39      REV 01   740-011613   E08C02065         SFP-SX
    Xcvr 40      REV 01   740-011613   E08E03405         SFP-SX
    Xcvr 41      REV 01   740-011613   E08E03411         SFP-SX
    Xcvr 43      REV 01   740-011613   E08C02171         SFP-SX
    Xcvr 45      REV 01   740-011613   E08E03410         SFP-SX
FPC 13           REV 16   710-016837   BB0109051344      EX8200-8XS
  CPU
SIB 0            REV 10   710-021613   AY0109166244      EX8216-SF320
SIB 1            REV 10   710-021613   AY0109166357      EX8216-SF320
SIB 2            REV 10   710-021613   AY0109166362      EX8216-SF320
SIB 3            REV 10   710-021613   AY0109166338      EX8216-SF320
SIB 4            REV 10   710-021613   AY0109166350      EX8216-SF320
SIB 5            REV 10   710-021613   AY0109166365      EX8216-SF320
SIB 6            REV 10   710-021613   AY0109166361      EX8216-SF320
SIB 7            REV 10   710-021613   AY0109166399      EX8216-SF320
PSU 0            REV 17   740-021466   BG0709170003      EX8200-AC2K
PSU 1            REV 17   740-021466   BG0709170004      EX8200-AC2K
PSU 2            REV 17   740-021466   BG0709170020      EX8200-AC2K
PSU 3            REV 17   740-021466   BG0709170017      EX8200-AC2K
PSU 4            REV 17   740-021466   BG0709170008      EX8200-AC2K
PSU 5            REV 17   740-021466   BG0709170018      EX8200-AC2K
Top Fan Tray
  FTC 0          REV 4    760-022620   CX1209140212      EX8216-FT
  FTC 1          REV 4    760-022620   CX1209140212      EX8216-FT
Bottom Fan Tray
  FTC 0          REV 4    760-022620   CX1209140211      EX8216-FT
  FTC 1          REV 4    760-022620   CX1209140211      EX8216-FT
LCD 0            REV 04   710-025742   CE0109186919      EX8200 LCD
```

show chassis hardware clei-models (EX8216 Switch)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 08   710-016845
PSU 0            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 1            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 2            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 3            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 4            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 5            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
Top Fan Tray
Bottom Fan Tray
```

show chassis hardware clei-models (T1600 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 03   710-005608                     CHAS-BP-T640-S
FPM Display      REV 05   710-002897                     CRAFT-T640-S
CIP              REV 06   710-002895                     CIP-L-T640-S
PEM 0            Rev 07   740-017906   IPUPAC7KTA        PWR-T1600-3-80-DC-S
PEM 1            Rev 18   740-002595                     PWR-T-DC-S
SCG 0            REV 15   710-003423                     SCG-T-S
Routing Engine 0 REV 08   740-014082                     RE-A-2000-4096-S
Routing Engine 1 REV 07   740-014082                     RE-A-2000-4096-S
CB 0             REV 05   710-007655                     CB-T-S
CB 1             REV 03   710-017707                     CB-T-S
FPC 0            REV 07   710-013558                     T640-FPC2-E2
  PIC 0          REV 01   750-010618                     PB-4GE-SFP
  PIC 1          REV 06   750-001900                     PB-1OC48-SON-SMSR
  PIC 2          REV 14   750-001901                     PB-4OC12-SON-SMIR
  PIC 3          REV 07   750-001900                     PB-1OC48-SON-SMSR
FPC 1            REV 06   710-013553                     T640-FPC1-E2
  PIC 0          REV 08   750-001072                     P-1GE-SX
  PIC 1          REV 10   750-012266                     PB-4GE-TYPE1-SFP-IQ2
  PIC 2          REV 22   750-005634                     PB-1CHOC12SMIR-QPP
FPC 2
  PIC 0          REV 16   750-007141                     PC-10GE-SFP
  PIC 1          REV 06   750-015217                     PC-8GE-TYPE3-SFP-IQ2
  PIC 2          REV 05   750-004695                     PC-TUNNEL
  PIC 3          REV 17   750-009553                     PC-4OC48-SON-SFP
FPC 3            REV 01   710-010154                     T640-FPC3-E
  PIC 0          REV 07   750-012793                     PC-1XGE-TYPE3-XFP-IQ2
  PIC 1          REV 25   750-007141                     PC-10GE-SFP
  PIC 2          REV 17   750-009553                     PC-4OC48-SON-SFP
  PIC 3          REV 32   750-003700                     PC-1OC192-SON-VSR
FPC 4            REV 16   710-013037                     T1600-FPC4-ES
 PIC 1           REV 06   750-034781                     PD-1CE-CFP
FPC 5            REV 02   710-013037                     T1600-FPC4-ES
  PIC 0          REV 16   750-012518                     PD-4OC192-SON-XFP
  PIC 1          REV 01   750-010850                     PD-1OC768-SON-SR
FPC 6            REV 14   710-013037                     T1600-FPC4-ES
  PIC 0          REV 11   750-017405                     PD-4XGE-XFP
  PIC 1          REV 13   750-017405                     PD-4XGE-XFP
FPC 7            REV 09   710-007529                     T640-FPC3
  PIC 0          REV 10   750-012793                     PC-1XGE-TYPE3-XFP-IQ2
  PIC 1          REV 01   750-015217                     PC-8GE-TYPE3-SFP-IQ2
```

```
  PIC 2          REV 01   750-015217                    PC-8GE-TYPE3-SFP-IQ2
  PIC 3          REV 15   750-009450                    PC-1OC192-SON-SR2
SIB 0            REV 07   710-013074                    SIB-I-T1600-S
SIB 1            REV 07   710-013074                    SIB-I-T1600-S
SIB 2            REV 07   710-013074                    SIB-I-T1600-S
SIB 3            REV 07   710-013074                    SIB-I-T1600-S
SIB 4            REV 07   710-013074                    SIB-I-T1600-S
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T-S
Fan Tray 2                                              FAN-REAR-TX-T640-S
```

show chassis hardware clei-models (PTX10008 Routers)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 27   750-054097   CMMUM00ARA        QFX10008-CHAS
CB 0             REV 02   750-068820   CMUCAH3CTB        QFX10000-RE
CB 1             REV 02   750-068820   CMUCAH3CTB        QFX10000-RE
FPC 0            REV 36   750-051354   CMUIAM9BAA        QFX10000-36Q
  PIC 0                   BUILTIN
FPC 1            REV 33   750-051354   CMUIAM9BAA        QFX10000-36Q
  PIC 0                   BUILTIN
FPC 2            REV 32   750-051357   CMUIANABAA        QFX10000-30C
  PIC 0                   BUILTIN
FPC 3            REV 35   750-051357   CMUIANABAA        QFX10000-30C
  PIC 0                   BUILTIN
FPC 5            REV 08   750-068822   CMUIAM9BAB        QFX10000-36Q
  PIC 0                   BUILTIN
FPC 6            REV 08   750-068822   CMUIAM9BAB        QFX10000-36Q
  PIC 0                   BUILTIN
FPD Board        REV 07   711-054687
Power Supply 0   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 1   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 2   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 3   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 4   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 5   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
FTC 0            REV 14   750-050108   CMUCAHZCAA        QFX10008-FAN-CTRL
FTC 1            REV 14   750-050108   CMUCAHZCAA        QFX10008-FAN-CTRL
Fan Tray 0       REV 09   760-054372   CMUCAHYCAA        QFX10008-FAN
Fan Tray 1       REV 09   760-054372   CMUCAHYCAA        QFX10008-FAN
SIB 0            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 1            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 2            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 3            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 4            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 5            REV 23   750-050058   CMUCAH0CAA        QFX10008-SF
```

show chassis hardware clei-models (PTX10016 Routers)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 24   750-077138   CMMUN00ARA        JNP10016
CB 0             REV 04   711-065897   PROTOXCLEI        PROTO-ASSEMBLY
CB 1             REV 05   711-065897   PROTOXCLEI        PROTO-ASSEMBLY
FPC 2
  PIC 0                   BUILTIN
FPC 4            REV 35   750-071976   CMUIANABAA        JNP10K-LC1101
```

```
  PIC 0                     BUILTIN
FPC 5            REV 13    750-068822   CMUIAM9BAC        QFX10000-36Q
  PIC 0                     BUILTIN
FPC 6            REV 41    750-071976   CMUIANABAB        JNP10K-LC1101
  PIC 0                     BUILTIN
FPC 7            REV 35    750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                     BUILTIN
FPC 8            REV 35    750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                     BUILTIN
FPC 9            REV 41    750-071976   CMUIANABAB        JNP10K-LC1101
  PIC 0                     BUILTIN
FPC 10           REV 35    750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                     BUILTIN
FPC 11           REV 35    750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                     BUILTIN
FPC 13           REV 41    750-071976   CMUIANABAB        JNP10K-LC1101
  PIC 0                     BUILTIN
FPC 15           REV 37    750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                     BUILTIN
Power Supply 0   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 1   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 2   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 3   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 4   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 5   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 6   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 7   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 8   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 9   REV 01    740-073147   CMUPADPBAA        JNP10K-PWR-DC
Fan Tray 0                                               QFX5100-FAN-AFO
Fan Tray 1                                               QFX5100-FAN-AFO
SIB 0            REV 15    750-077140   CMUCAH6CAA        JNP10016-SF
SIB 1            REV 15    750-077140   CMUCAH6CAA        JNP10016-SF
SIB 2            REV 15    750-077140   CMUCAH6CAA        JNP10016-SF
SIB 3            REV 15    750-077140   CMUCAH6CAA        JNP10016-SF
SIB 4            REV 15    750-077140   CMUCAH6CAA        JNP10016-SF
SIB 5            REV 15    750-077140   CMUCAH6CAA        JNP10016-SF
FPD Board        REV 07    711-054687
```

show chassis hardware (EX2300-C Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                HV0215410003      EX2300-C-12P
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-EX2300C-12P
FPC 0            REV 04   650-059984   HV0215410003      EX2300-C-12P
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0          REV 04   BUILTIN      BUILTIN           12x10/100/1000 Base-T
  PIC 1          REV 04   650-059984   HV0215410003      2x10G SFP/SFP+
    Xcvr 0       REV 01   740-021309   T09K00695         SFP+-10G-LR
    Xcvr 1       REV 01   740-030658   AD1146A05JT       SFP+-10G-USR
Power Supply 0                                           JPSU-170W-AC
```

show chassis hardware (EX2300 Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
```

```
Chassis                                 JY0215410033      EX2300-24P
Pseudo CB 0
Routing Engine 0          BUILTIN       BUILTIN           RE-EX2300-24P
FPC 0            REV 05   650-059968    JY0215410033      EX2300-24P
  CPU                     BUILTIN       BUILTIN           FPC CPU
  PIC 0          REV 05   BUILTIN       BUILTIN           24x10/100/1000 Base-T
  PIC 1          REV 05   650-059968    JY0215410033      4x10G SFP/SFP+
    Xcvr 0       REV 01   740-030658    AD1125A03ES       SFP+-10G-USR
    Xcvr 1       REV 01   740-021308    AJP0TDZ           SFP+-10G-SR
    Xcvr 3       REV 01   740-021309    A9401FL           SFP+-10G-LR
Power Supply 0                                            JPSU-450W-AC-AFO
Fan Tray 0                                                Fan Module, Airflow Out
 (AFO)
Fan Tray 1                                                Fan Module, Airflow Out
 (AFO)
```

show chassis hardware detail (EX4200 Switch)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                BM0208327733      EX4200-24T
Routing Engine 0 REV 11   750-021256   BM0208327733      EX4200-24T, 8 POE
Routing Engine 0                       BM0208327733      EX4200-24T, 8 POE
FPC 0            REV 11   750-021256   BM0208327733      EX4200-24T, 8 POE
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           24x 10/100/1000 Base-T
  PIC 1          REV 03B  711-021270   AR0208162285      4x GE SFP
  BRD            REV 08   711-021264   AK0208328289      EX4200-24T, 8 POE
Power Supply 0   REV 03   740-020957   AT0508346354      PS 320W AC
Fan Tray                                                  Fan Tray
```

show chassis hardware (EX4300 Switch)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                PD3713160055      EX4300-48P
Routing Engine 0 REV 04   650-044930   PD3713160055      EX4300-48P
FPC 0            REV 04   650-044930   PD3713160055      EX4300-48P
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0          REV 04   BUILTIN      BUILTIN           48x 10/100/1000 Base-T
  PIC 1          REV 04   BUILTIN      BUILTIN           4x 40GE
Power Supply 0   REV 01   740-046871   1EDA3090026       JPSU-1100-AC-AFO-A
Fan Tray 0                                                Fan Module, Airflow Out
 (AFO)
Fan Tray 1                                                Fan Module, Airflow Out
 (AFO)
```

show chassis hardware models (EX4500 Switch)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0 REV 01   750-035700   GG0210271867      EX4500-40F-FB-C
FPC 0            REV 01   750-035700   GG0210271867      EX4500-40F-FB-C
  PIC 0                   BUILTIN      BUILTIN           EX4500-40F-FB-C
Power Supply 1   REV 01   740-029654   H884FS00JC09      EX4500-PWR1-AC-FB
```

show chassis hardware detail (EX9200 Switch)

```
user@switch> show chassis hardware

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN111DA44RFB      EX9208
Midplane         REV 05   710-017414   TS2912            EX9208-BP
FPM Board        REV 02   710-017254   XN1804            Front Panel Display
PEM 0            Rev 01   740-022697   QCS0906C033       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 01   740-022697   QCS0906C095       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 08   740-031116   9009122883        RE-S-EX9200-1800X4
CB 0             REV 16   750-031391   CAAW4391          EX9200-SCBEF
PC 0             REV 07   750-049612   CABJ9312          EX9200 40x1G Copper
  CPU          REV 04   711-038484   CABH8268          MPCE PMB 2G
  MIC 0          REV 02   750-049607   CABT9623          40x 1GE RJ45
    PIC 0                 BUILTIN      BUILTIN           10x 1GE RJ45
    PIC 1                 BUILTIN      BUILTIN           10x 1GE RJ45
    PIC 2                 BUILTIN      BUILTIN           10x 1GE RJ45
    PIC 3                 BUILTIN      BUILTIN           10x 1GE RJ45
FPC 1            REV 10   710-013699   CAAN3529          EX9200-40x1G-SFP
  CPU            REV 04   711-038484   CAAL7608          MPCE PMB 2G
   MIC 0          REV 26   750-028392   CAAS5151          20x 1GE SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE SFP
    PIC 1                 BUILTIN      BUILTIN           10x 1GE SFP
  MIC 1          REV 26   750-028392   CAAC8006          20x 1GE SFP
    PIC 2                 BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 8     REV 01   740-011613   E08L03674         SFP-SX
      Xcvr 9     REV 01   740-011613   E08M00243         SFP-SX
    PIC 3                 BUILTIN      BUILTIN           10x 1GE SFP
    FPC 3        REV 10   710-013699   CAAR5261          EX9200-40x1G-SFP
  CPU            REV 04   711-038484   CAAS2118          MPCE PMB 2G
   MIC 0          REV 26   750-028392   CAAS5067          20x 1GE SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 2     REV 01   740-031851   PNA7L8U           SFP-SX
      Xcvr 3     REV 02   740-011613   AM0943SEKGZ       SFP-SX
      Xcvr 4     REV 02   740-011613   AM0943SEJZ9       SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE SFP
  MIC 1          REV 26   750-028392   CAAS5132          20x 1GE SFP
    PIC 2                 BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 4     REV 01   740-011613   E08D02625         SFP-SX
      Xcvr 9     REV 02   740-011613   PJH4RD9           SFP-SX
    PIC 3                 BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 0     REV 01   740-011613   AM0813S8YME       SFP-SX
      Fan Tray                                           Left Fan Tray
```

show chassis hardware detail (PTX10008 Routers)

```
user@switch> show chassis hardware detail

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DE487             JNP10008 [PTX10008 -
PILOT BUILD V1.1]
Midplane         REV 27   750-054097   ACPD4307          Midplane 8
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
```

```
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
CB 0             REV 02   750-068820   ACNZ4440          Control Board
CB 1             REV 02   750-068820   ACNZ8284          Control Board
FPC 0            REV 36   750-051354   ACNP4679          LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-058734   1ECQ113834D       QSFP-100GBASE-SR4
    Xcvr 5       REV 01   740-058734   1ECQ1137067       QSFP-100GBASE-SR4
    Xcvr 6       REV 01   740-054053   QF3205SD          QSFP+-4X10G-SR
    Xcvr 7       REV 01   740-058734   1ECQ11381MP       QSFP-100GBASE-SR4
    Xcvr 11      REV 01   740-061405   1ACQ110507K       QSFP-100GBASE-SR4
    Xcvr 13      REV 01   740-058734   1ECQ11390ZB       QSFP-100GBASE-SR4
    Xcvr 17      REV 01   740-058734   1ECQ11381M1       QSFP-100GBASE-SR4
    Xcvr 19      REV 01   740-058734   1ECQ11381JS       QSFP-100GBASE-SR4
    Xcvr 23      REV 01   740-058734   1ACQ112000E       QSFP-100GBASE-SR4
    Xcvr 25      REV 01   740-058734   1ECQ11381NT       QSFP-100GBASE-SR4
    Xcvr 28      REV 01   740-054053   QG1502WV          QSFP+-4X10G-SR
    Xcvr 29      REV 01   740-058734   1ACQ112000D       QSFP-100GBASE-SR4
    Xcvr 33      REV 01   740-058734   1ACQ1134065       QSFP-100GBASE-SR4
    Xcvr 34      REV 01   740-067442   XV20L4L           QSFP+-40G-SR4
FPC 1            REV 33   750-051354   ACNX8831          LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 5                NON-JNPR     37700171YY0084    QSFP-100GBASE-LR4
    Xcvr 25               NON-JNPR     GDA2017459        QSFP-100GBASE-LR4
    Xcvr 29               NON-JNPR     GDF2008750        QSFP-100GBASE-LR4
FPC 2            REV 32   750-051357   ACPB0341          LC1101 - 30C / 30Q / 96X

  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          30x100GE/30x40GE/96x10GE

    Xcvr 0                NON-JNPR     37700170YZC305    QSFP-100GBASE-LR4
    Xcvr 4                NON-JNPR     37700170YZC306    QSFP-100GBASE-LR4
    Xcvr 9       REV 01   740-054053   QF36013S          QSFP+-4X10G-SR
    Xcvr 12      REV 01   740-067442   XV301AU           QSFP+-40G-SR4
    Xcvr 14      REV 01   740-043308   UWE2CG9           QSFP+-40G-LR4
    Xcvr 16      REV 01   740-043308   UWH141S           QSFP+-40G-LR4
    Xcvr 17      REV 01   740-058734   1ECQ11180VH       QSFP-100GBASE-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492237      QSFP+-4X10G-LR
    Xcvr 26      REV 01   740-058734   1ACQ111803N       QSFP-100GBASE-SR4
    Xcvr 27      REV 01   740-058734   1ACQ113405S       QSFP-100GBASE-SR4
FPC 3            REV 35   750-051357   ACPD2186          LC1101 - 30C / 30Q / 96X

  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          30x100GE/30x40GE/96x10GE

    Xcvr 0       REV 01   740-061409   1GCQA1470A3       QSFP-100GBASE-LR4
    Xcvr 1       REV 01   740-061409   1GCQA1470XC       QSFP-100GBASE-LR4
    Xcvr 7                NON-JNPR     FG4550500008      QSFP-100G-CWDM4
```

```
    Xcvr 24      REV 01   740-058734   1ECQ11381LX       QSFP-100GBASE-SR4
    Xcvr 29      REV 01   740-043308   UWE0UYS           QSFP+-40G-LR4
FPC 5            REV 08   750-068822   ACPF0057          LC1102 - 12C / 36Q /
144X
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE
FPC 6            REV 08   750-068822   ACPE9951          LC1102 - 12C / 36Q /
144X
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-054053   QF3208LG          QSFP+-4X10G-SR
    Xcvr 7       REV 01   740-067442   XV20LGN           QSFP+-40G-SR4
    Xcvr 8       REV 01   740-067442   XV20VMV           QSFP+-40G-SR4
    Xcvr 9       REV 01   740-067442   XV20KCN           QSFP+-40G-SR4
    Xcvr 10      REV 01   740-067442   XU504QD           QSFP+-40G-SR4
    Xcvr 11      REV 01   740-067442   XU504X7           QSFP+-40G-SR4
    Xcvr 12      REV 01   740-067442   XU504W8           QSFP+-40G-SR4
    Xcvr 16      REV 01   740-032986   QF4301JP          QSFP+-40G-SR4
    Xcvr 17      REV 01   740-032986   QF4303AE          QSFP+-40G-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492400      QSFP+-4X10G-LR
    Xcvr 19      REV 01   740-054050   INFAJ0492142      QSFP+-4X10G-LR
    Xcvr 24      REV 01   740-032986   QF4301KB          QSFP+-40G-SR4
    Xcvr 25      REV 01   740-032986   QF4303YP          QSFP+-40G-SR4
    Xcvr 30      REV 01   740-067442   XV300ZX           QSFP+-40G-SR4
    Xcvr 31      REV 01   740-043308   UWH2KBW           QSFP+-40G-LR4
    Xcvr 34      REV 01   740-054053   QG1501YU          QSFP+-4X10G-SR
FPD Board        REV 07   711-054687   ACPC7142          Front Panel Display
Power Supply 0   REV 02   740-049388   1EDL62102N9       Power Supply AC
Power Supply 1   REV 02   740-049388   1EDL60300KX       Power Supply AC
Power Supply 2   REV 02   740-049388   1EDL60300DL       Power Supply AC
Power Supply 3   REV 02   740-049388   1EDL61701BT       Power Supply AC
Power Supply 4   REV 02   740-049388   1EDL62102P7       Power Supply AC
Power Supply 5   REV 02   740-049388   1EDL62102PP       Power Supply AC
FTC 0            REV 14   750-050108   ACPE4038          Fan Controller 8
FTC 1            REV 14   750-050108   ACPE4032          Fan Controller 8
Fan Tray 0       REV 09   760-054372   ACPD6799          Fan Tray 8
Fan Tray 1       REV 09   760-054372   ACNZ3584          Fan Tray 8
SIB 0            REV 24   750-050058   ACPD4587          Switch Fabric 8
SIB 1            REV 24   750-050058   ACNZ0635          Switch Fabric 8
SIB 2            REV 24   750-050058   ACPD4908          Switch Fabric 8
SIB 3            REV 24   750-050058   ACNZ0617          Switch Fabric 8
SIB 4            REV 24   750-050058   ACNZ0527          Switch Fabric 8
SIB 5            REV 23   750-050058   ACNX6980          Switch Fabric 8
```

show chassis hardware detail (PTX10016 Routers)

```
user@switch> show chassis hardware detail

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DH995             JNP10016 [PTX10016]
Midplane         REV 22   750-056555   ACPM7810          Midplane 16
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
```

```
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002          Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel            uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087    uhub1
CB 0             REV 03   750-068820   ACPL7238         Control Board
CB 1             REV 03   750-068820   ACPL7298         Control Board
FPC 1            REV 36   750-077140   ACNP4590         LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN          FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 0       REV 01   740-054053   QF3600AV         QSFP+-4X10G-SR
    Xcvr 35      REV 01   740-061405   1ACQ110507K      QSFP-100GBASE-SR4
FPC 3            REV 07   750-071975   CAHA2224         LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN          FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 0       REV 01   740-054053   QG1505YM         QSFP+-4X10G-SR
    Xcvr 11               NON-JNPR     GDA2017459       QSFP-100GBASE-LR4
    Xcvr 35               NON-JNPR     GDF2008750       QSFP-100GBASE-LR4
FPC 5            REV 13   750-068822   ACPD6501         LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN          FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-058734   1ECQ11381LA      QSFP-100GBASE-SR4
    Xcvr 2       REV 01   740-043308   UWH141S          QSFP+-40G-LR4
    Xcvr 3       REV 01   740-043308   UWE2CG9          QSFP+-40G-LR4
FPC 6            REV 37   750-077140   ACNS2793         LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN          FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 0       REV 01   740-032986   QH0400VH         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-032986   QH0400VM         QSFP+-40G-SR4
    Xcvr 35      REV 01   740-058734   1ECQ11390ZB      QSFP-100GBASE-SR4
FPC 8            REV 36   750-077140   ACNP4625         LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN          FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-058732   1AMQA14206D      QSFP-100GBASE-LR4
    Xcvr 10      REV 01   740-032986   QF4301KB         QSFP+-40G-SR4
    Xcvr 24      REV 01   740-054050   INFAJ0492244     QSFP+-4X10G-LR
FPC 9           REV 35   750-071976   ACPD3055         LC1101 - 30C / 30Q / 96X

  CPU                      BUILTIN      BUILTIN          FPC CPU
  PIC 0                   BUILTIN      BUILTIN          30x100GE/30x40GE/96x10GE

    Xcvr 0                NON-JNPR     INGBT7970007     QSFP-100GBASE-LR4
    Xcvr 1                NON-JNPR     UWQ24D9          QSFP-100GBASE-LR4
    Xcvr 2                NON-JNPR     INGBT7970011     QSFP-100GBASE-LR4
    Xcvr 3                NON-JNPR     UX60AF1          QSFP-100G-CWDM4
    Xcvr 4                NON-JNPR     UX408JJ          QSFP-100GBASE-LR4
    Xcvr 11      REV 01   740-058734   1ECQ113835F      QSFP-100GBASE-SR4
    Xcvr 18               NON-JNPR     Q7496            QSFP-100G-CWDM4
    Xcvr 29      REV 01   740-058734   1ECQ11380LZ      QSFP-100GBASE-SR4
Power Supply 0   REV 02   740-049388   1EDL625039E      Power Supply AC
Power Supply 1   REV 02   740-049388   1EDL62503AD      Power Supply AC
Power Supply 2   REV 02   740-049388   1EDL625039P      Power Supply AC
```

```
Power Supply 3   REV 02   740-049388   1EDL702004E       Power Supply AC
Power Supply 4   REV 02   740-049388   1EDL625039D       Power Supply AC
Power Supply 5   REV 02   740-049388   1EDL63706JD       Power Supply AC
Power Supply 6   REV 02   740-049388   1EDL63706JH       Power Supply AC
FTC 0            REV 10   750-050309   ACPM2918          Fan Controller 16
FTC 1            REV 10   750-050309   ACPE8185          Fan Controller 16
Fan Tray 0       REV 10   760-077141   ACPV7288          Fan Tray 16
Fan Tray 1       REV 10   760-057901   ACPL0546          Fan Tray 16
SIB 0            REV 15   750-058270   ACPM2804          Switch Fabric 16
SIB 1            REV 15   750-058270   ACPM2808          Switch Fabric 16
SIB 2            REV 15   750-058270   ACPL4450          Switch Fabric 16
SIB 3            REV 15   750-058270   ACPJ9834          Switch Fabric 16
SIB 4            REV 15   750-058270   ACPM2814          Switch Fabric 16
SIB 5            REV 15   750-058270   ACPL4277          Switch Fabric 16
FPD Board        REV 07   711-054687   ACPL1407          Front Panel Display
```

show chassis hardware (M7i Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                31959             M7i
Midplane         REV 02   710-008761   CA0209            M7i Midplane
Power Supply 0   Rev 04   740-008537   PD10272           AC Power Supply
Routing Engine   REV 01   740-008846   1000396803        RE-5.0
CFEB             REV 02   750-009492   CA0166            Internet Processor IIv1
FPC 0                                                    E-FPC
  PIC 0          REV 04   750-003163   HJ6416            1x G/E, 1000 BASE-SX
  PIC 1          REV 04   750-003163   HJ6423            1x G/E, 1000 BASE-SX
  PIC 2          REV 04   750-003163   HJ6421            1x G/E, 1000 BASE-SX
  PIC 3          REV 02   750-003163   HJ0425            1x G/E, 1000 BASE-SX
FPC 1                                                    E-FPC
  PIC 2          REV 01   750-009487   HM2275            ASP - Integrated
  PIC 3          REV 01   750-009098   CA0142            2x F/E, 100 BASE-TX

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                B1157             M7i
Midplane         REV 05   710-008761   DM0840            M7i Midplane
Power Supply 0   Rev 08   740-008537   TE53755           AC Power Supply
Routing Engine   REV 07   740-011202   1000736567        RE-850
CFEB             REV 09   750-010463   DK6952            Internet Processor II
FPC 0                                                    E-FPC
  PIC 0          REV 12   750-012838   DL7993            4x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011614   PD94TDJ           SFP-LX10
    Xcvr 1       REV 01   740-011615   PAD5EER           UNSUPPORTED
    Xcvr 2       REV 01   740-011614   PD94THU           SFP-LX10
    Xcvr 3                NON-JNPR     PDC2E7A           SFP-LX10
  PIC 1          REV 03   750-023116   JT0203            4x CHSTM1 SDH CE SFP
    Xcvr 0       REV 01   740-012434   AGT063832PS       SFP-SR
    Xcvr 1       REV 01   740-012434   AGT063832LY       SFP-SR
    Xcvr 3       REV 01   740-016064   C06J19018         SFP-LR
  PIC 2          REV 15   750-014895   DM5757            MultiServices 100
  PIC 3          REV 01   750-025390   JW9448            12x T1/E1 CE
FPC 1                                                    E-FPC
  PIC 2                   BUILTIN      BUILTIN           1x Tunnel
  PIC 3          REV 09   750-009099   DM0899            1x G/E, 1000 BASE
    Xcvr 0       REV 01   740-012434   AGT07150HGJ       UNSUPPORTED
Fan Tray                                                 Rear Fan Tray
```

show chassis hardware (M10 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                1122              M10
Midplane         REV 1.1  710-001950   S/N AC6626
Power supply A   Rev 01   740-002497   S/N LC36095       AC
Power supply B   Rev 01   740-002497   S/N LC36100       AC
Display          REV 1.2  710-001995   S/N AC6656
Host                                   18000005dfb3fb01  teknor
FEB              REV 01   710-001948   S/N AC6632        Internet Processor II
FPC 0
  PIC 0          REV 08   750-001072   S/N AB2485        1x G/E, 1000 BASE-SX
  PIC 1          REV 01   750-000613   S/N AA1048        1x OC-12 SONET, SMIR
FPC 1
Fan Tray 0                                               FANTRAY-M10I-S
Fan Tray 1                                               FANTRAY-M10I-S
```

show chassis hardware models (M10 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   710-008920                     CHAS-MP-M10i-S
Power Supply 0   Rev 06   740-008537                     PWR-M10i-M7i-AC-S
Power Supply 1   Rev 06   740-008537                     PWR-M10i-M7i-AC-S
HCM 0            REV 03   710-010580                     HCM-M10i-S
HCM 1            REV 03   710-010580                     HCM-M10i-S
Routing Engine 0 REV 09   740-009459                     RE-400-256-S
CFEB 0           REV 05   750-010465                     FEB-M10i-M7i-S
FPC 0
  PIC 0          REV 10   750-002971                     PE-4OC3-SON-MM
  PIC 1          REV 11   750-002992                     PE-4FE-TX
  PIC 2          REV 03   750-002977                     PE-2OC3-ATM-MM
  PIC 3          REV 08   750-005724                     PE-2OC3-ATM2-MM
FPC 1
  PIC 2          REV 12   750-008425                     PE-AS
  PIC 3          REV 13   750-005636                     PE-4CHDS3-QPP
Fan Tray 0                                               FANTRAY-M10I-S
Fan Tray 1                                               FANTRAY-M10I-S
```

show chassis hardware (M20 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                20033             M20
Backplane        REV 07   710-001517   S/N AA7940
Power supply B   Rev 01   740-001465   S/N 000001        AC
Display          REV 02   710-001519   S/N AA9704
Host 0                                 98000004f8f27501  teknor
SSB slot 0       REV 01   710-001951   S/N AD5905        Internet Processor II
  SSRAM bank 0   REV 01   710-001385   S00480            2 MB
  SSRAM bank 1   REV 01   710-001385   S00490            2 MB
  SSRAM bank 2   REV 01   710-001385   S001:?            2 MB
  SSRAM bank 3   REV 01   710-001385   S00483            2 MB
SSB slot 1       N/A      N/A          N/A               Backup
FPC 1            REV 01   710-001292   S/N AB7528
  SSRAM          REV 01   710-000077   S/N 304209        1 MB
```

```
  SDRAM bank 0   REV 01   710-000099   S/N 000603        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N 000414        64 MB
  PIC 0          REV 03   750-000612   S/N AB8433        2x OC-3 ATM, MM
  PIC 1          REV 01   750-000616   S/N AA1168        1x OC-12 ATM, MM
  PIC 2          REV 01   750-000613   S/N AA1008        1x OC-12 SONET, SMIR
  PIC 3          REV 01   750-002501   S/N AD5810        4x E3
FPC 2            REV 01   710-001292   S/N AC0119
  SSRAM          REV 01   710-000077   S/N 503241        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N 306835        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N 306832        64 MB
Fan Tray 0                                               Front Upper Fan Tray
Fan Tray 1                                               Front Middle Fan Tray
Fan Tray 2                                               Front Bottom Fan Tray
Fan Tray 3                                               Rear Fan Tray
```

show chassis hardware models (M20 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Backplane        REV 03   710-002334                     CHAS-MP-M20-S
Power Supply A   REV 06   740-001465                     PWR-M20-AC-S
Display          REV 04   710-001519                     CRAFT-M20-S
Routing Engine 0 REV 06   740-003239                     RE-333-768-S
Routing Engine 1 REV 06   740-003239                     RE-333-768-S
SSB 0            REV 02   710-001951                     SSB-E-M20
SSB 1            N/A      N/A
FPC 0            REV 03   710-003308                     FPC-E
  PIC 0          REV 08   750-002303                     P-4FE-TX
  PIC 1          REV 07   750-004745                     P-2MCDS3
  PIC 2          REV 03   750-002965                     PE-4CHDS3
FPC 1            REV 03   710-003308                     FPC-E
  PIC 0          REV 03   750-002914                     P-2OC3-ATM-MM
Fan Tray 0                                               FANTRAY-F-M20-S
Fan Tray 1                                               FANTRAY-F-M20-S
Fan Tray 2                                               FANTRAY-F-M20-S
Fan Tray 3                                               FANTRAY-R-M20-S
```

show chassis hardware (M40 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Backplane        REV 02   710-000073   S/N AA0053
Power supply A   Rev 2    740-000235   S/N 000042        DC
Maxicab          REV X1   710-000229   S/N AA0139
Minicab          REV X1   710-000482   S/N AA0201
Display          REV 06   710-000150   S/N AA0905
Host                                                     cpv5000
SCB              REV X1   710-000075   S/N AA0158        Internet Processor I
  SSRAM bank 0   REV 02   710-000077   S/N AA2267        1 MB
  SSRAM bank 1   REV 02   710-000077   S/N AA2270        1 MB
  SSRAM bank 2   REV 02   710-000077   S/N AA2269        1 MB
  SSRAM bank 3   REV 02   710-000077   S/N AA2268        1 MB
FPC 0            REV 01   710-000175   S/N AA0048
  SSRAM          REV 01   710-000077   S/N AA2333        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N AA2332        64 MB
  SDRAM bank 1   REV X1   710-000099   S/N AA2337        64 MB
  PIC 0          REV 04   750-000613   S/N aa0343        1x OC-12 SONET, SMIR
  PIC 1          REV 04   750-000613   S/N AA0379        1x OC-12 SONET, SMIR
```

```
  PIC 2          REV 04   750-000613   S/N AA0377        1x OC-12 SONET, SMIR
  PIC 3          REV 04   750-000613   S/N AA0378        1x Tunnel
FPC 2            REV 01   710-000175   S/N AA0042
  SSRAM          REV 02   710-000077   S/N AA2288        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N AA2331        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N AA2330        64 MB
  PIC 0          REV X1   750-000603   S/N AA0143        4x OC-3 SONET, SMIR
  PIC 1          REV X1   750-000615   S/N AA0149        4x OC-3 SONET, MM
  PIC 2          REV X1   750-000611   S/N AA0148        4x OC-3 SONET, MM
  PIC 3          REV 04   750-000613   S/N AA0330        1x OC-12 SONET, SMIR
FPC 4            REV 01   710-000175   S/N AA0050
  SSRAM          REV 01   710-000077   S/N AA2327        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N AA2329        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N AA2328        64 MB
  PIC 0          REV 04   750-000613   S/N AA0320        1x OC-12 SONET, SMIR
  PIC 2          REV 05   750-000616   S/N AA1341        1x OC-12 ATM, MM
  PIC 3          REV 08   750-001072   S/N AB2462        1x G/E, 1000 BASE-SX
FPC 5            REV 10   710-000175   S/N AA7663
  SSRAM          REV 01   710-000077   S/N 501590        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N 300949        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N 300868        64 MB
  PIC 1          REV 01   750-001323   S/N AB1670        1x Tunnel
```

show chassis hardware (M40e Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  m40e
Midplane         REV 01   710-005071   AX3671
FPM CMB          REV 03   710-001642   AR9074
FPM Display      REV 03   710-001647   AR7331
CIP              REV 04   710-002649   BB4449
PEM 0            Rev 01   740-003787   MC12364           Power Entry Module
PEM 1            Rev 01   740-003787   MC12383           Power Entry Module
PCG 0            REV 07   710-001568   AG1332
PCG 1            REV 07   710-001568   AR3789
Host 0                                 3e000007c8176601  Present
MCS 0            REV 11   710-001226   AN5813
SFM 0 SPP        REV 07   710-001228   AG4676
SFM 0 SPR        REV 05   710-002189   AE4735            Internet Processor II
SFM 1 SPP        REV 07   710-001228   AP1347
SFM 1 SPR        REV 05   710-002189   BE0063            Internet Processor II
FPC 0            REV 01   710-011725   BE0669            M40e-EP-FPC Type 1
  CPU            REV 01   710-004600   BD9504
  PIC 0          REV 03   750-003737   AY3991            4x G/E, 1000 BASE-SX
FPC 1            REV 01   710-005197   BD9842            M40e-FPC Type 2
  CPU            REV 01   710-004600   BB4869
  PIC 0          REV 07   750-001900   AR8278            1x OC-48 SONET, SMSR
FPC 2            REV 02   710-005197   BD9824            M40e-FPC Type 2
  CPU            REV 01   710-004600   BD9531
  PIC 0          REV 03   750-003737   AY3986            4x G/E, 1000 BASE-SX
FPC 4            REV 02   710-005078   BE0664            M40e-FPC Type 1
  CPU            REV 01   710-004600   BD9559
  PIC 0          REV 03   750-001894   AG7963            1x G/E, 1000 BASE-SX
  PIC 2          REV 01   750-002575   AF2472            4x OC-3 SONET, SMIR
FPC 6            REV 02   710-005078   BE0652            M40e-FPC Type 1
  CPU            REV 01   710-004600   BD9607
  PIC 0          REV 02   750-002911   AN2286            4x F/E, 100 BASE-TX
  PIC 2          REV 01   750-002577   AP6345            4x OC-3 SONET, MM
```

show chassis hardware (M120 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN000054AC        M120
Midplane         REV 01   710-013667   RB4170            M120 Midplane
FPM Board        REV 02   710-011407   CJ9186            M120 FPM Board
FPM Display      REV 02   710-011405   CJ9173            M120 FPM Display
FPM CIP          REV 02   710-011410   CJ9221            M120 FPM CIP
PEM 0            Rev 05   740-011936   RM28320           AC Power Entry Module
PEM 1            Rev 05   740-011936   RM28321           AC Power Entry Module
Routing Engine 0 REV 03   740-014080   1000642883        RE-A-1000
CB 0             REV 03   710-011403   CM8346            M120 Control Board
CB 1             REV 06   710-011403   CP6728            M120 Control Board
FPC 1            REV 02   710-015908   CP6925            M120 CFPC 10GE
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN) XFP
    Xcvr 0       REV 01   740-014279   62E204N00007      XFP-10G-LR
FPC 3            REV 03   710-011393   CJ9234            M120 FPC Type 2
  PIC 0          REV 16   750-008155   NB5229            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F15JB           SFP-SX
    Xcvr 1       REV 01   740-007326   P4Q0R9G           SFP-SX
  PIC 1          REV 09   750-007745   CG4360            4x OC-3 SONET, SMIR
  PIC 2          REV 16   750-008155   ND7787            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F12AS           SFP-SX
    Xcvr 1       REV 01   740-011613   P9F1ALU           SFP-SX
  PIC 3          REV 07   750-011800   JW1284            8x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   P9F1AM6           SFP-SX
    Xcvr 6       REV 01   740-011613   P9F16NN           SFP-SX
    Xcvr 7       REV 01   740-011782   P8C29Y7           SFP-SX
  Board B        REV 02   710-011395   CN3754            M120 FPC Mezz
FPC 4            REV 02   710-011398   CP6741            M120 FPC Type 3
  PIC 0          REV 16   750-007141   NB2855            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011782   P922A1F           SFP-SX
    Xcvr 1       REV 01   740-011782   P922A16           SFP-SX
    Xcvr 2       REV 01   740-011782   P922A0U           SFP-SX
    Xcvr 3       REV 01   740-011782   P9229UZ           SFP-SX
    Xcvr 4       REV 01   740-009029   P11JXWP           SFP-LX
    Xcvr 6       REV 01   740-011613   P9F1ALW           SFP-SX
FPC 5            REV 01   710-011388   CJ9088            M120 FPC Type 1
  PIC 0          *** Hardware Not Supported ***
  PIC 1          REV 05   750-012052   NB0410            1x CHOC3 IQ SONET, SMLR

  PIC 2          REV 01   750-013167   CM3824            4x CHDS3 IQ
  PIC 3          REV 01   750-010240   CB5366            1x G/E SFP, 1000 BASE
  Board B        REV 01   710-011390   CJ9103            M120 FPC Mezz Board
FEB 3            REV 04   710-011663   CP6673            M120 FEB
FEB 4            REV 04   710-011663   CJ9368            M120 FEB
FEB 5            REV 04   710-011663   CJ9386            M120 FEB
Fan Tray 0                                                Front Top Fan Tray
Fan Tray 1                                                Front Bottom Fan Tray
Fan Tray 2                                                Rear Top Fan Tray
Fan Tray 3                                                Rear Bottom Fan Tray
```

show chassis hardware detail (M120 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
```

```
Chassis                                 JN000054AC        M120
Midplane         REV 01   710-013667   RB4170            M120 Midplane
FPM Board        REV 02   710-011407   CJ9186            M120 FPM Board
FPM Display      REV 02   710-011405   CJ9173            M120 FPM Display
FPM CIP          REV 02   710-011410   CJ9221            M120 FPM CIP
PEM 0            Rev 05   740-011936   RM28320           AC Power Entry Module
PEM 1            Rev 05   740-011936   RM28321           AC Power Entry Module
Routing Engine 0 REV 03   740-014080   1000642883        RE-A-1000
  ad0     248 MB  SILICONSYSTEMS INC 256M 126CT505S0763SC00110 Compact Flash
  ad2   38154 MB  HTE541040G9SA00      MPBBT0X2HS2E3M    Hard Disk
CB 0             REV 03   710-011403   CM8346            M120 Control Board
CB 1             REV 06   710-011403   CP6728            M120 Control Board
FPC 1            REV 02   710-015908   CP6925            M120 CFPC 10GE
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN) XFP
    Xcvr 0       REV 01   740-014279   62E204N00007      XFP-10G-LR
FPC 3            REV 03   710-011393   CJ9234            M120 FPC Type 2
  PIC 0          REV 16   750-008155   NB5229            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F15JB           SFP-SX
    Xcvr 1       REV 01   740-007326   P4Q0R9G           SFP-SX
  PIC 1          REV 09   750-007745   CG4360            4x OC-3 SONET, SMIR
  PIC 2          REV 16   750-008155   ND7787            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F12AS           SFP-SX
    Xcvr 1       REV 01   740-011613   P9F1ALU           SFP-SX
  PIC 3          REV 07   750-011800   JW1284            8x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   P9F1AM6           SFP-SX
    Xcvr 6       REV 01   740-011613   P9F16NN           SFP-SX
    Xcvr 7       REV 01   740-011782   P8C29Y7           SFP-SX
  Board B        REV 02   710-011395   CN3754            M120 FPC Mezz
FPC 4            REV 02   710-011398   CP6741            M120 FPC Type 3
  PIC 0          REV 16   750-007141   NB2855            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011782   P922A1F           SFP-SX
    Xcvr 1       REV 01   740-011782   P922A16           SFP-SX
    Xcvr 2       REV 01   740-011782   P922A0U           SFP-SX
    Xcvr 3       REV 01   740-011782   P9229UZ           SFP-SX
    Xcvr 4       REV 01   740-009029   P11JXWP           SFP-LX
    Xcvr 6       REV 01   740-011613   P9F1ALW           SFP-SX
FPC 5            REV 01   710-011388   CJ9088            M120 FPC Type 1
  PIC 0          *** Hardware Not Supported ***
  PIC 1          REV 05   750-012052   NB0410            1x CHOC3 IQ SONET, SMLR

  PIC 2          REV 01   750-013167   CM3824            4x CHDS3 IQ
  PIC 3          REV 01   750-010240   CB5366            1x G/E SFP, 1000 BASE
  Board B        REV 01   710-011390   CJ9103            M120 FPC Mezz Board
FEB 3            REV 04   710-011663   CP6673            M120 FEB
FEB 4            REV 04   710-011663   CJ9368            M120 FEB
FEB 5            REV 04   710-011663   CJ9386            M120 FEB
Fan Tray 0                                                Front Top Fan Tray
Fan Tray 1                                                Front Bottom Fan Tray
Fan Tray 2                                                Rear Top Fan Tray
Fan Tray 3                                                Rear Bottom Fan Tray
```

show chassis hardware models (M120 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   710-013667
FPM CIP          REV 02   710-011410                     CRAFT-M120-S
PEM 0            Rev 05   740-011936                     PWR-M120-AC-S
PEM 1            Rev 05   740-011936                     PWR-M120-AC-S
```

```
Routing Engine 0 REV 03   740-014080                    RE-A-1000-2048-S
CB 0             REV 03   710-011403                    CB-M120-S
CB 1             REV 06   710-011403                    CB-M120-S
FPC 1            REV 02   710-015908                    M120-cFPC-1XGE-XFP
FPC 3
  PIC 0          REV 16   750-008155                    PB-2GE-SFP-QPP
  PIC 1          REV 09   750-007745                    PC-4OC3-SON-SMIR
  PIC 2          REV 16   750-008155                    PB-2GE-SFP-QPP
  PIC 3          REV 07   750-011800                    PB-8GE-TYPE2-SFP-IQ2
FPC 4
  PIC 0          REV 16   750-007141                    PC-10GE-SFP
FPC 5
  PIC 1          REV 05   750-012052                    PB-1CHOC3-SMIR-QPP
  PIC 2          REV 01   750-013167                    PE-4CHDS3-QPP
  PIC 3          REV 01   750-010240                    PB-1GE-SFP
Fan Tray 0                                              FFANTRAY-M120-S
Fan Tray 1                                              FFANTRAY-M120-S
Fan Tray 2                                              RFANTRAY-M120-S
Fan Tray 3                                              RFANTRAY-M120-S
```

show chassis hardware (M160 Router)

```
user@host> show chassis hardware
Item             Version  Part number  Serial number     Description
Chassis                                101               M160
Midplane         REV 02   710-001245   S/N AB4107
FPM CMB          REV 01   710-001642   S/N AA2911
FPM Display      REV 01   710-001647   S/N AA2999
CIP              REV 02   710-001593   S/N AA9563
PEM 0            Rev 01   740-001243   S/N KJ35769       DC
PEM 1            Rev 01   740-001243   S/N KJ35765       DC
PCG 0            REV 01   710-001568   S/N AA9794
PCG 1            REV 01   710-001568   S/N AA9804
Host 1                                 da000004f8d57001  teknor
MCS 1            REV 03   710-001226   S/N AA9777
SFM 0 SPP        REV 04   710-001228   S/N AA2975
SFM 0 SPR        REV 02   710-001224   S/N AA9838        Internet Processor I
SFM 1 SPP        REV 04   710-001228   S/N AA2860
SFM 1 SPR        REV 01   710-001224   S/N AB0139        Internet Processor I
FPC 0            REV 03   710-001255   S/N AA9806        FPC Type 1
  CPU            REV 02   710-001217   S/N AA9590
  PIC 1          REV 05   750-000616   S/N AA1527        1x OC-12 ATM, MM
  PIC 2          REV 05   750-000616   S/N AA1535        1x OC-12 ATM, MM
  PIC 3          REV 01   750-000616   S/N AA1519        1x OC-12 ATM, MM
FPC 1            REV 02   710-001611   S/N AA9523        FPC Type 2
  CPU            REV 02   710-001217   S/N AA9571
  PIC 0          REV 03   750-001900   S/N AA9626        1x STM-16 SDH, SMIR
  PIC 1          REV 01   710-002381   S/N AD3633        2x G/E, 1000 BASE-SX
FPC 2                                                   FPC Type OC192
  CPU            REV 03   710-001217   S/N AB3329
  PIC 0          REV 01                                  1x OC-192 SM SR-2
Fan Tray 0                                              Rear Bottom Blower
Fan Tray 1                                              Rear Top Blower
Fan Tray 2                                              Front Top Blower
Fan Tray 3                                              Front Fan Tray
```

show chassis hardware models (M160 Router)

```
user@host> show chassis hardware models
```

```
 Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 03   710-009120                     CHAS-BP-M320-S
FPM Display      REV 02   710-009351                     CRAFT-M320-S
CIP              REV 03   710-005926                     CIP-M320-S
PEM 2            Rev X4   740-009148                     PWR-M-DC-S
PEM 3            Rev X4   740-009148                     PWR-M-DC-S
Routing Engine 0 REV 02   740-008883                     RE-1600-2048-S
Routing Engine 1 REV 02   740-008883                     RE-1600-2048-S
FPC 0            REV 02   710-010419                     M320-FPC1
  PIC 0          REV 01   750-001323                     P-TUNNEL
  PIC 1          REV 02   750-002987                     PE-1OC12-SON-SMIR
  PIC 2          REV 04   750-001894                     PB-1GE-SX
  PIC 3          REV 04   750-001896                     PB-1OC12-SON-SMIR
FPC 1            REV 02   710-010419                     M320-FPC1
  PIC 0          REV 04   750-001894                     PB-1GE-SX
  PIC 1          REV 04   750-001894                     PB-1GE-SX
  PIC 3          REV 03   750-001894                     PB-1GE-SX
FPC 2            REV 02   710-010419                     M320-FPC1
  PIC 0          REV 10   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
FPC 3
  PIC 0          REV 03   750-001895                     PB-1OC12-SON-MM
  PIC 1          REV 04   750-001894                     PB-1GE-SX
  PIC 3          REV 04   750-003141                     PB-1GE-SX-B
FPC 4            REV 02   710-010419                     M320-FPC1
FPC 5            REV 02   710-010419                     M320-FPC1
FPC 6            REV 02   710-010419                     M320-FPC1
FPC 7
  PIC 0          REV 15   750-001901                     PB-4OC12-SON-SMIR
  PIC 1          REV 06   750-001900                     PB-1OC48-SON-SMSR
  PIC 2          REV 07   750-001900                     PB-1OC48-SON-SMSR
  PIC 3          REV 05   750-003737                     PB-4GE-SX
SIB 0            REV 03   710-009184                     SIB-M-S
SIB 1            REV 03   710-009184                     SIB-M-S
SIB 2            REV 03   710-009184                     SIB-M-S
SIB 3            REV 03   710-009184                     SIB-M-S
Fan Tray 0                                               FFANTRAY-M320-S
Fan Tray 1                                               FFANTRAY-M320-S
Fan Tray 2                                               RFANTRAY-M320-S
```

show chassis hardware detail (M160 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               101               M160
Midplane         REV 02   710-001245   S/N AB4107
FPM CMB          REV 01   710-001642   S/N AA2911
FPM Display      REV 01   710-001647   S/N AA2999
CIP              REV 02   710-001593   S/N AA9563
PEM 0            Rev 01   740-001243   S/N KJ35769       DC
PEM 1            Rev 01   740-001243   S/N KJ35765       DC
PCG 0            REV 01   710-001568   S/N AA9794
PCG 1            REV 01   710-001568   S/N AA9804
Host 1                                 da000004f8d57001  teknor
```

```
MCS 1            REV 03   710-001226   S/N AA9777
SFM 0 SPP        REV 04   710-001228   S/N AA2975
SFM 0 SPR        REV 02   710-001224   S/N AA9838        Internet Processor I
  SSRAM bank 0   REV 01   710-000077   S/N 306456        1 MB
  SSRAM bank 1   REV 01   710-000077   S/N 306474        1 MB
  SSRAM bank 2   REV 01   710-000077   S/N 306388        1 MB
  SSRAM bank 3   REV 01   710-000077   S/N 306392        1 MB
SFM 1 SPP        REV 04   710-001228   S/N AA2860
SFM 1 SPR        REV 01   710-001224   S/N AB0139        Internet Processor I
  SSRAM bank 0   REV 01   710-000077   S/N 302917        1 MB
  SSRAM bank 1   REV 01   710-000077   S/N 302662        1 MB
  SSRAM bank 2   REV 01   710-000077   S/N 302593        1 MB
  SSRAM bank 3   REV 01   710-000077   S/N 100160        1 MB
FPC 0            REV 03   710-001255   S/N AA9806        FPC Type 1
  CPU            REV 02   710-001217   S/N AA9590
  SSRAM          REV 01   710-000077   S/N 302836        1 MB
  SDRAM 0        REV 01   710-001196   S00141            32 MB
  SDRAM 1        REV 01   710-001196   S0010;            32 MB
  SSRAM          REV 01   710-000077   S/N 302633        1 MB
  SDRAM 0        REV 01   710-001196   S00143            32 MB
  SDRAM 1        REV 01   710-001196   S00115            32 MB
  SSRAM          REV 01   710-000077   S/N 302952        1 MB
  SDRAM 0        REV 01   710-001196   S00135            32 MB
  SDRAM 1        REV 01   710-001196   S001=3            32 MB
  SSRAM          REV 01   710-000077   S/N 302892        1 MB
  SDRAM 0        REV 01   710-001196   S000?6            32 MB
  SDRAM 1        REV 01   710-001196   S001=5            32 MB
  PIC 1          REV 05   750-000616   S/N AA1527        1x OC-12 ATM, MM
  PIC 2          REV 05   750-000616   S/N AA1535        1x OC-12 ATM, MM
  PIC 3          REV 01   750-000616   S/N AA1519        1x OC-12 ATM, MM
FPC 1            REV 02   710-001611   S/N AA9523        FPC Type 2
  CPU            REV 02   710-001217   S/N AA9571
  SSRAM          REV 01   710-000077   S/N 306340        1 MB
  SDRAM 0        REV 01   710-001196   S00012            32 MB
  SDRAM 1        REV 01   710-001196   S0001?            32 MB
  SSRAM          REV 01   710-000077   S/N 306454        1 MB
  SDRAM 0        REV 01   710-001196   S00028            32 MB
  SDRAM 1        REV 01   710-001196   S0002?            32 MB
  SSRAM          REV 01   710-000077   S/N 306492        1 MB
  SDRAM 0        REV 01   710-001196   S00015            32 MB
  SDRAM 1        REV 01   710-001196   S00031            32 MB
  SSRAM          REV 01   710-000077   S/N 306363        1 MB
  SDRAM 0        REV 01   710-001196   S00013            32 MB
  SDRAM 1        REV 01   710-001196   S00032            32 MB
  PIC 0          REV 03   750-001900   S/N AA9626        1x STM-16 SDH, SMIR
  PIC 1          REV 01   710-002381   S/N AD3633        2x G/E, 1000 BASE-SX
FPC 2                                                    FPC Type OC192
... SSRAM          REV 01   710-000077   S/N 306466        1 MB
```

show chassis hardware (M320 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                67245             M320
Midplane         REV 05   710-009120   RB1202            M320 Midplane
FPM GBUS         REV 04   710-005928   HZ5697            M320 Board
FPM Display      REV 05   710-009351   HR1464            M320 FPM Display
CIP              REV 04   710-005926   HT8672            M320 CIP
PEM 0            Rev 05   740-009148   QK34208           DC Power Entry Module
PEM 1            Rev 05   740-009148   QK34262           DC Power Entry Module
```

```
PEM 2            Rev 05   740-009148   QF10449          DC Power Entry Module
PEM 3            Rev 05   740-009148   QJ18257          DC Power Entry Module
Routing Engine 0 REV 06   740-008883   P11123901185     RE-4.0
CB 0             REV 07   710-009115   JB2382           M320 Control Board
FPC 0            REV 02   710-005017   CD9926           M320 FPC Type 2
  CPU            REV 01   710-011659   CJ6940           M320 PCA SCPU
  PIC 0          REV 07   750-001900   AT1594           1x OC-48 SONET, SMSR
  PIC 1          REV 03   750-001850   HS2746           1x Tunnel
  PIC 2          REV 05   750-010618   JE7117           4x G/E SFP, 1000 BASE
  PIC 3          REV 06   750-001900   HE6083           1x OC-48 SONET, SMSR
FPC 2            REV 02   710-005017   CH0319           M320 FPC Type 1
  CPU            REV 01   710-011659   CJ6942           M320 PCA SCPU
  PIC 0          REV 05   750-003034   BD8705           4x OC-3 SONET, SMIR
FPC 5            REV 02   710-005017   CD9938           M320 FPC Type 2
  CPU
FPC 7            REV 02   710-005017   CD9934           M320 FPC Type 2
  CPU
SIB 0            REV 09   710-009184   JA6540           M320 SIB
SIB 1            REV 09   710-009184   HV9511           M320 SIB
SIB 2            REV 09   710-009184   HW2057           M320 SIB
SIB 3            REV 09   710-009184   JA6687           M320 SIB
Fan Tray 0                                             Front Top Fan Tray
Fan Tray 1                                             Front Bottom Fan Tray
Fan Tray 2                                             Rear Fan Tray
```

show chassis hardware models (M320 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code        FRU model number
Midplane         REV 03   710-009120                    CHAS-BP-M320-S
FPM Display      REV 02   710-009351                    CRAFT-M320-S
CIP              REV 03   710-005926                    CIP-M320-S
PEM 2            Rev X4   740-009148                    PWR-M-DC-S
PEM 3            Rev X4   740-009148                    PWR-M-DC-S
Routing Engine 0 REV 02   740-008883                    RE-1600-2048-S
Routing Engine 1 REV 02   740-008883                    RE-1600-2048-S
FPC 0            REV 02   710-010419                    M320-FPC1
  PIC 0          REV 01   750-001323                    P-TUNNEL
  PIC 1          REV 02   750-002987                    PE-1OC12-SON-SMIR
  PIC 2          REV 04   750-001894                    PB-1GE-SX
  PIC 3          REV 04   750-001896                    PB-1OC12-SON-SMIR
FPC 1            REV 02   710-010419                    M320-FPC1
  PIC 0          REV 04   750-001894                    PB-1GE-SX
  PIC 1          REV 04   750-001894                    PB-1GE-SX
  PIC 3          REV 03   750-001894                    PB-1GE-SX
FPC 2            REV 02   710-010419                    M320-FPC1
  PIC 0          REV 10   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
FPC 3
  PIC 0          REV 03   750-001895                    PB-1OC12-SON-MM
  PIC 1          REV 04   750-001894                    PB-1GE-SX
  PIC 3          REV 04   750-003141                    PB-1GE-SX-B
FPC 4            REV 02   710-010419                    M320-FPC1
FPC 5            REV 02   710-010419                    M320-FPC1
FPC 6            REV 02   710-010419                    M320-FPC1
```

```
FPC 7
  PIC 0          REV 15   750-001901                    PB-4OC12-SON-SMIR
  PIC 1          REV 06   750-001900                    PB-1OC48-SON-SMSR
  PIC 2          REV 07   750-001900                    PB-1OC48-SON-SMSR
  PIC 3          REV 05   750-003737                    PB-4GE-SX
SIB 0            REV 03   710-009184                    SIB-M-S
SIB 1            REV 03   710-009184                    SIB-M-S
SIB 2            REV 03   710-009184                    SIB-M-S
SIB 3            REV 03   710-009184                    SIB-M-S
Fan Tray 0                                              FFANTRAY-M320-S
Fan Tray 1                                              FFANTRAY-M320-S
Fan Tray 2                                              RFANTRAY-M320-S
```

show chassis hardware (MX5 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                E1368             MX5-T
Midplane         REV 01   711-038215   YF5288            MX5-T
PEM 0            Rev 04   740-028288   VA01215           AC Power Entry Module
PEM 1            Rev 04   740-028288   VA01218           AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
TFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZA9136            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 24   750-028392   YX9820            3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   AM1045SUAQ3       SFP-SX
      Xcvr 1     REV 01   740-031851   AM1045SUAPA       SFP-SX
      Xcvr 2     REV 01   740-031851   AM1045SUAN7       SFP-SX
      Xcvr 3     REV 01   740-031851   AM1045SU91Q       SFP-SX
      Xcvr 4     REV 01   740-031851   AM1045SUDDR       SFP-SX
      Xcvr 9     REV 01   740-011613   AM0848SB6A1       SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   AM1045SUAN0       SFP-SX
      Xcvr 1     REV 01   740-011613   AS0812S0719       SFP-SX
      Xcvr 2     REV 01   740-011613   AM0821SA121       SFP-SX
      Xcvr 3     REV 01   740-011613   PF21K21           SFP-SX
      Xcvr 4     REV 01   740-011613   AM0848SB69Z       SFP-SX
      Xcvr 5     REV 01   740-011782   P9P0XV3           SFP-SX
      Xcvr 6     REV 01   740-011613   AM0812S8WJN       SFP-SX
      Xcvr 7     REV 01   740-011613   PAM3G9Q           SFP-SX
      Xcvr 8     REV 01   740-011613   AM0848SB4A6       SFP-SX
      Xcvr 9     REV 01   740-011782   P9M0U37           SFP-SX
  MIC 1          REV 20   750-028380   ZG2657            3D 2x 10GE XFP
    PIC 2                 BUILTIN      BUILTIN           1x 10GE XFP
    PIC 3                 BUILTIN      BUILTIN           1x 10GE XFP
Fan Tray                                                Fan Tray
```

show chassis hardware (MX10 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                E1372             MX10-T
```

```
Midplane         REV 01   711-038211   YF5285           MX10-T
PEM 0            Rev 04   740-028288   VB01678          AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN          Routing Engine
TFEB 0                    BUILTIN      BUILTIN          Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZA9053           MPC QXM
FPC 0                     BUILTIN      BUILTIN          MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN          4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN          4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN          MPC BUILTIN
  MIC 0          REV 24   750-028392   YX9436           3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN          10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   AM1107SUFQW      SFP-SX
    PIC 1                 BUILTIN      BUILTIN          10x 1GE(LAN) SFP
Fan Tray                                               Fan Tray
```

show chassis hardware (MX40 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number    Description
Chassis                                E1367            MX40-T
Midplane         REV 01   711-038211   YF5284           MX40-T
PEM 0            Rev 04   740-028288   VB01680          AC Power Entry Module
PEM 1            Rev 04   740-028288   VB01700          AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN          Routing Engine
TFEB 0                    BUILTIN      BUILTIN          Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZA9048           MPC QXM
FPC 0                     BUILTIN      BUILTIN          MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN          4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN          4x 10GE XFP
      Xcvr 0     REV 01   740-014279   M7067UPP         XFP-10G-LR
      Xcvr 1              NON-JNPR     K9J02UN          XFP-10G-LR
FPC 1                     BUILTIN      BUILTIN          MPC BUILTIN
  MIC 0          REV 24   750-028392   YX3504           3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN          10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011613   AM0812S8WTE      SFP-SX
      Xcvr 1     REV 01   740-011613   PFA6KV2          SFP-SX
      Xcvr 2     REV 01   740-031851   AM1045SUDDM      SFP-SX
      Xcvr 3     REV 01   740-011613   PD63C7M          SFP-SX
      Xcvr 4     REV 01   740-011613   PD63DJY          SFP-SX
      Xcvr 5     REV 02   740-011613   AA0950STLL9      SFP-SX
      Xcvr 6     REV 01   740-011782   PAR1YHC          SFP-SX
      Xcvr 7     REV 01   740-011782   P9P0XXL          SFP-SX
      Xcvr 8     REV 01   740-011613   PD63D95          SFP-SX
      Xcvr 9     REV 01   740-031851   AM1045SU9B8      SFP-SX
    PIC 1                 BUILTIN      BUILTIN          10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011613   PF21L3Z          SFP-SX
      Xcvr 1     REV 01   740-031851   AM1045SU7M9      SFP-SX
      Xcvr 2     REV 01   740-031851   AM1045SUAPT      SFP-SX
      Xcvr 3     REV 01   740-011613   PFF2BZH          SFP-SX
      Xcvr 4     REV 01   740-031851   AM1045SUDDN      SFP-SX
      Xcvr 5     REV 01   740-031851   AM1039S00ZR      SFP-SX
      Xcvr 6     REV 01   740-031851   AM1045SUD6Y      SFP-SX
      Xcvr 8     REV 01   740-011613   PFM1QBS          SFP-SX
      Xcvr 9     REV 01   740-011613   PFF2E25          SFP-SX
  MIC 1          REV 01   750-021130   KG4391           3D 2x 10GE XFP
    PIC 2                 BUILTIN      BUILTIN          1x 10GE XFP
      Xcvr 0     REV 01   740-011571   C645XJ04G        XFP-10G-SR
    PIC 3                 BUILTIN      BUILTIN          1x 10GE XFP
```

```
      Xcvr 0              NON-JNPR     CA49BK0AE         XFP-10G-SR
Fan Tray                                                 Fan Tray
```

show chassis hardware (Fixed MX80 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX80-48T
Midplane         REV 01   711-031603   KF9250            MX80-48T
Routing Engine            BUILTIN      BUILTIN           Routing Engine
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine Board
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
      Xcvr 0              NON-JNPR     M6439D41          XFP-10G-LR
      Xcvr 1     REV 01   740-014279   6XE931N00202      XFP-10G-LR
      Xcvr 2     REV 01   740-014289   C715XU05F         XFP-10G-SR
      Xcvr 3     REV 01   740-014289   C650XU0EP         XFP-10G-SR
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 01   711-029399   JR6981            12x 1GE(LAN) RJ45
    PIC 0                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
    PIC 1                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
  MIC 1          REV 01   BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
    PIC 2                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
    PIC 3                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
Fan Tray                                                 Fan Tray
```

show chassis hardware (Modular MX80 Router)

```
user@host> show chassis hardware

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX80
Midplane         REV 02   711-031594   JR7084            MX80
PEM 0            Rev 01   740-028288   000018            AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine Board

  QXM 0          REV 05   711-028408   JR7041            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 02   750-028380   JR6598            3D 2x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0     REV 01   740-014289   T07M86365         XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0     REV 01   740-014289   T07M71094         XFP-10G-SR
  MIC 1          REV 02   750-028380   JG8548            3D 2x 10GE XFP
    PIC 2                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0     REV 02   740-014289   T08L86302         XFP-10G-SR
    PIC 3                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0     REV 02   740-014289   C810XU0BA         XFP-10G-SR
Fan Tray                                                 Fan Tray
```

show chassis hardware (MX150)

```
user@host> show chassis hardware
```

```
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DD2316AF0078      MX150
Midplane         REV 04   650-066113   DD2316AF0078      MX150
Power Supply 0
Routing Engine 0                                         RE-VMX
CB 0                                                     VMX SCB
CB 1                                                     VMX SCB
FPC 0                                                    Virtual FPC
  CPU            Rev. 1.0 RIOT         BUILTIN
  MIC 0                                                  Virtual
    PIC 0                BUILTIN      BUILTIN           Virtual
      Xcvr 10    REV 02   740-013111   A331846           SFP-T
      Xcvr 11    REV 02   740-013111   C248517           SFP-T
Fan Tray 0                                               fan-ctrl-0 0, Front to
Back Airflow - AFO
Fan Tray 1                                               fan-ctrl-0 1, Front to
Back Airflow - AFO
```

show chassis hardware models (MX150)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 04   650-066113   DD2316AF0163      MX150
Fan Tray 0                                               Assy,Sub,Fan
Tray,AFO,Opus-AFO
Fan Tray 1                                               Assy,Sub,Fan
Tray,AFO,Opus-AFO
```

show chassis hardware (MX104 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                G3503             MX104
Midplane         REV 28   750-044219   CAAX5741          MX104
PEM 0            REV 03   740-045933   1H072500016       AC Power Entry Module
PEM 1            REV 03   740-045932   1H073050017       DC Power Entry Module
Routing Engine 0 REV 20   750-044228   CAAY7935          RE-MX-104
Routing Engine 1 REV 13   750-044228   CAAM6380          RE-MX-104
AFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 15   750-036132   CAAF7948          2xOC12/8xOC3 CC-CE
    PIC 0                 BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE
      Xcvr 0     REV 01   740-011615   PCQ0U2J           SFP-IR
      Xcvr 1     REV 01   740-016068   PJL7A6G           SFP-SR
      Xcvr 2     REV 01   740-016068   PJL7A5J           SFP-SR
      Xcvr 3     REV 01   740-016065   PJN5HPZ           SFP-SR
      Xcvr 4     REV 01   740-029122   PKB38TL           SFP-LR
      Xcvr 5     REV 01   740-011787   P6A107G           SFP-LR
      Xcvr 6     REV 01   740-029122   PKB38TR           SFP-LR
      Xcvr 7     REV 01   740-011787   PBK0NK3           SFP-LR
  MIC 1
FPC 2                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
      Xcvr 0     REV 01   740-031980   B10F00465         SFP+-10G-SR
```

```
      Xcvr 1     REV 01   740-031980   B10F00461         SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   B10G01545         SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   B10G01385         SFP+-10G-SR
Fan Tray 0       REV 02   711-049570   CAAX6538          Fan Tray
```

show chassis hardware detail (MX104 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                G3503             MX104
Midplane         REV 28   750-044219   CAAX5741          MX104
PEM 0            REV 03   740-045933   1H072500016       AC Power Entry Module
PEM 1            REV 03   740-045932   1H073050017       DC Power Entry Module
Routing Engine 0 REV 20   750-044228   CAAY7935          RE-MX-104
  da0    7836 MB  ATP IG eUSB SSD                        Nand Flash 0
  usb0 (addr 1)  EHCI root hub 0       Freescale         uhub0
  usb0 (addr 2)  USB2513Bi  9491       SMSC              uhub1
  usb0 (addr 3)  ATP IG eUSB SSD 44801 ATP Electronics   umass0
Routing Engine 1 REV 13   750-044228   CAAM6380          RE-MX-104
  da0    7836 MB  ATP IG eUSB SSD                        Nand Flash 0
AFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 15   750-036132   CAAF7948          2xOC12/8xOC3 CC-CE
    PIC 0                 BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE
      Xcvr 0     REV 01   740-011615   PCQ0U2J           SFP-IR
      Xcvr 1     REV 01   740-016068   PJL7A6G           SFP-SR
      Xcvr 2     REV 01   740-016068   PJL7A5J           SFP-SR
      Xcvr 3     REV 01   740-016065   PJN5HPZ           SFP-SR
      Xcvr 4     REV 01   740-029122   PKB38TL           SFP-LR
      Xcvr 5     REV 01   740-011787   P6A107G           SFP-LR
      Xcvr 6     REV 01   740-029122   PKB38TR           SFP-LR
      Xcvr 7     REV 01   740-011787   PBK0NK3           SFP-LR
  MIC 1
FPC 2                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
      Xcvr 0     REV 01   740-031980   B10F00465         SFP+-10G-SR
      Xcvr 1     REV 01   740-031980   B10F00461         SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   B10G01545         SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   B10G01385         SFP+-10G-SR
Fan Tray 0       REV 02   711-049570   CAAX6538          Fan Tray
```

show chassis hardware detail (MX480 Packet Transport Router with details of virtual disk size)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN122FFD9AFB      MX480
Midplane         REV 05   710-017414   ACRB8882          MX480 Midplane
FPM Board        REV 02   710-017254   CADF7623          Front Panel Display
PEM 0            Rev 07   740-017343   QCS1128A0TY       DC Power Entry Module
PEM 1            Rev 07   740-017343   QCS1128A0JM       DC Power Entry Module
Routing Engine 0 REV 07   750-054758   CADG2028          RE-S-2X00x6
  vtbd0 15361 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002           Emulated IDE Disk
  usb0 (addr 1)  UHCI root HUB 0       Intel             uhub0
```

```
Routing Engine 1 REV 00   750-054758                    RE-S-2X00x6
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002          Emulated IDE Disk
  usb0 (addr 1)  UHCI root HUB 0       Intel            uhub0
CB 0             REV 01   750-055976   CACS1837         Enhanced MX SCB 2
CB 1             REV 01   750-055976   CADD9894         Enhanced MX SCB 2
  Xcvr 1         REV 01   740-031980   AP41KCL          SFP+-10G-SR
FPC 0            REV 09   750-049040   CACX1759         LOAD MPC Type 2
  CPU            REV 10   711-035209   CACP9324         HMPC PMB 2G
FPC 4            REV 28   750-037355   CACY8384         MPC4E 3D 2CGE+8XGE
  CPU            REV 10   711-035209   CACX0428         HMPC PMB 2G
Fan Tray                                                Enhanced Left Fan Tray
```

show chassis hardware extensive (MX104 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                G3503             MX104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               G3503
 Assembly ID:  0x0560            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX104
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 60 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 47 33 35 30 33 00 00 00 00 00 00 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 28   750-044219   CAAX5741          MX104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044219        S/N:               CAAX5741
 Assembly ID:  0x0560            Assembly Version:  01.28
 Date:         03-27-2013        Assembly Flags:    0x00
 Version:      REV 28            CLEI Code:         PROTOXCLEI
 ID: MX104                       FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 08 00 b0 a8 6e a7 f8 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 60 01 1c 52 45 56 20 32 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 31 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 58 35 37 34 31 00 1b 03 07
  Address 0x30: dd ff ff ff ad 01 08 00 b0 a8 6e a7 f8 00 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 47 33 35 30 33 00 00 00 00 00 00 00
PEM 0            REV 03   740-045933   1H072500016       AC Power Entry Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045933        S/N:               1H072500016
 Assembly ID:  0x0475            Assembly Version:  00.03
 Date:         12-14-2012        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         IPUPAJ9KAA
 ID: AC Power Entry Module       FRU Model Number:  PWR-AMX1100-AC-S
```

```
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 75 00 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 33 00 00
  Address 0x20: 31 48 30 37 32 35 30 30 30 31 36 00 00 0e 0c 07
  Address 0x30: dc 30 43 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 39 4b 41 41 50
  Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 41 43 2d 53 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 70 ff ff ff ff ff ff ff ff ff ff ff ff
PEM 1            REV 03   740-045932   1H073050017       DC Power Entry Module
Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045932        S/N:               1H073050017
 Assembly ID:  0x0476            Assembly Version:  00.03
 Date:         01-30-2013        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         IPUPAJ8KAA
 ID: DC Power Entry Module       FRU Model Number:  PWR-AMX1100-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 76 00 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 32 00 00
  Address 0x20: 31 48 30 37 33 30 35 30 30 31 37 00 00 1e 01 07
  Address 0x30: dd 30 44 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 38 4b 41 41 50
  Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 44 43 2d 53 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 72 ff ff ff ff ff ff ff ff ff ff ff ff
Routing Engine 0 REV 20   750-044228   CAAY7935          RE-MX-104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044228        S/N:               CAAY7935
 Assembly ID:  0x0b81            Assembly Version:  01.20
 Date:         03-18-2013        Assembly Flags:    0x00
 Version:      REV 20            CLEI Code:         PROTOXCLEI
 ID: RE-MX-104                   FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 08 b0 a8 6e a6 fc 10 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0b 81 01 14 52 45 56 20 32 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 59 37 39 33 35 00 12 03 07
  Address 0x30: dd ff ff ff ad 01 00 08 b0 a8 6e a6 fc 10 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  da0    7836 MB  ATP IG eUSB SSD                        Nand Flash 0
  usb0 (addr 1)  EHCI root hub 0       Freescale         uhub0
  usb0 (addr 2)  USB2513Bi  9491       SMSC              uhub1
  usb0 (addr 3)  ATP IG eUSB SSD 44801 ATP Electronics   umass0
Routing Engine 1 REV 13   750-044228   CAAM6380          RE-MX-104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044228        S/N:               CAAM6380
 Assembly ID:  0x0b81            Assembly Version:  01.13
 Date:         09-17-2012        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         PROTOXCLEI
 ID: RE-MX-104                   FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 08 64 87 88 27 08 18 ff ff ff ff ff ff
 I2C Hex Data:
```

```
  Address 0x00: 7f b0 02 fe 0b 81 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 4d 36 33 38 30 00 11 09 07
  Address 0x30: dc ff ff ff ad 01 00 08 64 87 88 27 08 18 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  da0    7836 MB  ATP IG eUSB SSD                        Nand Flash 0
AFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 15   750-036132   CAAF7948          2xOC12/8xOC3 CC-CE
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-036132        S/N:               CAAF7948
 Assembly ID:  0x0a1a            Assembly Version:  01.15
 Date:         07-03-2012        Assembly Flags:    0x00
 Version:      REV 15            CLEI Code:         IP9IAM2DAA
 ID: 2xOC12/8xOC3 CC-CE          FRU Model Number:  MIC-3D-8OC3-2OC12-ATM
 Board Information Record:
  Address 0x00: 12 01 05 03 05 ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0a 1a 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 36 31 33 32 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 46 37 39 34 38 00 03 07 07
  Address 0x30: dc ff ff ff 12 01 05 03 05 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 39 49 41 4d 32 44 41 41 4d
  Address 0x50: 49 43 2d 33 44 2d 38 4f 43 33 2d 32 4f 43 31 32
  Address 0x60: 2d 41 54 4d 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff e3 c0 02 a3 9c 00 00 00 00 0a 60 00 00
    PIC 0                 BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE
      Xcvr 0     REV 01   740-011615   PCQ0U2J           SFP-IR
      Xcvr 1     REV 01   740-016068   PJL7A6G           SFP-SR
      Xcvr 2     REV 01   740-016068   PJL7A5J           SFP-SR
      Xcvr 3     REV 01   740-016065   PJN5HPZ           SFP-SR
      Xcvr 4     REV 01   740-029122   PKB38TL           SFP-LR
      Xcvr 5     REV 01   740-011787   P6A107G           SFP-LR
      Xcvr 6     REV 01   740-029122   PKB38TR           SFP-LR
      Xcvr 7     REV 01   740-011787   PBK0NK3           SFP-LR
  MIC 1
FPC 2                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0a60            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 4x 10GE(LAN) SFP+
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 60 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 4d 58 43 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 4d 58 43 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 02 a5 04 7f b0 02 ff 0a 1a 01 0f
    PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
      Xcvr 0     REV 01   740-031980   B10F00465         SFP+-10G-SR
```

```
      Xcvr 1     REV 01   740-031980   B10F00461         SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   B10G01545         SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   B10G01385         SFP+-10G-SR
Fan Tray 0       REV 02   711-049570   CAAX6538          Fan Tray
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-049570        S/N:               CAAX6538
 Assembly ID:  0x0b82            Assembly Version:  01.02
 Date:         03-01-2013        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         PROTOXCLEI
 ID: Fan Tray                    FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 82 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 39 35 37 30 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 58 36 35 33 38 00 01 03 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware extensive (PTX10008 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DE487             JNP10008 [PTX10008 -
PILOT BUILD V1.1]
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               DE487
 Assembly ID:  0x0566            Assembly Version:  01.27
 Date:         08-08-2016        Assembly Flags:    0x00
                                 CLEI Code:         CMMUM00ARA
 ID: JNP10008                    FRU Model Number:  QFX10008-CHAS
 Board Information Record:
  Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 66 01 1b 00 45 56 20 32 37 00 00
  Address 0x10: 00 00 00 00 00 35 30 2d 30 35 34 30 39 37 00 00
  Address 0x20: 44 45 34 38 37 00 00 00 00 00 00 00 00 08 08 07
  Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00
Midplane         REV 27   750-054097   ACPD4307          Midplane 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-054097        S/N:               ACPD4307
 Assembly ID:  0x0be3            Assembly Version:  01.27
 Date:         08-08-2016        Assembly Flags:    0x00
 Version:      REV 27            CLEI Code:         CMMUM00ARA
 ID: QFX10008 Midplane           FRU Model Number:  QFX10008-CHAS
 Board Information Record:
  Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e3 01 1b 52 45 56 20 32 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 34 30 39 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 34 33 30 37 00 08 08 07
  Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
```

```
  Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00 00
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
CB 0             REV 02   750-068820   ACNZ4440          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACNZ4440
 Assembly ID:  0x0b9d            Assembly Version:  01.02
 Date:         06-13-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUCAH3CTB
 ID: Control Board               FRU Model Number:  QFX10000-RE
 Board Information Record:
  Address 0x00: ad 01 00 10 84 c1 c1 54 10 be ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9d 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 34 34 34 30 00 0d 06 07
  Address 0x30: e0 ff ff ff ad 01 00 10 84 c1 c1 54 10 be ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 02   750-068820   ACNZ8284          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACNZ8284
 Assembly ID:  0x0b9d            Assembly Version:  01.02
 Date:         06-27-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUCAH3CTB
 ID: Control Board               FRU Model Number:  QFX10000-RE
 Board Information Record:
  Address 0x00: ad 01 00 10 84 c1 c1 e5 b1 46 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9d 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 38 32 38 34 00 1b 06 07
  Address 0x30: e0 ff ff ff ad 01 00 10 84 c1 c1 e5 b1 46 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
FPC 0            REV 36   750-051354   ACNP4679          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-051354        S/N:               ACNP4679
 Assembly ID:  0x0be7            Assembly Version:  01.36
 Date:         11-11-2016        Assembly Flags:    0x00
 Version:      REV 36            CLEI Code:         CMUIAM9BAA
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 34 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 50 34 36 37 39 00 0b 0b 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 e0 3c fa 09 00 70 87
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 e0 3c fa
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 1       REV 01   740-058734   1ECQ113834D       QSFP-100GBASE-SR4
    Xcvr 5       REV 01   740-058734   1ECQ1137067       QSFP-100GBASE-SR4
    Xcvr 6       REV 01   740-054053   QF3205SD          QSFP+-4X10G-SR
    Xcvr 7       REV 01   740-058734   1ECQ11381MP       QSFP-100GBASE-SR4
    Xcvr 11      REV 01   740-061405   1ACQ110507K       QSFP-100GBASE-SR4
    Xcvr 13      REV 01   740-058734   1ECQ11390ZB       QSFP-100GBASE-SR4
    Xcvr 17      REV 01   740-058734   1ECQ11381M1       QSFP-100GBASE-SR4
    Xcvr 19      REV 01   740-058734   1ECQ11381JS       QSFP-100GBASE-SR4
    Xcvr 23      REV 01   740-058734   1ACQ112000E       QSFP-100GBASE-SR4
    Xcvr 25      REV 01   740-058734   1ECQ11381NT       QSFP-100GBASE-SR4
    Xcvr 28      REV 01   740-054053   QG1502WV          QSFP+-4X10G-SR
    Xcvr 29      REV 01   740-058734   1ACQ112000D       QSFP-100GBASE-SR4
    Xcvr 33      REV 01   740-058734   1ACQ1134065       QSFP-100GBASE-SR4
    Xcvr 34      REV 01   740-067442   XV20L4L           QSFP+-40G-SR4
FPC 1            REV 33   750-051354   ACNX8831          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-051354        S/N:               ACNX8831
 Assembly ID:  0x0be7            Assembly Version:  01.33
```

```
  Date:         06-03-2016        Assembly Flags:    0x00
  Version:      REV 33            CLEI Code:         CMUIAM9BAA
  ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b e7 01 21 52 45 56 20 33 33 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 34 00 00
   Address 0x20: 53 2f 4e 20 41 43 4e 58 38 38 33 31 00 03 06 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 42 42 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff fb ff ff ff ff ff ff ff ff ff ff ff ff
   CPU                     BUILTIN      BUILTIN           FPC CPU
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf020            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 20 02 11 00 20 3e fa 09 00 10 8a
   Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 20 3e fa
   Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
   PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf050            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
   Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
   Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
     Xcvr 5                NON-JNPR     37700171YY0084    QSFP-100GBASE-LR4
     Xcvr 25               NON-JNPR     GDA2017459        QSFP-100GBASE-LR4
     Xcvr 29               NON-JNPR     GDF2008750        QSFP-100GBASE-LR4
FPC 2            REV 32   750-051357   ACPB0341          LC1101 - 30C / 30Q / 96X

  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-051357        S/N:               ACPB0341
  Assembly ID:  0x0be8            Assembly Version:  01.32
  Date:         06-04-2016        Assembly Flags:    0x00
  Version:      REV 32            CLEI Code:         CMUIANABAA
  ID: ULC-30Q28                   FRU Model Number:  QFX10000-30C
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
```



```
  Address 0x00: 7f b0 02 ff 0b e8 01 20 52 45 56 20 33 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 42 30 33 34 31 00 04 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 30 43 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ef ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 00 67 00 0a 00 b0 8c
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 00 67 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                   BUILTIN      BUILTIN           30x100GE/30x40GE/96x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 de ad be ef de ad be ef de ad be ef
    Xcvr 0                NON-JNPR     37700170YZC305    QSFP-100GBASE-LR4
    Xcvr 4                NON-JNPR     37700170YZC306    QSFP-100GBASE-LR4
    Xcvr 9       REV 01   740-054053   QF36013S          QSFP+-4X10G-SR
    Xcvr 12      REV 01   740-067442   XV301AU           QSFP+-40G-SR4
    Xcvr 14      REV 01   740-043308   UWE2CG9           QSFP+-40G-LR4
    Xcvr 16      REV 01   740-043308   UWH141S           QSFP+-40G-LR4
    Xcvr 17      REV 01   740-058734   1ECQ11180VH       QSFP-100GBASE-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492237      QSFP+-4X10G-LR
    Xcvr 26      REV 01   740-058734   1ACQ111803N       QSFP-100GBASE-SR4
    Xcvr 27      REV 01   740-058734   1ACQ113405S       QSFP-100GBASE-SR4
FPC 3            REV 35   750-051357   ACPD2186          LC1101 - 30C / 30Q / 96X

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-051357        S/N:               ACPD2186
 Assembly ID:  0x0be8            Assembly Version:  01.35
 Date:         09-21-2016        Assembly Flags:    0x00
 Version:      REV 35            CLEI Code:         CMUIANABAA
 ID: ULC-30Q28                   FRU Model Number:  QFX10000-30C
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b e8 01 23 52 45 56 20 33 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 37 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 44 32 31 38 36 00 15 09 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 33 30 43 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
   CPU                     BUILTIN      BUILTIN           FPC CPU
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf020            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 20 02 11 00 80 70 fa 09 00 50 8f
   Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 80 70 fa
   Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
   PIC 0                   BUILTIN      BUILTIN           30x100GE/30x40GE/96x10GE

  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf050            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
   Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
   Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
     Xcvr 0       REV 01   740-061409   1GCQA1470A3       QSFP-100GBASE-LR4
     Xcvr 1       REV 01   740-061409   1GCQA1470XC       QSFP-100GBASE-LR4
     Xcvr 7                NON-JNPR     FG4550500008      QSFP-100G-CWDM4
     Xcvr 24      REV 01   740-058734   1ECQ11381LX       QSFP-100GBASE-SR4
     Xcvr 29      REV 01   740-043308   UWE0UYS           QSFP+-40G-LR4
FPC 5             REV 08   750-068822   ACPF0057          LC1102 - 12C / 36Q /
144X
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-068822        S/N:               ACPF0057
  Assembly ID:  0x0be7            Assembly Version:  01.08
  Date:         09-01-2016        Assembly Flags:    0x00
  Version:      REV 08            CLEI Code:         CMUIAM9BAB
  ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b e7 01 08 52 45 56 20 30 38 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 46 30 30 35 37 00 01 09 07
```

```
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 00 3d fa 09 00 90 94
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 00 3d fa
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
FPC 6            REV 08   750-068822   ACPE9951          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068822        S/N:               ACPE9951
 Assembly ID:  0x0be7            Assembly Version:  01.08
 Date:         09-01-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         CMUIAM9BAB
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 39 39 35 31 00 01 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
```

```
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 3e fa 09 00 30 97
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 c0 3e fa
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 1       REV 01   740-054053   QF3208LG          QSFP+-4X10G-SR
    Xcvr 7       REV 01   740-067442   XV20LGN           QSFP+-40G-SR4
    Xcvr 8       REV 01   740-067442   XV20VMV           QSFP+-40G-SR4
    Xcvr 9       REV 01   740-067442   XV20KCN           QSFP+-40G-SR4
    Xcvr 10      REV 01   740-067442   XU504QD           QSFP+-40G-SR4
    Xcvr 11      REV 01   740-067442   XU504X7           QSFP+-40G-SR4
    Xcvr 12      REV 01   740-067442   XU504W8           QSFP+-40G-SR4
    Xcvr 16      REV 01   740-032986   QF4301JP          QSFP+-40G-SR4
    Xcvr 17      REV 01   740-032986   QF4303AE          QSFP+-40G-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492400      QSFP+-4X10G-LR
    Xcvr 19      REV 01   740-054050   INFAJ0492142      QSFP+-4X10G-LR
    Xcvr 24      REV 01   740-032986   QF4301KB          QSFP+-40G-SR4
    Xcvr 25      REV 01   740-032986   QF4303YP          QSFP+-40G-SR4
    Xcvr 30      REV 01   740-067442   XV300ZX           QSFP+-40G-SR4
    Xcvr 31      REV 01   740-043308   UWH2KBW           QSFP+-40G-LR4
    Xcvr 34      REV 01   740-054053   QG1501YU          QSFP+-4X10G-SR
FPD Board        REV 07   711-054687   ACPC7142          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-054687        S/N:               ACPC7142
 Assembly ID:  0x0bf2            Assembly Version:  01.07
 Date:         07-22-2016        Assembly Flags:    0x00
 Version:      REV 07
 ID: QFX10000 FPD
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b f2 01 07 52 45 56 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 35 34 36 38 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 43 37 31 34 32 00 16 07 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 0   REV 02   740-049388   1EDL62102N9       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL62102N9
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         05-25-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 31 30 32 4e 39 00 00 19 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 1   REV 02   740-049388   1EDL60300KX       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL60300KX
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         01-20-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 30 33 30 30 4b 58 00 00 14 01 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 2   REV 02   740-049388   1EDL60300DL       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL60300DL
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         01-20-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 30 33 30 30 44 4c 00 00 14 01 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 3   REV 02   740-049388   1EDL61701BT       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL61701BT
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         05-01-2016        Assembly Flags:    0x00
```

```
  Version:      REV 02            CLEI Code:         CMUPADNBAA
  ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
   Address 0x20: 31 45 44 4c 36 31 37 30 31 42 54 00 00 01 05 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
   Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 4   REV 02   740-049388   1EDL62102P7       Power Supply AC
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          740-049388        S/N:               1EDL62102P7
  Assembly ID:  0x0483            Assembly Version:  01.02
  Date:         05-25-2016        Assembly Flags:    0x00
  Version:      REV 02            CLEI Code:         CMUPADNBAA
  ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
   Address 0x20: 31 45 44 4c 36 32 31 30 32 50 37 00 00 19 05 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
   Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 5   REV 02   740-049388   1EDL62102PP       Power Supply AC
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          740-049388        S/N:               1EDL62102PP
  Assembly ID:  0x0483            Assembly Version:  01.02
  Date:         05-25-2016        Assembly Flags:    0x00
  Version:      REV 02            CLEI Code:         CMUPADNBAA
  ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
   Address 0x20: 31 45 44 4c 36 32 31 30 32 50 50 00 00 19 05 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
   Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
FTC 0            REV 14   750-050108   ACPE4038          Fan Controller 8
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-050108        S/N:               ACPE4038
  Assembly ID:  0x0bee            Assembly Version:  01.14
  Date:         09-27-2016        Assembly Flags:    0x00
  Version:      REV 14            CLEI Code:         CMUCAHZCAA
  ID: QFX10000 FTC                FRU Model Number:  QFX10008-FAN-CTRL
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
```



```
  Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 38 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff ff
FTC 1            REV 14   750-050108   ACPE4032          Fan Controller 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050108        S/N:               ACPE4032
 Assembly ID:  0x0bee            Assembly Version:  01.14
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 14            CLEI Code:         CMUCAHZCAA
 ID: QFX10000 FTC                FRU Model Number:  QFX10008-FAN-CTRL
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 32 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 0       REV 09   760-054372   ACPD6799          Fan Tray 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-054372        S/N:               ACPD6799
 Assembly ID:  0x0bf0            Assembly Version:  01.09
 Date:         09-28-2016        Assembly Flags:    0x00
 Version:      REV 09            CLEI Code:         CMUCAHYCAA
 ID: QFX10008 FHB                FRU Model Number:  QFX10008-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 36 37 39 39 00 1c 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1       REV 09   760-054372   ACNZ3584          Fan Tray 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-054372        S/N:               ACNZ3584
 Assembly ID:  0x0bf0            Assembly Version:  01.09
 Date:         08-30-2016        Assembly Flags:    0x00
 Version:      REV 09            CLEI Code:         CMUCAHYCAA
 ID: QFX10008 FHB                FRU Model Number:  QFX10008-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 33 35 38 34 00 1e 08 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
SIB 0            REV 24   750-050058   ACPD4587          Switch Fabric 8
```

```
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-050058        S/N:               ACPD4587
  Assembly ID:  0x0bec            Assembly Version:  01.24
  Date:         06-19-2016        Assembly Flags:    0x00
  Version:      REV 24            CLEI Code:         CMUCAH0CAA
  ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 44 34 35 38 37 00 13 06 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
   Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 1            REV 24   750-050058   ACNZ0635          Switch Fabric 8
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-050058        S/N:               ACNZ0635
  Assembly ID:  0x0bec            Assembly Version:  01.24
  Date:         06-06-2016        Assembly Flags:    0x00
  Version:      REV 24            CLEI Code:         CMUCAH0CAA
  ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
   Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 33 35 00 06 06 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
   Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 2            REV 24   750-050058   ACPD4908          Switch Fabric 8
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-050058        S/N:               ACPD4908
  Assembly ID:  0x0bec            Assembly Version:  01.24
  Date:         07-12-2016        Assembly Flags:    0x00
  Version:      REV 24            CLEI Code:         CMUCAH0CAA
  ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 44 34 39 30 38 00 0c 07 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
   Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 3            REV 24   750-050058   ACNZ0617          Switch Fabric 8
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-050058        S/N:               ACNZ0617
  Assembly ID:  0x0bec            Assembly Version:  01.24
  Date:         06-07-2016        Assembly Flags:    0x00
  Version:      REV 24            CLEI Code:         CMUCAH0CAA
  ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
  Board Information Record:
```

```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 31 37 00 07 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 4            REV 24   750-050058   ACNZ0527          Switch Fabric 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACNZ0527
 Assembly ID:  0x0bec            Assembly Version:  01.24
 Date:         06-06-2016        Assembly Flags:    0x00
 Version:      REV 24            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 35 32 37 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 5            REV 23   750-050058   ACNX6980          Switch Fabric 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACNX6980
 Assembly ID:  0x0bec            Assembly Version:  01.23
 Date:         05-16-2016        Assembly Flags:    0x00
 Version:      REV 23            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 17 52 45 56 20 32 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 58 36 39 38 30 00 10 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ce 00 00 00 00 00 00 00 00 00 00 00 00
```

show chassis hardware extensive (PTX10016 Router)

```
user@host> show chassis hardware extensive

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DH995             JNP10016 [PTX10016]
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               DH995
 Assembly ID:  0x0566            Assembly Version:  01.22
 Date:         02-16-2017        Assembly Flags:    0x00
                                 CLEI Code:         CMMUN00ARA
 ID: JNP10016                    FRU Model Number:  QFX10016-CHAS
 Board Information Record:
```

```
  Address 0x00: ad 01 10 00 44 aa 50 ab 1b b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 66 01 16 00 45 56 20 32 32 00 00
  Address 0x10: 00 00 00 00 00 35 30 2d 30 35 36 35 35 35 00 00
  Address 0x20: 44 48 39 39 35 00 00 00 00 00 00 00 00 10 02 07
  Address 0x30: e1 ff ff ff ad 01 10 00 44 aa 50 ab 1b b6 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4e 30 30 41 52 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 32 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 51 44 48 39 39 35 00 00 00 00 00 00 00
Midplane         REV 22   750-056555   ACPM7810          Midplane 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-056555        S/N:               ACPM7810
 Assembly ID:  0x0be4            Assembly Version:  01.22
 Date:         02-16-2017        Assembly Flags:    0x00
 Version:      REV 22            CLEI Code:         CMMUN00ARA
 ID: QFX10016 Midplane           FRU Model Number:  QFX10016-CHAS
 Board Information Record:
  Address 0x00: ad 01 10 00 44 aa 50 ab 1b b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e4 01 16 52 45 56 20 32 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 36 35 35 35 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 37 38 31 30 00 10 02 07
  Address 0x30: e1 ff ff ff ad 01 10 00 44 aa 50 ab 1b b6 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4e 30 30 41 52 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 32 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 51 44 48 39 39 35 00 00 00 00 00 00 00
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
CB 0             REV 03   750-068820   ACPL7238          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACPL7238
 Assembly ID:  0x0b9d            Assembly Version:  01.03
 Date:         03-15-2017        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         CMUCAH3CTB
 ID: Control Board               FRU Model Number:  QFX10000-RE
 Board Information Record:
  Address 0x00: ad 01 00 10 e8 b6 c2 46 aa 29 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9d 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 37 32 33 38 00 0f 03 07
  Address 0x30: e1 ff ff ff ad 01 00 10 e8 b6 c2 46 aa 29 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 03   750-068820   ACPL7298          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACPL7298
```

```
  Assembly ID:  0x0b9d            Assembly Version:  01.03
  Date:         03-15-2017        Assembly Flags:    0x00
  Version:      REV 03            CLEI Code:         CMUCAH3CTB
  ID: Control Board               FRU Model Number:  QFX10000-RE
  Board Information Record:
   Address 0x00: ad 01 00 10 e8 b6 c2 46 99 b9 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 9d 01 03 52 45 56 20 30 33 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 4c 37 32 39 38 00 0f 03 07
   Address 0x30: e1 ff ff ff ad 01 00 10 e8 b6 c2 46 99 b9 ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
   Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
FPC 1            REV 36   750-077140   ACNP4590          LC1102 - 12C / 36Q /
144X
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-077140        S/N:               ACNP4590
  Assembly ID:  0x0be7            Assembly Version:  01.36
  Date:         10-17-2016        Assembly Flags:    0x00
  Version:      REV 36            CLEI Code:         CMUIAM9BAA
  ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 4e 50 34 35 39 30 00 11 0a 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
   CPU                     BUILTIN      BUILTIN           FPC CPU
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf020            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 20 02 11 00 40 36 bd 09 40 25 32
   Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 40 36 bd
   Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
   PIC 0                   BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf050            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
   Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
```

```
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0       REV 01   740-054053   QF3600AV          QSFP+-4X10G-SR
    Xcvr 35      REV 01   740-061405   1ACQ110507K       QSFP-100GBASE-SR4
FPC 3            REV 07   750-071975   CAHA2224          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-071975        S/N:               CAHA2224
 Assembly ID:  0x0be7            Assembly Version:  01.07
 Date:         01-17-2017        Assembly Flags:    0x00
 Version:      REV 07            CLEI Code:         PROTOXCLEI
 ID: ULC-36Q-12Q28               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 07 52 45 56 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 31 39 37 35 00 00
  Address 0x20: 53 2f 4e 20 43 41 48 41 32 32 32 34 00 11 01 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 60 b6 be 09 c0 cf 38
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 60 b6 be
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0       REV 01   740-054053   QG1505YM          QSFP+-4X10G-SR
```

```
    Xcvr 11               NON-JNPR     GDA2017459        QSFP-100GBASE-LR4
    Xcvr 35               NON-JNPR     GDF2008750        QSFP-100GBASE-LR4
FPC 5            REV 13   750-068822   ACPD6501          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068822        S/N:               ACPD6501
 Assembly ID:  0x0be7            Assembly Version:  01.13
 Date:         06-29-2017        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         CMUIAM9BAC
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 36 35 30 31 00 1d 06 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 43 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 43 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fd ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 c6 bc 09 c0 ca 40
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 c0 c6 bc
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 1       REV 01   740-058734   1ECQ11381LA       QSFP-100GBASE-SR4
    Xcvr 2       REV 01   740-043308   UWH141S           QSFP+-40G-LR4
    Xcvr 3       REV 01   740-043308   UWE2CG9           QSFP+-40G-LR4
FPC 6            REV 37   750-077140   ACNS2793          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-077140        S/N:               ACNS2793
```

```
 Assembly ID:  0x0be7            Assembly Version:  01.37
 Date:         03-25-2017        Assembly Flags:    0x00
 Version:      REV 37            CLEI Code:         CMUIAM9BAA
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 25 52 45 56 20 33 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 53 32 37 39 33 00 19 03 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 a0 e6 d4 09 00 bd 43
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 a0 e6 d4
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0       REV 01   740-032986   QH0400VH          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-032986   QH0400VM          QSFP+-40G-SR4
    Xcvr 35      REV 01   740-058734   1ECQ11390ZB       QSFP-100GBASE-SR4
FPC 8            REV 36   750-077140   ACNP4625          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-077140        S/N:               ACNP4625
 Assembly ID:  0x0be7            Assembly Version:  01.36
 Date:         10-17-2016        Assembly Flags:    0x00
 Version:      REV 36            CLEI Code:         CMUIAM9BAA
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```



```
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 50 34 36 32 35 00 11 0a 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 e6 d4 09 40 59 4a
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 c0 e6 d4
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 1       REV 01   740-058732   1AMQA14206D       QSFP-100GBASE-LR4
    Xcvr 10      REV 01   740-032986   QF4301KB          QSFP+-40G-SR4
    Xcvr 24      REV 01   740-054050   INFAJ0492244      QSFP+-4X10G-LR
FPC 9            REV 35   750-071976   ACPD3055          LC1101 - 30C / 30Q / 96X

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-071976        S/N:               ACPD3055
 Assembly ID:  0x0be8            Assembly Version:  01.35
 Date:         05-26-2016        Assembly Flags:    0x00
 Version:      REV 35            CLEI Code:         CMUIANABAA
 ID: ULC-30Q28                   FRU Model Number:  JNP10K-LC1101
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e8 01 23 52 45 56 20 33 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 31 39 37 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 33 30 35 35 00 1a 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 4a
```

```
  Address 0x50: 4e 50 31 30 4b 2d 4c 43 31 31 30 31 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ef ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 20 e7 d4 09 00 a6 4d
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 20 e7 d4
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                   BUILTIN      BUILTIN           30x100GE/30x40GE/96x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0                NON-JNPR     INGBT7970007      QSFP-100GBASE-LR4
    Xcvr 1                NON-JNPR     UWQ24D9           QSFP-100GBASE-LR4
    Xcvr 2                NON-JNPR     INGBT7970011      QSFP-100GBASE-LR4
    Xcvr 3                NON-JNPR     UX60AF1           QSFP-100G-CWDM4
    Xcvr 4                NON-JNPR     UX408JJ           QSFP-100GBASE-LR4
    Xcvr 11      REV 01   740-058734   1ECQ113835F       QSFP-100GBASE-SR4
    Xcvr 18               NON-JNPR     Q7496             QSFP-100G-CWDM4
    Xcvr 29      REV 01   740-058734   1ECQ11380LZ       QSFP-100GBASE-SR4
Power Supply 0   REV 02   740-049388   1EDL625039E       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL625039E
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 39 45 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
```

```
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 1   REV 02   740-049388   1EDL62503AD       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL62503AD
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 41 44 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 2   REV 02   740-049388   1EDL625039P       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL625039P
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 39 50 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 3   REV 02   740-049388   1EDL702004E       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL702004E
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         01-18-2017        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 37 30 32 30 30 34 45 00 00 12 01 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 4   REV 02   740-049388   1EDL625039D       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL625039D
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
```

```
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 39 44 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 5   REV 02   740-049388   1EDL63706JD       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL63706JD
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         09-13-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 33 37 30 36 4a 44 00 00 0d 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 6   REV 02   740-049388   1EDL63706JH       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL63706JH
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         09-13-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 33 37 30 36 4a 48 00 00 0d 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
FTC 0            REV 10   750-050309   ACPM2918          Fan Controller 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050309        S/N:               ACPM2918
 Assembly ID:  0x0b9c            Assembly Version:  01.10
 Date:         01-13-2017        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH5CAA
 ID: QFX10016 FTC                FRU Model Number:  QFX10016-FAN-CTRL
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9c 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 33 30 39 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 32 39 31 38 00 0d 01 07
```

```
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 35 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6f ff ff ff ff ff ff ff ff ff ff ff ff
FTC 1            REV 10   750-050309   ACPE8185          Fan Controller 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050309        S/N:               ACPE8185
 Assembly ID:  0x0b9c            Assembly Version:  01.10
 Date:         12-22-2016        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH5CAA
 ID: QFX10016 FTC                FRU Model Number:  QFX10016-FAN-CTRL
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9c 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 33 30 39 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 38 31 38 35 00 16 0c 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 35 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6f ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 0       REV 10   760-077141   ACPV7288          Fan Tray 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-077141        S/N:               ACPV7288
 Assembly ID:  0x0bf1            Assembly Version:  01.10
 Date:         06-07-2017        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH4CAA
 ID: QFX10016 FHB                FRU Model Number:  JNP10016-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f1 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 37 37 31 34 31 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 56 37 32 38 38 00 07 06 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 34 43 41 41 4a
  Address 0x50: 4e 50 31 30 30 31 36 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 0d ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1       REV 10   760-057901   ACPL0546          Fan Tray 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-057901        S/N:               ACPL0546
 Assembly ID:  0x0bf1            Assembly Version:  01.10
 Date:         02-14-2017        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH4CAA
 ID: QFX10016 FHB                FRU Model Number:  QFX10016-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f1 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 37 39 30 31 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 30 35 34 36 00 0e 02 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 34 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 0d ff ff ff ff ff ff ff ff ff ff ff ff
SIB 0            REV 15   750-058270   ACPM2804          Switch Fabric 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```

```
  P/N:          750-058270        S/N:               ACPM2804
  Assembly ID:  0x0bed            Assembly Version:  01.15
  Date:         12-21-2016        Assembly Flags:    0x00
  Version:      REV 15            CLEI Code:         CMUCAH6CAA
  ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 30 34 00 15 0c 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
   Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 1            REV 15   750-058270   ACPM2808          Switch Fabric 16
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-058270        S/N:               ACPM2808
  Assembly ID:  0x0bed            Assembly Version:  01.15
  Date:         12-21-2016        Assembly Flags:    0x00
  Version:      REV 15            CLEI Code:         CMUCAH6CAA
  ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 30 38 00 15 0c 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
   Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 2            REV 15   750-058270   ACPL4450          Switch Fabric 16
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-058270        S/N:               ACPL4450
  Assembly ID:  0x0bed            Assembly Version:  01.15
  Date:         02-17-2017        Assembly Flags:    0x00
  Version:      REV 15            CLEI Code:         CMUCAH6CAA
  ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 4c 34 34 35 30 00 11 02 07
   Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
   Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 3            REV 15   750-058270   ACPJ9834          Switch Fabric 16
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-058270        S/N:               ACPJ9834
  Assembly ID:  0x0bed            Assembly Version:  01.15
  Date:         12-17-2016        Assembly Flags:    0x00
  Version:      REV 15            CLEI Code:         CMUCAH6CAA
  ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4a 39 38 33 34 00 11 0c 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 4            REV 15   750-058270   ACPM2814          Switch Fabric 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-058270        S/N:               ACPM2814
 Assembly ID:  0x0bed            Assembly Version:  01.15
 Date:         12-21-2016        Assembly Flags:    0x00
 Version:      REV 15            CLEI Code:         CMUCAH6CAA
 ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 31 34 00 15 0c 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 5            REV 15   750-058270   ACPL4277          Switch Fabric 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-058270        S/N:               ACPL4277
 Assembly ID:  0x0bed            Assembly Version:  01.15
 Date:         02-17-2017        Assembly Flags:    0x00
 Version:      REV 15            CLEI Code:         CMUCAH6CAA
 ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 34 32 37 37 00 11 02 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
FPD Board        REV 07   711-054687   ACPL1407          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-054687        S/N:               ACPL1407
 Assembly ID:  0x0bf2            Assembly Version:  01.07
 Date:         02-12-2017        Assembly Flags:    0x00
 Version:      REV 07
 ID: QFX10000 FPD
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b f2 01 07 52 45 56 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 35 34 36 38 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 31 34 30 37 00 0c 02 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware models (MX104 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 20   750-044219   CAAS5849          PROTO-ASSEMBLY
PEM 0            REV 01   740-045932   1H072400065
Routing Engine 0 REV 16   750-044228   CAAR5915          PROTO-ASSEMBLY
AFEB 0                    BUILTIN      BUILTIN
FPC 0                     BUILTIN      BUILTIN
FPC 1                     BUILTIN      BUILTIN
  MIC 0          REV 01   750-046905   CAAK7103          MIC-3D-20GE-SFP-EH
FPC 2                     BUILTIN      BUILTIN
Fan Tray         REV 02   711-049570   CAAX6538          PROTO-ASSEMBLY
```

show chassis hardware models (PTX10008 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 27   750-054097   ACPD4307          QFX10008-CHAS
CB 0             REV 02   750-068820   ACNZ4440          QFX10000-RE
CB 1             REV 02   750-068820   ACNZ8284          QFX10000-RE
FPC 0            REV 36   750-051354   ACNP4679          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPC 1            REV 33   750-051354   ACNX8831          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPC 2            REV 32   750-051357   ACPB0341          QFX10000-30C
  PIC 0                   BUILTIN      BUILTIN
FPC 3            REV 35   750-051357   ACPD2186          QFX10000-30C
  PIC 0                   BUILTIN      BUILTIN
FPC 5            REV 08   750-068822   ACPF0057          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPC 6            REV 08   750-068822   ACPE9951          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPD Board        REV 07   711-054687   ACPC7142
Power Supply 0   REV 02   740-049388   1EDL62102N9       QFX10000-PWR-AC
Power Supply 1   REV 02   740-049388   1EDL60300KX       QFX10000-PWR-AC
Power Supply 2   REV 02   740-049388   1EDL60300DL       QFX10000-PWR-AC
Power Supply 3   REV 02   740-049388   1EDL61701BT       QFX10000-PWR-AC
Power Supply 4   REV 02   740-049388   1EDL62102P7       QFX10000-PWR-AC
Power Supply 5   REV 02   740-049388   1EDL62102PP       QFX10000-PWR-AC
FTC 0            REV 14   750-050108   ACPE4038          QFX10008-FAN-CTRL
FTC 1            REV 14   750-050108   ACPE4032          QFX10008-FAN-CTRL
Fan Tray 0       REV 09   760-054372   ACPD6799          QFX10008-FAN
Fan Tray 1       REV 09   760-054372   ACNZ3584          QFX10008-FAN
SIB 0            REV 24   750-050058   ACPD4587          QFX10008-SF
SIB 1            REV 24   750-050058   ACNZ0635          QFX10008-SF
SIB 2            REV 24   750-050058   ACPD4908          QFX10008-SF
SIB 3            REV 24   750-050058   ACNZ0617          QFX10008-SF
SIB 4            REV 24   750-050058   ACNZ0527          QFX10008-SF
SIB 5            REV 23   750-050058   ACNX6980          QFX10008-SF
```

show chassis hardware models (PTX10016 Router)

```
user@host> show chassis hardware models
```

```
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 24   750-077138   ACPR5157          JNP10016
CB 0             REV 04   711-065897   CAHA9983          PROTO-ASSEMBLY
CB 1             REV 05   711-065897   CAJD3802          PROTO-ASSEMBLY
FPC 2
  PIC 0                   BUILTIN      BUILTIN
FPC 4            REV 35   750-071976   ACPD2168          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 5            REV 13   750-068822   ACPA0336          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 6            REV 41   750-071976   ACPF0695          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 7            REV 35   750-071976   ACPD2139          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 8            REV 35   750-071976   ACPD2142          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 9            REV 41   750-071976   ACPM5461          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 10           REV 35   750-071976   ACNS6795          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 11           REV 35   750-071976   ACPD1831          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 13           REV 41   750-071976   ACPS2075          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 15           REV 37   750-071976   ACPL7163          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
Power Supply 0   REV 01   740-073147   1EDM6171155       JNP10K-PWR-DC
Power Supply 1   REV 01   740-073147   1EDM6281575       JNP10K-PWR-DC
Power Supply 2   REV 01   740-073147   1EDM6171044       JNP10K-PWR-DC
Power Supply 3   REV 01   740-073147   1EDM6281244       JNP10K-PWR-DC
Power Supply 4   REV 01   740-073147   1EDM6282093       JNP10K-PWR-DC
Power Supply 5   REV 01   740-073147   1EDM6281413       JNP10K-PWR-DC
Power Supply 6   REV 01   740-073147   1EDM6171071       JNP10K-PWR-DC
Power Supply 7   REV 01   740-073147   1EDM6170709       JNP10K-PWR-DC
Power Supply 8   REV 01   740-073147   1EDM6171169       JNP10K-PWR-DC
Power Supply 9   REV 01   740-073147   1EDM6170754       JNP10K-PWR-DC
Fan Tray 0                                               QFX5100-FAN-AFO
Fan Tray 1                                               QFX5100-FAN-AFO
SIB 0            REV 15   750-077140   ACPV3933          JNP10016-SF
SIB 1            REV 15   750-077140   ACPV3938          JNP10016-SF
SIB 2            REV 15   750-077140   ACPV3974          JNP10016-SF
SIB 3            REV 15   750-077140   ACPV3879          JNP10016-SF
SIB 4            REV 15   750-077140   ACPV3964          JNP10016-SF
SIB 5            REV 15   750-077140   ACPV3981          JNP10016-SF
FPD Board        REV 07   711-054687   ACPS8855
```

show chassis hardware clei-models (MX104 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 20   750-044219   PROTOXCLEI        PROTO-ASSEMBLY
PEM 0            REV 01   740-045932
Routing Engine 0 REV 16   750-044228   PROTOXCLEI        PROTO-ASSEMBLY
AFEB 0                    BUILTIN
FPC 0                     BUILTIN
FPC 1                     BUILTIN
  MIC 0          REV 01   750-046905   PROTOXCLEI        MIC-3D-20GE-SFP-EH
FPC 2                     BUILTIN
Fan Tray        REV 02   711-049570   CAAX6538          PROTO-ASSEMBLY
```

show chassis hardware (MX240 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7EAFC      MX240
Midplane         REV 01   710-021041   TR1502            MX240 Backplane
FPM Board        REV 01   710-017254   KD4017            Front Panel Display
PEM 0            Rev 02   740-017330   000332            PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   000226            PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 06   740-013063   1000703522        RE-S-2000
Routing Engine 1 REV 06   740-015113   1000687625        RE-S-1300
CB 0             REV 07   710-013385   KC9057            MX SCB
CB 1             REV 05   710-013385   JY4760            MX SCB
FPC 1            REV 01   750-021679   KC7340            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KD4078            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   P9F18ME           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
FPC 2            REV 04   710-016669   JS4529            DPCE 40x 1GE R EQ
  CPU            REV 06   710-013713   KB3969            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3Y79           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XU8           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YG6           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3XUG           SFP-SX
    Xcvr 4       REV 01   740-011613   PBG3XTJ           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3ZUM           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3Y5H           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3UZT           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3US1           SFP-SX
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3YG7           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XZ9           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3XTY           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3UZG           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3Y8W           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3YVX           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YB3           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG43VQ           SFP-SX
Fan Tray 0       REV 01   710-021113   JS4642            MX240 Fan Tray
```

show chassis hardware detail (MX 240 Router with Routing Engine Displaying DIMM Information)

```
user@host> show chassis hardware detail

Item             Version  Part number  Serial number     Description
Chassis                                JN11279B4AFC      MX240 Backplane
Midplane         REV 07   760-021404   TS2474            MX240 Backplane
FPM Board        REV 03   760-021392   XC2643            Front Panel Display
PEM 0            Rev 03   740-017343   QCS0908A068       DC Power Entry Module
Routing Engine 0 REV 01   740-031117   AARCHOO           RE-S-1800x4
  ad0    3764 MB  STEC M2+ CF 9.0.2    STIM2Q3209239145303 Removable Compact Flash
```

```
  ad1   28626 MB  WDC SSD-F0030S-5000  C933Z036237215548S00 Compact Flash
  usb0 (addr 1)  EHCI root hub 0       Intel              uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087      uhub1
  DIMM 0         VL31B5263E-F8S DIE REV-0 PCB REV-0       MFR ID-ce80
  DIMM 1         VL31B5263E-F8S DIE REV-0 PCB REV-0       MFR ID-ce80
  DIMM 2         VL31B5263E-F8S DIE REV-0 PCB REV-0       MFR ID-ce80
  DIMM 3         SL31B5263E-F8S DIE REV-0 PCB REV-0       MFR ID-ce80
CB 0             REV 03   710-021523   XD7225             MX SCB
Fan Tray 0       REV 01   710-021113   WZ4986             MX240 Fan Tray
```

show chassis hardware (MX240 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7EAFC      MX240
Midplane         REV 01   710-021041   TR1502            MX240 Backplane
FPM Board        REV 01   710-017254   KD4017            Front Panel Display
PEM 0            Rev 02   740-017330   000332            PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   000226            PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 06   740-013063   1000703522        RE-S-2000
Routing Engine 1 REV 06   740-015113   1000687625        RE-S-1300
CB 0             REV 02   710-031391   YE8494            Enhanced MX SCB
CB 1             REV 05   710-031391   YOP5764           Enhanced MX SCB
FPC 1            REV 01   750-021679   KC7340            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KD4078            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   P9F18ME           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
FPC 2            REV 04   710-016669   JS4529            DPCE 40x 1GE R EQ
  CPU            REV 06   710-013713   KB3969            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3Y79           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XU8           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YG6           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3XUG           SFP-SX
    Xcvr 4       REV 01   740-011613   PBG3XTJ           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3ZUM           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3Y5H           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3UZT           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3US1           SFP-SX
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3YG7           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XZ9           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3XTY           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3UZG           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3Y8W           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3YVX           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YB3           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG43VQ           SFP-SX
Fan Tray 0       REV 01   710-021113   JS4642            MX240 Fan Tray
```

show chassis hardware (MX480 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7FAFB      MX480
Midplane         REV 04   710-017414   TR2071            MX480 Midplane
FPM Board        REV 02   710-017254   KB8459            Front Panel Display
PEM 0            Rev 02   740-017330   QCS07519029       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   QCS07519041       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 02   740-017330   QCS07519097       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 07   740-013063   1000733381        RE-S-2000
Routing Engine 1 REV 07   740-013063   1000733540        RE-S-2000
CB 0             REV 07   710-013385   KA8022            MX SCB
CB 1             REV 07   710-013385   KA8303            MX SCB
FPC 0            REV 09   750-020452   KA8660            DPCE 40x 1GE X EQ
  CPU            REV 06   710-013713   KA8185            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
Fan Tray                                                  Left Fan Tray
```

show chassis hardware (MX480 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7FAFB      MX480
Midplane         REV 04   710-017414   TR2071            MX480 Midplane
FPM Board        REV 02   710-017254   KB8459            Front Panel Display
PEM 0            Rev 02   740-017330   QCS07519029       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   QCS07519041       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 02   740-017330   QCS07519097       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 07   740-013063   1000733381        RE-S-2000
Routing Engine 1 REV 07   740-013063   1000733540        RE-S-2000
CB 0             REV 07   710-013385   KA8022            Enhanced MX SCB
CB 1             REV 07   710-013385   KA8303            Enhanced MX SCB
FPC 0            REV 09   750-020452   KA8660            DPCE 40x 1GE X EQ
  CPU            REV 06   710-013713   KA8185            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
Fan Tray                                                  Left Fan Tray
```

show chassis hardware (MX480 Routers with MPC5E and Built-In OTN PIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C0338AFB      MX480
Midplane         REV 05   710-017414   ABAB8430          MX480 Midplane
FPM Board        REV 02   710-017254   ZS8005            Front Panel Display
```

```
PEM 0            Rev 05   740-029970   QCS1024U089       PS 1.4-2.52kW; 90-264V
AC in
PEM 1            Rev 10   740-029970   QCS1314U0FJ       PS 1.4-2.52kW; 90-264V
AC in
PEM 2            Rev 07   740-029970   QCS1121U076       PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009092471        RE-S-1800x4
Routing Engine 1 REV 05   740-031116   9009097958        RE-S-1800x4
CB 0             REV 16   750-031391   CAAX0789          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAX0856          Enhanced MX SCB
FPC 0            REV 32   750-028467   ABBP1782          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBP5410          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   983152A00038      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00211         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AQ72LPB           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AHN0WR5           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11J03627         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00300         SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ42WSS           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ43HGC           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   ANA0ND0           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   ANA0NGF           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   ANA0NG9           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   ANA0MP9           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQA06CG           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   19T511100493      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   APR040J           SFP+-10G-SR
FPC 1            REV 26   750-046005   CACN1894          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8698          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   163363A03046      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JS8           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   153363A00593      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JUJ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQC0B53           CFP2-100G-LR4-D
FPC 2            REV 26   750-046005   CACN1891          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8694          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0                NON-JNPR     URA012A           SFP+-10G-LR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     J13F47042         CFP2-100G-LR4-D
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AJC0BM3           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   11T511100917      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQK07SU           CFP2-100G-LR4-D
FPC 3            REV 03   750-045372   CAAD9425          MPCE Type 3 3D
CPU            REV 08   711-035209   CAAD9094          HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9204          1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC034         CFP2-100G-SR10
  MIC 1          REV 19   750-033199   CAAJ1814          1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
FPC 4            REV 21.0.11 750-045715 CAAY3568         MPC5E 3D Q 24XGE+6XLGE
```

```
  CPU            REV 07   711-045719   CAAW7430          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AP406NG           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AR41NLP           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11D05630         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ       REV 12   750-049136   CACM6678          MPC5E 24XGE OTN Mezz
FPC 5            REV 11   750-045372   CABK7539          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABJ2466          HMPC PMB 2G
  MIC 0          REV 19   750-033199   CAAJ9719          1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CFP
      Xcvr 0     REV 01   740-035329   UP1020P           CFP-100G-SR10
  MIC 1          REV 07   750-033196   YZ0797            1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XC42FC022         CFP2-100G-SR10
Fan Tray                                                 Enhanced Left Fan Tray
```

show chassis hardware detail (MX480 Routers with MPC5E and Built-In OTN PIC)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C0338AFB      MX480
Midplane         REV 05   710-017414   ABAB8430          MX480 Midplane
FPM Board        REV 02   710-017254   ZS8005            Front Panel Display
PEM 0            Rev 05   740-029970   QCS1024U089       PS 1.4-2.52kW; 90-264V
AC in
PEM 1            Rev 10   740-029970   QCS1314U0FJ       PS 1.4-2.52kW; 90-264V
AC in
PEM 2            Rev 07   740-029970   QCS1121U076       PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009092471        RE-S-1800x4
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6862     Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-478612-001127 Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 05   740-031116   9009097958        RE-S-1800x4
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6145     Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000273 Disk 1
CB 0             REV 16   750-031391   CAAX0789          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAX0856          Enhanced MX SCB
FPC 0            REV 32   750-028467   ABBP1782          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBP5410          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   983152A00038      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00211         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AQ72LPB           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AHN0WR5           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11J03627         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00300         SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ42WSS           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ43HGC           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   ANA0ND0           SFP+-10G-SR
```

```
    Xcvr 1       REV 01   740-021308   ANA0NGF           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   ANA0NG9           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   ANA0MP9           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQA06CG           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   19T511100493      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   APR040J           SFP+-10G-SR
FPC 1            REV 26   750-046005   CACN1894          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8698          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   163363A03046      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JS8           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   153363A00593      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JUJ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQC0B53           CFP2-100G-LR4-D
FPC 2            REV 26   750-046005   CACN1891          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8694          RMPC PMB
PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0                NON-JNPR     URA012A           SFP+-10G-LR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     J13F47042         CFP2-100G-LR4-D
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AJC0BM3           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   11T511100917      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQK07SU           CFP2-100G-LR4-D
FPC 3            REV 03   750-045372   CAAD9425          MPCE Type 3 3D
  CPU            REV 08   711-035209   CAAD9094          HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9204          1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC034         CFP2-100G-SR10
  MIC 1          REV 19   750-033199   CAAJ1814          1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
FPC 4            REV 21.0.11 750-045715 CAAY3568         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 07   711-045719   CAAW7430          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AP406NG           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AR41NLP           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11D05630         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ         REV 12   750-049136   CACM6678          MPC5E 24XGE OTN Mezz
FPC 5            REV 11   750-045372   CABK7539          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABJ2466          HMPC PMB 2G
  MIC 0          REV 19   750-033199   CAAJ9719          1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CFP
      Xcvr 0     REV 01   740-035329   UP1020P           CFP-100G-SR10
  MIC 1          REV 07   750-033196   YZ0797            1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XC42FC022         CFP2-100G-SR10
Fan Tray                                                 Enhanced Left Fan Tray
```

show chassis hardware extensive (MX480 Routers with MPC5E and Built-In OTN PIC)

```
user@host> show chassis hardware extensive
```

```
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C0338AFB      MX480
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN11C0338AFB
 Assembly ID:  0x01fe            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x02
 ID: MX480
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 01 fe 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 43 30 33 33 38 41 46 42 02 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 05   710-017414   ABAB8430          MX480 Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-017414        S/N:               ABAB8430
 Assembly ID:  0x01fe            Assembly Version:  01.05
 Date:         12-13-2011        Assembly Flags:    0x00
 Version:      REV 05
 ID: MX480 Midplane              FRU Model Number:  CHAS-BP-MX480-S
 Board Information Record:
  Address 0x00: ad 01 08 00 00 23 9c fc 98 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 fe 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 34 31 34 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 38 34 33 30 00 0d 0c 07
  Address 0x30: db ff ff ff ad 01 08 00 00 23 9c fc 98 00 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 48 41 53 2d 42 50 2d 4d 58 34 38 30 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 02   710-017254   ZS8005            Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-017254        S/N:               ZS8005
 Assembly ID:  0x01ff            Assembly Version:  01.02
 Date:         11-21-2011        Assembly Flags:    0x00
 Version:      REV 02
 ID: Front Panel Display         FRU Model Number:  CRAFT-MX480-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 ff 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 32 35 34 00 00
  Address 0x20: 53 2f 4e 20 5a 53 38 30 30 35 00 00 00 15 0b 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 52 41 46 54 2d 4d 58 34 38 30 2d 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PEM 0            Rev 05   740-029970   QCS1024U089       PS 1.4-2.52kW; 90-264V
AC in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-029970        S/N:               QCS1024U089
 Assembly ID:  0x0432            Assembly Version:  01.05
 Date:         06-17-2010        Assembly Flags:    0x00
```

```
 Version:      Rev 05
 ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number:  PWR-MX480-2520-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 32 01 05 52 65 76 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
  Address 0x20: 51 43 53 31 30 32 34 55 30 38 39 00 00 11 06 07
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 1            Rev 10   740-029970   QCS1314U0FJ       PS 1.4-2.52kW; 90-264V
AC in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-029970        S/N:               QCS1314U0FJ
 Assembly ID:  0x0432            Assembly Version:  01.10
 Date:         04-04-2013        Assembly Flags:    0x00
 Version:      Rev 10
 ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number:  PWR-MX480-2520-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 32 01 0a 52 65 76 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
  Address 0x20: 51 43 53 31 33 31 34 55 30 46 4a 00 00 04 04 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 2            Rev 07   740-029970   QCS1121U076       PS 1.4-2.52kW; 90-264V
AC in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-029970        S/N:               QCS1121U076
 Assembly ID:  0x0432            Assembly Version:  01.07
 Date:         05-23-2011        Assembly Flags:    0x00
 Version:      Rev 07
 ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number:  PWR-MX480-2520-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 32 01 07 52 65 76 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
  Address 0x20: 51 43 53 31 31 32 31 55 30 37 36 00 00 17 05 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 05   740-031116   9009092471        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009092471
 Assembly ID:  0x09c0            Assembly Version:  01.05
 Date:         11-01-2011        Assembly Flags:    0x00
 Version:      REV 05            CLEI Code:         COUCALDBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00
 I2C Hex Data:
```

```
  Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 30 39 32 34 37 31 00 00 00 01 0b 07
  Address 0x30: db ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
  Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6862     Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-478612-001127 Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 05   740-031116   9009097958        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009097958
 Assembly ID:  0x09c0            Assembly Version:  01.05
 Date:         02-06-2012        Assembly Flags:    0x00
 Version:      REV 05            CLEI Code:         COUCALDBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 30 39 37 39 35 38 00 00 00 06 02 07
  Address 0x30: dc ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
  Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6145     Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000273 Disk 1

...
```

show chassis hardware (MX960 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX960
Midplane         REV 01   710-013698   AA6082            MX960 Midplane
PIM              Rev 01   740-013110   000008            Power Inlet Module
PEM 2
PEM 3            Rev 01   740-013682   000038            PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 00   740-015113   1000617944        RE-S-1300
CB 0             REV 05   710-013725   JK6947            MX960 Test SCB
FPC 4            REV 01   710-013305   JM7617            MX960 Test DPC
  CPU
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
  PIC 1                   BUILTIN      BUILTIN           10x 1GE
FPC 7            REV 01   710-013305   JL9634            MX960 Test DPC
  CPU
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
    Xcvr 0                NON-JNPR     MYBG65I82C        XFP-10G-SR
  PIC 1                   BUILTIN      BUILTIN           10x 1GE
    Xcvr 1       REV 01   740-011782   P7N0368           SFP-SX
```

```
    Xcvr 4       REV 01   740-011782   P8J1W27           SFP-SX
    Xcvr 6       REV 01   740-011782   P8J1VSD           SFP-SX
    Xcvr 9       REV 01   740-011782   P8J1W25           SFP-SX
Fan Tray 0
Fan Tray 1
```

show chassis hardware (MX960 Router with Bidirectional Optics)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10BA5B9AFA      MX960
Midplane         REV 03   710-013698   TR0234            MX960 Backplane
FPM Board        REV 03   710-014974   JA0878            Front Panel Display
PDM             Rev 03   740-013110   QCS11135028       Power Distribution Module
PEM 0            Rev 03   740-013682   QCS11154036       PS 1.7kW; 200-240VAC in
PEM 1            Rev 03   740-013682   QCS11154010       PS 1.7kW; 200-240VAC in
PEM 2            Rev 03   740-013682   QCS11154022       PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 06   740-013063   1000691458        RE-S-2000
CB 0             REV 07   710-013385   KA2190            MX SCB
CB 1             REV 07   710-013385   KA0837            MX SCB
FPC 3            REV 02   750-018122   KB3890            DPCE 40x 1GE R
  CPU
FPC 4            REV 01   750-018122   KB3889            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KB3976            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 1       REV 01   740-020426   4910549           SFP-1000BASE-BX40-D
    Xcvr 2       REV 01   740-020426   4910551           SFP-1000BASE-BX40-D
    Xcvr 5       REV 01   740-021340   77E245N00006      SFP-1000BASE-BX10-U
    Xcvr 6       REV 01   740-020425   4882821           SFP-1000BASE-BX40-U
    Xcvr 8       REV 01   740-020425   4882820           SFP-1000BASE-BX40-U
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-020465   77E555N00894      SFP-1000BASE-BX10-D
    Xcvr 1       REV 01   740-020465   75E467X00818      SFP-1000BASE-BX10-D
    Xcvr 2       REV 01   740-020465   75E467X00573      SFP-1000BASE-BX10-D
    Xcvr 3       REV 01   740-020465   4888227           SFP-1000BASE-BX10-D
    Xcvr 4       REV 01   740-020465   4888241           SFP-1000BASE-BX10-D
    Xcvr 5       REV 01   740-021340   77E245N00005      SFP-1000BASE-BX10-U
    Xcvr 6       REV 01   740-021340   76E245X00487      SFP-1000BASE-BX10-U
    Xcvr 7       REV 01   740-021341   5255889           SFP-1000BASE-BX10-U
    Xcvr 8       REV 01   740-021341   5255887           SFP-1000BASE-BX10-U
    Xcvr 9       REV 01   740-021340   77E245N00004      SFP-1000BASE-BX10-U
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-020424   5007582           SFP-1000BASE-BX10-D
    Xcvr 1       REV 01   740-020424   4888187           SFP-1000BASE-BX10-D
    Xcvr 2       REV 01   740-020424   4656500           SFP-1000BASE-BX10-D
    Xcvr 5       REV 01   740-021341   5255886           SFP-1000BASE-BX10-U
    Xcvr 7       REV 01   740-021340   77E245N00003      SFP-1000BASE-BX10-U
    Xcvr 8       REV 01   740-021341   5255888           SFP-1000BASE-BX10-U
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-017726   74S184H30341      SFP-EX
    Xcvr 1       REV 01   740-017726   4814061           SFP-EX
    Xcvr 5       REV 01   740-017726   6ZS184H31108      SFP-EX
    Xcvr 9       REV 01   740-021340   76E245X00486      SFP-1000BASE-BX10-U
Fan Tray 0
Fan Tray 1       REV 03   740-014971   TP0850            Fan Tray
```

show chassis hardware (MX960 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
```

```
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1096805AFA      MX960
Midplane         REV 03   710-013698   TR0183            MX960 Backplane
Fan Extender     REV 02   710-018051   JY5227            Extended Cable Manager
FPM Board        REV 03   710-014974   JZ6876            Front Panel Display
PDM             Rev 03   740-013110   QCS11035023       Power Distribution Module
PEM 1            Rev 03   740-013682   QCS1109400L       PS 1.7kW; 200-240VAC in
PEM 2            Rev 03   740-013682   QCS11094015       PS 1.7kW; 200-240VAC in
PEM 3            Rev 03   740-013682   QCS11094012       PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 06   740-013063   1000687969        RE-S-2000
Routing Engine 1 REV 06   740-013063   1000687955        RE-S-2000
CB 0             REV 11   750-031391   YZ6072            Enhanced MX SCB
CB 1             REV 11   750-031391   YZ6068            Enhanced MX SCB
CB 2             REV 11   750-031391   YZ6081            Enhanced MX SCB
FPC 0            REV 01   750-018122   KA5576            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KB3961            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   P9F18GF           SFP-SX
    Xcvr 2       REV 01   740-011782   P9M0TL9           SFP-SX
    Xcvr 7       REV 01   740-011782   P9P0XXH           SFP-SX
    Xcvr 9       REV 01   740-011782   P9M0TN1           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   PAJ4UHC           SFP-SX
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   PFF2CD0           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3ZUT           SFP-SX
    Xcvr 2       REV 01   740-011613   PFF2DDV           SFP-SX
    Xcvr 5       REV 01   740-011613   P8E2SST           SFP-SX
    Xcvr 9       REV 01   740-011782   PB8329N           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-026192   1U0201084503342   SFP-100BASE-BX10-U
    Xcvr 1       REV 01   740-026193   1U1201084503313   SFP-100BASE-BX10-D
    Xcvr 2       REV 01   740-011613   PAJ4Y5B           SFP-SX
    Xcvr 6       REV 01   740-011782   P9M0U3M           SFP-SX
    Xcvr 7       REV 01   740-011782   P9M0TLA           SFP-SX
FPC 1            REV 16   750-031089   YL0719            MPC Type 2 3D
  CPU            REV 06   711-030884   YL1463            MPC PMB 2G
  MIC 0          REV 07   750-028387   JR6500            3D 4x 10GE  XFP
    PIC 0                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0     REV 01   740-014279   733019A00154      XFP-10G-LR
      Xcvr 1     REV 02   740-014289   T09F55034         XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0     REV 01   740-014279   913019B00791      XFP-10G-LR
      Xcvr 1     REV 01   740-014289   98S803A90384      XFP-10G-SR
  MIC 1          REV 24   750-028387   YJ3950            3D 4x 10GE  XFP
    PIC 2                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0     REV 02   740-014279   T10B36134         XFP-10G-LR
      Xcvr 1     REV 01   740-014289   T07M86354         XFP-10G-SR
    PIC 3                 BUILTIN      BUILTIN           2x 10GE  XFP
FPC 2            REV 08   710-014219   JY9654            DPCE 4x 10GE R
  CPU            REV 06   710-013713   JZ6549            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
  PIC 1                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
  PIC 2                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
    Xcvr 0       REV 03   740-011571   C931BK028         XFP-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
FPC 3            REV 10   750-024199   XJ6692            MX FPC Type 3
  CPU            REV 03   710-022351   XF5182            DPC PMB
  PIC 0          REV 17   750-009553   RJ2945            4x OC-48 SONET
    Xcvr 1       REV 01   740-011785   PCP3YLL           SFP-SR
```

```
    Xcvr 3       REV 01   740-011785   PDS0MRY           SFP-SR
  PIC 1          REV 32   750-003700   DP2113            1x OC-192 12xMM VSR
FPC 5            REV 25   750-028467   YM8256            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   YL3029            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 1       REV 01   740-031980   AHN0X1Z           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
FPC 7            REV 02   750-031092   JR6658            MPC Type 1 3D Q
  CPU            REV 01   711-030884   JZ9038            MPC PMB 2G
  MIC 0          REV 08   750-028392   JZ8737            3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011782   PBE2C6Y           SFP-SX
      Xcvr 2              NON-JNPR     U8105N8           SFP-SX
      Xcvr 4     REV 01   740-011613   PFM18EF           SFP-SX
      Xcvr 7     REV 01   740-011613   PFF2AM8           SFP-SX
      Xcvr 8     REV 01   740-011613   PFF2CT6           SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011782   PB82VHH           SFP-SX
      Xcvr 1     REV 01   740-011613   PFF2CSW           SFP-SX
      Xcvr 9     REV 01   740-011613   PFF2BY0           SFP-SX
  QXM 0          REV 04   711-028408   JR6372            MPC QXM
FPC 8            REV 05   750-024387   JW9754            MX FPC Type 2
  CPU            REV 03   710-022351   KF1651            DPC PMB
  PIC 0          REV 08   750-014730   DM3664            4x OC-3 1x OC-12 SFP
    Xcvr 0       REV 01   740-016065   81S290N00077      SFP-SR
    Xcvr 1                NON-JNPR     2191844           SFP-SR
    Xcvr 2       REV 01   740-011618   PD81EE5           SFP-IR
  PIC 1          REV 08   750-014637   DM3671            4x OC-12-3 SFP
    Xcvr 0       REV 01   740-011785   PCK3UNK           SFP-SR
    Xcvr 3       REV 01   740-011785   PDS0MPZ           SFP-SR
FPC 10           REV 04   710-013699   JY4654            DPCE 40x 1GE R
  CPU            REV 05   710-013713   JS9717            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 5       REV 01   740-011782   PAR1L72           SFP-SX
    Xcvr 6       REV 01   740-011782   P8N1YQ4           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011782   P8Q2AVL           SFP-SX
    Xcvr 5       REV 01   740-011782   PAR1L7B           SFP-SX
    Xcvr 6       REV 01   740-011782   PAR1L2J           SFP-SX
    Xcvr 8       REV 01   740-011782   P8N1YMY           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
Fan Tray 0       REV 03   740-014971   TP0567            Fan Tray
Fan Tray 1       REV 03   740-014971   TP0702            Fan Tray
```

show chassis hardware models (MX960 Router with Enhanced MX SCB)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 03   710-013698   TR0183            CHAS-BP-MX960-S
Fan Extender     REV 02   710-018051   JY5227            ECM-MX960
FPM Board        REV 03   710-014974   JZ6876            CRAFT-MX960-S
Routing Engine 0 REV 06   740-013063   1000687969        RE-S-2000-4096-S
Routing Engine 1 REV 06   740-013063   1000687955        RE-S-2000-4096-S
CB 0             REV 11   750-031391   YZ6072            SCBE-MX-S
CB 1             REV 11   750-031391   YZ6068            SCBE-MX-S
CB 2             REV 11   750-031391   YZ6081            SCBE-MX-S
FPC 0            REV 01   750-018122   KA5576            DPCE-R-40GE-SFP
```

```
FPC 1            REV 16   750-031089   YL0719            MX-MPC2-3D
  MIC 0          REV 07   750-028387   JR6500            MIC-3D-4XGE-XFP
  MIC 1          REV 24   750-028387   YJ3950            MIC-3D-4XGE-XFP
FPC 2            REV 08   710-014219   JY9654            DPC-R-4XGE-XFP
FPC 3            REV 10   750-024199   XJ6692            MX-FPC3
  PIC 0          REV 17   750-009553   RJ2945            PC-4OC48-SON-SFP
  PIC 1          REV 32   750-003700   DP2113            PC-1OC192-SON-VSR
FPC 5            REV 25   750-028467   YM8256            MPC-3D-16XGE-SFPP
FPC 7            REV 02   750-031092   JR6658            MX-MPC1-3D-Q
  MIC 0          REV 08   750-028392   JZ8737            MIC-3D-20GE-SFP
FPC 8            REV 05   750-024387   JW9754            MX-FPC2
  PIC 0          REV 08   750-014730   DM3664            PB-4OC3-1OC12-SON2-SFP
  PIC 1          REV 08   750-014637   DM3671            PB-4OC3-4OC12-SON-SFP
FPC 10           REV 04   710-013699   JY4654            DPC-R-40GE-SFP
Fan Tray 0       REV 03   740-014971   TP0567            FFANTRAY-MX960-S
Fan Tray 1       REV 03   740-014971   TP0702            FFANTRAY-MX960-S
```

show chassis hardware (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1214852AFA      MX960
Midplane         REV 01   710-030012   ACAX3674          MX960 Backplane
FPM Board        REV 03   710-014974   CAAZ9326          Front Panel Display
PDM             Rev 03   740-013110   QCS17025017      Power Distribution Module
PEM 0            Rev 10   740-027760   QCS1702N062       PS 4.1kW; 200-240V AC
in
PEM 1            Rev 04   740-027760   QCS1422N02C       PS 4.1kW; 200-240V AC
in
PEM 2            Rev 09   740-027760   QCS1614N01X       PS 4.1kW; 200-240V AC
in
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800x4
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800x4
CB 0             REV 18   750-031391   CABF0579          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAZ2471          Enhanced MX SCB
CB 2             REV 16   750-031391   CAAW9595          Enhanced MX SCB
FPC 0            REV 18   750-046005   CACE6574          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8908          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA0DYT           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MS7           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03Z         CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   ANA0NAJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRQ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-049775   J13K72993         CFP2-100G-LR4
FPC 1            REV 11   750-045372   CABK8154          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABE7370          HMPC PMB 2G
  MIC 0          REV 07   750-033307   CABD5255          10X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-021308   AQ50319           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ5035V           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQ502XJ           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ43HHR           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   AQ502YA           SFP+-10G-SR
      Xcvr 5     REV 01   740-021308   AQ502EU           SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   AQ502HR           SFP+-10G-SR
      Xcvr 7     REV 01   740-021308   AQ502A6           SFP+-10G-SR
```

```
      Xcvr 8     REV 01   740-021308   AQ43H8M          SFP+-10G-SR
  MIC 1          REV 14   750-033196   CAAP1398         1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN          1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC064        CFP-100G-SR10
FPC 3            REV 35   750-028467   CAAT9156         MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAV4645         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43HZ1          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ43HZC          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ43HD2          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502HN          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43HGF          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501RZ          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5029V          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ501X9          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ502ZN          SFP+-10G-SR
 Xcvr 1       REV 01   740-021308   AQ43H86          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ502ZY          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502PZ          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ503E6          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502XN          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11F00213        SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ50336          SFP+-10G-SR
FPC 4            REV 18   750-046005   CACE6568         MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8900         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA095A          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0M1E          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     FE13F000F        CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0LYC          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LYB          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-048813   XD32FE00Z        CFP2-100G-SR10
FPC 5            REV 18   750-046005   CACE6577         MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8902         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0MXE          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LVY          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03T        CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0LW1          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LW3          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     FE13F000J        CFP2-100G-SR10
FPC 7            REV 09   750-037355   CAAF0937         MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAD8004         HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   ANA0MM3          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0       REV 01   740-035329   X000C163         CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQG0MS6          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRX          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQG0M6Y          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQG0LZM          SFP+-10G-SR
```

```
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00499         CFP-100G-SR10
FPC 8            REV 39   750-045715   CACD1903          MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1815          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QC480289          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QC480274          QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130190          QSFP+-40G-SR4
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130197          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130180          QSFP+-40G-SR4
 Xcvr 2       REV 01   740-046565   QD130199          QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0415          MPC5E 24XGE OTN Mezz
FPC 9            REV 05   750-044444   CAAY9801          MPCE Type 2 3D P
  CPU            REV 04   711-038484   CAAW3673          MPCE PMB 2G
  MIC 0          REV 28   750-028387   CAAX1071          3D 4x 10GE  XFP
    PIC 0                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0              NON-JNPR     T12L92342         XFP-10G-SR
      Xcvr 1              NON-JNPR     T12L92303         XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0              NON-JNPR     CC07BK02X         XFP-10G-SR
  QXM 0          REV 06   711-028408   CAAW4883          MPC QXM
  QXM 1          REV 06   711-028408   CAAW4603          MPC QXM
FPC 10           REV 21.0.11 750-045715 CAAY3541         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 07   711-045719   CAAW7426          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP
    Xcvr 0       REV 01   740-031980   AHK01AP           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502ZU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP41BLS           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQA08YA           SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   AQA0K26           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA06S3           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQA06AS           SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQA053N           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0E97           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA0GS4           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA0JVA           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA057A           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   ANA0MLS           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQA093A           SFP+-10G-SR
    Xcvr 3       REV 01   740-021309   943153A00075      SFP+-10G-LR
    Xcvr 4       REV 01   740-021308   AQA077B           SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQA0JSC           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA0735           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQ5028N           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AP40VN5           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0K0J           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA07AP           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA08YB           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ       REV 07   750-045717   CAAX3123          MPC5E 24XGE Mezz
FPC 11           REV 17   750-037355   CAAT3986          MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAR3972          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA0DSE           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501Y3           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ501XU           SFP+-10G-SR
```

```
    Xcvr 3       REV 01   740-021308   AQ5036Y           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00247         CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   ALQ1DKF           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ403YA           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP40TY0           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALQ14G0           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00095         CFP-100G-SR10
Fan Tray 0       REV 08   740-031521   ACAF4219          Enhanced Fan Tray
Fan Tray 1       REV 08   740-031521   ACAF4225          Enhanced Fan Tray
```

show chassis hardware detail (MX960 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX960
Midplane         REV 01   710-013698   AA6082            MX960 Midplane
PIM              Rev 01   740-013110   000008            Power Inlet Module
PEM 2
PEM 3            Rev 01   740-013682   000038            PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 00   740-015113   1000617944        RE-S-1300
  ad0     245 MB  SanDisk SDCFB-256    111419E1805T1141  Compact Flash
  ad2   38154 MB  FUJITSU MHT2040BH    NR0WT5925N77      Hard Disk
CB 0             REV 05   710-013725   JK6947            MX960 Test SCB
FPC 4            REV 01   710-013305   JM7617            MX960 Test DPC
  CPU
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
  PIC 1                   BUILTIN      BUILTIN           10x 1GE
FPC 7            REV 01   710-013305   JL9634            MX960 Test DPC
  CPU
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
    Xcvr 0                NON-JNPR     MYBG65I82C        XFP-10G-SR
  PIC 1                   BUILTIN      BUILTIN           10x 1GE
    Xcvr 1       REV 01   740-011782   P7N0368           SFP-SX
    Xcvr 4       REV 01   740-011782   P8J1W27           SFP-SX
    Xcvr 6       REV 01   740-011782   P8J1VSD           SFP-SX
    Xcvr 9       REV 01   740-011782   P8J1W25           SFP-SX
Fan Tray 0
Fan Tray 1
```

show chassis hardware detail (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1214852AFA      MX960
Midplane         REV 01   710-030012   ACAX3674          MX960 Backplane
FPM Board        REV 03   710-014974   CAAZ9326          Front Panel Display
PDM             Rev 03   740-013110   QCS17025017       Power Distribution Module
PEM 0            Rev 10   740-027760   QCS1702N062       PS 4.1kW; 200-240V AC
in
PEM 1            Rev 04   740-027760   QCS1422N02C       PS 4.1kW; 200-240V AC
in
PEM 2            Rev 09   740-027760   QCS1614N01X       PS 4.1kW; 200-240V AC
in
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 000016CD Compact Flash
```

```
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000061346       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 1         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 2         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 3         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 0000106D Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000052402       Disk 1
CB 0             REV 18   750-031391   CABF0579          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAZ2471          Enhanced MX SCB
CB 2             REV 16   750-031391   CAAW9595          Enhanced MX SCB
FPC 0            REV 18   750-046005   CACE6574          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8908          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA0DYT           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MS7           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03Z         CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   ANA0NAJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRQ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-049775   J13K72993         CFP2-100G-LR4
FPC 1            REV 11   750-045372   CABK8154          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABE7370          HMPC PMB 2G
  MIC 0          REV 07   750-033307   CABD5255          10X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-021308   AQ50319           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ5035V           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQ502XJ           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ43HHR           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   AQ502YA           SFP+-10G-SR
      Xcvr 5     REV 01   740-021308   AQ502EU           SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   AQ502HR           SFP+-10G-SR
      Xcvr 7     REV 01   740-021308   AQ502A6           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   AQ43H8M           SFP+-10G-SR
  MIC 1          REV 14   750-033196   CAAP1398          1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC064         CFP2-100G-SR10
FPC 3            REV 35   750-028467   CAAT9156          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAV4645          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43HZ1           SFP+-10G-SR
Xcvr 1       REV 01   740-021308   AQ43HZC           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ43HD2           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502HN           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43HGF           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501RZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5029V           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ501X9           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ502ZN           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ43H86           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ502ZY           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502PZ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ503E6           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502XN           SFP+-10G-SR
```

```
    Xcvr 2       REV 01   740-031980   B11F00213         SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ50336           SFP+-10G-SR
FPC 4            REV 18   750-046005   CACE6568          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8900          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA095A           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0M1E           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     FE13F000F         CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0LYC           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LYB           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-048813   XD32FE00Z         CFP2-100G-SR10
FPC 5            REV 18   750-046005   CACE6577          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8902          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0MXE           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LVY           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03T         CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0LW1           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LW3           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     FE13F000J         CFP2-100G-SR10
FPC 7            REV 09   750-037355   CAAF0937          MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAD8004          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-021308   ANA0MM3           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0       REV 01   740-035329   X000C163          CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQG0MS6           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRX           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQG0M6Y           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQG0LZM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00499         CFP-100G-SR10
FPC 8            REV 39   750-045715   CACD1903          MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1815          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
 PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QC480289          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QC480274          QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130190          QSFP+-40G-SR4
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130197          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130180          QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130199          QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0415          MPC5E 24XGE OTN Mezz
FPC 9            REV 05   750-044444   CAAY9801          MPCE Type 2 3D P
  CPU            REV 04   711-038484   CAAW3673          MPCE PMB 2G
  MIC 0          REV 28   750-028387   CAAX1071          3D 4x 10GE  XFP
    PIC 0                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0              NON-JNPR     T12L92342         XFP-10G-SR
      Xcvr 1              NON-JNPR     T12L92303         XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0              NON-JNPR     CC07BK02X         XFP-10G-SR
  QXM 0          REV 06   711-028408   CAAW4883          MPC QXM
```

```
  QXM 1          REV 06   711-028408   CAAW4603          MPC QXM
FPC 10           REV 21.0.11 750-045715 CAAY3541         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 07   711-045719   CAAW7426          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP
    Xcvr 0       REV 01   740-031980   AHK01AP           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502ZU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP41BLS           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQA08YA           SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   AQA0K26           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA06S3           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQA06AS           SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQA053N           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0E97           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA0GS4           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA0JVA           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA057A           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   ANA0MLS           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQA093A           SFP+-10G-SR
    Xcvr 3       REV 01   740-021309   943153A00075      SFP+-10G-LR
    Xcvr 4       REV 01   740-021308   AQA077B           SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQA0JSC           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA0735           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQ5028N           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AP40VN5           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0K0J           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA07AP           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA08YB           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ       REV 07   750-045717   CAAX3123          MPC5E 24XGE Mezz
FPC 11           REV 17   750-037355   CAAT3986          MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAR3972          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA0DSE           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501Y3           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ501XU           SFP+-10G-SR
 Xcvr 3       REV 01   740-021308   AQ5036Y           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00247         CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   ALQ1DKF           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ403YA           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP40TY0           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALQ14G0           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00095         CFP-100G-SR10
Fan Tray 0       REV 08   740-031521   ACAF4219          Enhanced Fan Tray
Fan Tray 1       REV 08   740-031521   ACAF4225          Enhanced Fan Tray
```

show chassis hardware extensive (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1214852AFA      MX960
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN1214852AFA
 Assembly ID:  0x0512            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX960
```

```
  Board Information Record:
   Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 05 12 00 00 00 00 00 00 00 00 00 00
   Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x20: 4a 4e 31 32 31 34 38 35 32 41 46 41 00 00 00 00
   Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 01   710-030012   ACAX3674          MX960 Backplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          710-030012        S/N:               ACAX3674
  Assembly ID:  0x01df            Assembly Version:  01.01
  Date:         01-19-2013        Assembly Flags:    0x00
  Version:      REV 01            CLEI Code:         COM8T00CRB
  ID: MX960 Backplane             FRU Model Number:  CHAS-BP-MX960-S
  Board Information Record:
   Address 0x00: ad 01 08 00 54 e0 32 bc 68 00 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 01 df 01 01 52 45 56 20 30 31 00 00
   Address 0x10: 00 00 00 00 37 31 30 2d 30 33 30 30 31 32 00 00
   Address 0x20: 53 2f 4e 20 41 43 41 58 33 36 37 34 00 13 01 07
   Address 0x30: dd ff ff ff ad 01 08 00 54 e0 32 bc 68 00 ff ff
   Address 0x40: ff ff ff ff 01 43 4f 4d 38 54 30 30 43 52 42 43
   Address 0x50: 48 41 53 2d 42 50 2d 4d 58 39 36 30 2d 53 00 00
   Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff aa ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 03   710-014974   CAAZ9326          Front Panel Display
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          710-014974        S/N:               CAAZ9326
  Assembly ID:  0x01e6            Assembly Version:  01.03
  Date:         12-31-2012        Assembly Flags:    0x00
  Version:      REV 03
  ID: Front Panel Display         FRU Model Number:  CRAFT-MX960-S
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 01 e6 01 03 52 45 56 20 30 33 00 00
   Address 0x10: 00 00 00 00 37 31 30 2d 30 31 34 39 37 34 00 00
   Address 0x20: 53 2f 4e 20 43 41 41 5a 39 33 32 36 00 1f 0c 07
   Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
   Address 0x50: 52 41 46 54 2d 4d 58 39 36 30 2d 53 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PDM             Rev 03   740-013110   QCS17025017       Power Distribution Module
Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          740-013110        S/N:               QCS17025017
  Assembly ID:  0x0416            Assembly Version:  01.03
  Date:         01-10-2013        Assembly Flags:    0x00
  Version:      Rev 03
  ID: Power Distribution Module
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 04 16 01 03 52 65 76 20 30 33 00 00
   Address 0x10: 00 00 00 00 37 34 30 2d 30 31 33 31 31 30 00 00
   Address 0x20: 51 43 53 31 37 30 32 35 30 31 37 00 00 0a 01 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  Address 0x40: ff 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 0            Rev 10   740-027760   QCS1702N062       PS 4.1kW; 200-240V AC
in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-027760        S/N:               QCS1702N062
 Assembly ID:  0x0430            Assembly Version:  01.10
 Date:         01-15-2013        Assembly Flags:    0x00
 Version:      Rev 10
 ID: PS 4.1kW; 200-240V AC in    FRU Model Number:  PWR-MX960-4100-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 0a 52 65 76 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 37 30 32 4e 30 36 32 00 00 0f 01 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 1            Rev 04   740-027760   QCS1422N02C       PS 4.1kW; 200-240V AC
in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-027760        S/N:               QCS1422N02C
 Assembly ID:  0x0430            Assembly Version:  01.04
 Date:         06-04-2010        Assembly Flags:    0x00
 Version:      Rev 04
 ID: PS 4.1kW; 200-240V AC in    FRU Model Number:  PWR-MX960-4100-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 04 52 65 76 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 34 32 32 4e 30 32 43 00 00 04 06 07
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 2            Rev 09   740-027760   QCS1614N01X       PS 4.1kW; 200-240V AC
in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-027760        S/N:               QCS1614N01X
Assembly ID:  0x0430            Assembly Version:  01.09
 Date:         04-07-2012        Assembly Flags:    0x00
 Version:      Rev 09
 ID: PS 4.1kW; 200-240V AC in    FRU Model Number:  PWR-MX960-4100-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 09 52 65 76 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 36 31 34 4e 30 31 58 00 00 07 04 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

```
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009131803
 Assembly ID:  0x09c0            Assembly Version:  01.08
 Date:         03-04-2013        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         COUCASKBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 31 33 31 38 30 33 00 00 00 04 03 07
  Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
  Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 000016CD Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000061346       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 1         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 2         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 3         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009124913
 Assembly ID:  0x09c0            Assembly Version:  01.08
 Date:         01-09-2013        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         COUCASKBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 31 32 34 39 31 33 00 00 00 09 01 07
  Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
  Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
 Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 0000106D Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000052402       Disk 1
CB 0             REV 18   750-031391   CABF0579          Enhanced MX SCB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-031391        S/N:               CABF0579
 Assembly ID:  0x09b0            Assembly Version:  01.18
 Date:         04-15-2013        Assembly Flags:    0x00
 Version:      REV 18            CLEI Code:         COUCASRBAA
 ID: Enhanced MX SCB             FRU Model Number:  SCBE-MX-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 b0 01 12 52 45 56 20 31 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
  Address 0x20: 53 2f 4e 20 43 41 42 46 30 35 37 39 00 0f 04 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 43 41 53 52 42 41 41 53
```

```
  Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 43 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 7d ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 16   750-031391   CAAZ2471          Enhanced MX SCB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-031391        S/N:               CAAZ2471
 Assembly ID:  0x09b0            Assembly Version:  01.16
 Date:         03-09-2013        Assembly Flags:    0x00
 Version:      REV 16            CLEI Code:         COUCARCBAB
 ID: Enhanced MX SCB             FRU Model Number:  SCBE-MX-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 5a 32 34 37 31 00 09 03 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
  Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff
CB 2             REV 16   750-031391   CAAW9595          Enhanced MX SCB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-031391        S/N:               CAAW9595
 Assembly ID:  0x09b0            Assembly Version:  01.16
 Date:         02-01-2013        Assembly Flags:    0x00
 Version:      REV 16            CLEI Code:         COUCARCBAB
 ID: Enhanced MX SCB             FRU Model Number:  SCBE-MX-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 57 39 35 39 35 00 01 02 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
 Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff
FPC 0            REV 18   750-046005   CACE6574          MPC5E 3D Q 2CGE+4XGE
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-046005        S/N:               CACE6574
 Assembly ID:  0x0b8c            Assembly Version:  01.18
 Date:         11-20-2013        Assembly Flags:    0x00
 Version:      REV 18            CLEI Code:         PROTOXCLEI
 ID: MPC5E 3D Q 2CGE+4XGE        FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 8c 01 12 52 45 56 20 31 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 36 30 30 35 00 00
  Address 0x20: 53 2f 4e 20 43 41 43 45 36 35 37 34 00 14 0b 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 09   711-045719   CACG8908          RMPC PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-045719        S/N:               CACG8908
 Assembly ID:  0x0b85            Assembly Version:  01.09
```

```
Date:         11-13-2013        Assembly Flags:    0x00
Version:      REV 09
ID: RMPC PMB
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0b 85 01 09 52 45 56 20 30 39 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 34 35 37 31 39 00 00
 Address 0x20: 53 2f 4e 20 43 41 43 47 38 39 30 38 00 0d 0b 07
 Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
 Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
 PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x0a90            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 2X10GE SFPP OTN
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x70: 00 00 00 00 c0 02 ae dc 00 00 00 00 0a 6e 00 00
Xcvr 0       REV 01   740-021308   AQA0DYT           SFP+-10G-SR
   Xcvr 1       REV 01   740-021308   AQG0MS7           SFP+-10G-SR
 PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x0a6e            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 1X100GE CFP2 OTN
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x70: 00 00 00 00 c0 03 f3 8c 31 5c e7 80 00 00 00 02
   Xcvr 0       REV 01   740-046563   XD16FC03Z         CFP2-100G-SR10
 PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x0a90            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 2X10GE SFPP OTN
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00 00
```

```
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 03 f5 6c 31 5c db 40 00 00 00 02
    Xcvr 0       REV 01   740-021308   ANA0NAJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRQ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0a6e            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 1X100GE CFP2 OTN
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 03 ed ec 31 5c e2 e8 00 00 00 02
 Xcvr 0       REV 01   740-049775   J13K72993         CFP2-100G-LR4
FPC 1            REV 11   750-045372   CABK8154          MPCE Type 3 3D
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-045372        S/N:               CABK8154
 Assembly ID:  0x09db            Assembly Version:  04.11
 Date:         05-18-2013        Assembly Flags:    0x00
 Version:      REV 11            CLEI Code:         COUIBBNBAA
 ID: MPCE Type 3 3D              FRU Model Number:  MX-MPC3E-3D
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 db 04 0b 52 45 56 20 31 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 35 33 37 32 00 00
  Address 0x20: 53 2f 4e 20 43 41 42 4b 38 31 35 34 00 12 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4e 42 41 41 4d
  Address 0x50: 58 2d 4d 50 43 33 45 2d 33 44 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 44 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff cf ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 08   711-035209   CABE7370          HMPC PMB 2G
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-035209        S/N:               CABE7370
 Assembly ID:  0x0b04            Assembly Version:  01.08
 Date:         05-08-2013        Assembly Flags:    0x00
 Version:      REV 08
 ID: HMPC PMB 2G
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 42 45 37 33 37 30 00 08 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  MIC 0          REV 07   750-033307   CABD5255          10X10GE SFPP
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-033307        S/N:               CABD5255
 Assembly ID:  0x0a2a            Assembly Version:  02.07
 Date:         04-25-2013        Assembly Flags:    0x00
 Version:      REV 07            CLEI Code:         COUIBBJBAA
 ID: 10X10GE SFPP                FRU Model Number:  MIC3-3D-10XGE-SFPP
 Board Information Record:
  Address 0x00: 34 01 03 03 05 ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0a 2a 02 07 52 45 56 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 33 30 37 00 00
  Address 0x20: 53 2f 4e 20 43 41 42 44 35 32 35 35 00 19 04 07
  Address 0x30: dd ff ff ff 34 01 03 03 05 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4a 42 41 41 4d
  Address 0x50: 49 43 33 2d 33 44 2d 31 30 58 47 45 2d 53 46 50
  Address 0x60: 50 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 82 c0 03 f0 bc 57 79 83 80 00 00 00 02
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
Xcvr 0     REV 01   740-021308   AQ50319           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ5035V           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQ502XJ           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ43HHR           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   AQ502YA           SFP+-10G-SR
      Xcvr 5     REV 01   740-021308   AQ502EU           SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   AQ502HR           SFP+-10G-SR
      Xcvr 7     REV 01   740-021308   AQ502A6           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   AQ43H8M           SFP+-10G-SR
  MIC 1          REV 14   750-033196   CAAP1398          1X100GE CXP
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-033196        S/N:               CAAP1398
 Assembly ID:  0x0a29            Assembly Version:  03.14
 Date:         10-27-2012        Assembly Flags:    0x00
 Version:      REV 14            CLEI Code:         COUIBBKBAA
 ID: 1X100GE CXP                 FRU Model Number:  MIC3-3D-1X100GE-CXP
 Board Information Record:
  Address 0x00: 34 01 07 07 08 ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0a 29 03 0e 52 45 56 20 31 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 31 39 36 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 50 31 33 39 38 00 1b 0a 07
  Address 0x30: dc ff ff ff 34 01 07 07 08 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4b 42 41 41 4d
  Address 0x50: 49 43 33 2d 33 44 2d 31 58 31 30 30 47 45 2d 43
  Address 0x60: 58 50 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 96 c0 03 ef cc 57 79 85 08 00 00 00 02
    PIC 2                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC064         CFP2-100G-SR10
FPC 3            REV 35   750-028467   CAAT9156          MPC 3D 16x 10GE
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          750-028467        S/N:               CAAT9156
 Assembly ID:  0x0997            Assembly Version:  01.35
 Date:         12-17-2012        Assembly Flags:    0x00
 Version:      REV 35
 ID: MPC 3D 16x 10GE             FRU Model Number:  MPC-3D-16XGE-SFPP
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 97 01 23 52 45 56 20 33 35 00 00
```

```
 Address 0x10: 00 00 00 00 37 35 30 2d 30 32 38 34 36 37 00 00
 Address 0x20: 53 2f 4e 20 43 41 41 54 39 31 35 36 00 11 0c 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 4d
 Address 0x50: 50 43 2d 33 44 2d 31 36 58 47 45 2d 53 46 50 50
 Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 CPU            REV 11   711-029089   CAAV4645          AMPC PMB
Jedec Code:   0x7fb0            EEPROM Version:    0x01
P/N:          711-029089        S/N:               CAAV4645
Assembly ID:  0x0998            Assembly Version:  01.11
Date:         12-13-2012        Assembly Flags:    0x00
Version:      REV 11
ID: AMPC PMB
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 09 98 01 0b 52 45 56 20 31 31 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 32 39 30 38 39 00 00
 Address 0x20: 53 2f 4e 20 43 41 41 56 34 36 34 35 00 0d 0c 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
 PIC 0                  BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x02fe            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x70: 00 00 00 00 c0 02 6b 94 00 00 00 00 02 fe 00 00
   Xcvr 0       REV 01   740-021308   AQ43HZ1           SFP+-10G-SR
   Xcvr 1       REV 01   740-021308   AQ43HZC           SFP+-10G-SR
   Xcvr 2       REV 01   740-021308   AQ43HD2           SFP+-10G-SR
   Xcvr 3       REV 01   740-021308   AQ502HN           SFP+-10G-SR
 PIC 1                  BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x02fe            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

```
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 02 ac 0c 00 00 00 00 02 fe 00 00
    Xcvr 0       REV 01   740-021308   AQ43HGF           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501RZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5029V           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ501X9           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x02fe            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
......
```

show chassis hardware models (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 01   710-030012   ACAX3674          CHAS-BP-MX960-S
FPM Board        REV 03   710-014974   CAAZ9326          CRAFT-MX960-S
PEM 0            Rev 10   740-027760   QCS1702N062       PWR-MX960-4100-AC-S
PEM 1            Rev 04   740-027760   QCS1422N02C       PWR-MX960-4100-AC-S
PEM 2            Rev 09   740-027760   QCS1614N01X       PWR-MX960-4100-AC-S
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800X4-16G-S
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800X4-16G-S
CB 0             REV 18   750-031391   CABF0579          SCBE-MX-S
CB 1             REV 16   750-031391   CAAZ2471          SCBE-MX-S
CB 2             REV 16   750-031391   CAAW9595          SCBE-MX-S
FPC 0            REV 18   750-046005   CACE6574          PROTO-ASSEMBLY
FPC 1            REV 11   750-045372   CABK8154          MX-MPC3E-3D
  MIC 0          REV 07   750-033307   CABD5255          MIC3-3D-10XGE-SFPP
  MIC 1          REV 14   750-033196   CAAP1398          MIC3-3D-1X100GE-CXP
FPC 3            REV 35   750-028467   CAAT9156          MPC-3D-16XGE-SFPP
FPC 4            REV 18   750-046005   CACE6568          PROTO-ASSEMBLY
FPC 5            REV 18   750-046005   CACE6577          PROTO-ASSEMBLY
FPC 7            REV 09   750-037355   CAAF0937          MPC4E-2CGE-8XGE
FPC 8            REV 39   750-045715   CACD1903          PROTO-ASSEMBLY
FPC 9            REV 05   750-044444   CAAY9801          MX-MPC2E-3D-P
  MIC 0          REV 28   750-028387   CAAX1071          MIC-3D-4XGE-XFP
FPC 10           REV 21.0.11 750-045715 CAAY3541         PROTO-ASSEMBLY
FPC 11           REV 17   750-037355   CAAT3986          MPC4E-3D-2CGE-8XGE
Fan Tray 0       REV 08   740-031521   ACAF4219          FFANTRAY-MX960-HC-S
Fan Tray 1       REV 08   740-031521   ACAF4225          FFANTRAY-MX960-HC-S
```

show chassis hardware clei-models (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   710-030012   COM8T00CRB        CHAS-BP-MX960-S
FPM Board        REV 03   710-014974                     CRAFT-MX960-S
PEM 0            Rev 10   740-027760                     PWR-MX960-4100-AC-S
PEM 1            Rev 04   740-027760                     PWR-MX960-4100-AC-S
PEM 2            Rev 09   740-027760                     PWR-MX960-4100-AC-S
Routing Engine 0 REV 08   740-031116   COUCASKBAA        RE-S-1800X4-16G-S
Routing Engine 1 REV 08   740-031116   COUCASKBAA        RE-S-1800X4-16G-S
CB 0             REV 18   750-031391   COUCASRBAA        SCBE-MX-S
CB 1             REV 16   750-031391   COUCARCBAB        SCBE-MX-S
CB 2             REV 16   750-031391   COUCARCBAB        SCBE-MX-S
FPC 0            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
```

```
FPC 1            REV 11   750-045372   COUIBBNBAA        MX-MPC3E-3D
  MIC 0          REV 07   750-033307   COUIBBJBAA        MIC3-3D-10XGE-SFPP
  MIC 1          REV 14   750-033196   COUIBBKBAA        MIC3-3D-1X100GE-CXP
FPC 3            REV 35   750-028467                     MPC-3D-16XGE-SFPP
FPC 4            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
FPC 5            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
FPC 7            REV 09   750-037355   PROTOXCLEI        MPC4E-2CGE-8XGE
FPC 8            REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
FPC 9            REV 05   750-044444   COUIBBGBAA        MX-MPC2E-3D-P
  MIC 0          REV 28   750-028387   COUIA16BAA        MIC-3D-4XGE-XFP
FPC 10           REV 21.0.11 750-045715 PROTOXCLEI       PROTO-ASSEMBLY
FPC 11           REV 17   750-037355   IPU3A4DHAA        MPC4E-3D-2CGE-8XGE
Fan Tray 0       REV 08   740-031521                     FFANTRAY-MX960-HC-S
Fan Tray 1       REV 08   740-031521                     FFANTRAY-MX960-HC-S
```

show chassis hardware (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN123F6D9AFA      MX960
Midplane         REV 04   750-047849   ACRC8764          Enhanced MX960 Backplane
FPM Board        REV 03   710-014974   CACS4395          Front Panel Display
PDM             Rev 03   740-013110   QCS1809500Z       Power Distribution Module
PEM 0            Rev 08   740-029344   QCS1817V0LK       DC 4.1kW Power Entry
Module
PEM 1            Rev 08   740-029344   QCS1814V01F       DC 4.1kW Power Entry
Module
PEM 2            Rev 08   740-029344   QCS1810V1EW       DC 4.1kW Power Entry
Module
PEM 3            Rev 08   740-029344   QCS1810V1K5       DC 4.1kW Power Entry
Module
Routing Engine 0 REV 11   740-031116   9013103483        RE-S-1800x4
Routing Engine 1 REV 10   740-031116   9009198513        RE-S-1800x4
CB 0             REV 23   750-031391   CADW3218          Enhanced MX SCB
CB 1             REV 14   750-031391   ABBK5220          Enhanced MX SCB
FPC 1            REV 14   750-045372   CADK0464          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADM9839          HMPC PMB 2G
  MIC 0          REV 19   750-033199   CAAE5870          1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CFP
      Xcvr 0     REV 01   740-032210   UTH0H0W           CFP-100G-LR4
FPC 2            REV 14   750-045372   CADN3262          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADN8129          HMPC PMB 2G
FPC 3            REV 14   750-045372   CADH0146          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADT2458          HMPC PMB 2G
  MIC 0          REV 03   750-057666   CADP1386          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   SMD5136.1         OTN-100G-LH
FPC 4            REV 18   750-045372   CAEV5668          MPCE Type 3 3D
  CPU            REV 10   711-035209   CAET7827          HMPC PMB 2G
FPC 7            REV 14   750-045372   CADJ1947          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADJ1561          HMPC PMB 2G
  MIC 0          REV 05   750-057666   CAEB5763          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   1DJBZ052002       OTN-100G-LH
FPC 8            REV 14   750-045372   CADK0485          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADM9828          HMPC PMB 2G
  MIC 0          REV 03   750-057666   CADP1390          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
FPC 9            REV 14   750-045372   CADJ1936          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADJ1566          HMPC PMB 2G
```



```
  MIC 0          REV 14   750-057666   CAFF7544          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   1DJBZ05100K       OTN-100G-LH
FPC 10           REV 14   750-054901   CADJ3846          MPC3E NG HQoS
  CPU            REV 11   711-045719   CADN5471          RMPC PMB
  MIC 0          REV 05   750-057666   CAEB5760          1X100GE DWDM CFP2-ACO
 PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   SMD5091.1         CFP-Loopback
Fan Tray 0       REV 08   740-031521   ACDB4083          Enhanced Fan Tray
Fan Tray 1       REV 08   740-031521   ACDB3995          Enhanced Fan Tray
```

show chassis hardware clei-models(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   750-047849   CMMJA10BRA        CHAS-BP3-MX960-S
FPM Board        REV 03   710-014974                     CRAFT-MX960-S
PEM 0            Rev 08   740-029344                     PWR-MX960-4100-DC-S
PEM 1            Rev 08   740-029344                     PWR-MX960-4100-DC-S
PEM 2            Rev 08   740-029344                     PWR-MX960-4100-DC-S
PEM 3            Rev 08   740-029344                     PWR-MX960-4100-DC-S
Routing Engine 0 REV 11   740-031116   COUCASYBAB        RE-S-1800X4-16G-S
Routing Engine 1 REV 10   740-031116   COUCASYBAA        RE-S-1800X4-16G-S
CB 0             REV 23   750-031391   COUCATXBAA        SCBE-MX-S
CB 1             REV 14   750-031391   COUCARCBAA        SCBE-MX-S
FPC 1            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 19   750-033199   COUIBA8BAA        MIC3-3D-1X100GE-CFP
FPC 2            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
FPC 3            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 03   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 4            REV 18   750-045372   COUIBBNBAC        MX-MPC3E-3D
FPC 7            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 05   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 8            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 03   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 9            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 14   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 10           REV 14   750-054901   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 0          REV 05   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
Fan Tray 0       REV 08   740-031521                     FFANTRAY-MX960-HC-S
Fan Tray 1       REV 08   740-031521                     FFANTRAY-MX960-HC-S
```

show chassis hardware (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN123AC42AJC      PTX3000
Midplane         REV 22   750-044645   ACLP6640          Backplane
FPM              REV 07   760-044663   ACMX2146          Front Panel Display
PSM 1            REV 02   740-044980   1EDD3080169       DC 12V Power Supply
PSM 2            REV 06   740-044981   1EDK5040563       AC 12V Power Supply
PSM 3            REV 06   740-044981   1EDK5040313       AC 12V Power Supply
PSM 4            REV 04   740-044980   1EDJ3330088       DC 12V Power Supply
Routing Engine 0 REV 12   740-026942   P737A-006029      RE-DUO-2600
CB 0             REV 18   750-044656   ACMZ3179          Control Board
FPC 2            REV 06   750-057064   ACAM6098          FPC3-SFF-PTX-1X
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0          REV 17   750-059747   ACNW3510          5X100GE DWDM CFP2-ACO
```

```
    Xcvr 0       REV 01   740-062357   1DJBZ040003       OTN-100G-LH
    Xcvr 2       REV 01   740-062357   1DJBZ044004       OTN-100G-LH
    Xcvr 3       REV 01   740-062357   1DJBZ03500P       OTN-100G-LH
    Xcvr 4       REV 01   740-062357   1DJBZ03700C       OTN-100G-LH
FPC 4            REV 12   750-057064   ACAM7153          FPC3-SFF-PTX-1X
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0          REV 17   750-059747   ACNW3511          5X100GE DWDM CFP2-ACO
    Xcvr 0       REV 01   740-061663   47                OTN-100G-LH
    Xcvr 1       REV 01   740-061663   39                OTN-100G-LH
    Xcvr 2       REV 01   740-062357   1DJBZ044002       OTN-100G-LH
    Xcvr 3       REV 01   740-062357   1DJBZ03700G       OTN-100G-LH
    Xcvr 4       REV 01   740-062357   1DJBZ041001       OTN-100G-LH
FPC 8            REV 11   750-057064   ACAM6808          FPC3-SFF-PTX-1X
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0          REV 17   750-059747   ACNW3508          5X100GE DWDM CFP2-ACO
    Xcvr 0       REV 01   740-061663   194               OTN-100G-LH
    Xcvr 1       REV 01   740-061663   168               OTN-100G-LH
    Xcvr 2       REV 01   740-061663   52                OTN-100G-LH
    Xcvr 3       REV 01   740-061663   85                OTN-100G-LH
    Xcvr 4       REV 01   740-061663   218               OTN-100G-LH
SIB 0            REV 03   750-057067   ACAM8513          SIB3-SFF-PTX
SIB 1            REV 01   750-057067   ACAM5918          SIB3-SFF-PTX
SIB 2            REV 01   711-057066   ACAM4325          SIB3-SFF-PTX
SIB 3            REV 01   711-057066   ACAM4328          SIB3-SFF-PTX
SIB 4            REV 01   711-057066   ACAM4349          SIB3-SFF-PTX
SIB 5            REV 01   711-057066   ACAM4323          SIB3-SFF-PTX
SIB 6            REV 01   711-057066   ACAM4344          SIB3-SFF-PTX
SIB 7            REV 01   750-057067   ACAM4346          SIB3-SFF-PTX
SIB 8            REV 01   750-057067   ACAM5911          SIB3-SFF-PTX
Fan Tray 0       REV 13   760-044659   ACMP6395          Fan Tray (Exhaust)
Fan Tray 1       REV 13   760-044659   ACMZ6957          Fan Tray (Exhaust)
```

show chassis hardware clei-models (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 22   750-044645   IPMVN10FRA        CHAS-MP-PTX3000-S
FPM              REV 07   760-044663   IPUCBE5CAA        FPD-SFF-PTX-S
PSM 1            REV 02   740-044980   PROTOPWRDC        PSM-SFF-PTX-DC-2200-S
PSM 2            REV 06   740-044981   IPUPAK0KAB        PSM-SFF-PTX-AC-S
PSM 3            REV 06   740-044981   IPUPAK0KAB        PSM-SFF-PTX-AC-S
PSM 4            REV 04   740-044980   IPUPAK1KAA        PSM-SFF-PTX-DC-S
Routing Engine 0 REV 12   740-026942                     RE-DUO-C2600-16G-S
CB 0             REV 18   750-044656   IPUCBE6CAB        CB-SFF-PTX-S
FPC 2            REV 06   750-057064   PROTOXCLEI        PROTO-ASSEMBLY
  PIC 0          REV 17   750-059747   IPU3BC5HAA        PTX-5-100G-WDM
FPC 4            REV 12   750-057064
  PIC 0          REV 17   750-059747   IPU3BC5HAA        PTX-5-100G-WDM
FPC 8            REV 11   750-057064
  PIC 0          REV 17   750-059747   IPU3BC5HAA        PTX-5-100G-WDM
SIB 0            REV 03   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
SIB 1            REV 01   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
SIB 2            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 3            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 4            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 5            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 6            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 7            REV 01   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
SIB 8            REV 01   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
```

```
Fan Tray 0       REV 13   760-044659   IPUCBE8CAA        FAN-SFF-PTX-S
Fan Tray 1       REV 13   760-044659   IPUCBE8CAA        FAN-SFF-PTX-S
```

show chassis hardware (MX2010 Router)

```
user@host > show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E3217AFK      MX2010
Midplane         REV 01   750-044636   ABAB8506          Lower Backplane
Midplane 1       REV 01   711-044557   ZY8296            Upper Backplane
PMP              REV 03   711-032426   ACAJ1388          Power Midplane
FPM Board        REV 06   711-032349   ZX8744            Front Panel Display
PSM 4            REV 0C   740-033727   VK00254           DC 52V Power Supply
Module
PSM 5            REV 0B   740-033727   VG00015           DC 52V Power Supply
Module
PSM 6            REV 0B   740-033727   VH00097           DC 52V Power Supply
Module
PSM 7            REV 0C   740-033727   VJ00151           DC 52V Power Supply
Module
PSM 8            REV 0C   740-033727   VJ00149           DC 52V Power Supply
Module
PDM 0            REV 0B   740-038109   WA00008           DC Power Dist Module
PDM 1            REV 0B   740-038109   WA00014           DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009094134        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009094141        RE-S-1800x4
CB 0             REV 08   750-040257   CAAB3491          Control Board
CB 1             REV 08   750-040257   CAAB3489          Control Board
SPMB 0           REV 02   711-041855   CAAA6135          PMB Board
SPMB 1           REV 02   711-041855   CAAA6137          PMB Board
SFB 0            REV 06   711-032385   ZV1828            Switch Fabric Board
SFB 1            REV 07   711-032385   ZZ2568            Switch Fabric Board
SFB 2            REV 07   711-032385   ZZ2563            Switch Fabric Board
SFB 3            REV 07   711-032385   ZZ2564            Switch Fabric Board
SFB 4            REV 07   711-032385   ZZ2580            Switch Fabric Board
SFB 5            REV 07   711-032385   ZZ2579            Switch Fabric Board
SFB 6            REV 07   711-032385   CAAB4882          Switch Fabric Board
SFB 7            REV 07   711-032385   CAAB4898          Switch Fabric Board
FPC 0            REV 33   750-028467   CAAB1919          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAB7174          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH02RE           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMH038C           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH0390           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMG0SUA           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH0579           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMG0SGP           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH04SV           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMH04X3           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH0135           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMH02NC           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH02XB           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMH02PN           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH057Y           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMG0JHE           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH02HT           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMH04V4           SFP+-10G-SR
```

```
FPC 1            REV 21   750-033205   ZG5027            MPC Type 3
  CPU            REV 04   711-035209   YT4780            HMPC PMB 2G
  MIC 0          REV 03   750-033307   ZV6299            10X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-031980   083363A00410      SFP+-10G-SR
      Xcvr 1     REV 01   740-031980   083363A00334      SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   113363A00125      SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   083363A00953      SFP+-10G-SR
      Xcvr 4     REV 01   740-031980   AHR013D           SFP+-10G-SR
      Xcvr 5     REV 01   740-031980   AJ40JUR           SFP+-10G-SR
      Xcvr 6     REV 01   740-031980   AJ40JKL           SFP+-10G-SR
      Xcvr 7     REV 01   740-031980   AJ30ECK           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   19T511100864      SFP+-10G-SR
      Xcvr 9     REV 01   740-021308   19T511100868      SFP+-10G-SR
  MIC 1          REV 03   750-033307   ZV6268            10X10GE SFPP
    PIC 2                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-031980   AJC0JML           SFP+-10G-SR
      Xcvr 1     REV 01   740-031980   AJ403PC           SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   AJ10N25           SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   AJ40JF4           SFP+-10G-SR
      Xcvr 4     REV 01   740-031980   AJ40JSJ           SFP+-10G-SR
      Xcvr 5     REV 01   740-031980   AJ403V7           SFP+-10G-SR
      Xcvr 6     REV 01   740-031980   AJ40JN3           SFP+-10G-SR
      Xcvr 7     REV 01   740-031980   AJ40JSU           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   19T511100468      SFP+-10G-SR
      Xcvr 9     REV 01   740-021308   19T511101363      SFP+-10G-SR
FPC 8            REV 22   750-031089   ZT9746            MPC Type 2 3D
  CPU            REV 06   711-030884   ZS1271            MPC PMB 2G
  MIC 0          REV 26   750-028392   ABBS1150          3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   PLG023C           SFP-SX
      Xcvr 1     REV 01   740-031851   PLG09C6           SFP-SX
      Xcvr 2     REV 02   740-011613   AM0950SF9L7       SFP-SX
      Xcvr 3     REV 02   740-011613   AM1001SFN1H       SFP-SX
      Xcvr 4     REV 02   740-011613   AM1001SFM9D       SFP-SX
      Xcvr 5     REV 02   740-011613   AM1001SFLTJ       SFP-SX
      Xcvr 6     REV 01   740-031851   AC1108S03L9       SFP-SX
      Xcvr 7     REV 01   740-031851   AC1102S00NC       SFP-SX
      Xcvr 8     REV 01   740-031851   AC1102S00MX       SFP-SX
      Xcvr 9     REV 01   740-031851   AC1102S0085       SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   AC1102S00KU       SFP-SX
      Xcvr 1     REV 01   740-031851   AC1102S00NG       SFP-SX
      Xcvr 2     REV 01   740-031851   AC1102S00K3       SFP-SX
      Xcvr 3     REV 01   740-031851   AC1102S008R       SFP-SX
      Xcvr 4     REV 01   740-031851   AM1107SUFVJ       SFP-SX
      Xcvr 5     REV 01   740-031851   AC1108S03LG       SFP-SX
  MIC 1          REV 26   750-028387   ABBR9582          3D 4x 10GE  XFP
    PIC 2                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0               NON-JNPR     T10A91703         XFP-10G-SR
      Xcvr 1               NON-JNPR     T09L42604         XFP-10G-SR
    PIC 3                 BUILTIN      BUILTIN           2x 10GE  XFP
FPC 9            REV 11   750-036284   ZL3591            MPC 3D 16x 10GE EM
  CPU            REV 10   711-029089   ZL0513            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   1YT517101825      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   1YT517101821      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   1YT517101682      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALQ13R6           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   1YT517101828      SFP+-10G-SR
```

```
    Xcvr 1       REV 01   740-031980   1YT517101716      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   1YT517101732      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALP0TR1           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   1YT517101741      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   1YT517101829      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   1YT517101669      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALQ14E3           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   1YT517101826      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   1YT517101817      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   1YT517101735      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALQ159A           SFP+-10G-SR
ADC 0            REV 05   750-043596   CAAC2073          Adapter Card
ADC 1            REV 01   750-043596   ZV4117            Adapter Card
ADC 8            REV 01   750-043596   ZV4107            Adapter Card
ADC 9            REV 02   750-043596   ZW1555            Adapter Card
Fan Tray 0       REV 2A   760-046960   ACAY0015          172mm FanTray - 6 Fans
Fan Tray 1       REV 2A   760-046960   ACAY0019          172mm FanTray - 6 Fans
Fan Tray 2       REV 2A   760-046960   ACAY0020          172mm FanTray - 6 Fans
Fan Tray 3       REV 2A   760-046960   ACAY0021          172mm FanTray - 6 Fans
```

show chassis hardware detail (MX2010 Router)

```
user@host > show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E233DAFK      MX2010
Midplane         REV 26   750-044636   ABAB9357          Lower Backplane
Midplane 1       REV 01   711-044557   ABAB8643          Upper Backplane
PMP              REV 04   711-032426   ACAJ1677          Power Midplane
FPM Board        REV 08   760-044634   ABBV9726          Front Panel Display
PSM 0            REV 01   740-045050   1E02224000P       DC 52V Power Supply
Module
PSM 1            REV 01   740-045050   1E02224000M       DC 52V Power Supply
Module
PSM 2            REV 01   740-045050   1E022240010       DC 52V Power Supply
Module
PSM 3            REV 01   740-045050   1E02224000G       DC 52V Power Supply
Module
PSM 4            REV 01   740-045050   1E022240013       DC 52V Power Supply
Module
PSM 5            REV 01   740-045050   1E022240007       DC 52V Power Supply
Module
PSM 6            REV 01   740-045050   1E02224001C       DC 52V Power Supply
Module
PSM 7            REV 01   740-045050   1E02224001D       DC 52V Power Supply
Module
PSM 8            REV 01   740-045050   1E02224001B       DC 52V Power Supply
Module
PDM 0            REV 01   740-045234   1E262250067       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009099704        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 00000651 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000019592       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009099706        RE-S-1800x4
```

```
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 114 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000404 Disk 1
CB 0             REV 13   750-040257   CAAF8436          Control Board
CB 1             REV 13   750-040257   CAAF8434          Control Board
SPMB 0           REV 02   711-041855   ABBV3825          PMB Board
SPMB 1           REV 02   711-041855   ABBV3833          PMB Board
SFB 0            REV 05   711-044466   ABBX5682          Switch Fabric Board
SFB 1            REV 05   711-044466   ABBX5676          Switch Fabric Board
SFB 2            REV 05   711-044466   ABBX5665          Switch Fabric Board
SFB 3            REV 05   711-044466   ABBX5699          Switch Fabric Board
SFB 4            REV 05   711-044466   ABBX5603          Switch Fabric Board
SFB 5            REV 05   711-044466   ABBX5587          Switch Fabric Board
SFB 6            REV 05   711-044466   ABBX5607          Switch Fabric Board
SFB 7            REV 05   711-044466   ABBX5669          Switch Fabric Board
FPC 0            REV 09   750-037355   CAAF0924          MPC Type 4-2
  CPU            REV 08   711-035209   CAAB9842          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-021308   19T511101656      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA04RU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00558      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M00202         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00328         CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA088W           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B10L04211         SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   19T511101602      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10L04151         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
Xcvr 0                NON-JNPR     X12J00332         CFP-100G-SR10
FPC 1            REV 18   750-033205   ZE0128            MPC Type 3
  CPU            REV 06   711-035209   ZG5431            HMPC PMB 2G
  MIC 0          REV 15   750-033199   ZP6435            1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CFP
      Xcvr 0     REV 01   740-032210   J11E46118         CFP-100G-LR4
  MIC 1          REV 15   750-033199   ZP6442            1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
      Xcvr 0     REV 01   740-032210   UMN03T4           CFP-100G-LR4
FPC 2            REV 16   750-037358   CAAL1001          MPC Type 4-1
  CPU            REV 08   711-035209   CAAK7927          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   193363A00589      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00028      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00376      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00016      SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00499      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   973152A00039      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11E01239         SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00058      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   B10M00075         SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00014      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AMA0638           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00063      SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AMA0629           SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   973152A00053      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00344      SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00046      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA062M           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00080      SFP+-10G-SR
```

```
    Xcvr 2       REV 01   740-031980   193363A00580      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00064      SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   093363A01494      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   973152A00020      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   123363A00047      SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00072      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-021308   03DZ06A01033      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00022      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   03DZ06A01026      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00013      SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   03DZ06A01028      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   973152A00079      SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   03DZ06A01018      SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00025      SFP+-10G-SR
FPC 3            REV 33   750-028467   CAAF5400          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAH7626          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00066      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00021      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00062      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00027      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00065      SFP+-10G-SR
 Xcvr 1       REV 01   740-021308   973152A00069      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00026      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00003      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00035      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00004      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00049      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00055      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00010      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00001      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00073      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00012      SFP+-10G-SR
FPC 4            REV 21   750-033205   ZG5028            MPC Type 3
  CPU            REV 05   711-035209   YX3911            HMPC PMB 2G
  MIC 0          REV 03   750-036233   ZL2036            2X40GE QSFP
    PIC 0                 BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB220708          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB220735          QSFP+-40G-SR4
  MIC 1          REV 03   750-036233   ZL2028            2X40GE QSFP
    PIC 2                 BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB220727          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB220715          QSFP+-40G-SR4
FPC 5            REV 11   750-037358   CAAE2196          MPC Type 4-1
  CPU            REV 08   711-035209   CAAD9074          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA062S           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA062P           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AMA052R           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AMA0632           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00564      SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   193363A00229      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00363      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00278      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA04CC           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AD0927A001W       SFP+-10G-SR
```

```
    Xcvr 2       REV 01   740-031980   AMA04N2           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AMA062U           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00491      SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   183363A01511      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00565      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00405      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA07QX           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA06MS           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00318      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   193363A00402      SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00174      SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   193363A00388      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00377      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00234      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA062T           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   193363A00550      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00364      SFP+-10G-SR
Xcvr 3       REV 01   740-031980   AMA0630           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00509      SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   193363A00459      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   113363A00191      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00352      SFP+-10G-SR
FPC 6            REV 33   750-028467   CAAF5552          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAH7601          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AD0927A0036       SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AD0927A003M       SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AD0927A003G       SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AD0927A0031       SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   193363A00331      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   193363A00325      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00417      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A02509      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   T09K75140         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11A04356         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01952         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01914         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   T09K75157         SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   T09K75194         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01926         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01936         SFP+-10G-SR
FPC 7            REV 16   750-037358   CAAL1012          MPC Type 4-1
  CPU            REV 08   711-035209   CAAJ3851          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA04NK           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00260         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11E02192         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AMA04CP           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJ40JKK           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11F00238         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B10M00275         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00211      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   B11D05577         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11G00586         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AMA08B7           SFP+-10G-SR
```

```
    Xcvr 3       REV 01   740-031980   AMA04Q0           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11D05840         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11E00467         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11E00029         SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   19T511101712      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   193363A00568      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B10M00166         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B10M00212         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11D05823         SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   03DZ06A01005      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   03DZ06A01003      SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   03DZ06A01009      SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   03DZ06A01004      SFP+-10G-SR
PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-021308   03DZ06A01017      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   03DZ06A01016      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   03DZ06A01024      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   03DZ06A01008      SFP+-10G-SR
    Xcvr 4       REV 01   740-030658   AD0946A02UH       SFP+-10G-USR
    Xcvr 5       REV 01   740-021308   T09J67913         SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AD0837ES09G       SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   03DZ06A01015      SFP+-10G-SR
FPC 8            REV 03   750-045372   CAAD3111          MPC Type 3
  CPU            REV 08   711-035209   CAAD8033          HMPC PMB 2G
  MIC 0          REV 03   750-036233   ZL2032            2X40GE QSFP
    PIC 0                  BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB230273          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB230254          QSFP+-40G-SR4
  MIC 1          REV 03   750-036233   ZL2021            2X40GE QSFP
    PIC 2                  BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB390962          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB390960          QSFP+-40G-SR4
FPC 9            REV 09   750-037355   CAAF1531          MPC Type 4-2
  CPU            REV 08   711-035209   CAAB9927          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   193363A00525      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   193363A00504      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00368      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJ40JSS           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   123363A00042      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B10M00023         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJ802EM           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11E02348         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
ADC 0            REV 13   750-043596   ABBX5532          Adapter Card
ADC 1            REV 13   750-043596   ABBX5550          Adapter Card
ADC 2            REV 13   750-043596   ABBX5571          Adapter Card
ADC 3            REV 13   750-043596   ABBX5568          Adapter Card
ADC 4            REV 13   750-043596   ABBX5556          Adapter Card
ADC 5            REV 13   750-043596   ABBX5553          Adapter Card
ADC 6            REV 13   750-043596   ABBX5541          Adapter Card
ADC 7            REV 13   750-043596   ABBX5578          Adapter Card
ADC 8            REV 13   750-043596   ABBX5560          Adapter Card
ADC 9            REV 07   750-043596   ABBV7188          Adapter Card
Fan Tray 0       REV 03   760-046960   ACAY0127          172mm FanTray - 6 Fans
Fan Tray 1       REV 2A   760-046960   ACAY0068          172mm FanTray - 6 Fans
Fan Tray 2       REV 2A   760-046960   ACAY0072          172mm FanTray - 6 Fans
Fan Tray 3       REV 2A   760-046960   ACAY0070          172mm FanTray - 6 Fans
```

show chassis hardware extensive (MX2010 Router)

```
user@host > show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E233DAFK      MX2010
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN11E233DAFK
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2010
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 45 32 33 33 44 41 46 4b 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 26   750-044636   ABAB9357          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044636        S/N:               ABAB9357
 Assembly ID:  0x0b66            Assembly Version:  01.26
 Date:         08-28-2012        Assembly Flags:    0x00
 Version:      REV 26            CLEI Code:         PROTOXCLEI
 ID: Lower Backplane             FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 08 00 2c 21 72 70 a0 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 66 01 1a 52 45 56 20 32 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 35 37 00 1c 08 07
  Address 0x30: dc ff ff ff ad 01 08 00 2c 21 72 70 a0 00 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1       REV 01   711-044557   ABAB8643          Upper Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-044557        S/N:               ABAB8643
 Assembly ID:  0x0b65            Assembly Version:  01.01
 Date:         07-27-2012        Assembly Flags:    0x00
 Version:      REV 01
 ID: Upper Backplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 65 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 38 36 34 33 00 1b 07 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP              REV 04   711-032426   ACAJ1677          Power Midplane
Jedec Code:   0x7fb0            EEPROM Version:    0x01
```

```
 P/N:          711-032426        S/N:               ACAJ1677
 Assembly ID:  0x045d            Assembly Version:  01.04
 Date:         07-20-2012        Assembly Flags:    0x00
 Version:      REV 04
 ID: Power Midplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 4a 31 36 37 37 00 14 07 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 08   760-044634   ABBV9726          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-044634        S/N:               ABBV9726
 Assembly ID:  0x0b64            Assembly Version:  01.08
 Date:         09-10-2012        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         IPMYA4EJRA
 ID: Front Panel Display         FRU Model Number:  MX2010-CRAFT-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 64 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 34 34 36 33 34 00 00
  Address 0x20: 53 2f 4e 20 41 42 42 56 39 37 32 36 00 0a 09 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
  Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0            REV 01   740-045050   1E02224000P       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045050        S/N:               1E02224000P
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         12-06-2012        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         XXXXXXXXXX
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-HC-DC-S-A
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 30 35 30 00 00
  Address 0x20: 31 45 30 32 32 32 34 30 30 30 50 00 00 06 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 58 58 58 58 58 58 58 58 58 58 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 48 43 2d 44 43 2d
  Address 0x60: 53 2d 41 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1            REV 01   740-045050   1E02224000M       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045050        S/N:               1E02224000M
Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         12-06-2012        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         XXXXXXXXXX
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-HC-DC-S-A
```

```
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 30 35 30 00 00
  Address 0x20: 31 45 30 32 32 32 34 30 30 30 4d 00 00 06 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 58 58 58 58 58 58 58 58 58 58 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 48 43 2d 44 43 2d
  Address 0x60: 53 2d 41 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4a 00 00 00 00 00 00 00 00 00 00 00 00
...
PDM 0            REV 01   740-045234   1E262250067       DC Power Dist Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045234        S/N:               1E262250067
 Assembly ID:  0x047b            Assembly Version:  01.01
 Date:         06-28-2012        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAJSKAA
 ID: DC Power Dist Module        FRU Model Number:  MX2000-PDM-DC-S-A
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 7b 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
  Address 0x20: 31 45 32 36 32 32 35 30 30 36 37 00 00 1c 06 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 2d 41
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 89 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 02   740-041821   9009099704        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-041821        S/N:               9009099704
 Assembly ID:  0x09c0            Assembly Version:  01.02
 Date:         03-15-2012        Assembly Flags:    0x00
 Version:      REV 02
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
  Address 0x20: 39 30 30 39 30 39 39 37 30 34 00 00 00 0f 03 07
  Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
  Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 00000651 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000019592       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009099706        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-041821        S/N:               9009099706
 Assembly ID:  0x09c0            Assembly Version:  01.02
 Date:         02-23-2012        Assembly Flags:    0x00
```

```
 Version:      REV 02
 ID: RE-S-1800x4                FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
 Address 0x20: 39 30 30 39 30 39 39 37 30 36 00 00 00 17 02 07
  Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
  Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 114 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000404 Disk 1
CB 0             REV 13   750-040257   CAAF8436          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-040257        S/N:               CAAF8436
 Assembly ID:  0x0b26            Assembly Version:  01.13
 Date:         08-29-2012        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         PROTOXCLEI
 ID: Control Board               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 26 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 35 37 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 46 38 34 33 36 00 1d 08 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
...
SPMB 0           REV 02   711-041855   ABBV3825          PMB Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-041855        S/N:               ABBV3825
 Assembly ID:  0x0b29            Assembly Version:  01.02
 Date:         08-14-2012        Assembly Flags:    0x00
 Version:      REV 02
 ID: PMB Board
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 29 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 31 38 35 35 00 00
  Address 0x20: 53 2f 4e 20 41 42 42 56 33 38 32 35 00 0e 08 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
...
SFB 0            REV 05   711-044466   ABBX5682          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-044466        S/N:               ABBX5682
 Assembly ID:  0x0b25            Assembly Version:  01.05
 Date:         09-07-2012        Assembly Flags:    0x00
 Version:      REV 05            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
```

```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 25 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 34 36 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 42 58 35 36 38 32 00 07 09 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 00 00 00 01 00 00 00 00 00 00 48 00
...
FPC 0            REV 09   750-037355   CAAF0924          MPC Type 4-2
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-037355        S/N:               CAAF0924
 Assembly ID:  0x0b4e            Assembly Version:  01.09
 Date:         05-21-2012        Assembly Flags:    0x00
 Version:      REV 09            CLEI Code:         PROTOXCLEI
 ID: MPC Type 4-2                FRU Model Number:  MPC4E-2CGE-8XGE
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 4e 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 33 35 35 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 46 30 39 32 34 00 15 05 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 4d
  Address 0x50: 50 43 34 45 2d 32 43 47 45 2d 38 58 47 45 00 00
  Address 0x60: 00 00 00 00 00 00 30 39 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c6 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 08   711-035209   CAAB9842          HMPC PMB 2G
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-035209        S/N:               CAAB9842
 Assembly ID:  0x0b04            Assembly Version:  01.08
 Date:         05-17-2012        Assembly Flags:    0x00
 Version:      REV 08
 ID: HMPC PMB 2G
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 42 39 38 34 32 00 11 05 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN           4x10GE SFPP
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0a53            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 4x10GE SFPP
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 53 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 4d 58 43 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 4d 58 43 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

```
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ae 64 00 00 00 00 0a 52 00 00
    Xcvr 0       REV 01   740-021308   19T511101656      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA04RU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00558      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M00202         SFP+-10G-SR
...
ADC 0            REV 13   750-043596   ABBX5532          Adapter Card
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-043596        S/N:               ABBX5532
 Assembly ID:  0x0b3d            Assembly Version:  01.13
 Date:         09-12-2012        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         IPUCBA8CAA
 ID: Adapter Card                FRU Model Number:  MX2000-LC-ADAPTER
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 3d 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 33 35 39 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 42 58 35 35 33 32 00 0c 09 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 41 38 43 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 4c 43 2d 41 44 41 50 54 45 52
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 3a 00 00 00 00 00 00 00 00 00 00 00 00
...
```

show chassis hardware models (MX2010 Router)

```
user@host > show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
FPM Board        REV 06   711-032349   ZX8744            711-032349
PSM 4            REV 0C   740-033727   VK00254           00000000000000000000000
PSM 5            REV 0B   740-033727   VG00015           00000000000000000000000
PSM 6            REV 0B   740-033727   VH00097           00000000000000000000000
PSM 7            REV 0C   740-033727   VJ00151           00000000000000000000000
PSM 8            REV 0C   740-033727   VJ00149           00000000000000000000000
PDM 0            REV 0B   740-038109   WA00008
PDM 1            REV 0B   740-038109   WA00014
Routing Engine 0 REV 02   740-041821   9009094134        RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821   9009094141        RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   CAAB3491          750-040257
CB 1             REV 08   750-040257   CAAB3489          750-040257
SFB 0            REV 06   711-032385   ZV1828            711-032385
SFB 1            REV 07   711-032385   ZZ2568            711-032385
SFB 2            REV 07   711-032385   ZZ2563            711-032385
SFB 3            REV 07   711-032385   ZZ2564            711-032385
SFB 4            REV 07   711-032385   ZZ2580            711-032385
SFB 5            REV 07   711-032385   ZZ2579            711-0323856
SFB 6            REV 07   711-032385   CAAB4882          711-044170
SFB 7            REV 07   711-032385   CAAB4898          711-044170
FPC 0            REV 33   750-028467   CAAB1919          MPC-3D-16XGE-SFPP
FPC 1            REV 21   750-033205   ZG5027            MX-MPC3-3D
  MIC 0          REV 03   750-033307   ZV6299            MIC3-3D-10XGE-SFPP
  MIC 1          REV 03   750-033307   ZV6268            MIC3-3D-10XGE-SFPP
FPC 8            REV 22   750-031089   ZT9746            MX-MPC2-3D
  MIC 0          REV 26   750-028392   ABBS1150          MIC-3D-20GE-SFP
  MIC 1          REV 26   750-028387   ABBR9582          MIC-3D-4XGE-XFP
FPC 9            REV 11   750-036284   ZL3591            MPCE-3D-16XGE-SFPP
```

```
ADC 0            REV 05   750-043596   CAAC2073          750-043596
ADC 1            REV 01   750-043596   ZV4117            750-043596
ADC 8            REV 01   750-043596   ZV4107            750-043596
ADC 9            REV 02   750-043596   ZW1555            750-043596
Fan Tray 0       REV 2A   760-046960   ACAY0015
Fan Tray 1       REV 2A   760-046960   ACAY0019
Fan Tray 2       REV 2A   760-046960   ACAY0020
Fan Tray 3       REV 2A   760-046960   ACAY0021
```

show chassis hardware clei-models (MX2010 Routers)

```
user@host > show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
FPM Board        REV 06   711-032349   PROTOXCLEI        711-032349
PSM 4            REV 0C   740-033727   0000000000        00000000000000000000000
PSM 5            REV 0B   740-033727   0000000000        00000000000000000000000
PSM 6            REV 0B   740-033727   0000000000        00000000000000000000000
PSM 7            REV 0C   740-033727   0000000000        00000000000000000000000
PSM 8            REV 0C   740-033727   0000000000        00000000000000000000000
PDM 0            REV 0B   740-038109
PDM 1            REV 0B   740-038109
Routing Engine 0 REV 02   740-041821                     RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821                     RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   PROTOXCLEI        750-040257
CB 1             REV 08   750-040257   PROTOXCLEI        750-040257
SFB 0            REV 06   711-032385   PROTOXCLEI        711-032385
SFB 1            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 2            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 3            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 4            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 5            REV 07   711-032385   PROTOXCLEI        711-0323856
SFB 6            REV 07   711-032385   PROTOXCLEI        711-044170
SFB 7            REV 07   711-032385   PROTOXCLEI        711-044170
FPC 0            REV 33   750-028467                     MPC-3D-16XGE-SFPP
FPC 1            REV 21   750-033205                     MX-MPC3-3D
  MIC 0          REV 03   750-033307   PROTOXCLEI        MIC3-3D-10XGE-SFPP
  MIC 1          REV 03   750-033307   PROTOXCLEI        MIC3-3D-10XGE-SFPP
FPC 8            REV 22   750-031089   COUIBAYBAA        MX-MPC2-3D
  MIC 0          REV 26   750-028392   COUIA15BAA        MIC-3D-20GE-SFP
  MIC 1          REV 26   750-028387   COUIA16BAA        MIC-3D-4XGE-XFP
FPC 9            REV 11   750-036284   CMUIACGBAA        MPCE-3D-16XGE-SFPP
ADC 0            REV 05   750-043596   PROTOXCLEI        750-043596
ADC 1            REV 01   750-043596   PROTOXCLEI        750-043596
ADC 8            REV 01   750-043596   PROTOXCLEI        750-043596
ADC 9            REV 02   750-043596   PROTOXCLEI        750-043596
Fan Tray 0       REV 2A   760-046960
Fan Tray 1       REV 2A   760-046960
Fan Tray 2       REV 2A   760-046960
Fan Tray 3       REV 2A   760-046960
```

show chassis hardware (MX2010 Routers with MPC6E and OTN MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN11C9AFEAFK      MX2010
Midplane         REV 35   750-044636   ABAB9188          Lower Backplane
Midplane 1       REV 02   711-044557   ABAB8729          Upper Backplane
PMP              REV 04   711-032426   ACAJ2432          Power Midplane
```

```
FPM Board        REV 09   760-044634   ABCA4314          Front Panel Display
PSM 0            REV 01   740-050037   1EDB321015C       DC 52V Power Supply
Module
PSM 1            REV 01   740-050037   1EDB321015J       DC 52V Power Supply
Module
PSM 2            REV 01   740-050037   1EDB32000K8       DC 52V Power Supply
Module
PSM 3            REV 01   740-050037   1EDB32101JW       DC 52V Power Supply
Module
PSM 4            REV 01   740-050037   1EDB321015G       DC 52V Power Supply
Module
PSM 5            REV 01   740-050037   1EDB32101HH       DC 52V Power Supply
Module
PSM 6            REV 01   740-050037   1EDB32101HD       DC 52V Power Supply
Module
PSM 7            REV 01   740-050037   1EDB321015F       DC 52V Power Supply
Module
PSM 8            REV 01   740-050037   1EDB321015B       DC 52V Power Supply
Module
PDM 0            REV 03   740-045234   1EFA3220433       DC Power Dist Module
PDM 1            REV 03   740-045234   1EFA3220425       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009115685        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009099711        RE-S-1800x4
CB 0             REV 23   750-040257   CABE8395          Control Board
CB 1             REV 12   750-040257   CAAD9499          Control Board
SPMB 0           REV 02   711-041855   ABCG8426          PMB Board
SPMB 1           REV 02   711-041855   ABBS1481          PMB Board
SFB 0            REV 06   711-044466   ABCD5013          Switch Fabric Board
SFB 1            REV 06   711-044466   ABCD5160          Switch Fabric Board
SFB 2            REV 06   711-044466   ABCD5175          Switch Fabric Board
SFB 3            REV 06   711-044466   ABCD4938          Switch Fabric Board
SFB 4            REV 06   711-044466   ABCD4944          Switch Fabric Board
SFB 5            REV 06   711-044466   ABCD4968          Switch Fabric Board
SFB 6            REV 06   711-044466   ABCD5267          Switch Fabric Board
SFB 7            REV 06   711-044466   ABCD4997          Switch Fabric Board
FPC 0            REV 59   750-044130   ABCT7676          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8527          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7810          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7811          MPC6E XL
FPC 2            REV 27   750-033205   ZL6014            MPCE Type 3 3D
  CPU            REV 07   711-035209   ZK9068            HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9214          1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XC49FC030         CFP2-100G-SR10
  MIC 1          REV 18   750-033199   CAAC3231          1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
FPC 3            REV 59   750-044130   ABCT7682          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8531          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7818          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7819          MPC6E XL
FPC 4            REV 33   750-044130   ABBY9278          MPC6E 3D
  CPU            REV 09   711-045719   ABBY8677          RMPC PMB
  XLM 0          REV 06.2.00 711-046638 ABBY8844         MPC6E XL
  XLM 1          REV 06.2.00 711-046638 ABBY8830         MPC6E XL
FPC 5            REV 59   750-044130   ABCT7675          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8526          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7808          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7809          MPC6E XL
FPC 6            REV 30   750-028467   ZM4986            MPC 3D 16x 10GE
 CPU            REV 10   711-029089   ZP6541            AMPC PMB
  PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
```

```
    Xcvr 0       REV 01   740-021308   AQ43GAC           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   ALM0A6D           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AQF0RB3           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   153363A00333      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AN10KYE           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   APK04YM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AQF0H44           SFP+-10G-SR
FPC 8            REV 38   750-031090   CABF7313          MPC Type 2 3D EQ
  CPU            REV 08   711-030884   CABE6727          MPC PMB 2G
  MIC 0          REV 18   750-028380   YK8253            3D 2x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0     REV 03   740-014289   AD1148M00TP       XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           1x 10GE XFP
  QXM 0          REV 06   711-028408   CABC5614          MPC QXM
  QXM 1          REV 06   711-028408   CABC5550          MPC QXM
FPC 9            REV 39   750-044130   ABCK1652          MPC6E 3D
  CPU            REV 09   711-045719   ABCK1655          RMPC PMB
  MIC 0          REV 09   750-049457   ABCP1230          2X100GE CFP2 OTN
    PIC 0                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0              NON-JNPR     37300222WP0002    CFP2-100G-LR4-D
      Xcvr 1              NON-JNPR     FD46F001Y         CFP2-100G-SR10
  MIC 1          REV 07   750-049457   ABCV6662          2X100GE CFP2 OTN
    PIC 1                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0              NON-JNPR     UQD0014           CFP2-100G-LR4-D
      Xcvr 1              NON-JNPR     J13J68335         CFP2-100G-LR4-D
  XLM 0          REV 07.2.00 711-046638 ABCK5491         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK5475         MPC6E XL
ADC 1            REV 17   750-043596   ABCG9023          Adapter Card
ADC 2            REV 01   750-043596   ZV4079            Adapter Card
ADC 6            REV 17   750-043596   ABCG8866          Adapter Card
ADC 8            REV 17   750-043596   ABCA8993          Adapter Card
Fan Tray 0       REV 06   760-046960   ACAY0354          172mm FanTray - 6 Fans
Fan Tray 1       REV 06   760-046960   ACAY0831          172mm FanTray - 6 Fans
Fan Tray 2       REV 06   760-046960   ACAY0892          172mm FanTray - 6 Fans
Fan Tray 3       REV 06   760-046960   ACAY0839          172mm FanTray - 6 Fans
```

show chassis hardware detail (MX2010 Routers with MPC6E and OTN MIC)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C9AFEAFK      MX2010
Midplane         REV 35   750-044636   ABAB9188          Lower Backplane
Midplane 1       REV 02   711-044557   ABAB8729          Upper Backplane
PMP              REV 04   711-032426   ACAJ2432          Power Midplane
FPM Board        REV 09   760-044634   ABCA4314          Front Panel Display
PSM 0            REV 01   740-050037   1EDB321015C       DC 52V Power Supply
Module
PSM 1            REV 01   740-050037   1EDB321015J       DC 52V Power Supply
Module
PSM 2            REV 01   740-050037   1EDB32000K8       DC 52V Power Supply
Module
PSM 3            REV 01   740-050037   1EDB32101JW       DC 52V Power Supply
Module
PSM 4            REV 01   740-050037   1EDB321015G       DC 52V Power Supply
Module
PSM 5            REV 01   740-050037   1EDB32101HH       DC 52V Power Supply
Module
```

```
PSM 6            REV 01   740-050037   1EDB32101HD       DC 52V Power Supply
Module
PSM 7            REV 01   740-050037   1EDB321015F       DC 52V Power Supply
Module
PSM 8            REV 01   740-050037   1EDB321015B       DC 52V Power Supply
Module
PDM 0            REV 03   740-045234   1EFA3220433       DC Power Dist Module
PDM 1            REV 03   740-045234   1EFA3220425       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009115685        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200274310822 191 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000043190       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 1         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 2         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 3         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009099711        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 30 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000146 Disk 1
CB 0             REV 23   750-040257   CABE8395          Control Board
CB 1             REV 12   750-040257   CAAD9499          Control Board
SPMB 0           REV 02   711-041855   ABCG8426          PMB Board
SPMB 1           REV 02   711-041855   ABBS1481          PMB Board
SFB 0            REV 06   711-044466   ABCD5013          Switch Fabric Board
SFB 1            REV 06   711-044466   ABCD5160          Switch Fabric Board
SFB 2            REV 06   711-044466   ABCD5175          Switch Fabric Board
SFB 3            REV 06   711-044466   ABCD4938          Switch Fabric Board
SFB 4            REV 06   711-044466   ABCD4944          Switch Fabric Board
SFB 5            REV 06   711-044466   ABCD4968          Switch Fabric Board
SFB 6            REV 06   711-044466   ABCD5267          Switch Fabric Board
SFB 7            REV 06   711-044466   ABCD4997          Switch Fabric Board
FPC 0            REV 59   750-044130   ABCT7676          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8527          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7810          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7811          MPC6E XL
FPC 2            REV 27   750-033205   ZL6014            MPCE Type 3 3D
  CPU            REV 07   711-035209   ZK9068            HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9214          1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XC49FC030         CFP2-100G-SR10
  MIC 1          REV 18   750-033199   CAAC3231          1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
FPC 3            REV 59   750-044130   ABCT7682          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8531          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7818          MPC6E XL
 XLM 1          REV 13   711-046638   ABCT7819          MPC6E XL
FPC 4            REV 33   750-044130   ABBY9278          MPC6E 3D
  CPU            REV 09   711-045719   ABBY8677          RMPC PMB
  XLM 0          REV 06.2.00 711-046638 ABBY8844         MPC6E XL
  XLM 1          REV 06.2.00 711-046638 ABBY8830         MPC6E XL
FPC 5            REV 59   750-044130   ABCT7675          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8526          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7808          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7809          MPC6E XL
FPC 6            REV 30   750-028467   ZM4986            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ZP6541            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43GAC           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   ALM0A6D           SFP+-10G-SR
```

```
    Xcvr 1       REV 01   740-031980   AQF0RB3           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   153363A00333      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AN10KYE           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   APK04YM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AQF0H44           SFP+-10G-SR
FPC 8            REV 38   750-031090   CABF7313          MPC Type 2 3D EQ
  CPU            REV 08   711-030884   CABE6727          MPC PMB 2G
  MIC 0          REV 18   750-028380   YK8253            3D 2x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0     REV 03   740-014289   AD1148M00TP       XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           1x 10GE XFP
  QXM 0          REV 06   711-028408   CABC5614          MPC QXM
  QXM 1          REV 06   711-028408   CABC5550          MPC QXM
FPC 9            REV 39   750-044130   ABCK1652          MPC6E 3D
  CPU            REV 09   711-045719   ABCK1655          RMPC PMB
  MIC 0          REV 09   750-049457   ABCP1230          2X100GE CFP2 OTN
    PIC 0                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0               NON-JNPR     37300222WP0002    CFP2-100G-LR4-D
      Xcvr 1               NON-JNPR     FD46F001Y         CFP2-100G-SR10
  MIC 1          REV 07   750-049457   ABCV6662          2X100GE CFP2 OTN
    PIC 1                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0               NON-JNPR     UQD0014           CFP2-100G-LR4-D
      Xcvr 1               NON-JNPR     J13J68335         CFP2-100G-LR4-D
  XLM 0          REV 07.2.00 711-046638 ABCK5491         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK5475         MPC6E XL
ADC 1            REV 17   750-043596   ABCG9023          Adapter Card
ADC 2            REV 01   750-043596   ZV4079            Adapter Card
ADC 6            REV 17   750-043596   ABCG8866          Adapter Card
ADC 8            REV 17   750-043596   ABCA8993          Adapter Card
Fan Tray 0       REV 06   760-046960   ACAY0354          172mm FanTray - 6 Fans
Fan Tray 1       REV 06   760-046960   ACAY0831          172mm FanTray - 6 Fans
Fan Tray 2       REV 06   760-046960   ACAY0892          172mm FanTray - 6 Fans
Fan Tray 3       REV 06   760-046960   ACAY0839          172mm FanTray - 6 Fans
```

show chassis hardware extensive (MX2010 Routers with MPC6E and OTN MIC)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C9AFEAFK      MX2010
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN11C9AFEAFK
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2010
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 43 39 41 46 45 41 46 4b 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 35   750-044636   ABAB9188          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044636        S/N:               ABAB9188
```

```
  Assembly ID:  0x0b66            Assembly Version:  01.35
  Date:         06-21-2013        Assembly Flags:    0x00
  Version:      REV 35            CLEI Code:         IPMU810ARA
  ID: Lower Backplane             FRU Model Number:  CHAS-BP-MX2010-S
  Board Information Record:
   Address 0x00: ad 01 08 00 3c 8a b0 38 68 00 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 66 01 23 52 45 56 20 33 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
   Address 0x20: 53 2f 4e 20 41 42 41 42 39 31 38 38 00 15 06 07
   Address 0x30: dd ff ff ff ad 01 08 00 3c 8a b0 38 68 00 ff ff
   Address 0x40: ff ff ff ff 01 49 50 4d 55 38 31 30 41 52 41 43
   Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 31 30 2d 53 00
   Address 0x60: 00 00 00 00 00 00 30 36 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f8 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1       REV 02   711-044557   ABAB8729          Upper Backplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-044557        S/N:               ABAB8729
  Assembly ID:  0x0b65            Assembly Version:  01.02
  Date:         03-21-2013        Assembly Flags:    0x00
  Version:      REV 02
  ID: Upper Backplane
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 0b 65 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
   Address 0x20: 53 2f 4e 20 41 42 41 42 38 37 32 39 00 15 03 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP              REV 04   711-032426   ACAJ2432          Power Midplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-032426        S/N:               ACAJ2432
  Assembly ID:  0x045d            Assembly Version:  01.04
  Date:         03-28-2013        Assembly Flags:    0x00
  Version:      REV 04
  ID: Power Midplane
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
   Address 0x20: 53 2f 4e 20 41 43 41 4a 32 34 33 32 00 1c 03 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 09   760-044634   ABCA4314          Front Panel Display
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          760-044634        S/N:               ABCA4314
  Assembly ID:  0x0b64            Assembly Version:  01.09
  Date:         03-28-2013        Assembly Flags:    0x00
  Version:      REV 09            CLEI Code:         IPMYA4EJRA
  ID: Front Panel Display         FRU Model Number:  MX2010-CRAFT-S
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
```

```
  Address 0x00: 7f b0 02 ff 0b 64 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 34 34 36 33 34 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 41 34 33 31 34 00 1c 03 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
  Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0            REV 01   740-050037   1EDB321015C       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015C
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 43 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1            REV 01   740-050037   1EDB321015J       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015J
Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 4a 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2            REV 01   740-050037   1EDB32000K8       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32000K8
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-23-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 30 30 30 4b 38 00 00 17 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3            REV 01   740-050037   1EDB32101JW       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32101JW
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 4a 57 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4            REV 01   740-050037   1EDB321015G       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015G
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 47 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5            REV 01   740-050037   1EDB32101HH       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32101HH
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 48 48 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
```

```
PSM 6            REV 01   740-050037   1EDB32101HD       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32101HD
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 48 44 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7            REV 01   740-050037   1EDB321015F       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015F
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 46 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8            REV 01   740-050037   1EDB321015B       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015B
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 42 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PDM 0            REV 03   740-045234   1EFA3220433       DC Power Dist Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045234        S/N:               1EFA3220433
 Assembly ID:  0x047b            Assembly Version:  01.03
```

```
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         IPUPAJSKAA
 ID: DC Power Dist Module        FRU Model Number:  MX2000-PDM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 7b 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
  Address 0x20: 31 45 46 41 33 32 32 30 34 33 33 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 33 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 1d 00 00 00 00 00 00 00 00 00 00 00 00
PDM 1            REV 03   740-045234   1EFA3220425       DC Power Dist Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045234        S/N:               1EFA3220425
 Assembly ID:  0x047b            Assembly Version:  01.03
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         IPUPAJSKAA
 ID: DC Power Dist Module        FRU Model Number:  MX2000-PDM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
..
```

show chassis hardware (MX2020 Router)

```
user@host > show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E2227AFJ      MX2020
Midplane         REV 27   750-040240   ABAB9384          Lower Power Midplane
Midplane 1       REV 04   711-032386   ABAB9386          Upper Backplane
PMP 1            REV 05   711-032428   ACAJ1579          Upper Power Midplane
PMP 0            REV 04   711-032426   ACAJ1524          Lower Power Midplane
FPM Board        REV 06   760-040242   ABBT8837          Front Panel Display
PSM 0            REV 01   740-045050   1E022240056       DC 52V Power Supply
Module
PSM 1            REV 01   740-045050   1E022240054       DC 52V Power Supply
Module
PSM 2            REV 01   740-045050   1E02224005H       DC 52V Power Supply
Module
PSM 3            REV 01   740-045050   1E022240053       DC 52V Power Supply
Module
PSM 4            REV 01   740-045050   1E02224004K       DC 52V Power Supply
Module
PSM 7            REV 01   740-045050   1E02224006W       DC 52V Power Supply
Module
PSM 8            REV 01   740-045050   1E022240062       DC 52V Power Supply
Module
PSM 9            REV 01   740-045050   1E02224005B       DC 52V Power Supply
Module
PSM 10           REV 01   740-045050   1E02224005A       DC 52V Power Supply
Module
PSM 11           REV 01   740-045050   1E022240052       DC 52V Power Supply
Module
PSM 12           REV 01   740-045050   1E022240051       DC 52V Power Supply
Module
PSM 13           REV 01   740-045050   1E022240058       DC 52V Power Supply
Module
PSM 14           REV 01   740-045050   1E02224004L       DC 52V Power Supply
```

```
Module
PSM 15           REV 01   740-045050   1E02224005M       DC 52V Power Supply
Module
PSM 16           REV 01   740-045050   1E02224006S       DC 52V Power Supply
Module
PSM 17           REV 01   740-045050   1E02224005Z       DC 52V Power Supply
Module
PDM 0            REV 01   740-045234   1E012150033       DC Power Dist Module
PDM 1            REV 01   740-045234   1E012150027       DC Power Dist Module
PDM 2            REV 01   740-045234   1E012150028       DC Power Dist Module
PDM 3            REV 01   740-045234   1E012150045       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009089704        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009094138        RE-S-1800x4
CB 0             REV 14   750-040257   CAAF8430          Control Board
CB 1             REV 08   750-040257   CAAB3482          Control Board
SPMB 0           REV 01   711-041855   ZS2290            PMB Board
SPMB 1           REV 02   711-041855   CAAA6141          PMB Board
SFB 0            REV 03   711-044466   ABBV6789          Switch Fabric Board
SFB 1            REV 05   711-044466   ABBX5666          Switch Fabric Board
SFB 2            REV 05   711-044466   ABBX5678          Switch Fabric Board
SFB 3            REV 05   711-044466   ABBX5687          Switch Fabric Board
SFB 4            REV 05   711-044466   ABBX5609          Switch Fabric Board
SFB 5            REV 05   711-044466   ABBX5675          Switch Fabric Board
SFB 6            REV 03   711-044466   ABBV6805          Switch Fabric Board
SFB 7            REV 05   711-044466   ABBX5701          Switch Fabric Board
FPC 0            REV 30   750-028467   ABBN0284          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0507          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00990         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04357         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01327         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04375         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02760         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02904         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E03963         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00756         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04418         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01077         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01128         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01253         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E01140         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01626         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01075         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01177         SFP+-10G-USR
FPC 1            REV 30   750-028467   ABBN0208          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1084          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04745         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01570         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E04388         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01439         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04739         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01869         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01675         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01901         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01346         SFP+-10G-USR
```

```
    Xcvr 1       REV 01   740-030658   B11F01288         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01824         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04312         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02811         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01495         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01265         SFP+-10G-USR
FPC 2            REV 30   750-028467   ZM5111            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ZP6607            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LJA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MFZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKL           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KF4           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FBJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MM2           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LJV           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NXV           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1H           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLS           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FL5           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL9           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG2           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KDU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MG1           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM0           SFP+-10G-SR
FPC 3            REV 30   750-028467   ABBN0302          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0495          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01581         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01176         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01251         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02752         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00786         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01020         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01023         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02819         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02812         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11D04437         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01279         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01333         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00978         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01018         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01784         SFP+-10G-USR
    Xcvr 3       REV 01   740-031980   AK80NKP           SFP+-10G-SR
FPC 4            REV 30   750-028467   ABBN0308          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1095          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04305         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01147         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01195         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01743         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01892         SFP+-10G-USR
```

```
    Xcvr 1       REV 01   740-030658   B11E02880         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00725         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01057         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02816         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11C04501         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02764         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00789         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01250         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00787         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E03803         SFP+-10G-USR
FPC 5            REV 30   750-028467   ABBN0316          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1082          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00523         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01848         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01865         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00540         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00422         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00428         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00423         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01855         SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01847         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00526         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00529         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00525         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00425         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00530         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01851         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00528         SFP+-10G-SR
FPC 6            REV 32   750-028467   ABBN6832          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6534          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MB4           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FQ6           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N1F           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLQ           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80KDR           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FGJ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N5G           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KD8           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LET           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80N1X           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRF           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL2           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N3D           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MRB           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LEQ           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LER           SFP+-10G-SR
FPC 7            REV 32   750-028467   ABBN6811          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7288          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NK8           SFP+-10G-SR
```

```
    Xcvr 1       REV 01   740-031980   AK80LJG           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LBU           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N21           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEU           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLM           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NL6           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LES           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEN           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80ME0           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LMG           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM1           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MG7           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KF9           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRQ           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLE           SFP+-10G-SR
FPC 8            REV 23   750-028467   YN2977            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   YP1856            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00875      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00851      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00772      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00882      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00735      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00169      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00726      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00077      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00168      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00676      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00732      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00091      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00725      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00642      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00871      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00853      SFP+-10G-SR
FPC 9            REV 32   750-028467   ABBN6798          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6556          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   9ZDZ06A00055      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00239      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AD0915E003K       SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AD0915E003A       SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MRC           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NL5           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKN           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N3U           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1T           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ808DJ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NG4           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80FND           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FKQ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLT           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKR           SFP+-10G-SR
```

```
    Xcvr 3       REV 01   740-031980   AK80LKM          SFP+-10G-SR
FPC 10           REV 32   750-028467   ABBN6813         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6542         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NA3          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLF          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MRH          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KE4          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00030     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80L9H          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80ME8          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLR          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG1          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MCA          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LFC          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LEM          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N9X          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80LAC          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LF2          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N8T          SFP+-10G-SR
FPC 11           REV 30   750-028467   ABBN0281         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0526         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01326        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03973        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00950        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00674        SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00775        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04461        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01074        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02821        SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04501        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00757        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01623        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01022        SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04359        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02751        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02736        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01178        SFP+-10G-USR
FPC 12           REV 32   750-028467   ABBN6796         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7259         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01856        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01853        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01863        SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02863     SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02668     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02881     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01671     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02627     SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02725     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02692     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02730     SFP+-10G-SR
```

```
    Xcvr 3       REV 01   740-031980   163363A03081      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02736      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02568      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02747      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02579      SFP+-10G-SR
FPC 13           REV 30   750-028467   ABBN0270          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ0966          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NL1           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NXW           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KD2           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80FMD           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NKQ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MGH           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N38           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL7           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEL           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NKD           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KCY           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LHK           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80M5J           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MBE           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NLG           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LFH           SFP+-10G-SR
FPC 14           REV 32   750-028467   ABBN6790          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6515          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LZM           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MCC           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KCM           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KE0           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021310   C10F99155         SFP+-10G-LRM
    Xcvr 1       REV 01   740-021310   C10F99049         SFP+-10G-LRM
    Xcvr 2       REV 01   740-021310   C10F99128         SFP+-10G-LRM
    Xcvr 3       REV 01   740-021310   C10F99169         SFP+-10G-LRM
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LF3           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02597      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A03060      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03057      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEX           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FEU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FNM           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AJQ0Q5G           SFP+-10G-SR
FPC 15           REV 32   750-028467   ABBN6791          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7289          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00424         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01849         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01862         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01852         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00427         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00430         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01854         SFP+-10G-SR
```

```
    Xcvr 3       REV 01   740-031980   B11K00426         SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00429         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01864         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01850         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00522         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E01144         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00985         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00796         SFP+-10G-USR
    Xcvr 3       REV 01   740-031980   B11K01866         SFP+-10G-SR
FPC 16           REV 30   750-028467   ABBM4592          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0465          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01435         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01052         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01328         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01254         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02738         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02881         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01624         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00889         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02883         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00681         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E04306         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02813         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01801         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02753         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01156         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04324         SFP+-10G-USR
FPC 17           REV 32   750-028467   ABBN6810          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7237          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02638      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02082      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01674      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03058      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03048      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02729      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02566      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02567      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02878      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02739      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01959      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02660      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02731      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02588      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02673      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02654      SFP+-10G-SR
FPC 18           REV 30   750-028467   ABBM4739          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0487          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02569      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02886      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A03082      SFP+-10G-SR
```

```
    Xcvr 3       REV 01   740-031980   133363A00297      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02726      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A03050      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02884      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03076      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02581      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02873      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02582      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03083      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031981   UL70BU6           SFP+-10G-LR
    Xcvr 1       REV 01   740-031981   UL50QC6           SFP+-10G-LR
    Xcvr 2       REV 01   740-031981   UL708N6           SFP+-10G-LR
    Xcvr 3       REV 01   740-031981   UL603KK           SFP+-10G-LR
FPC 19           REV 32   750-028467   ABBN6827          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6508          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A01688      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A01724      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01773      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02593      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03061      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A03056      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02669      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03070      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02572      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02697      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02585      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03052      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02591      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02649      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02577      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02698      SFP+-10G-SR
ADC 0            REV 13   750-043596   ABBX5561          Adapter Card
ADC 1            REV 13   750-043596   ABBX5546          Adapter Card
ADC 2            REV 13   750-043596   ABBX5535          Adapter Card
ADC 3            REV 13   750-043596   ABBX5552          Adapter Card
ADC 4            REV 13   750-043596   ABBX5581          Adapter Card
ADC 5            REV 13   750-043596   ABBX5545          Adapter Card
ADC 6            REV 13   750-043596   ABBX5554          Adapter Card
ADC 7            REV 07   750-043596   ABBV7194          Adapter Card
ADC 8            REV 07   750-043596   ABBV7251          Adapter Card
ADC 9            REV 07   750-043596   ABBV7202          Adapter Card
ADC 10           REV 13   750-043596   ABBX5538          Adapter Card
ADC 11           REV 13   750-043596   ABBX5566          Adapter Card
ADC 12           REV 13   750-043596   ABBX5542          Adapter Card
ADC 13           REV 13   750-043596   ABBX5539          Adapter Card
ADC 14           REV 13   750-043596   ABBX5555          Adapter Card
ADC 15           REV 13   750-043596   ABBX5557          Adapter Card
ADC 16           REV 13   750-043596   ABBX5536          Adapter Card
ADC 17           REV 13   750-043596   ABBX5559          Adapter Card
ADC 18           REV 13   750-043596   ABBX5537          Adapter Card
ADC 19           REV 11   750-043596   ABBW5685          Adapter Card
Fan Tray 0       REV 2A   760-046960   ACAY0030          172mm FanTray - 6 Fans
Fan Tray 1       REV 2A   760-046960   ACAY0039          172mm FanTray - 6 Fans
```

```
Fan Tray 2       REV 2A   760-046960   ACAY0033          172mm FanTray - 6 Fans
Fan Tray 3       REV 2A   760-046960   ACAY0062          172mm FanTray - 6 Fans
```

show chassis hardware detail (MX2020 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E2227AFJ      MX2020
Midplane         REV 27   750-040240   ABAB9384          Lower Power Midplane
Midplane 1       REV 04   711-032386   ABAB9386          Upper Backplane
PMP 1            REV 05   711-032428   ACAJ1821          Upper Power Midplane
PMP 0            REV 04   711-032426   ACAJ1524          Lower Power Midplane
FPM Board        REV 06   760-040242   ABBT8837          Front Panel Display
PSM 0            REV 01   740-045050   1E02224006G       DC 52V Power Supply
Module
PSM 1            REV 01   740-045050   1E022240053       DC 52V Power Supply
Module
PSM 2            REV 01   740-045050   1E02224004K       DC 52V Power Supply
Module
PSM 3            REV 01   740-045050   1E022240056       DC 52V Power Supply
Module
PSM 4            REV 01   740-045050   1E022240054       DC 52V Power Supply
Module
PSM 5            REV 01   740-045050   1E02224005H       DC 52V Power Supply
Module
PSM 6            REV 01   740-045050   1E02224006S       DC 52V Power Supply
Module
PSM 7            REV 01   740-045050   1E02224005M       DC 52V Power Supply
Module
PSM 8            REV 01   740-045050   1E022240062       DC 52V Power Supply
Module
PSM 9            REV 03   740-045050   1EDB2350095       DC 52V Power Supply
Module
PSM 10           REV 03   740-045050   1EDB235009L       DC 52V Power Supply
Module
PSM 11           REV 03   740-045050   1EDB2350092       DC 52V Power Supply
Module
PSM 12           REV 03   740-045050   1EDB23500AT       DC 52V Power Supply
Module
PSM 13           REV 03   740-045050   1EDB2350094       DC 52V Power Supply
Module
PSM 15           REV 03   740-045050   1EDB235008X       DC 52V Power Supply
Module
PDM 0            REV 01   740-045234   1E012150033       DC Power Dist Module
PDM 1            REV 01   740-045234   1E012150027       DC Power Dist Module
PDM 2            REV 01   740-045234   1E262250072       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009094138        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDisk VCF3 20110825A021D0000064 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000347 Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009089709        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 00000113 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-478612-001044 Disk 1
CB 0             REV 08   750-040257   CAAB3482          Control Board
CB 1             REV 04   750-040257   ZT2864            Control Board
```

```
SPMB 0           REV 02   711-041855   CAAA6141          PMB Board
SPMB 1           REV 01   711-041855   ZS2275            PMB Board
SFB 0            REV 05   711-044466   ABBT2161          Switch Fabric Board
SFB 1            REV 05   711-044466   ABBT2159          Switch Fabric Board
SFB 2            REV 05   711-044466   ABBX3718          Switch Fabric Board
SFB 3            REV 05   711-044466   ABBT2152          Switch Fabric Board
SFB 4            REV 05   711-044466   ABBT2160          Switch Fabric Board
SFB 5            REV 05   711-044466   ABBT2145          Switch Fabric Board
SFB 6            REV 05   711-044466   ABBT2150          Switch Fabric Board
SFB 7            REV 05   711-044466   ABBT2163          Switch Fabric Board
FPC 0            REV 30   750-028467   ABBN0284          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0507          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00990         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04357         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01327         SFP+-10G-USR
Xcvr 3       REV 01   740-030658   B11E04375         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02760         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02904         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E03963         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00756         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04418         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01077         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01128         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01253         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E01140         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01626         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01075         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01177         SFP+-10G-USR
FPC 1            REV 30   750-028467   ABBN0308          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1095          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04305         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01147         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01195         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01743         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01892         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02880         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00725         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01057         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02816         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11C04501         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02764         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00789         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01250         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00787         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E03803         SFP+-10G-USR
FPC 2            REV 30   750-028467   ABBN0316          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1082          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00523         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01848         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01865         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00540         SFP+-10G-SR
```

```
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00422         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00428         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00423         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01855         SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01847         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00526         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00529         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00525         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
Xcvr 0       REV 01   740-031980   B11K00425         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00530         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01851         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00528         SFP+-10G-SR
FPC 3            REV 32   750-028467   ABBN6832          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6534          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MB4           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FQ6           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N1F           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLQ           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80KDR           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FGJ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N5G           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KD8           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LET           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80N1X           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRF           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL2           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N3D           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MRB           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LEQ           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LER           SFP+-10G-SR
FPC 4            REV 32   750-028467   ABBN6811          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7288          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NK8           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80LJG           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LBU           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N21           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEU           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLM           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NL6           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LES           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEN           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80ME0           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LMG           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM1           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MG7           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KF9           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRQ           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLE           SFP+-10G-SR
FPC 5            REV 32   750-028467   ABBN6791          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7289          AMPC PMB
```

```
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00424         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01849         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01862         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01852         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP
Xcvr 0       REV 01   740-031980   B11K00427         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00430         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01854         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00426         SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00429         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01864         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01850         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00522         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E01144         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00985         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00796         SFP+-10G-USR
    Xcvr 3       REV 01   740-031980   B11K01866         SFP+-10G-SR
FPC 6            REV 30   750-028467   ABBM4592          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0465          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01435         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01052         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01328         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01254         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02738         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02881         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01624         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00889         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02883         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00681         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E04306         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02813         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01801         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02753         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01156         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04324         SFP+-10G-USR
FPC 7            REV 32   750-028467   ABBN6810          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7237          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03058      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02082      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01674      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02638      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03048      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02729      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02566      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02567      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02878      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02739      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01959      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02660      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02731      SFP+-10G-SR
```

```
    Xcvr 1       REV 01   740-031980   163363A02588      SFP+-10G-SR
 Xcvr 2       REV 01   740-031980   163363A02673      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02654      SFP+-10G-SR
FPC 8            REV 30   750-028467   ABBM4739          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0487          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02569      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02886      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A03082      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   133363A00297      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02726      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A03050      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02884      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03076      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02581      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02873      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02582      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03083      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031981   UL70BU6           SFP+-10G-LR
    Xcvr 1       REV 01   740-031981   UL50QC6           SFP+-10G-LR
    Xcvr 2       REV 01   740-031981   UL708N6           SFP+-10G-LR
    Xcvr 3       REV 01   740-031981   UL603KK           SFP+-10G-LR
FPC 9            REV 32   750-028467   ABBN6827          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6508          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A01688      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A01724      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01773      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02593      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03061      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A03056      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02669      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03070      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02572      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02697      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02585      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03052      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02591      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02649      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02577      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02698      SFP+-10G-SR
FPC 10           REV 30   750-028467   ABBN0302          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0495          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01581         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01176         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01251         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02752         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00786         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01020         SFP+-10G-USR
 Xcvr 2       REV 01   740-030658   B11E01023         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02819         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02812         SFP+-10G-USR
```

```
    Xcvr 1       REV 01   740-030658   B11D04437         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01279         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01333         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00978         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01018         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01784         SFP+-10G-USR
    Xcvr 3       REV 01   740-031980   AK80NKP           SFP+-10G-SR
FPC 11           REV 32   750-028467   ABBN6790          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6515          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LZM           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MCC           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KCM           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KE0           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021310   C10F99155         SFP+-10G-LRM
    Xcvr 1       REV 01   740-021310   C10F99049         SFP+-10G-LRM
    Xcvr 2       REV 01   740-021310   C10F99128         SFP+-10G-LRM
    Xcvr 3       REV 01   740-021310   C10F99169         SFP+-10G-LRM
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LF3           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02597      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A03060      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03057      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEX           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FEU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FNM           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AJQ0Q5G           SFP+-10G-SR
FPC 12           REV 30   750-028467   ZM5111            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ZP6607            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LJA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MFZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKL           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KF4           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FBJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MM2           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LJV           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NXV           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1H           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLS           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FL5           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL9           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG2           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KDU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MG1           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM0           SFP+-10G-SR
FPC 13           REV 30   750-028467   ABBN0208          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1084          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04745         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01570         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E04388         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01439         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04739         SFP+-10G-USR
```

```
    Xcvr 1       REV 01   740-030658   B11F01869         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01675         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01901         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01346         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01288         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01824         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04312         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02811         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01495         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01265         SFP+-10G-USR
FPC 14           REV 23   750-028467   YN2977            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   YP1856            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00875      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00851      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00772      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00882      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00735      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00169      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00726      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00077      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00168      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00676      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00732      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00091      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00725      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00642      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00871      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00853      SFP+-10G-SR
FPC 15           REV 32   750-028467   ABBN6798          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6556          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   9ZDZ06A00055      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00239      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AD0915E003K       SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AD0915E003A       SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MRC           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NL5           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKN           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N3U           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1T           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ808DJ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NG4           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80FND           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FKQ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLT           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKR           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LKM           SFP+-10G-SR
FPC 16           REV 30   750-028467   ABBN0270          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ0966          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NL1           SFP+-10G-SR
```

```
    Xcvr 1       REV 01   740-031980   AK80NXW          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KD2          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80FMD          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NKQ          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MGH          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N38          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL7          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80M5J          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NKD          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KCY          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LHK          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEL          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MBE          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NLG          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LFH          SFP+-10G-SR
FPC 17           REV 32   750-028467   ABBN6796         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7259         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01856        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01853        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01863        SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02863     SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02668     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02881     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01671     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02627     SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02725     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02692     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02730     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03081     SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02736     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02568     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02747     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02579     SFP+-10G-SR
FPC 18           REV 30   750-028467   ABBN0281         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0526         AMPC PMB
PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01326        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03973        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00950        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00674        SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00775        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04461        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01074        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02821        SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04501        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00757        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01623        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01022        SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04359        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02751        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02736        SFP+-10G-USR
```

```
    Xcvr 3       REV 01   740-030658   B11E01178         SFP+-10G-USR
FPC 19           REV 32   750-028467   ABBN6813          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6542          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NA3           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLF           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MRH           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KE4           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00030      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80L9H           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80ME8           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLR           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG1           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MCA           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LFC           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LEM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N9X           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80LAC           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LF2           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N8T           SFP+-10G-SR
ADC 0            REV 13   750-043596   ABBX5561          Adapter Card
ADC 1            REV 13   750-043596   ABBX5546          Adapter Card
ADC 2            REV 13   750-043596   ABBX5535          Adapter Card
ADC 3            REV 13   750-043596   ABBX5552          Adapter Card
ADC 4            REV 13   750-043596   ABBX5581          Adapter Card
ADC 5            REV 13   750-043596   ABBX5545          Adapter Card
ADC 6            REV 13   750-043596   ABBX5554          Adapter Card
ADC 7            REV 07   750-043596   ABBV7194          Adapter Card
ADC 8            REV 07   750-043596   ABBV7251          Adapter Card
ADC 9            REV 07   750-043596   ABBV7202          Adapter Card
ADC 10           REV 13   750-043596   ABBX5579          Adapter Card
ADC 11           REV 13   750-043596   ABBX5548          Adapter Card
ADC 12           REV 13   750-043596   ABBX5575          Adapter Card
ADC 13           REV 13   750-043596   ABBX5539          Adapter Card
ADC 14           REV 13   750-043596   ABBX5555          Adapter Card
ADC 15           REV 13   750-043596   ABBX5557          Adapter Card
ADC 16           REV 13   750-043596   ABBX5536          Adapter Card
ADC 17           REV 13   750-043596   ABBX5559          Adapter Card
ADC 18           REV 13   750-043596   ABBX5537          Adapter Card
ADC 19           REV 11   750-043596   ABBW5685          Adapter Card
Fan Tray 0       REV 04   760-046960   ACAY0090          172mm FanTray - 6 Fans
Fan Tray 1       REV 04   760-046960   ACAY0088          172mm FanTray - 6 Fans
Fan Tray 2       REV 04   760-046960   ACAY0089          172mm FanTray - 6 Fans
Fan Tray 3       REV 04   760-046960   ACAY0108          172mm FanTray - 6 Fans
```

show chassis hardware models (MX2020 Router)

```
user@host > show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 27   750-040240   ABAB9384          750-040240
FPM Board        REV 06   760-040242   ABBT8837          760-040242
PSM 0            REV 01   740-045050   1E02224006G       MX2000-PSM-HC-DC-S-A
PSM 1            REV 01   740-045050   1E022240053       MX2000-PSM-HC-DC-S-A
PSM 2            REV 01   740-045050   1E02224004K       MX2000-PSM-HC-DC-S-A
PSM 3            REV 01   740-045050   1E022240056       MX2000-PSM-HC-DC-S-A
PSM 4            REV 01   740-045050   1E022240054       MX2000-PSM-HC-DC-S-A
PSM 5            REV 01   740-045050   1E02224005H       MX2000-PSM-HC-DC-S-A
```

```
PSM 6            REV 01   740-045050   1E02224006S       MX2000-PSM-HC-DC-S-A
PSM 7            REV 01   740-045050   1E02224005M       MX2000-PSM-HC-DC-S-A
PSM 8            REV 01   740-045050   1E022240062       MX2000-PSM-HC-DC-S-A
PSM 9            REV 03   740-045050   1EDB2350095       MX2000-PSM-DC-S-A
PSM 10           REV 03   740-045050   1EDB235009L       MX2000-PSM-DC-S-A
PSM 11           REV 03   740-045050   1EDB2350092       MX2000-PSM-DC-S-A
PSM 12           REV 03   740-045050   1EDB23500AT       MX2000-PSM-DC-S-A
PSM 13           REV 03   740-045050   1EDB2350094       MX2000-PSM-DC-S-A
PSM 15           REV 03   740-045050   1EDB235008X       MX2000-PSM-DC-S-A
PDM 0            REV 01   740-045234   1E012150033
PDM 1            REV 01   740-045234   1E012150027
PDM 2            REV 01   740-045234   1E262250072       MX2000-PDM-DC-S-A
Routing Engine 0 REV 02   740-041821   9009094138        RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821   9009089709        RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   CAAB3482          750-040257
CB 1             REV 04   750-040257   ZT2864            750-040257
SFB 0            REV 05   711-044466   ABBT2161          MX2000-SFB-S
SFB 1            REV 05   711-044466   ABBT2159          MX2000-SFB-S
SFB 2            REV 05   711-044466   ABBX3718          MX2000-SFB-S
SFB 4            REV 05   711-044466   ABBT2160          MX2000-SFB-S
SFB 5            REV 05   711-044466   ABBT2145          MX2000-SFB-S
SFB 7            REV 05   711-044466   ABBT2163          MX2000-SFB-S
FPC 0            REV 30   750-028467   ABBN0284          MPC-3D-16XGE-SFPP
FPC 1            REV 30   750-028467   ABBN0308          MPC-3D-16XGE-SFPP
FPC 2            REV 30   750-028467   ABBN0316          MPC-3D-16XGE-SFPP
FPC 3            REV 32   750-028467   ABBN6832          MPC-3D-16XGE-SFPP
FPC 4            REV 32   750-028467   ABBN6811          MPC-3D-16XGE-SFPP
FPC 5            REV 32   750-028467   ABBN6791          MPC-3D-16XGE-SFPP
FPC 6            REV 30   750-028467   ABBM4592          MPC-3D-16XGE-SFPP
FPC 7            REV 32   750-028467   ABBN6810          MPC-3D-16XGE-SFPP
FPC 8            REV 30   750-028467   ABBM4739          MPC-3D-16XGE-SFPP
FPC 9            REV 32   750-028467   ABBN6827          MPC-3D-16XGE-SFPP
FPC 10           REV 30   750-028467   ABBN0302          MPC-3D-16XGE-SFPP
FPC 11           REV 32   750-028467   ABBN6790          MPC-3D-16XGE-SFPP
FPC 12           REV 30   750-028467   ZM5111            MPC-3D-16XGE-SFPP
FPC 13           REV 30   750-028467   ABBN0208          MPC-3D-16XGE-SFPP
FPC 14           REV 23   750-028467   YN2977            MPC-3D-16XGE-SFPP
FPC 15           REV 32   750-028467   ABBN6798          MPC-3D-16XGE-SFPP
FPC 16           REV 30   750-028467   ABBN0270          MPC-3D-16XGE-SFPP
FPC 17           REV 32   750-028467   ABBN6796          MPC-3D-16XGE-SFPP
FPC 18           REV 30   750-028467   ABBN0281          MPC-3D-16XGE-SFPP
FPC 19           REV 32   750-028467   ABBN6813          MPC-3D-16XGE-SFPP
ADC 0            REV 13   750-043596   ABBX5561          PROTO-ASSEMBLY
ADC 1            REV 13   750-043596   ABBX5546          PROTO-ASSEMBLY
ADC 2            REV 13   750-043596   ABBX5535          MX2000-LC-ADAPTER
ADC 3            REV 13   750-043596   ABBX5552          MX2000-LC-ADAPTER
ADC 4            REV 13   750-043596   ABBX5581          MX2000-LC-ADAPTER
ADC 5            REV 13   750-043596   ABBX5545          PROTO-ASSEMBLY
ADC 6            REV 13   750-043596   ABBX5554          PROTO-ASSEMBLY
ADC 7            REV 07   750-043596   ABBV7194          MX2000-LC-ADAPTER
ADC 8            REV 07   750-043596   ABBV7251          MX2000-LC-ADAPTER
ADC 9            REV 07   750-043596   ABBV7202          MX2000-LC-ADAPTER
ADC 10           REV 13   750-043596   ABBX5579          MX2000-LC-ADAPTER
ADC 12           REV 13   750-043596   ABBX5575          MX2000-LC-ADAPTER
ADC 13           REV 13   750-043596   ABBX5539          PROTO-ASSEMBLY
ADC 14           REV 13   750-043596   ABBX5555          PROTO-ASSEMBLY
ADC 15           REV 13   750-043596   ABBX5557          MX2000-LC-ADAPTER
ADC 16           REV 13   750-043596   ABBX5536          PROTO-ASSEMBLY
ADC 17           REV 13   750-043596   ABBX5559          PROTO-ASSEMBLY
ADC 18           REV 13   750-043596   ABBX5537          PROTO-ASSEMBLY
ADC 19           REV 11   750-043596   ABBW5685          PROTO-ASSEMBLY
```

```
Fan Tray 0       REV 04   760-046960   ACAY0090
Fan Tray 1       REV 04   760-046960   ACAY0088
Fan Tray 2       REV 04   760-046960   ACAY0089
Fan Tray 3       REV 04   760-046960   ACAY0108
```

show chassis hardware clei-models (MX2020 Router)

```
user@ host > show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 27   750-040240   PROTOXCLEI        750-040240
FPM Board        REV 06   760-040242   PROTOXCLEI        760-040242
PSM 0            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 1            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 2            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 3            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 4            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 5            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 6            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 7            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 8            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 9            REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 10           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 11           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 12           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 13           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 15           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PDM 0            REV 01   740-045234
PDM 1            REV 01   740-045234
PDM 2            REV 01   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S-A
Routing Engine 0 REV 02   740-041821                     RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821                     RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   PROTOXCLEI        750-040257
CB 1             REV 04   750-040257   PROTOXCLEI        750-040257
SFB 0            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 1            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 2            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 4            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 5            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 7            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
FPC 0            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 1            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 2            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 3            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 4            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 5            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 6            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 7            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 8            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 9            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 10           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 11           REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 12           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 13           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 14           REV 23   750-028467                     MPC-3D-16XGE-SFPP
FPC 15           REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 16           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 17           REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 18           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 19           REV 32   750-028467                     MPC-3D-16XGE-SFPP
ADC 0            REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
```

```
ADC 1            REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 2            REV 13   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 3            REV 13   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 4            REV 13   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 5            REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 6            REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 7            REV 07   750-043596   PROTOXCLEI        MX2000-LC-ADAPTER
ADC 8            REV 07   750-043596   PROTOXCLEI        MX2000-LC-ADAPTER
ADC 9            REV 07   750-043596   PROTOXCLEI        MX2000-LC-ADAPTER
ADC 10           REV 13   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 12           REV 13   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 13           REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 14           REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 15           REV 13   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 16           REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 17           REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 18           REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 19           REV 11   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
Fan Tray 0       REV 04   760-046960
Fan Tray 1       REV 04   760-046960
Fan Tray 2       REV 04   760-046960
Fan Tray 3       REV 04   760-046960
```

show chassis hardware (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN120BADBAFJ      MX2020
Midplane         REV 51   750-040240   ABAB9243          Lower Backplane
Midplane 1       REV 04   711-032386   ABAB9399          Upper Backplane
PMP 1            REV 05   711-032428   ACAJ2541          Upper Power Midplane
PMP 0            REV 04   711-032426   ACAJ2194          Lower Power Midplane
FPM Board        REV 13   760-040242   ABCA8835          Front Panel Display
PSM 0            REV 01   740-050037   1EDB32403L5       DC 52V Power Supply
Module
PSM 1            REV 01   740-050037   1EDB32403L3       DC 52V Power Supply
Module
PSM 2            REV 01   740-050037   1EDB32403KM       DC 52V Power Supply
Module
PSM 3            REV 01   740-050037   1EDB3130079       DC 52V Power Supply
Module
PSM 4            REV 01   740-050037   1EDB3130077       DC 52V Power Supply
Module
PSM 5            REV 01   740-050037   1EDB3130020       DC 52V Power Supply
Module
PSM 6            REV 01   740-050037   1EDB313009S       DC 52V Power Supply
Module
PSM 7            REV 01   740-050037   1EDB313008E       DC 52V Power Supply
Module
PSM 8            REV 01   740-050037   1EDB3130063       DC 52V Power Supply
Module
PSM 12           REV 01   740-050037   1EDB3130026       DC 52V Power Supply
Module
PSM 13           REV 01   740-050037   1EDB3130074       DC 52V Power Supply
Module
PSM 14           REV 01   740-050037   1EDB313009D       DC 52V Power Supply
Module
PSM 15           REV 01   740-050037   1EDB3130024       DC 52V Power Supply
Module
PSM 16           REV 01   740-050037   1EDB3130054       DC 52V Power Supply
```

```
Module
PSM 17           REV 01   740-050037   1EDB3130080       DC 52V Power Supply
Module
PDM 0            REV 03   740-045234   1EGA3170144       DC Power Dist Module
PDM 1            REV 03   740-045234   1EGA3170158       DC Power Dist Module
PDM 2            REV 03   740-045234   1EGA3170182       DC Power Dist Module
PDM 3            REV 03   740-045234   1EGA3170207       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009112112        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009112087        RE-S-1800x4
CB 0             REV 23   750-040257   CABA2295          Control Board
CB 1             REV 23   750-040257   CABE8379          Control Board
SPMB 0           REV 02   711-041855   ABCE8851          PMB Board
SPMB 1           REV 02   711-041855   ABCE8839          PMB Board
SFB 0            REV 06   711-044466   ABCD5001          Switch Fabric Board
SFB 1            REV 06   711-044466   ABCD5034          Switch Fabric Board
SFB 2            REV 06   711-044466   ABCH3899          Switch Fabric Board
SFB 3            REV 06   711-044466   ABCD5020          Switch Fabric Board
SFB 4            REV 06   711-044466   ABCD4975          Switch Fabric Board
SFB 5            REV 06   711-044466   ABCH3881          Switch Fabric Board
SFB 6            REV 06   711-044466   ABCD5026          Switch Fabric Board
SFB 7            REV 06   711-044466   ABCD5032          Switch Fabric Board
FPC 0            REV 39   750-045715   CACD1902          MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACB1933          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   B11F00361         SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   19T511101854      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   19T511100377      SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   ANT0878           SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   19T511100398      SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQ4363J           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   19T511101377      SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   ANT072M           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AG90C7N           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AM30M09           SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B10E01016         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
 Xcvr 0       REV 01   740-031980   B10L04151         SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   19T511101379      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5036J           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AG90C4M           SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   19T511101104      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQ502ZM           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AN10KY2           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQ43G41           SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQ41F04           SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AMS16N3           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AMH04Y3           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   ANA093E           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ         REV 09   750-049136   CABN0410          MPC5E 24XGE OTN Mezz
FPC 1            REV 11   750-045372   CABK8112          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABJ6621          HMPC PMB 2G
  MIC 0          REV 07   750-033307   CAAZ2897          10X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-021308   AQ501VK           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ501YC           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQ43HJF           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ43H8D           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   19T511100370      SFP+-10G-SR
      Xcvr 5     REV 01   740-031980   153363A00763      SFP+-10G-SR
```

```
      Xcvr 6     REV 01   740-021308   APH2LXB          SFP+-10G-SR
      Xcvr 7     REV 01   740-031980   AMC0LVV          SFP+-10G-SR
      Xcvr 8     REV 01   740-031980   B11F00230        SFP+-10G-SR
  MIC 1          REV 14   750-033196   CAAP1390         1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN          1X100GE CXP
      Xcvr 0     REV 01   740-032166   XB11F000M        CFP2-100G-SR10
FPC 2            REV 17   750-037355   CAAS5826         MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAR3986         HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   T09F43722        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   ALP0KXF          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ502FG          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502T7          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00571        CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-031980   AJ71KEH          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11E01355        SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11F00249        SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP
FPC 3            REV 05   750-044444   CAAY9920         MPCE Type 2 3D P
  CPU            REV 04   711-038484   CAAW3639         MPCE PMB 2G
  MIC 0          REV 28   750-028387   CAAX1083         3D 4x 10GE  XFP
    PIC 0                 BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0               NON-JNPR     CC07BK05B        XFP-10G-SR
      Xcvr 1     REV 01   740-011571   C728XJ00U        XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0               NON-JNPR     T12L92339        XFP-10G-SR
  QXM 0          REV 06   711-028408   CAAW4915         MPC QXM
  QXM 1          REV 06   711-028408   CAAW4894         MPC QXM
FPC 4            REV 18   750-046005   CACH5661         MPC5E 3D Q 2CGE+4XGE
 CPU            REV 09   711-045719   CACF2880         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          2X10GE SFPP OTN
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03Y        CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          2X10GE SFPP OTN
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-049775   J13K72997        CFP2-100G-LR4-D
FPC 5            REV 35   750-028467   CAAR2623         MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAR0491         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ5027T          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502J0          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5027S          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ501Y7          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ501YB          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ503EB          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ43HJH          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ43J0Y          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ50352          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501X6          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ502NV          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502ZJ          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ502H4          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ43HJK          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJ30CU7          SFP+-10G-SR
FPC 9            REV 30   750-044130   ABCF5773         MPC6E 3D
  CPU            REV 09   711-045719   ABCF1270         RMPC PMB
```

```
  MIC 0          REV 05   750-049457   ABCD7829          2X100GE CFP2 OTN
    PIC 0                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0              NON-JNPR     FE13F000K         CFP2-100G-SR10
      Xcvr 1     REV 01   740-048813   XD32FE017         CFP2-100G-LR-D
  MIC 1          REV 07   750-049457   ABCK2812          2X100GE CFP2 OTN
    PIC 1                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0     REV 01   740-048813   XD32FE018         CFP2-100G-SR10
      Xcvr 1              NON-JNPR     FE13F000E         CFP2-100G-LR4-D
  XLM 0          REV 05.2.00 711-046638 ABCF5915         MPC6E XL
  XLM 1          REV 05.2.00 711-046638 ABCF5916         MPC6E XL
FPC 10           REV 36   750-044130   ABCS8602          MPC6E 3D
  CPU            REV 09   711-045719   ABCS8779          RMPC PMB
  MIC 0          REV 06   750-049979   ABCK2656          24X10GE SFPP OTN
    PIC 0                 BUILTIN      BUILTIN           24X10GE SFPP OTN
      Xcvr 0     REV 01   740-021308   AQ43J08           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQE1Y2E           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQE1UW4           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQE1MQF           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   AQG0MN1           SFP+-10G-SR
      Xcvr 5     REV 01   740-021308   AQE1L9M           SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   AQG0MPD           SFP+-10G-SR
      Xcvr 7     REV 01   740-021308   AQE1Y2B           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   AQG0LT5           SFP+-10G-SR
      Xcvr 9     REV 01   740-021308   AQD2ET4           SFP+-10G-SR
      Xcvr 10    REV 01   740-021308   AQG0MPC           SFP+-10G-SR
      Xcvr 11    REV 01   740-021308   AQG0M63           SFP+-10G-SR
     Xcvr 12    REV 01   740-021308   AQG0LT1           SFP+-10G-SR
      Xcvr 13    REV 01   740-021308   AQG0M4L           SFP+-10G-SR
      Xcvr 14    REV 01   740-021308   AQG0LS7           SFP+-10G-SR
      Xcvr 15    REV 01   740-021308   AQE1MQB           SFP+-10G-SR
      Xcvr 16    REV 01   740-021308   AQG0LZP           SFP+-10G-SR
      Xcvr 17    REV 01   740-021308   AQE1LU9           SFP+-10G-SR
      Xcvr 18    REV 01   740-021308   AQG0MRZ           SFP+-10G-SR
      Xcvr 19    REV 01   740-021308   AQE1MQ9           SFP+-10G-SR
      Xcvr 20    REV 01   740-021308   AQG0LRX           SFP+-10G-SR
      Xcvr 21    REV 01   740-021308   AQE1UWD           SFP+-10G-SR
      Xcvr 22    REV 01   740-021308   AQG0LT4           SFP+-10G-SR
      Xcvr 23    REV 01   740-021308   AQE1MQL           SFP+-10G-SR
  MIC 1          REV 12   750-050008   ABCK5372          4X100GE CXP
    PIC 1                 BUILTIN      BUILTIN           4X100GE CXP
      Xcvr 3     REV 01   740-046563   XD16FC02Z         CFP2-100G-SR10
  XLM 0          REV 07.2.00 711-046638 ABCK3481         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK4725         MPC6E XL
FPC 17           REV 28   750-044130   ABBZ3873          MPC6E 3D
  CPU            REV 08   711-045719   ABBZ3770          RMPC PMB
  MIC 0          REV 11   750-046535   ABCC7731          24X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           24X10GE SFPP
      Xcvr 1     REV 01   740-021308   APK0543           SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   B10G01119         SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ502SX           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   AQ43H84           SFP+-10G-SR
      Xcvr 5     REV 01   740-021308   AQ501TB           SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   AQ502JZ           SFP+-10G-SR
      Xcvr 7     REV 01   740-021308   AQ502SC           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   AQ502JW           SFP+-10G-SR
      Xcvr 9     REV 01   740-021308   AQ502RM           SFP+-10G-SR
      Xcvr 10    REV 01   740-031980   AHK013B           SFP+-10G-SR
      Xcvr 11    REV 01   740-021308   AQG0MRT           SFP+-10G-SR
      Xcvr 13    REV 01   740-031980   AMC0JTC           SFP+-10G-SR
      Xcvr 14    REV 01   740-021308   ANA0MQ0           SFP+-10G-SR
      Xcvr 15    REV 01   740-021308   AQ502GS           SFP+-10G-SR
```

```
      Xcvr 16    REV 01   740-021308   AQG0M0J          SFP+-10G-SR
      Xcvr 17    REV 01   740-021308   AQG0MUR          SFP+-10G-SR
      Xcvr 18    REV 01   740-021308   AQG0MRR          SFP+-10G-SR
      Xcvr 19    REV 01   740-021308   AQG0M0F          SFP+-10G-SR
      Xcvr 20    REV 01   740-021308   AQ50312          SFP+-10G-SR
      Xcvr 21    REV 01   740-021308   AQ5032U          SFP+-10G-SR
      Xcvr 22    REV 01   740-021308   APE17B5          SFP+-10G-SR
      Xcvr 23    REV 01   740-021309   91D104A00011     SFP+-10G-LR
  MIC 1          REV 03   750-050008   ABCC4522         4X100GE CXP
    PIC 1                 BUILTIN      BUILTIN          4X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC02U        CFP2-100G-SR10
      Xcvr 1     REV 01   740-046563   XC42FC03K        CFP2-100G-SR10
      Xcvr 2     REV 01   740-046563   XC42FC01Z        CFP2-100G-SR10
      Xcvr 3     REV 01   740-046563   XC42FC02U        CFP2-100G-SR10
  XLM 0          REV 04.2.00 711-046638 ABBZ3779        MPC6E XL
  XLM 1          REV 04.2.00 711-046638 ABBZ3780        MPC6E XL
FPC 18           REV 39   750-045715   CACD1910         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1817         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 1                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN          3X40GE QSFPP
 Xcvr 0       REV 01   740-046565   QD130194         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130193         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130196         QSFP+-40G-SR4
  PIC 3                   BUILTIN      BUILTIN          3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130191         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130198         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130192         QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0411         MPC5E 24XGE OTN Mezz
FPC 19           REV 39   750-045715   CACD1908         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1820         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          12X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA0EXJ          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0M6D          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQG0LW7          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQA0JKB          SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   AQG0MTM          SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQA07NE          SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQG0M41          SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQG0MU7          SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQG0MUG          SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQG0MMX          SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQG0M5K          SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQG0LVZ          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN          3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN          3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130242         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130245         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130613         QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0418         MPC5E 24XGE OTN Mezz
ADC 0            REV 17   750-043596   ABCD5378         Adapter Card
ADC 1            REV 17   750-043596   ABCD5465         Adapter Card
ADC 2            REV 17   750-043596   ABCD5431         Adapter Card
ADC 3            REV 17   750-043596   ABCD5356         Adapter Card
ADC 4            REV 02   750-043596   ZW1545           Adapter Card
ADC 5            REV 17   750-043596   ABCD5517         Adapter Card
ADC 18           REV 17   750-043596   ABCD5535         Adapter Card
ADC 19           REV 01   750-043596   ZV4127           Adapter Card
Fan Tray 0       REV 06   760-046960   ACAY0791         172mm FanTray - 6 Fans
Fan Tray 1       REV 06   760-046960   ACAY0788         172mm FanTray - 6 Fans
```

```
Fan Tray 2       REV 06   760-046960   ACAY0755          172mm FanTray - 6 Fans
Fan Tray 3       REV 06   760-046960   ACAY0441          172mm FanTray - 6 Fans
```

show chassis hardware detail (MX2020 Router with MPC5EQ and MPC6E)

```
user@host>show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN120BADBAFJ      MX2020
Midplane         REV 51   750-040240   ABAB9243          Lower Backplane
Midplane 1       REV 04   711-032386   ABAB9399          Upper Backplane
PMP 1            REV 05   711-032428   ACAJ2541          Upper Power Midplane
PMP 0            REV 04   711-032426   ACAJ2194          Lower Power Midplane
FPM Board        REV 13   760-040242   ABCA8835          Front Panel Display
PSM 0            REV 01   740-050037   1EDB32403L5       DC 52V Power Supply
Module
PSM 1            REV 01   740-050037   1EDB32403L3       DC 52V Power Supply
Module
PSM 2            REV 01   740-050037   1EDB32403KM       DC 52V Power Supply
Module
PSM 3            REV 01   740-050037   1EDB3130079       DC 52V Power Supply
Module
PSM 4            REV 01   740-050037   1EDB3130077       DC 52V Power Supply
Module
PSM 5            REV 01   740-050037   1EDB3130020       DC 52V Power Supply
Module
PSM 6            REV 01   740-050037   1EDB313009S       DC 52V Power Supply
Module
PSM 7            REV 01   740-050037   1EDB313008E       DC 52V Power Supply
Module
PSM 8            REV 01   740-050037   1EDB3130063       DC 52V Power Supply
Module
PSM 12           REV 01   740-050037   1EDB3130026       DC 52V Power Supply
Module
PSM 13           REV 01   740-050037   1EDB3130074       DC 52V Power Supply
Module
PSM 14           REV 01   740-050037   1EDB313009D       DC 52V Power Supply
Module
PSM 15           REV 01   740-050037   1EDB3130024       DC 52V Power Supply
Module
PSM 16           REV 01   740-050037   1EDB3130054       DC 52V Power Supply
Module
PSM 17           REV 01   740-050037   1EDB3130080       DC 52V Power Supply
Module
PDM 0            REV 03   740-045234   1EGA3170144       DC Power Dist Module
PDM 1            REV 03   740-045234   1EGA3170158       DC Power Dist Module
PDM 2            REV 03   740-045234   1EGA3170182       DC Power Dist Module
PDM 3            REV 03   740-045234   1EGA3170207       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009112112        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200274310822 113 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000031656       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009112087        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200274310822 366 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000039979       Disk 1
CB 0             REV 23   750-040257   CABA2295          Control Board
```

```
CB 1             REV 23   750-040257   CABE8379          Control Board
SPMB 0
SPMB 1
FPC 0            REV 39   750-045715   CACD1902          MPC5E 3D Q 24XGE+6XLGE
  CPU
FPC 1            REV 11   750-045372   CABK8112          MPCE Type 3 3D
  CPU
FPC 2            REV 17   750-037355   CAAS5826          MPC4E 3D 2CGE+8XGE
  CPU
FPC 3            REV 05   750-044444   CAAY9920          MPCE Type 2 3D P
  CPU
FPC 4            REV 18   750-046005   CACH5661          MPC5E 3D Q 2CGE+4XGE
  CPU
FPC 5            REV 35   750-028467   CAAR2623          MPC 3D 16x 10GE
 CPU
FPC 9            REV 30   750-044130   ABCF5773          MPC6E 3D
  CPU
FPC 10           REV 36   750-044130   ABCS8602          MPC6E 3D
  CPU
FPC 17           REV 28   750-044130   ABBZ3873          MPC6E 3D
  CPU
FPC 18           REV 39   750-045715   CACD1910          MPC5E 3D Q 24XGE+6XLGE
  CPU
FPC 19           REV 39   750-045715   CACD1908          MPC5E 3D Q 24XGE+6XLGE
  CPU
Fan Tray 0       REV 06   760-046960   ACAY0791          172mm FanTray - 6 Fans
Fan Tray 1       REV 06   760-046960   ACAY0788          172mm FanTray - 6 Fans
Fan Tray 2       REV 06   760-046960   ACAY0755          172mm FanTray - 6 Fans
Fan Tray 3       REV 06   760-046960   ACAY0441          172mm FanTray - 6 Fans
```

show chassis hardware extensive (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN120BADBAFJ      MX2020
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN120BADBAFJ
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2020
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 32 30 42 41 44 42 41 46 4a 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 51   750-040240   ABAB9243          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-040240        S/N:               ABAB9243
 Assembly ID:  0x0b22            Assembly Version:  01.51
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 51            CLEI Code:         IPMU710ARA
 ID: Lower Backplane             FRU Model Number:  CHAS-BP-MX2020-S
 Board Information Record:
  Address 0x00: ad 01 10 00 4c 96 14 72 30 08 ff ff ff ff ff ff
```

```
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 22 01 33 52 45 56 20 35 31 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 34 30 00 00
   Address 0x20: 53 2f 4e 20 41 42 41 42 39 32 34 33 00 1e 05 07
   Address 0x30: dd ff ff ff ad 01 10 00 4c 96 14 72 30 08 ff ff
   Address 0x40: ff ff ff ff 01 49 50 4d 55 37 31 30 41 52 41 43
   Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 32 30 2d 53 00
   Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d3 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1       REV 04   711-032386   ABAB9399          Upper Backplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-032386        S/N:               ABAB9399
  Assembly ID:  0x0b23            Assembly Version:  01.04
  Date:         10-22-2012        Assembly Flags:    0x00
  Version:      REV 04
  ID: Upper Backplane
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 fe 0b 23 01 04 52 45 56 20 30 34 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 33 38 36 00 00
   Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 39 39 00 16 0a 07
   Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
   Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP 1            REV 05   711-032428   ACAJ2541          Upper Power Midplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-032428        S/N:               ACAJ2541
  Assembly ID:  0x045c            Assembly Version:  01.05
  Date:         04-26-2013        Assembly Flags:    0x00
  Version:      REV 05
  ID: Upper Power Midplane
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 04 5c 01 05 52 45 56 20 30 35 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 38 00 00
   Address 0x20: 53 2f 4e 20 41 43 41 4a 32 35 34 31 00 1a 04 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
   Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP 0            REV 04   711-032426   ACAJ2194          Lower Power Midplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-032426        S/N:               ACAJ2194
  Assembly ID:  0x045d            Assembly Version:  01.04
  Date:         01-29-2013        Assembly Flags:    0x00
  Version:      REV 04
  ID: Lower Power Midplane
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
   Address 0x20: 53 2f 4e 20 41 43 41 4a 32 31 39 34 00 1d 01 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
   Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 13   760-040242   ABCA8835          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-040242        S/N:               ABCA8835
 Assembly ID:  0x0b24            Assembly Version:  01.13
 Date:         04-13-2013        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         IPMYAE5JRA
 ID: Front Panel Display         FRU Model Number:  MX2020-CRAFT-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 24 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 34 30 32 34 32 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 41 38 38 33 35 00 0d 04 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 59 41 45 35 4a 52 41 4d
  Address 0x50: 58 32 30 32 30 2d 43 52 41 46 54 2d 53 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 95 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0            REV 01   740-050037   1EDB32403L5       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32403L5
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         06-21-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 34 30 33 4c 35 00 00 15 06 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1            REV 01   740-050037   1EDB32403L3       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32403L3
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         06-21-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 34 30 33 4c 33 00 00 15 06 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2            REV 01   740-050037   1EDB32403KM       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```

```
 P/N:          740-050037        S/N:               1EDB32403KM
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         06-21-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 34 30 33 4b 4d 00 00 15 06 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3            REV 01   740-050037   1EDB3130079       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130079
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 37 39 00 00 10 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4            REV 01   740-050037   1EDB3130077       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130077
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 37 37 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5            REV 01   740-050037   1EDB3130020       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130020
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
```

```
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 32 30 00 00 10 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6            REV 01   740-050037   1EDB313009S       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB313009S
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 39 53 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7            REV 01   740-050037   1EDB313008E       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB313008E
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 38 45 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8            REV 01   740-050037   1EDB3130063       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130063
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
```

```
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 36 33 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 12           REV 01   740-050037   1EDB3130026       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130026
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 32 36 00 00 10 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 13           REV 01   740-050037   1EDB3130074       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130074
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 37 34 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 14           REV 01   740-050037   1EDB313009D       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB313009D
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 39 44 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 15           REV 01   740-050037   1EDB3130024       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130024
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
...
```

show chassis hardware models (MX2020 Routers with MPC5EQ and MPC6E)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 51   750-040240   ABAB9243          CHAS-BP-MX2020-S
FPM Board        REV 13   760-040242   ABCA8835          MX2020-CRAFT-S
PSM 0            REV 01   740-050037   1EDB32403L5       MX2000-PSM-DC-S
PSM 1            REV 01   740-050037   1EDB32403L3       MX2000-PSM-DC-S
PSM 2            REV 01   740-050037   1EDB32403KM       MX2000-PSM-DC-S
PSM 3            REV 01   740-050037   1EDB3130079       MX2000-PSM-DC-S
PSM 4            REV 01   740-050037   1EDB3130077       MX2000-PSM-DC-S
PSM 5            REV 01   740-050037   1EDB3130020       MX2000-PSM-DC-S
PSM 6            REV 01   740-050037   1EDB313009S       MX2000-PSM-DC-S
PSM 7            REV 01   740-050037   1EDB313008E       MX2000-PSM-DC-S
PSM 8            REV 01   740-050037   1EDB3130063       MX2000-PSM-DC-S
PSM 12           REV 01   740-050037   1EDB3130026       MX2000-PSM-DC-S
PSM 13           REV 01   740-050037   1EDB3130074       MX2000-PSM-DC-S
PSM 14           REV 01   740-050037   1EDB313009D       MX2000-PSM-DC-S
PSM 15           REV 01   740-050037   1EDB3130024       MX2000-PSM-DC-S
PSM 16           REV 01   740-050037   1EDB3130054       MX2000-PSM-DC-S
PSM 17           REV 01   740-050037   1EDB3130080       MX2000-PSM-DC-S
PDM 0            REV 03   740-045234   1EGA3170144       MX2000-PDM-DC-S
PDM 1            REV 03   740-045234   1EGA3170158       MX2000-PDM-DC-S
PDM 2            REV 03   740-045234   1EGA3170182       MX2000-PDM-DC-S
PDM 3            REV 03   740-045234   1EGA3170207       MX2000-PDM-DC-S
Routing Engine 0 REV 02   740-041821   9009112112        RE-MX2000-1800X4-S
Routing Engine 1 REV 02   740-041821   9009112087        RE-MX2000-1800X4-S
CB 0             REV 23   750-040257   CABA2295          RE-MX2000-1800X4-S
CB 1             REV 23   750-040257   CABE8379          RE-MX2000-1800X4-S
SFB 0            REV 06   711-044466   ABCD5001          MX2000-SFB-S
SFB 1            REV 06   711-044466   ABCD5034          MX2000-SFB-S
SFB 2            REV 06   711-044466   ABCH3899          MX2000-SFB-S
SFB 3            REV 06   711-044466   ABCD5020          MX2000-SFB-S
SFB 4            REV 06   711-044466   ABCD4975          MX2000-SFB-S
SFB 5            REV 06   711-044466   ABCH3881          MX2000-SFB-S
SFB 6            REV 06   711-044466   ABCD5026          MX2000-SFB-S
SFB 7            REV 06   711-044466   ABCD5032          MX2000-SFB-S
FPC 0            REV 39   750-045715   CACD1902          PROTO-ASSEMBLY
FPC 1            REV 11   750-045372   CABK8112          MX-MPC3E-3D
FPC 2            REV 17   750-037355   CAAS5826          MPC4E-3D-2CGE-8XGE
FPC 3            REV 05   750-044444   CAAY9920          MX-MPC2E-3D-P
FPC 4            REV 18   750-046005   CACH5661          PROTO-ASSEMBLY
```

```
FPC 5            REV 35   750-028467   CAAR2623          MPC-3D-16XGE-SFPP
FPC 9            REV 30   750-044130   ABCF5773          PROTO-ASSEMBLY
FPC 10           REV 36   750-044130   ABCS8602          PROTO-ASSEMBLY
FPC 17           REV 28   750-044130   ABBZ3873          PROTO-ASSEMBLY
FPC 18           REV 39   750-045715   CACD1910          PROTO-ASSEMBLY
FPC 19           REV 39   750-045715   CACD1908          PROTO-ASSEMBLY
ADC 0            REV 17   750-043596   ABCD5378          MX2000-LC-ADAPTER
ADC 1            REV 17   750-043596   ABCD5465          MX2000-LC-ADAPTER
ADC 2            REV 17   750-043596   ABCD5431          MX2000-LC-ADAPTER
ADC 3            REV 17   750-043596   ABCD5356          MX2000-LC-ADAPTER
ADC 4            REV 02   750-043596   ZW1545            750-043596
ADC 5            REV 17   750-043596   ABCD5517          MX2000-LC-ADAPTER
ADC 18           REV 17   750-043596   ABCD5535          MX2000-LC-ADAPTER
ADC 19           REV 01   750-043596   ZV4127            750-043596
Fan Tray 0       REV 06   760-046960   ACAY0791          MX2000-FANTRAY-S
Fan Tray 1       REV 06   760-046960   ACAY0788          MX2000-FANTRAY-S
Fan Tray 2       REV 06   760-046960   ACAY0755          MX2000-FANTRAY-S
Fan Tray 3       REV 06   760-046960   ACAY0441          MX2000-FANTRAY-S
```

show chassis hardware clei-models (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 51   750-040240   IPMU710ARA        CHAS-BP-MX2020-S
FPM Board        REV 13   760-040242   IPMYAE5JRA        MX2020-CRAFT-S
PSM 0            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 1            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 2            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 3            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 4            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 5            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 6            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 7            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 8            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 12           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 13           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 14           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 15           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 16           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 17           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PDM 0            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
PDM 1            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
PDM 2            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
PDM 3            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
CB 0             REV 23   750-040257   IPUCBA7CTA        RE-MX2000-1800X4-S
CB 1             REV 23   750-040257   IPUCBA7CTA        RE-MX2000-1800X4-S
SFB 0            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 1            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 2            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 3            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 4            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 5            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 6            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 7            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
FPC 0            REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
FPC 1            REV 11   750-045372   COUIBBNBAA        MX-MPC3E-3D
FPC 2            REV 17   750-037355   IPU3A4DHAA        MPC4E-3D-2CGE-8XGE
FPC 3            REV 05   750-044444   COUIBBGBAA        MX-MPC2E-3D-P
  MIC 0          REV 28   750-028387   COUIA16BAA        MIC-3D-4XGE-XFP
FPC 4            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
```

```
FPC 5            REV 35   750-028467                     MPC-3D-16XGE-SFPP
FPC 9            REV 30   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 0          REV 05   750-049457   PROTOXCLEI        PROTO-ASSEMBLY
FPC 10           REV 36   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 0          REV 06   750-049979   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 1          REV 12   750-050008   PROTOXCLEI        PROTO-ASSEMBLY
FPC 17           REV 28   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 1          REV 03   750-050008   PROTOXCLEI        PROTO-ASSEMBLY
FPC 18           REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
FPC 19           REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
ADC 0            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 1            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 2            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 3            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 4            REV 02   750-043596   PROTOXCLEI        750-043596
ADC 5            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 18           REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 19           REV 01   750-043596   PROTOXCLEI        750-043596
Fan Tray 0       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
Fan Tray 1       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
Fan Tray 2       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
Fan Tray 3       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
```

show chassis hardware (MX Series routers with ATM MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN115736EAFC      MX240
Midplane         REV 07   760-021404   ABAA5038          MX240 Backplane
FPM Board        REV 03   760-021392   ABBA2758          Front Panel Display
PEM 0            Rev 01   740-022697   QCS0937C07K       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 01   740-022697   QCS0939C04X       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 01   740-022697   QCS0937C06B       PS 1.2-1.7kW; 100-240V
AC in
PEM 3            Rev 01   740-022697   QCS0937C07U       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 12   740-013063   9009042291        RE-S-2000
Routing Engine 1 REV 12   740-013063   9009042266        RE-S-2000
CB 0             REV 06   710-021523   ABBC1435          MX SCB
CB 1             REV 06   710-021523   ABBC1497          MX SCB
FPC 2     REV 14   750-031088   YH8446            MPC Type 2 3D Q
  CPU            REV 06   711-030884   YH9612            MPC PMB 2G
  MIC 0
  MIC 1          REV 10   750-036132   ZP7062            2xOC12/8xOC3 CC-CE
    PIC 2                BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE

  Xcvr 0              NON-JNPR     23393-00492       UNKNOWN
      Xcvr 1              NON-JNPR     23393-00500       UNKNOWN
      Xcvr 2              NON-JNPR     23393-00912       UNKNOWN
      Xcvr 3     REV 01   740-015638   22216-00575       Load SFP
      Xcvr 4     REV 01   740-015638   24145-00110       Load SFP
      Xcvr 5     REV 01   740-015638   24145-00016       Load SFP
      Xcvr 6     REV 01   740-015638   24145-00175       Load SFP
      Xcvr 7              NON-JNPR     23393-00627       UNKNOWN
  QXM 0          REV 05   711-028408   YF4681            MPC QXM
  QXM 1          REV 05   711-028408   YF4817            MPC QXM
Fan Tray 0       REV 01   710-021113   XL3645            MX240 Fan Tray
```

show chassis hardware (MX240, MX480, MX960 routers with Application Services Modular Line Card)

```
user@host>show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11D969BAFA      MX960
Midplane         REV 03   710-013698   ACAA2362          MX960 Backplane
FPM Board        REV 03   710-014974   ZR0639            Front Panel Display
PDM             Rev 03   740-013110   QCS152250SX       Power Distribution Module
PEM 0            Rev 10   740-013683   QCS1512718W       DC Power Entry Module
PEM 1            Rev 10   740-013683   QCS1512702Y       DC Power Entry Module
Routing Engine 0 REV 15   740-013063   9012024667        RE-S-2000
Routing Engine 1 REV 15   740-013063   9012024649        RE-S-2000
CB 0             REV 14   750-031391   ZJ7749            Enhanced MX SCB
CB 1             REV 14   750-031391   ZJ7750            Enhanced MX SCB
CB 2             REV 14   750-031391   ZY9233            Enhanced MX SCB
FPC 0            REV 17   750-031089   YR7434            MPC Type 2 3D
  CPU
FPC 1            REV 11   750-037207   ZW9727            AS-MCC
  CPU            REV 04   711-038173   ZW4817            AS-MCC-PMB
  MIC 0          REV 01   750-037214   ZH3764            AS-MSC
    PIC 0                 BUILTIN      BUILTIN           AS-MSC
  MIC 1          REV 01   711-028408   JZ9200            AS-MXC
    PIC 2                 BUILTIN      BUILTIN           AS-MXC
FPC 4            REV 30   750-028467   ABBN0232          MPC 3D 16x 10GE
  CPU
FPC 5            REV 04   750-037207   ZK9074            AS-MCC
  CPU
Fan Tray 0       REV 05   740-014971   VT5683            Fan Tray
Fan Tray 1       REV 05   740-014971   VT5684            Fan Tray
```

show chassis hardware extensive (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```
user@host>  show chassis hardware extensive

ID: AS-MCC                      FRU Model Number:  750-037207
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
  Address 0x20: 53 2f 4e 20 5a 57 39 37 32 37 00 00 00 11 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 04   711-038173   ZW4817            AS-MCC-PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-038173        S/N:               ZW4817
 Assembly ID:  0x0b38            Assembly Version:  01.04
 Date:         12-30-2011        Assembly Flags:    0x00
 Version:      REV 04
 ID: AS-MCC-PMB
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
```

```
  Address 0x20: 53 2f 4e 20 5a 57 34 38 31 37 00 00 00 1e 0c 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00 00
  MIC 0          REV 01   750-037214   ZH3764            AS-MSC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-037214        S/N:               ZH3764
 Assembly ID:  0x0a44            Assembly Version:  01.01
 Date:         07-04-2011        Assembly Flags:    0x00
 Version:      REV 01
 ID: AS-MSC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0a 44 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 34 00 00
  Address 0x20: 53 2f 4e 20 5a 48 33 37 36 34 00 00 00 04 07 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f6 c0 03 e1 bc 00 00 00 00 00 00 00 00
    PIC 0                 BUILTIN      BUILTIN           AS-MSC
FPC 4            REV 30   750-028467   ABBN0232          MPC 3D 16x 10GE
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
```

show chassis hardware (MX480 Router with MPC4E)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10FF57BAFB      MX480
Midplane         REV 05   750-047849   Good              MX480 Midplane
FPM Board        REV 02   710-017254   KG2066            Front Panel Display
PEM 0            Rev 03   740-017330   QCS081590BJ       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 03   740-017330   QCS0815908Z       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 03   740-029970   QCS1001U001       PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009089502        RE-S-1800x4
Routing Engine 1 REV 05   740-031116   9009089624        RE-S-1800x4
CB 0             REV 02   750-031391   YE8506            Enhanced MX SCB
CB 1             REV 14   750-031391   ZK8265            Enhanced MX SCB
FPC 2            REV 05   750-037358   ZT0638            MPC4E 3D 32XGE
  CPU            REV 07   711-035209   ZK3187            HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           8X10GE SFPP
  PIC 1                   BUILTIN      BUILTIN           8X10GE SFPP
  PIC 2                   BUILTIN      BUILTIN           8X10GE SFPP
  PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
FPC 3            REV 06   750-037355   CAAB1144          MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAB1278          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   B11E01439         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11D05809         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     D5418             UNKNOWN
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00362         CFP-100G-SR10
```

```
FPC 4            REV 12.3.10 750-033205 YR9445          MPCE Type 3 3D
  CPU
Fan Tray                                                Enhanced Left Fan Tray
```

show chassis hardware (MX2020 Router with MPC4E)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E188CAFJ      MX2020
Midplane         REV 04   711-032387   ABAC7474          Lower Backplane
Midplane 1       REV 04   711-032386   ABAC7408          Upper Backplane
PMP 1            REV 03   711-032428   ACAJ1137          Upper Power Midplane
PMP 0            REV 03   711-032426   ACAJ1016          Lower Power Midplane
FPM Board        REV 06   760-040242   ABBT8832          Front Panel Display
PSM 3            REV 0C   740-033727   VK00255           DC 52V Power Supply
Module
PSM 4            REV 0C   740-033727   VJ00148           DC 52V Power Supply
Module
PSM 5            REV 0C   740-033727   VK00207           DC 52V Power Supply
Module
PSM 6            REV 0C   740-033727   VK00319           DC 52V Power Supply
Module
PSM 7            REV 0C   740-033727   VK00264           DC 52V Power Supply
Module
PSM 8            REV 0B   740-033727   VG00025           DC 52V Power Supply
Module
PSM 13           REV 0C   740-033727   VK00274           DC 52V Power Supply
Module
PSM 14           REV 0C   740-033727   VJ00167           DC 52V Power Supply
Module
PSM 15           REV 0C   740-033727   VK00299           DC 52V Power Supply
Module
PSM 16           REV 0C   740-033727   VK00213           DC 52V Power Supply
Module
PSM 17           REV 0C   740-033727   VK00253           DC 52V Power Supply
Module
PDM 0            REV 0B   740-038109   VJ00040           DC Power Dist Module
PDM 2            REV 0B   740-038109   VJ00025           DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009089735        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009089731        RE-S-1800x4
CB 0             REV 04   750-040257   ZT2846            Control Board
CB 1             REV 04   750-040257   ZT2877            Control Board
SPMB 0           REV 01   711-041855   ZS2282            PMB Board
SPMB 1           REV 01   711-041855   ZS2261            PMB Board
SFB 0            REV 07   711-032385   ZZ2582            Switch Fabric Board
SFB 1            REV 04   711-032385   ZV4229            Switch Fabric Board
SFB 2            REV 07   711-032385   CAAB4902          Switch Fabric Board
SFB 3            REV 07   711-032385   CAAB4891          Switch Fabric Board
SFB 4            REV 07   711-032385   CAAB4883          Switch Fabric Board
SFB 5            REV 07   711-032385   CAAB4889          Switch Fabric Board
SFB 6            REV 06   711-032385   ZV1818            Switch Fabric Board
SFB 7            REV 07   711-032385   CAAB4897          Switch Fabric Board
FPC 0            REV 34   750-031090   ZT9799            MPC Type 2 3D EQ
  CPU            REV 06   711-030884   ZS1122            MPC PMB 2G
  MIC 0          REV 11   750-033535   CAAD7674          MIC-3D-10C192-XFP
    PIC 0                 BUILTIN      BUILTIN           MIC-3D-10C192-XFP
      Xcvr 0     REV 01   740-014279   753019A00404      XFP-OC192-SR
  MIC 1          REV 14   750-031967   ZM6103            MIC-3D-8OC3OC12-4OC48
    PIC 2                 BUILTIN      BUILTIN           MIC-3D-8OC3OC12-4OC48
      Xcvr 0     REV 01   740-011615   PEF1AZP           SFP-IR
```

```
      Xcvr 1     REV 01   740-011615   PEF1AZN          SFP-IR
      Xcvr 2     REV 01   740-021308   ANA0N8S          SFP+-10G-SR
  QXM 0          REV 06   711-028408   ZT9339           MPC QXM
  QXM 1          REV 06   711-028408   ZT9237           MPC QXM
FPC 9            REV 34   750-031090   ZT9770           MPC Type 2 3D EQ
  CPU            REV 06   711-030884   ZS1302           MPC PMB 2G
  MIC 0          REV 24   750-028387   YJ3950           3D 4x 10GE  XFP
    PIC 0                 BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0               NON-JNPR     T09M52516        XFP-10G-SR
      Xcvr 1               NON-JNPR     CA49BK095        XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0     REV 02   740-014289   C834XU01T        XFP-10G-SR
      Xcvr 1               NON-JNPR     T09M52515        XFP-10G-SR
  MIC 1          REV 11   750-033535   CAAD7681         MIC-3D-1OC192-XFP
    PIC 2                 BUILTIN      BUILTIN          MIC-3D-1OC192-XFP
      Xcvr 0     REV 01   740-014279   KBQ02BE          XFP-OC192-SR
  QXM 0          REV 06   711-028408   ZT9151           MPC QXM
  QXM 1          REV 06   711-028408   ZT9116           MPC QXM
FPC 10           REV 27   750-033205   ZL6215           MPCE Type 3 3D
  CPU            REV 07   711-035209   ZK9038           HMPC PMB 2G
  MIC 0          REV 18   750-028380   YG6885           3D 2x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN          1x 10GE XFP
      Xcvr 0     REV 01   740-014289   C706XU0AG        XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN          1x 10GE XFP
      Xcvr 0     REV 02   740-014289   T08L84366        XFP-10G-SR
FPC 14           REV 09   750-037355   CAAF1534         MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAB9879         HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   21T511100436     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AHP0GPM          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   123363A00032     SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   19T511100477     SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00260        CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   21T511104086     SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   21T511104627     SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   21T511104644     SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP
FPC 19           REV 32   750-028467   ZR2008           MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ZT6933           AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   19T511100291     SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMH02VE          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   23T511102128     SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMS15PP          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   123363A00716     SFP+-10G-SR
ADC 0            REV 05   750-043596   CAAC2072         Adapter Card
ADC 9            REV 01   750-043596   ZV4111           Adapter Card
ADC 10           REV 05   750-043596   CAAC2058         Adapter Card
ADC 14           REV 02   750-043596   ZW1561           Adapter Card
ADC 19           REV 01   750-043596   ZV4127           Adapter Card
Fan Tray 0       REV 03   760-046960   ACAY0124         172mm FanTray - 6 Fans
Fan Tray 1       REV 2A   760-046960   ACAY0022         172mm FanTray - 6 Fans
Fan Tray 2       REV 2A   760-046960   ACAY0023         172mm FanTray - 6 Fans
Fan Tray 3       REV 2A   760-046960   ACAY0025         172mm FanTray - 6 Fans
```

show chassis hardware (MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                F3434             MX80-P
Midplane         REV 01   711-044315   ZK2681            MX80-P
PEM 0            Rev 04   740-028288   VE05267           AC Power Entry Module
PEM 1            Rev 04   740-028288   VE05270           AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
TFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZK0952            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 02   750-049846   CAAV2153          3D 20x 1GE(LAN)-E,SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) -E  SFP
      Xcvr 0     REV 01   740-011613   AM0816S9B81       SFP-SX
      Xcvr 1     REV 02   740-011613   AM0925SBLK7       SFP-SX
      Xcvr 2     REV 01   740-011613   UAQ0005           SFP-SX
      Xcvr 3     REV 01   740-011613   UAQ000C           SFP-SX
      Xcvr 4     REV 01   740-011613   P9F195E           SFP-SX
      Xcvr 5     REV 01   740-011613   UAQ0003           SFP-SX
      Xcvr 6     REV 01   740-031851   AM1041SU1LD       SFP-SX
      Xcvr 8     REV 02   740-013111   B101501           SFP-T
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) -E  SFP
      Xcvr 0     REV 01   740-011613   PFM1ML7           SFP-SX
      Xcvr 4     REV 01   740-011613   PE729P6           SFP-SX
      Xcvr 6     REV 02   740-011613   AM1014SGC84       SFP-SX
      Xcvr 9     REV 01   740-011613   AM0812S8UK3       SFP-SX
  MIC 1          REV 26   750-028392   ZY0187            3D 20x 1GE(LAN) SFP
    PIC 2                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011613   P9F1AN9           SFP-SX
      Xcvr 5     REV 02   740-011613   AM1003SFUF4       SFP-SX
      Xcvr 9     REV 01   740-031851   AM1041SU1LM       SFP-SX
    PIC 3                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 4     REV 01   740-011613   PAJ4MYT           SFP-SX
      Xcvr 7     +        NON-JNPR     XG32A024          SFP-SX
      Xcvr 8              NON-JNPR     PFR0V6J           SFP-SX
      Xcvr 9     REV 01   740-031851   AM1041SU02U       SFP-SX
Fan Tray
```

show chassis hardware models (MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
PEM 0            Rev 04   740-028288   VE05267           PWR-MX80-AC-S
PEM 1            Rev 04   740-028288   VE05270           PWR-MX80-AC-S
Routing Engine            BUILTIN      BUILTIN
TFEB 0                    BUILTIN      BUILTIN
FPC 0                     BUILTIN      BUILTIN
FPC 1                     BUILTIN      BUILTIN
  MIC 0          REV 02   750-049846   CAAV2153          MIC-3D-20GE-SFP-E
  MIC 1          REV 26   750-028392   ZY0187            MIC-3D-20GE-SFP
Fan Tray                                                 FANTRAY-MX80-S
```

show chassis hardware (MX2008 Router)

```
user@host>show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1259E1CAFL      MX2008
Midplane         REV 47   750-044636   ABAD1739          Lower Backplane
PMP              REV 01   711-051406   ACVD0738          Power Midplane
FPM Board        REV 02   760-068193   ABDG7408          Front Panel Display
PSM 1            REV 06   740-050037   1EDB61200R8       DC 52V Power Supply
Module
PSM 2            REV 06   740-050037   1EDB61200WA       DC 52V Power Supply
Module
PSM 3            REV 06   740-050037   1EDB61200NY       DC 52V Power Supply
Module
PSM 4            REV 06   740-050037   1EDB61200N2       DC 52V Power Supply
Module
PSM 5            REV 06   740-050037   1EDB61200RN       DC 52V Power Supply
Module
PSM 6            REV 06   740-050037   1EDB61200RF       DC 52V Power Supply
Module
PSM 7            REV 06   740-050037   1EDB61200R7       DC 52V Power Supply
Module
PDM 0            REV 01   740-060189   1EFF5250143       DC PDM Optimized
PDM 1            REV 01   740-060189   1EFF5250074       DC PDM Optimized
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x8
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x8
CB 0             REV 01   750-067373   ABDJ0047          Control Board
CB 1             REV 03   750-067373   ABDH3016          Control Board
SFB 0            REV 08   750-067371   ABDK7180          Switch Fabric Board
SFB 1            REV 08   750-067371   ABDK7024          Switch Fabric Board
SFB 2            REV 08   750-067371   ABDK7188          Switch Fabric Board
SFB 3            REV 08   750-067371   ABDK7143          Switch Fabric Board
SFB 4            REV 08   750-067371   ABDK7030          Switch Fabric Board
SFB 5            REV 08   750-067371   ABDK7146          Switch Fabric Board
SFB 6            REV 08   750-067371   ABDK7203          Switch Fabric Board
SFB 7            REV 08   750-067371   ABDK7238          Switch Fabric Board
FPC 0            REV 36   750-044130   ABCS8607          MPC6E 3D
  CPU            REV 09   711-045719   ABCS8776          RMPC PMB
  MIC 0          REV 21   750-050008   ABCT5920          4X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           4X100GE CXP
  XLM 0          REV 07.2.00 711-046638 ABCK3488         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK5482         MPC6E XL
FPC 1            REV 22   750-063414   CAFJ3026          MPC9E 3D
  CPU            REV 16   750-057177   CAFF9332          SMPC PMB
FPC 7            REV 08   750-038492   ZX4080            MPCE Type 2 3D EQ
  CPU            REV 03   711-038484   ZX3665            MPCE PMB 2G
  MIC 0          REV 05   750-037128   ZR4031            1xCOC12/4xCOC3 CH-CE
    PIC 0                 BUILTIN      BUILTIN           1xCOC12/4xCOC3 CH-CE
  MIC 1          REV 23   750-032479   CADE8614          MIC-3D-8DS3-E3
    PIC 2                 BUILTIN      BUILTIN           MIC-3D-8DS3-E3
  QXM 0          REV 06   711-028408   ZW8299            MPC QXM
  QXM 1          REV 06   711-028408   ZY0609            MPC QXM
ADC 7            REV 17   750-043596   ABCA0990          Adapter Card
Fan Tray 0       REV 01   760-052467   ACAY6190          172mm FanTray - 6 Fans
Fan Tray 1       REV 01   760-052467   ACAY6414          172mm FanTray - 6 Fans
```

show chassis hardware detail (MX2008 Router)

```
user@host>show chassis hardware detail
```

```
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1259E1CAFL      MX2008
Midplane         REV 47   750-044636   ABAD1739          Lower Backplane
PMP              REV 01   711-051406   ACVD0738          Power Midplane
FPM Board        REV 02   760-068193   ABDG7408          Front Panel Display
PSM 1            REV 06   740-050037   1EDB61200R8       DC 52V Power Supply
Module
PSM 2            REV 06   740-050037   1EDB61200WA       DC 52V Power Supply
Module
PSM 3            REV 06   740-050037   1EDB61200NY       DC 52V Power Supply
Module
PSM 4            REV 06   740-050037   1EDB61200N2       DC 52V Power Supply
Module
PSM 5            REV 06   740-050037   1EDB61200RN       DC 52V Power Supply
Module
PSM 6            REV 06   740-050037   1EDB61200RF       DC 52V Power Supply
Module
PSM 7            REV 06   740-050037   1EDB61200R7       DC 52V Power Supply
Module
PDM 0            REV 01   740-060189   1EFF5250143       DC PDM Optimized
PDM 1            REV 01   740-060189   1EFF5250074       DC PDM Optimized
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x8
  vtbd0 15361 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002           Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086            uhub0
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x8
  vtbd0 15361 MB                                         Virtio Block Disk
  vtbd1 15360 MB                                         Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002           Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086            uhub0
CB 0             REV 01   750-067373   ABDJ0047          Control Board
CB 1             REV 03   750-067373   ABDH3016          Control Board
SFB 0            REV 08   750-067371   ABDK7180          Switch Fabric Board
SFB 1            REV 08   750-067371   ABDK7024          Switch Fabric Board
SFB 2            REV 08   750-067371   ABDK7188          Switch Fabric Board
SFB 3            REV 08   750-067371   ABDK7143          Switch Fabric Board
SFB 4            REV 08   750-067371   ABDK7030          Switch Fabric Board
SFB 5            REV 08   750-067371   ABDK7146          Switch Fabric Board
SFB 6            REV 08   750-067371   ABDK7203          Switch Fabric Board
SFB 7            REV 08   750-067371   ABDK7238          Switch Fabric Board
FPC 0            REV 36   750-044130   ABCS8607          MPC6E 3D
  CPU            REV 09   711-045719   ABCS8776          RMPC PMB
  MIC 0          REV 21   750-050008   ABCT5920          4X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           4X100GE CXP
  XLM 0          REV 07.2.00 711-046638 ABCK3488         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK5482         MPC6E XL
FPC 1            REV 22   750-063414   CAFJ3026          MPC9E 3D
  CPU            REV 16   750-057177   CAFF9332          SMPC PMB
FPC 7            REV 08   750-038492   ZX4080            MPCE Type 2 3D EQ
  CPU            REV 03   711-038484   ZX3665            MPCE PMB 2G
  MIC 0          REV 05   750-037128   ZR4031            1xCOC12/4xCOC3 CH-CE
    PIC 0                 BUILTIN      BUILTIN           1xCOC12/4xCOC3 CH-CE
  MIC 1          REV 23   750-032479   CADE8614          MIC-3D-8DS3-E3
    PIC 2                 BUILTIN      BUILTIN           MIC-3D-8DS3-E3
  QXM 0          REV 06   711-028408   ZW8299            MPC QXM
  QXM 1          REV 06   711-028408   ZY0609            MPC QXM
ADC 7            REV 17   750-043596   ABCA0990          Adapter Card
Fan Tray 0       REV 01   760-052467   ACAY6190          172mm FanTray - 6 Fans
Fan Tray 1       REV 01   760-052467   ACAY6414          172mm FanTray - 6 Fans
```

show chassis hardware extensive (MX2008 Router)

```
user@host>show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1259E1CAFL      MX2008
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN1259E1CAFL
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2008
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 32 35 39 45 31 43 41 46 4c 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 47   750-044636   ABAD1739          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044636        S/N:               ABAD1739
 Assembly ID:  0x0b66            Assembly Version:  01.47
 Date:         06-08-2016        Assembly Flags:    0x00
 Version:      REV 47            CLEI Code:         IPMU810ARB
 ID: Lower Backplane             FRU Model Number:  CHAS-BP-MX2010-S
 Board Information Record:
  Address 0x00: ad 01 08 00 f4 cc 55 3e 35 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 66 01 2f 52 45 56 20 34 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 44 31 37 33 39 00 08 06 07
  Address 0x30: e0 ff ff ff ad 01 08 00 f4 cc 55 3e 35 00 ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 55 38 31 30 41 52 42 43
  Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 31 30 2d 53 00
  Address 0x60: 00 00 00 00 00 00 42 43 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 18 ff ff ff ff ff ff ff ff ff ff ff ff
PMP              REV 01   711-051406   ACVD0738          Power Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-051406        S/N:               ACVD0738
 Assembly ID:  0x045d            Assembly Version:  01.01
 Date:         06-06-2016        Assembly Flags:    0x00
 Version:      REV 01
 ID: Power Midplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5d 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 35 31 34 30 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 56 44 30 37 33 38 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 02   760-068193   ABDG7408          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```

```
 P/N:          760-068193        S/N:               ABDG7408
 Assembly ID:  0x0cac            Assembly Version:  01.02
 Date:         06-06-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         PROTOXCLEI
 ID: Front Panel Display         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c ac 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 36 38 31 39 33 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 47 37 34 30 38 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 1            REV 06   740-050037   1EDB61200R8       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200R8
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 38 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2            REV 06   740-050037   1EDB61200WA       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200WA
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 57 41 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3            REV 06   740-050037   1EDB61200NY       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200NY
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
```

```
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 4e 59 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4            REV 06   740-050037   1EDB61200N2       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200N2
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 4e 32 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5            REV 06   740-050037   1EDB61200RN       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200RN
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 4e 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6            REV 06   740-050037   1EDB61200RF       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200RF
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
```

```
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 46 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7            REV 06   740-050037   1EDB61200R7       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200R7
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 37 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PDM 0            REV 01   740-060189   1EFF5250143       DC PDM Optimized
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-060189        S/N:               1EFF5250143
 Assembly ID:  0x0495            Assembly Version:  01.01
 Date:         07-21-2015        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAN1KAA
 ID: DC PDM Optimized            FRU Model Number:  MX2K-PDM-OP-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 95 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 36 30 31 38 39 00 00
  Address 0x20: 31 45 46 46 35 32 35 30 31 34 33 00 00 15 07 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4e 31 4b 41 41 4d
  Address 0x50: 58 32 4b 2d 50 44 4d 2d 4f 50 2d 44 43 2d 53 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 84 00 00 00 00 00 00 00 00 00 00 00 00
PDM 1            REV 01   740-060189   1EFF5250074       DC PDM Optimized
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-060189        S/N:               1EFF5250074
 Assembly ID:  0x0495            Assembly Version:  01.01
 Date:         07-21-2015        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAN1KAA
 ID: DC PDM Optimized            FRU Model Number:  MX2K-PDM-OP-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 95 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 36 30 31 38 39 00 00
  Address 0x20: 31 45 46 46 35 32 35 30 30 37 34 00 00 15 07 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4e 31 4b 41 41 4d
  Address 0x50: 58 32 4b 2d 50 44 4d 2d 4f 50 2d 44 43 2d 53 00
```

```
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 84 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x8
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0c10            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: RE-S-2X00x8
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0c 10 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 00 00 00 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 00 00 00 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002          Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086           uhub0
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x8
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0c10            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: RE-S-2X00x8
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0c 10 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 00 00 00 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 00 00 00 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002          Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086           uhub0
CB 0             REV 01   750-067373   ABDJ0047         Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067373        S/N:               ABDJ0047
 Assembly ID:  0x0c96            Assembly Version:  01.01
 Date:         06-21-2016        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         PROTOXCLEI
 ID: Control Board               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 20 28 8a 1c 6d c4 7e ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 96 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 33 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4a 30 30 34 37 00 15 06 07
  Address 0x30: e0 ff ff ff ad 01 00 20 28 8a 1c 6d c4 7e ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
```

```
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 03   750-067373   ABDH3016          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067373        S/N:               ABDH3016
 Assembly ID:  0x0c96            Assembly Version:  01.03
 Date:         05-07-2016        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         PROTOXCLEI
 ID: Control Board               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 20 f4 cc 55 35 71 a0 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 96 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 33 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 48 33 30 31 36 00 07 05 07
  Address 0x30: e0 ff ff ff ad 01 00 20 f4 cc 55 35 71 a0 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
SFB 0            REV 08   750-067371   ABDK7180          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7180
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 38 30 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 00 00 48 00
SFB 1            REV 08   750-067371   ABDK7024          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7024
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 30 32 34 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 01 00 48 00
SFB 2            REV 08   750-067371   ABDK7188          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7188
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-28-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
```

```
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 38 38 00 1c 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 02 00 48 00
SFB 3            REV 08   750-067371   ABDK7143          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7143
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 34 33 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 03 00 48 00
SFB 4            REV 08   750-067371   ABDK7030          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7030
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-24-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 30 33 30 00 18 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 04 00 48 00
SFB 5            REV 08   750-067371   ABDK7146          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7146
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 34 36 00 1b 09 07
```

```
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 05 00 48 00
SFB 6            REV 08   750-067371   ABDK7203          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7203
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-28-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 32 30 33 00 1c 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 06 00 48 00
SFB 7            REV 08   750-067371   ABDK7238          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7238
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 32 33 38 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 07 00 48 00
FPC 0            REV 36   750-044130   ABCS8607          MPC6E 3D
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044130        S/N:               ABCS8607
 Assembly ID:  0x0b86            Assembly Version:  01.36
 Date:         10-29-2013        Assembly Flags:    0x00
 Version:      REV 36            CLEI Code:         PROTOXCLEI
 ID: MPC6E 3D                    FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0b 86 01 24 52 45 56 20 33 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 31 33 30 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 53 38 36 30 37 00 1d 0a 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 09   711-045719   ABCS8776          RMPC PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```

```
P/N:          711-045719        S/N:               ABCS8776
Assembly ID:  0x0b85            Assembly Version:  01.09
Date:         10-24-2013        Assembly Flags:    0x00
Version:      REV 09
ID: RMPC PMB
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0b 85 01 09 52 45 56 20 30 39 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 34 35 37 31 39 00 00
 Address 0x20: 53 2f 4e 20 41 42 43 53 38 37 37 36 00 18 0a 07
 Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
 Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff c2 00 00 00 00 16 47 1f b0 00 00 00 00
 MIC 0          REV 21   750-050008   ABCT5920          4X100GE CXP
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-050008        S/N:               ABCT5920
Assembly ID:  0x0a83            Assembly Version:  01.21
Date:         09-29-2014        Assembly Flags:    0x00
Version:      REV 21            CLEI Code:         IP9IATYDAA
ID: 4X100GE CXP                 FRU Model Number:  MIC6-100G-CXP
Board Information Record:
 Address 0x00: 12 01 07 02 03 ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 83 01 15 52 45 56 20 32 31 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 30 38 00 00
 Address 0x20: 53 2f 4e 20 41 42 43 54 35 39 32 30 00 1d 09 07
 Address 0x30: de ff ff ff 12 01 07 02 03 ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 49 50 39 49 41 54 59 44 41 41 4d
 Address 0x50: 49 43 36 2d 31 30 30 47 2d 43 58 50 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 74 00 00 00 00 10 09 73 3c c0 02 70 3c
   PIC 0                 BUILTIN      BUILTIN           4X100GE CXP
 XLM 0          REV 07.2.00 711-046638 ABCK3488         MPC6E XL
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          711-046638        S/N:               ABCK3488
Assembly ID:  0x0b88            Assembly Version:  01.07
Date:         11-11-2013        Assembly Flags:    0x00
Version:      REV 07.2.00
ID: MPC6E XL
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0b 88 01 07 52 45 56 20 30 37 2e 32
 Address 0x10: 2e 30 30 00 37 31 31 2d 30 34 36 36 33 38 00 00
 Address 0x20: 53 2f 4e 20 41 42 43 4b 33 34 38 38 00 0b 0b 07
 Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
 Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
 XLM 1          REV 07.2.00 711-046638 ABCK5482         MPC6E XL
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          711-046638        S/N:               ABCK5482
Assembly ID:  0x0b88            Assembly Version:  01.07
Date:         10-21-2013        Assembly Flags:    0x00
Version:      REV 07.2.00
ID: MPC6E XL
Board Information Record:
```

```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 88 01 07 52 45 56 20 30 37 2e 32
  Address 0x10: 2e 30 30 00 37 31 31 2d 30 34 36 36 33 38 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 4b 35 34 38 32 00 15 0a 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
FPC 1            REV 22   750-063414   CAFJ3026          MPC9E 3D
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-063414        S/N:               CAFJ3026
 Assembly ID:  0x0c43            Assembly Version:  01.22
 Date:         03-28-2016        Assembly Flags:    0x00
 Version:      REV 22            CLEI Code:         IPUCBMUCAA
 ID: MPC9E 3D                    FRU Model Number:  MX2K-MPC9E
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0c 43 01 16 52 45 56 20 32 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 33 34 31 34 00 00
  Address 0x20: 53 2f 4e 20 43 41 46 4a 33 30 32 36 00 1c 03 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 4d 55 43 41 41 4d
  Address 0x50: 58 32 4b 2d 4d 50 43 39 45 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 16   750-057177   CAFF9332          SMPC PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          750-057177        S/N:               CAFF9332
 Assembly ID:  0x0c22            Assembly Version:  01.16
 Date:         03-20-2016        Assembly Flags:    0x00
 Version:      REV 16
 ID: SMPC PMB
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0c 22 01 10 52 45 56 20 31 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 37 31 37 37 00 00
  Address 0x20: 53 2f 4e 20 43 41 46 46 39 33 33 32 00 14 03 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 38 f9 0d e0 4f d1 4b 08
FPC 7            REV 08   750-038492   ZX4080            MPCE Type 2 3D EQ
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-038492        S/N:               ZX4080
 Assembly ID:  0x0b35            Assembly Version:  01.08
 Date:         02-03-2012        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         COUIBA5BAA
 ID: MPCE Type 2 3D EQ           FRU Model Number:  MX-MPC2E-3D-EQ
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 35 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 38 34 39 32 00 00
  Address 0x20: 53 2f 4e 20 5a 58 34 30 38 30 00 00 00 03 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 41 35 42 41 41 4d
```

```
 Address 0x50: 58 2d 4d 50 43 32 45 2d 33 44 2d 45 51 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 74 ff ff ff ff ff ff ff ff ff ff ff ff
 CPU            REV 03   711-038484   ZX3665           MPCE PMB 2G
Jedec Code:   0x7fb0            EEPROM Version:    0x01
P/N:          711-038484        S/N:               ZX3665
Assembly ID:  0x0b36            Assembly Version:  01.03
Date:         02-01-2012        Assembly Flags:    0x00
Version:      REV 03
ID: MPCE PMB 2G
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 0b 36 01 03 52 45 56 20 30 33 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 34 38 34 00 00
 Address 0x20: 53 2f 4e 20 5a 58 33 36 36 35 00 00 00 01 02 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff 00 00 00 02 00 00 0c 00 42 5f c0 a4
 MIC 0          REV 05   750-037128   ZR4031           1xCOC12/4xCOC3 CH-CE
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-037128        S/N:               ZR4031
Assembly ID:  0x0a1b            Assembly Version:  01.05
Date:         12-04-2011        Assembly Flags:    0x00
Version:      REV 05            CLEI Code:         PROTOXCLEI
ID: 1xCOC12/4xCOC3 CH-CE        FRU Model Number:  MIC-3D-4CHOC3-1OC12-CE
Board Information Record:
 Address 0x00: 12 01 05 03 05 ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 1b 01 05 52 45 56 20 30 35 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 31 32 38 00 00
 Address 0x20: 53 2f 4e 20 5a 52 34 30 33 31 00 00 00 04 0c 07
 Address 0x30: db ff ff ff 12 01 05 03 05 ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 4d
 Address 0x50: 49 43 2d 33 44 2d 34 43 48 4f 43 33 2d 31 4f 43
 Address 0x60: 31 32 2d 43 45 00 30 32 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 98 c0 02 61 bc 7f b0 02 ff 0a 11 01 17
   PIC 0                BUILTIN      BUILTIN          1xCOC12/4xCOC3 CH-CE
 MIC 1          REV 23   750-032479   CADE8614         MIC-3D-8DS3-E3
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-032479        S/N:               CADE8614
Assembly ID:  0x0a11            Assembly Version:  01.23
Date:         07-24-2014        Assembly Flags:    0x00
Version:      REV 23            CLEI Code:         COUIA8DBAA
ID: MIC-3D-8DS3-E3              FRU Model Number:  MIC-3D-8DS3-E3
Board Information Record:
 Address 0x00: 56 01 ff ff 03 ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 11 01 17 52 45 56 20 32 33 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 32 34 37 39 00 00
 Address 0x20: 53 2f 4e 20 43 41 44 45 38 36 31 34 00 18 07 07
 Address 0x30: de ff ff ff 56 01 ff ff 03 ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 43 4f 55 49 41 38 44 42 41 41 4d
 Address 0x50: 49 43 2d 33 44 2d 38 44 53 33 2d 45 33 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 7b c0 03 e5 7c 4f 8a 9e 10 00 00 00 02
   PIC 2                BUILTIN      BUILTIN          MIC-3D-8DS3-E3
 QXM 0          REV 06   711-028408   ZW8299           MPC QXM
Jedec Code:   0x7fb0            EEPROM Version:    0x01
```

```
 P/N:          711-028408        S/N:               ZW8299
 Assembly ID:  0x097a            Assembly Version:  02.06
 Date:         01-19-2012        Assembly Flags:    0x00
 Version:      REV 06
 ID: MPC QXM
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 7a 02 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 32 38 34 30 38 00 00
  Address 0x20: 53 2f 4e 20 5a 57 38 32 39 39 00 00 00 13 01 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  QXM 1          REV 06   711-028408   ZY0609            MPC QXM
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-028408        S/N:               ZY0609
 Assembly ID:  0x097a            Assembly Version:  02.06
 Date:         01-19-2012        Assembly Flags:    0x00
 Version:      REV 06
 ID: MPC QXM
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 7a 02 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 32 38 34 30 38 00 00
  Address 0x20: 53 2f 4e 20 5a 59 30 36 30 39 00 00 00 13 01 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
ADC 7            REV 17   750-043596   ABCA0990          Adapter Card
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-043596        S/N:               ABCA0990
 Assembly ID:  0x0b3d            Assembly Version:  01.17
 Date:         03-07-2013        Assembly Flags:    0x00
 Version:      REV 17            CLEI Code:         IPUCBA8CAA
 ID: Adapter Card                FRU Model Number:  MX2000-LC-ADAPTER
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 3d 01 11 52 45 56 20 31 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 33 35 39 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 41 30 39 39 30 00 07 03 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 41 38 43 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 4c 43 2d 41 44 41 50 54 45 52
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 3a 00 00 00 00 00 00 00 00 00 00 00 00
Fan Tray 0       REV 01   760-052467   ACAY6190          172mm FanTray - 6 Fans
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-052467        S/N:               ACAY6190
 Assembly ID:  0x0b96            Assembly Version:  02.10
 Date:         09-18-2015        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUCBENCAA
 ID: 172mm FanTray - 6 Fans      FRU Model Number:  MX2000-FANTRAY-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 96 02 0a 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 32 34 36 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 59 36 31 39 30 00 12 09 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 45 4e 43 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 46 41 4e 54 52 41 59 2d 53 00
  Address 0x60: 00 00 00 00 00 00 31 ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 1a ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1       REV 01   760-052467   ACAY6414          172mm FanTray - 6 Fans
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-052467        S/N:               ACAY6414
 Assembly ID:  0x0b96            Assembly Version:  02.10
 Date:         10-28-2015        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUCBENCAA
 ID: 172mm FanTray - 6 Fans      FRU Model Number:  MX2000-FANTRAY-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 96 02 0a 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 32 34 36 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 59 36 34 31 34 00 1c 0a 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 45 4e 43 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 46 41 4e 54 52 41 59 2d 53 00
  Address 0x60: 00 00 00 00 00 00 31 ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 1a ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware models (MX2008 Router)

```
user@host>show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 47   750-044636   ABAD1739          CHAS-BP-MX2010-S
PMP              REV 01   711-051406   ACVD0738
FPM Board        REV 02   760-068193   ABDG7408          PROTO-ASSEMBLY
PSM 1            REV 06   740-050037   1EDB61200R8       MX2000-PSM-DC-S
PSM 2            REV 06   740-050037   1EDB61200WA       MX2000-PSM-DC-S
PSM 3            REV 06   740-050037   1EDB61200NY       MX2000-PSM-DC-S
PSM 4            REV 06   740-050037   1EDB61200N2       MX2000-PSM-DC-S
PSM 5            REV 06   740-050037   1EDB61200RN       MX2000-PSM-DC-S
PSM 6            REV 06   740-050037   1EDB61200RF       MX2000-PSM-DC-S
PSM 7            REV 06   740-050037   1EDB61200R7       MX2000-PSM-DC-S
PDM 0            REV 01   740-060189   1EFF5250143       MX2K-PDM-OP-DC-S
PDM 1            REV 01   740-060189   1EFF5250074       MX2K-PDM-OP-DC-S
CB 0             REV 01   750-067373   ABDJ0047          PROTO-ASSEMBLY
CB 1             REV 03   750-067373   ABDH3016          PROTO-ASSEMBLY
SFB 0            REV 08   750-067371   ABDK7180          PROTO-ASSEMBLY
SFB 1            REV 08   750-067371   ABDK7024          PROTO-ASSEMBLY
SFB 2            REV 08   750-067371   ABDK7188          PROTO-ASSEMBLY
SFB 3            REV 08   750-067371   ABDK7143          PROTO-ASSEMBLY
SFB 4            REV 08   750-067371   ABDK7030          PROTO-ASSEMBLY
SFB 5            REV 08   750-067371   ABDK7146          PROTO-ASSEMBLY
SFB 6            REV 08   750-067371   ABDK7203          PROTO-ASSEMBLY
SFB 7            REV 08   750-067371   ABDK7238          PROTO-ASSEMBLY
FPC 0            REV 36   750-044130   ABCS8607          PROTO-ASSEMBLY
  MIC 0          REV 21   750-050008   ABCT5920          MIC6-100G-CXP
FPC 1            REV 22   750-063414   CAFJ3026          MX2K-MPC9E
FPC 7            REV 08   750-038492   ZX4080            MX-MPC2E-3D-EQ
  MIC 0          REV 05   750-037128   ZR4031            MIC-3D-4CHOC3-1OC12-CE
  MIC 1          REV 23   750-032479   CADE8614          MIC-3D-8DS3-E3
```

```
ADC 7            REV 17   750-043596   ABCA0990          MX2000-LC-ADAPTER
Fan Tray 0       REV 01   760-052467   ACAY6190          MX2000-FANTRAY-S
Fan Tray 1       REV 01   760-052467   ACAY6414          MX2000-FANTRAY-S
```

show chassis hardware clei-models (MX2008 Router)

```
user@host>show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 47   750-044636   IPMU810ARB        CHAS-BP-MX2010-S
PMP              REV 01   711-051406
FPM Board        REV 02   760-068193   PROTOXCLEI        PROTO-ASSEMBLY
PSM 1            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 2            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 3            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 4            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 5            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 6            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 7            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PDM 0            REV 01   740-060189   IPUPAN1KAA        MX2K-PDM-OP-DC-S
PDM 1            REV 01   740-060189   IPUPAN1KAA        MX2K-PDM-OP-DC-S
CB 0             REV 01   750-067373   PROTOXCLEI        PROTO-ASSEMBLY
CB 1             REV 03   750-067373   PROTOXCLEI        PROTO-ASSEMBLY
SFB 0            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 1            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 2            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 3            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 4            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 5            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 6            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 7            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
FPC 0            REV 36   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 0          REV 21   750-050008   IP9IATYDAA        MIC6-100G-CXP
FPC 1            REV 22   750-063414   IPUCBMUCAA        MX2K-MPC9E
FPC 7            REV 08   750-038492   COUIBA5BAA        MX-MPC2E-3D-EQ
  MIC 0          REV 05   750-037128   PROTOXCLEI        MIC-3D-4CHOC3-1OC12-CE
  MIC 1          REV 23   750-032479   COUIA8DBAA        MIC-3D-8DS3-E3
ADC 7            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
Fan Tray 0       REV 01   760-052467   IPUCBENCAA        MX2000-FANTRAY-S
Fan Tray 1       REV 01   760-052467   IPUCBENCAA        MX2000-FANTRAY-S
```

show chassis hardware (MX10003 Router)

```
user@host>  show chassis hardware

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                BLANK             JNP10003 [MX10003]
Midplane         REV 01   750-066883   CAGM0759          Midplane 2
Routing Engine 0          BUILTIN      BUILTIN           Routing Engine
Routing Engine 1          BUILTIN      BUILTIN           Routing Engine
CB 0             REV 07   750-067071   CAGX4354          SPM
  Mezz           REV 10   711-066896   CAHS7200          SPM Mezz Board
CB 1             REV 07   750-067071   CAGX4363          SPM
  Mezz           REV 10   711-066896   CAHS7193          SPM Mezz Board
FPC 0            REV 05   750-066879   CAGV0273          LC2103
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0
  PIC 1
FPC 1            REV 05   750-066879   CAGV0278          LC2103
```

```
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0                   BUILTIN      BUILTIN           6xQSFPP
  PIC 1
PEM 0            REV 01   740-066937   1HS16320003       JNP-PWR1600-AC
PEM 1            REV 01   740-066937   1HS16320002       JNP-PWR1600-AC
Fan Tray 0       REV 02   760-069329   CAGS7731          JNP FAN 3RU
Fan Tray 1       REV 02   760-069329   CAGS7776          JNP FAN 3RU
Fan Tray 2       REV 02   760-069329   CAGS7659          JNP FAN 3RU
Fan Tray 3       REV 02   760-069329   CAGS7669          JNP FAN 3RU
```

show chassis hardware (MX204 Router)

```
user@host> show chassis hardware

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                BB768             JNP204 [MX204]
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x6
CB 0             REV 11   750-069579   CAJD3113          JNP204 [MX204]
FPC 0                     BUILTIN      BUILTIN           MPC
  PIC 0                   BUILTIN      BUILTIN           4XQSFP28 PIC
    Xcvr 0       REV 01   740-061405   1ACQ110409R       QSFP-100GBASE-SR4
    Xcvr 1       REV 01   740-054053   QF027546          QSFP+-4X10G-SR
    Xcvr 2       REV 01   740-058732   1AMQA142092       QSFP-100GBASE-LR4
    Xcvr 3       REV 01   740-058732   1AMQA14203J       QSFP-100GBASE-LR4
  PIC 1                   BUILTIN      BUILTIN           8XSFPP PIC
PEM 1            REV 04   740-043886   1GA46361256       JPSU-650W-DC-AFO
Fan Tray 0                                               Fan Tray, Front to Back
 Airflow - AFO
Fan Tray 1                                               Fan Tray, Front to Back
 Airflow - AFO
Fan Tray 2                                               Fan Tray, Front to Back
 Airflow - AFO
```

show chassis hardware (vMX running in lite mode)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VM54599D128A      VMX
Midplane
Routing Engine 0                                         RE-VMX
CB 0                                                     VMX SCB
CB 1                                                     VMX SCB
FPC 0                                                    Virtual FPC
  CPU            Rev. 1.0 RIOT-LITE    BUILTIN
  MIC 0                                                  Virtual
    PIC 0                 BUILTIN      BUILTIN           Virtual
```

show chassis hardware (vMX running in performance mode)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VM54599D128A      VMX
Midplane
Routing Engine 0                                         RE-VMX
CB 0                                                     VMX SCB
CB 1                                                     VMX SCB
FPC 0                                                    Virtual FPC
```

```
  CPU            Rev. 1.0 RIOT-PERF    BUILTIN
  MIC 0                                                Virtual
    PIC 0                BUILTIN      BUILTIN           Virtual
```

show chassis hardware (T320 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                19093             T320
Midplane         REV 04   710-004339   BC1436            T320 Backplane
FPM GBUS         REV 03   710-004461   BC1407            T320 FPM Board
FPM Display      REV 04   710-002897   BE0763            FPM Display
CIP              REV 05   710-002895   BB2311            T Series CIP
PEM 0            Rev 01   740-004359   NB12546           Power Entry Module
SCG 0            REV 06   710-004455   AY4522            T320 Sonet
Clock Gen.
Routing Engine 0                                        unknown
CB 0             REV 13   710-002728   BC1577            T Series
Control Board
CB 1             REV 13   710-002728   BC1595            T Series
Control Board
FPC 1            REV 09   710-007531   HS1572            FPC Type 2
   CPU            REV 15   710-001726   HR8763            FPC CPU
   PIC 0          REV 01   750-010618   CB5579            4x G/E SFP,
1000 BASE
     SFP 0        REV 01   740-007326   P5809Z1           SFP-SX
     SFP 1        REV 01   740-007326   P4Q10XU           SFP-SX
     SFP 2                 NON-JNPR     RA45020031        SFP-SX
     SFP 3                 NON-JNPR     RA45020032        SFP-SX
   PIC 1          REV 01   750-010618   CD9587            4x G/E SFP,
1000 BASE
     SFP 0                 NON-JNPR     P5A08QZ           SFP-T
     SFP 1        REV 01   740-007326   P4Q133K           SFP-SX
     SFP 2        REV 01   740-007326   P5809YY           SFP-SX
     SFP 3        REV 01   740-007327   4C81704           SFP-LX
   MMB 1          REV 03   710-005555   HR9401            MMB-288mbit
   PPB 0          REV 04   710-003758   HR2886            PPB Type 2
FPC 2            REV 07   710-005860   HP2392            FPC Type 1
   CPU            REV 14   710-001726   HP7797            FPC CPU
   PIC 0          REV 02   750-007643   HM0853            1x G/E QPP,
1000 BASE
     SFP 0        REV 01   740-007326   P11E9JJ           SFP-SX
   MMB 1          REV 02   710-005555   HN2379            MMB-288mbit
   PPB 0          REV 04   710-003758   HP8092            PPB Type 2
FPC 3            REV 07   710-005860   HP2393            FPC Type 1
   CPU            REV 14   710-001726   HP0968            FPC CPU
   PIC 0          REV 01   750-010240   CB5363            1x G/E SFP,
1000 BASE
     SFP 0        REV 01   740-007326   P4R0PNH           SFP-SX
   PIC 1          REV 03   750-003034   HD2832            4x OC-3 SONET,
SMIR
   MMB 1          REV 02   710-005555   HN6307            MMB-288mbit
   PPB 0          REV 04   710-003758   HP5051            PPB Type 2
FPC 4            REV 01   710-010845   JD3872            FPC Type 4
   CPU            REV 02   710-011481   JB6042            FPC CPU
 5            REV 01   710-005802   BC1566            FPC Type 2
   CPU            REV 09   710-001726   AY4922            FPC CPU
   PIC 0          REV 02   750-008155   BE2114            2x G/E QPP,
1000 BASE
     SFP 0        REV 01   740-007326   P4R0PMQ           SFP-SX
```

```
     SFP 1        REV 01   740-007326   P4R0PN9           SFP-SX
   PIC 1          REV 01   750-008155   BE2116            2x G/E QPP,
1000 BASE
     SFP 0        REV 01   740-007326   P4R0PNZ           SFP-SX
     SFP 1                 NON-JNPR     2908              SFP-T
   MMB 1          REV 01   710-005555   AZ2246            MMB-288mbit
   PPB 0          REV 03   710-003758   AY4839            PPB Type 2
FPC 7            REV 01   710-005803   AZ2123            FPC Type 3
...
```

show chassis hardware (T640 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                19182             T640
Midplane         REV 04   710-002726   AX5608            T640 Backplane
FPM GBUS         REV 02   710-002901   HE3064            T640 FPM Board
FPM Display      REV 02   710-002897   HE7864            FPM Display
CIP              REV 05   710-002895   HA5024            T Series CIP
PEM 0            Rev 02   740-029522   VH26235           AC PEM 10kW US
PEM 1            Rev 02   740-029522   VH26230           AC PEM 10kW US
SCG 0            REV 03   710-003423   HA4508            T640 Sonet Clock Gen.
Routing Engine 0 REV 02   740-005022   210865700483      RE-3.0 (RE-600)
CB 0             REV 01   710-002728   HD3044            T Series Control Board
FPC 2            REV 04   710-001721   HD5572            FPC Type 3
  CPU            REV 06   710-001726   HA4712            FPC CPU
  PIC 1          REV 03   750-009567   HV2331            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009898   USC202R103        XENPAK-SR
  PIC 2          REV 03   750-009567   HV2332            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-011268   USC202R112        XENPAK-ZR
  PIC 3          REV 03   750-009567   HX4416            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-012056   434TC004          XENPAK-CX4
  PIC 4          REV 03   750-009567   HX4420            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-012058   434TC124          XENPAK-LX4
FPC 5            REV 01   710-013553   JE4839            E2-FPC Type 1
  CPU            REV 01   710-013569   JW9163            FPC CPU
  PIC 0          REV 01   750-009567   HX4419            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009898   USC202RT05        XENPAK-LR
  PIC 1          REV 03   750-009567   HN7426            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009550   03L90051          XENPAK-ER
  PIC 2          REV 03   750-009467   HT7423            1x 10GE(LAN),XENPAK
    SFP 0                 NON-JNPR                       UNKNOWON
  PIC 3          REV 04   750-005100   AY4850            1x 10GE(LAN),DWDM
FPC 4            REV 01   710-010845   JD3872            FPC Type 4
  CPU            REV 02   710-011481   JB6042            FPC CPU
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray
```

show chassis hardware models (T640 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   710-002726                     CHAS-BP-T640-S
FPM Display      REV 02   710-002897                     CRAFT-T640-S
CIP              REV 05   710-002895                     CIP-L-T640-S
PEM 0            Rev 01   740-002595                     PWR-T-DC-S
SCG 0            REV 04   710-003423                     SCG-T-S
```

```
SCG 1            REV 04   710-003423                    SCG-T-S
Routing Engine 0 REV 01   740-005022                    RE-600-2048-S
Routing Engine 1 REV 07   740-005022                    RE-600-2048-S
CB 0             REV 06   710-002726                    CHAS-BP-T640-S
CB 1             REV 06   710-002728                    CB-L-T-S
FPC 5            REV 05   710-007527                    T640-FPC2
  PIC 0          REV 05   750-002510                    PB-2GE-SX
  PIC 1          REV 05   750-001901                    PB-4OC12-SON-SMIR
FPC 6            REV 03   710-001721                    T640-FPC3
  PIC 1          REV 01   750-009553                    PC-4OC48-SON-SFP
SIB 4            REV 02   750-005486                    SIB-I-T640-S
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T-S
Fan Tray 2                                              FAN-REAR-TX-T640-S
```

show chassis hardware extensive (T640 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                   T640
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:        ...........       S/N:             ...........
 Assembly ID:  0x0507            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 Version:    ...........
 ID: Gibson LCC Chassis
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 05 07 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 04   710-002726   AX5633
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-002726.       S/N:               AX5633.
 Assembly ID:  0x0127            Assembly Version:  01.04
 Date:         06-27-2001        Assembly Flags:    0x00
 Version:      REV 04.....
 ID: Gibson Backplane
 Board Information Record:
  Address 0x00: ad 01 08 00 00 90 69 0e f8 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 27 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 30 32 37 32 36 00 00
  Address 0x20: 53 2f 4e 20 41 58 35 36 33 33 00 00 00 1b 06 07
  Address 0x30: d1 ff ff ff ad 01 08 00 00 90 69 0e f8 00 ff ff
  Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM GBUS         REV 02   710-002901   HE3245
 ...
FPM Display      REV 02   710-002897   HA4873
 ...
CIP              REV 05   710-002895   HA4729
...
PEM 1            RevX02   740-002595   MD21815           Power Entry Module
 ...
SCG 0            REV 04   710-003423   HF6023
 ...
SCG 1            REV 04   710-003423   HF6061
```

```
 ...
Routing Engine 0 REV 01   740-005022   210865700292      RE-3.0
...
CB 0             REV 06   710-002728   HE3614
...
FPC 1            REV 01   710-002385   HE3009            FPC Type 1
...              REV 06   710-001726   HC0010
```

show chassis hardware (T4000 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1172F25AHA      T4000
Midplane         REV 01   710-027486   RC8355            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAE0927          T640 FPM Board
FPM Display      REV 01   710-021387   EF6764            T1600 FPM Display
CIP              REV 06   710-002895   BBAD9210          T-series CIP
PEM 0            REV 01   740-036442   VA00016           Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAD7248          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAE3874          T640 Sonet Clock Gen.
Routing Engine 0 REV 05   740-026941   P737F-002248      RE-DUO-1800
Routing Engine 1 REV 06   740-026941   P737F-002653      RE-DUO-1800
CB 0             REV 09   710-022597   ED0295            LCC Control Board
CB 1             REV 09   710-022597   EA6050            LCC Control Board
FPC 0            REV 26   750-032819   EK1173            FPC Type 5-3D
  CPU            REV 12   711-030686   EJ8584            SNG PMB
  PIC 0          REV 07   750-034624   EF6837            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   123363A01145      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   123363A01147      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01P3           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M03256         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJJ01M2           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   123363A01137      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01PN           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01NW           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   123363A01139      SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01KE           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01336      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B10M01325         SFP+-10G-SR
  PIC 1          REV 07   750-034624   EF6800            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJJ01SA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01QZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJH0217           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ01TE           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJJ01KV           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJJ01MU           SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01R0           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01TC           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ0364           SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJD0GV3           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B10M03343         SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01QJ           SFP+-10G-SR
  LMB 0          REV 05   711-034381   EJ8490            Type-0 LMB
  LMB 1          REV 04   711-035774   EJ8517            Type-1 LMB
  LMB 2          REV 05   711-034381   EJ8489            Type-0 LMB
FPC 3            REV 07   750-032819   EG3637            FPC Type 5-3D
  CPU            REV 09   711-030686   EG0150            SNG PMB
  PIC 0          REV 08   750-035293   EF3657            1x100GE
    Xcvr 0       REV 01   740-032210   C22CQNJ           CFP-100G-LR4
  PIC 1          REV 10   750-034624   BBAN4098          12x10GE (LAN/WAN) SFPP
```

```
    Xcvr 0       REV 01   740-031980   B11J04902         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04891         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01MX           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04183         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04894         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04184         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04897         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04899         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ01TV           SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04057         SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ01M4           SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04905         SFP+-10G-SR
  LMB 0          REV 04   711-034381   EG1524            Type-0 LMB
  LMB 1          REV 03   711-035774   EG0345            Type-1 LMB
  LMB 2          REV 04   711-034381   EG1522            Type-0 LMB
FPC 5            REV 03   710-033871   BBAJ0768          FPC Type 4-ES
  CPU            REV 11   710-016744   BBAH9342          ST-PMB2
  PIC 0          REV 09   750-029262   EE6789            100GE
  PIC 1          REV 03   750-034781   EE6655            100GE CFP
    Xcvr 0       REV 01   740-032210   J11A22334         CFP-100G-LR4
  BRIDGE 0       REV 03   711-029995   EE6572            100GE Bridge Board
  MMB 0          REV 07   710-025563   BBAJ4657          ST-MMB2
  MMB 1          REV 07   710-025563   BBAJ3073          ST-MMB2
FPC 6            REV 05   750-010153   EF4936            FPC Type 5-3D
  CPU            REV 06   711-030686   EF4189            SNG PMB
  PIC 0          REV 10   750-034624   BBAN4109          12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   B11J04895         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04898         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11J04021         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04903         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04311         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04059         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04016         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04017         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B11J04887         SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04297         SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11J04893         SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04022         SFP+-10G-SR
  PIC 1          REV 02   750-034624   EE3711            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJH033X           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01N0           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01SV           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ032L           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B10M01593         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJD0FF1           SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01NU           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   123363A01305      SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B10M00361         SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01M7           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ032X           SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01PG           SFP+-10G-SR
  LMB 0          REV 04   711-034381   EF3838            Type-0 LMB
  LMB 1          REV 03   711-035774   EF3821            Type-1 LMB
  LMB 2          REV 04   711-034381   EF3834            Type-0 LMB
SPMB 0           REV 05   710-023321   ED1990            LCC Switch CPU
SPMB 1           REV 05   710-023321   EA2768            LCC Switch CPU
SIB 0            REV 02   711-036340   EF8802            SIB-HC-3D
SIB 1            REV 07   711-036340   EG2286            SIB-HC-3D
SIB 2            REV 07   711-036340   EG2252            SIB-HC-3D
SIB 3            REV 02   711-036340   EF1358            SIB-HC-3D
SIB 4            REV 02   711-036340   EF8806            SIB-HC-3D
```

```
Fan Tray 0                                                  Front Top Fan Tray
Fan Tray 1                                                  Front Bottom Fan Tray
-- Rev 2
Fan Tray 2                                                  Rear Fan Tray -- Rev 3
```

show chassis hardware (T4000 Router with 16-GB Line Card Chassis (LCC) Routing Engine)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11BDF2CAHA      T1600
Midplane         REV 01   710-027486   ACAJ0774          T640 Backplane
FPM GBUS         REV 13   710-002901   BBAL6812          T640 FPM Board
FPM Display      REV 04   710-021387   BBAP2679          T1600 FPM Display
CIP              REV 06   710-002895   BBAP4758          T-series CIP
PEM 0            Rev 03   740-026384   XF86421           Power Entry Module 3x80
PEM 1            Rev 03   740-026384   XF86429           Power Entry Module 3x80
SCG 0            REV 18   710-003423   BBAP1896          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAN8659          T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-042243   737F-002238       RE-DUO-1800-16G
Routing Engine 1 REV 01   740-042243   737F-002403       RE-DUO-1800-16G
CB 1             REV 11   710-022597   EK4526            LCC Control Board
CB 1             REV 11   710-022597   EK4527            LCC Control Board
FPC 0            REV 05   710-033871   EK5644            FPC Type 4-ES
  CPU            REV 11   710-016744   EK3428            ST-PMB2
  PIC 0          REV 20   750-017405   EJ3041            4x 10GE (LAN/WAN) XFP
  PIC 1          REV 17   750-026962   EH7536            10x10GE(LAN/WAN) SFPP
  MMB 0          REV 07   710-025563   EK6039            ST-MMB2
  MMB 1          REV 07   710-025563   EK6086            ST-MMB2
FPC 1            REV 05   710-033871   EK6583            FPC Type 4-ES
  CPU            REV 11   710-016744   EK3401            ST-PMB2
  PIC 0          REV 17   750-026962   EJ8948            10x10GE(LAN/WAN) SFPP
  MMB 0          REV 07   710-025563   EK6202            ST-MMB2
  MMB 1          REV 07   710-025563   EK6112            ST-MMB2
SPMB 1           REV 05   710-023321   EK4900            LCC Switch CPU
SIB 0            REV 11   710-013074   EK5958            SIB-I8-SF
SIB 1            REV 11   710-013074   EK4606            SIB-I8-SF
SIB 2            REV 11   710-013074   EK5971            SIB-I8-SF
SIB 3            REV 11   710-013074   EK4609            SIB-I8-SF
SIB 4            REV 11   710-013074   EK4602            SIB-I8-SF
Fan Tray 0                                                Front Top Fan Tray
Fan Tray 1                                                Front Bottom Fan Tray
Fan Tray 2                                                Rear Fan Tray -- Rev 2
```

show chassis hardware (T4000 Router with LSR FPC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1173A24AHA      T4000
FPC 3            REV      750-048373   AN7797            FPC Type 5-LSR
  CPU            REV 10   711-030686   AN6649            SNG PMB
  PIC 0          REV 07   750-034624   EF6830            12x10GE (LAN/WAN) SFPP
```

show chassis hardware clei-models (T4000 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   710-027486   IPMJ700DRD        CHAS-BP-T1600-S
```

```
FPM Display      REV 01   710-021387                    CRAFT-T1600-S
CIP              REV 06   710-002895                    CIP-L-T640-S
PEM 0            REV 01   740-036442   IPUPAG6KAA       PWR-T-6-60-DC
SCG 0            REV 18   710-003423                    SCG-T-S
SCG 1            REV 18   710-003423                    SCG-T-S
Routing Engine 0 REV 05   740-026941                    RE-DUO-C1800-8G-S
Routing Engine 1 REV 06   740-026941                    RE-DUO-C1800-8G-S
CB 0             REV 09   710-022597                    CB-LCC-S
CB 1             REV 09   710-022597                    CB-LCC-S
FPC 3
  PIC 0          REV 08   750-035293   XXXXXXXXBB       PF-1CGE-CFP
  PIC 1          REV 10   750-034624   XXXXXXXXCC       PF-12XGE-SFPP
FPC 5            REV 03   710-033871   IPUCAMBCTD       T1600-FPC4-ES
  PIC 1          REV 03   750-034781   IPUIBKLMAA       PD-1CE-CFP-FPC4
FPC 6
  PIC 0          REV 10   750-034624   XXXXXXXXCC       PF-12XGE-SFPP
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T4000-S
Fan Tray 2                                              FANTRAY-TXP-R-S
```

show chassis hardware detail (T4000 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1172F25AHA      T4000
Midplane         REV 01   710-027486   RC8355            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAE0927          T640 FPM Board
FPM Display      REV 01   710-021387   EF6764            T1600 FPM Display
CIP              REV 06   710-002895   BBAD9210          T-series CIP
PEM 0            REV 01   740-036442   VA00016           Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAD7248          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAE3874          T640 Sonet Clock Gen.
Routing Engine 0 REV 05   740-026941   P737F-002248      RE-DUO-1800
  ad0    3823 MB  SMART CF             2009121602A661576157 Compact Flash
  ad1   59690 MB  STEC MACH-8 SSD      STM000103FDB      Disk 1
Routing Engine 1 REV 06   740-026941   P737F-002653      RE-DUO-1800
  ad0    3823 MB  SMART CF             201011150153F52CF52C Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 2010110900150A880A88 Disk 1
CB 0             REV 09   710-022597   ED0295            LCC Control Board
CB 1             REV 09   710-022597   EA6050            LCC Control Board
FPC 0            REV 26   750-032819   EK1173            FPC Type 5-3D
  CPU            REV 12   711-030686   EJ8584            SNG PMB
  PIC 0          REV 07   750-034624   EF6837            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   123363A01145      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   123363A01147      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01P3           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M03256         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJJ01M2           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   123363A01137      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01PN           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01NW           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   123363A01139      SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01KE           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01336      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B10M01325         SFP+-10G-SR
  PIC 1          REV 07   750-034624   EF6800            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJJ01SA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01QZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJH0217           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ01TE           SFP+-10G-SR
```

```
    Xcvr 4       REV 01   740-031980   AJJ01KV          SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJJ01MU          SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01R0          SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01TC          SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ0364          SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJD0GV3          SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B10M03343        SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01QJ          SFP+-10G-SR
  LMB 0          REV 05   711-034381   EJ8490           Type-0 LMB
  LMB 1          REV 04   711-035774   EJ8517           Type-1 LMB
  LMB 2          REV 05   711-034381   EJ8489           Type-0 LMB
FPC 3            REV 07   750-032819   EG3637           FPC Type 5-3D
  CPU            REV 09   711-030686   EG0150           SNG PMB
  PIC 0          REV 08   750-035293   EF3657           1x100GE
    Xcvr 0       REV 01   740-032210   C22CQNJ          CFP-100G-LR4
  PIC 1          REV 10   750-034624   BBAN4098         12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   B11J04902        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04891        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01MX          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04183        SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04894        SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04184        SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04897        SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04899        SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ01TV          SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04057        SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ01M4          SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04905        SFP+-10G-SR
  LMB 0          REV 04   711-034381   EG1524           Type-0 LMB
  LMB 1          REV 03   711-035774   EG0345           Type-1 LMB
  LMB 2          REV 04   711-034381   EG1522           Type-0 LMB
FPC 5            REV 03   710-033871   BBAJ0768         FPC Type 4-ES
  CPU            REV 11   710-016744   BBAH9342         ST-PMB2
  PIC 0          REV 09   750-029262   EE6789           100GE
  PIC 1          REV 03   750-034781   EE6655           100GE CFP
    Xcvr 0       REV 01   740-032210   J11A22334        CFP-100G-LR4
  BRIDGE 0       REV 03   711-029995   EE6572           100GE Bridge Board
  MMB 0          REV 07   710-025563   BBAJ4657         ST-MMB2
  MMB 1          REV 07   710-025563   BBAJ3073         ST-MMB2
FPC 6            REV 05   750-010153   EF4936           FPC Type 5-3D
  CPU            REV 06   711-030686   EF4189           SNG PMB
  PIC 0          REV 10   750-034624   BBAN4109         12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   B11J04895        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04898        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11J04021        SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04903        SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04311        SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04059        SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04016        SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04017        SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B11J04887        SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04297        SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11J04893        SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04022        SFP+-10G-SR
  PIC 1          REV 02   750-034624   EE3711           12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJH033X          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01N0          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01SV          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ032L          SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B10M01593        SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJD0FF1          SFP+-10G-SR
```

```
    Xcvr 6       REV 01   740-031980   AJJ01NU           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   123363A01305      SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B10M00361         SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01M7           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ032X           SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01PG           SFP+-10G-SR
  LMB 0          REV 04   711-034381   EF3838            Type-0 LMB
  LMB 1          REV 03   711-035774   EF3821            Type-1 LMB
  LMB 2          REV 04   711-034381   EF3834            Type-0 LMB
SPMB 0           REV 05   710-023321   ED1990            LCC Switch CPU
SPMB 1           REV 05   710-023321   EA2768            LCC Switch CPU
SIB 0            REV 02   711-036340   EF8802            SIB-HC-3D
SIB 1            REV 07   711-036340   EG2286            SIB-HC-3D
SIB 2            REV 07   711-036340   EG2252            SIB-HC-3D
SIB 3            REV 02   711-036340   EF1358            SIB-HC-3D
SIB 4            REV 02   711-036340   EF8806            SIB-HC-3D
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
-- Rev 2
Fan Tray 2                                               Rear Fan Tray -- Rev 3
```

show chassis hardware models (T4000 Router)

```
user@host> show chassis hardware models

Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 01   710-027486   RC8355            CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   EF6764            CRAFT-T1600-S
CIP              REV 06   710-002895   BBAD9210          CIP-L-T640-S
PEM 0            REV 01   740-036442   VA00016           PWR-T-6-60-DC
SCG 0            REV 18   710-003423   BBAD7248          SCG-T-S
SCG 1            REV 18   710-003423   BBAE3874          SCG-T-S
Routing Engine 0 REV 05   740-026941   P737F-002248      RE-DUO-C1800-8G-S
Routing Engine 1 REV 06   740-026941   P737F-002653      RE-DUO-C1800-8G-S
CB 0             REV 09   710-022597   ED0295            CB-LCC-S
CB 1             REV 09   710-022597   EA6050            CB-LCC-S
FPC 3
  PIC 0          REV 08   750-035293   EF3657            PF-1CGE-CFP
  PIC 1          REV 10   750-034624   BBAN4098          PF-12XGE-SFPP
FPC 5            REV 03   710-033871   BBAJ0768          T1600-FPC4-ES
  PIC 1          REV 03   750-034781   EE6655            PD-1CE-CFP-FPC4
FPC 6
  PIC 0          REV 10   750-034624   BBAN4109          PF-12XGE-SFPP
Fan Tray 0                                               FANTRAY-T-S
Fan Tray 1                                               FANTRAY-T4000-S
Fan Tray 2                                               FAN-REAR-TXP-LCC
```

show chassis hardware lcc (TX Matrix Router)

```
user@host> show chassis hardware lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                65751             T640
Midplane         REV 03   710-005608   RA1408            T640 Backplane
FPM GBUS         REV 09   710-002901   RA2784            T640 FPM Board
FPM Display      REV 05   710-002897   RA2825            FPM Display
CIP              REV 06   710-002895   HT0684            T Series CIP
```

```
PEM 0            Rev 11   740-002595   PM18483          Power Entry Module
PEM 1            Rev 11   740-002595   qb13984          Power Entry Module
SCG 0            REV 11   710-003423   HT0022           T640 Sonet Clock Gen.
Routing Engine 0 REV 13   740-005022   210865700363     RE-3.0 (RE-600)
CB 0             REV 03   710-007655   HW1195           Control Board (CB-T)
FPC 1            REV 05   710-007527   HM3245           FPC Type 2
  CPU            REV 14   710-001726   HM1084           FPC CPU
  PIC 0          REV 02   750-007218   AZ1112           2x OC-12 ATM2 IQ, SMIR
  PIC 1          REV 02   750-007745   HG3462           4x OC-3 SONET, SMIR
  PIC 2          REV 14   750-001901   BA5390           4x OC-12 SONET, SMIR
  PIC 3          REV 09   750-008155   HS3012           2x G/E IQ, 1000 BASE
    SFP 0                 NON-JNPR     P1186TY          SFP-S
    SFP 1        REV 01   740-007326   P11WLTF          SFP-SX
  MMB 1          REV 02   710-005555   HL7514           MMB-288mbit
  PPB 0          REV 04   710-003758   HM4405           PPB Type 2
  PPB 1          REV 04   710-003758   AV1960           PPB Type 2
FPC 2            REV 08   710-010154   HZ3578           E-FPC Type 3
  CPU            REV 05   710-010169   HZ3219           FPC CPU-Enhanced
  PIC 0          REV 02   750-009567   HX2882           1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009898   USC202U709       XENPAK-LR
  PIC 1          REV 03   750-003336   HJ9954           4x OC-48 SONET, SMSR
  PIC 2          REV 01   750-004535   HC0235           1x OC-192 SM SR1
  PIC 3          REV 07   750-007141   HX1699           10x 1GE(LAN), 1000 BASE

    SFP 0        REV 01   740-007326   2441042          SFP-SX
    SFP 1        REV 01   740-007326   2441027          SFP-SX
  MMB 0          REV 03   710-010171   HV2365           MMB-5M3-288mbit
  MMB 1          REV 03   710-010171   HZ3888           MMB-5M3-288mbit
SPMB 0           REV 09   710-003229   HW5245           T Series Switch CPU
SIB 3            REV 07   710-005781   HR5927           SIB-L8-F16
  B Board        REV 06   710-005782   HR5971           SIB-L8-F16 (B)
SIB 4            REV 07   710-005781   HR5903           SIB-L8-F16
  B Board        REV 06   710-005782   HZ5275           SIB-L8-F16 (B)
```

show chassis hardware scc (TX Matrix Router)

```
user@host> show chassis hardware scc
scc-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  TX Matrix
Midplane         REV 04   710-004396   RB0014           SCC Midplane
FPM GBUS         REV 04   710-004617   HW9141           SCC FPM Board
FPM Display      REV 04   710-004619   HS5950           SCC FPM
CIP 0            REV 01   710-010218   HV9151           SCC CIP
CIP 1            REV 01   710-010218   HV9152           SCC CIP
PEM 1            Rev 11   740-002595   QB13977          Power Entry Module
Routing Engine 0 REV 05   740-008883   P11123900153     RE-4.0 (RE-1600)
CB 0             REV 01   710-011709   HR5964           Control Board (CB-TX)
SPMB 0           REV 09   710-003229   HW5293           T Series Switch CPU
SIB 3
SIB 4            REV 01   710-005839   HW1177           SIB-S8-F16
  B Board        REV 01   710-005840   HW1202           SIB-S8-F16 (B)
```

show chassis hardware (T1600 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
```

```
Chassis                                  B2703             T1600
Midplane         REV 03   710-005608   RC4137            T640 Backplane
FPM GBUS         REV 10   710-002901   DT7062            T640 FPM Board
FPM Display      REV 05   710-002897   DS3067            FPM Display
CIP              REV 06   710-002895   DT3386            T-series CIP
PEM 0            Rev 07   740-017906   UA26344           Power Entry Module 3x80
PEM 1            Rev 18   740-002595   UF38441           Power Entry Module
SCG 0            REV 15   710-003423   DV0941            T640 Sonet Clock Gen.
Routing Engine 0 REV 08   740-014082   9009014502        RE-A-2000
Routing Engine 1 REV 07   740-014082   9009009591        RE-A-2000
CB 0             REV 05   710-007655   JA9360            Control Board (CB-T)
CB 1             REV 03   710-017707   DT3251            Control Board (CB-T)
FPC 0            REV 07   710-013558   DR4253            E2-FPC Type 2
  CPU            REV 05   710-013563   DS3902            FPC CPU-Enhanced
  PIC 0          REV 01   750-010618   CB5446            4x G/E SFP, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F11CW           SFP-SX
    Xcvr 1       REV 01   740-011613   P9F15C2           SFP-SX
    Xcvr 2       REV 01   740-011782   PB94K0L           SFP-SX
  PIC 1          REV 06   750-001900   HB6399            1x OC-48 SONET, SMSR
  PIC 2          REV 14   750-001901   AP1092            4x OC-12 SONET, SMIR
  PIC 3          REV 07   750-001900   AR8275            1x OC-48 SONET, SMSR
  MMB 1          REV 07   710-010171   DS1524            MMB-5M3-288mbit
FPC 1            REV 06   710-013553   DL9067            E2-FPC Type 1
  CPU            REV 04   710-013563   DM1685            FPC CPU-Enhanced
  PIC 0          REV 08   750-001072   AB1688            1x G/E, 1000 BASE-SX
  PIC 1          REV 10   750-012266   JX5519            4x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   AM0812S8UK6       SFP-SX
    Xcvr 2       REV 01   740-011613   AM0812S8UK1       SFP-SX
    Xcvr 3       REV 01   740-011782   P8N1YHG           SFP-SX
  PIC 2          REV 22   750-005634   DP0083            1x CHOC12 IQ SONET, SMIR

  MMB 1          REV 07   710-008923   DN1862            MMB 3M 288-bit
FPC 2            REV 01   710-005548   HJ9899            FPC Type 3
  CPU            REV 06   710-001726   HC0586            FPC CPU
  PIC 0          REV 16   750-007141   NC9660            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011613   AM0812S8XAR       SFP-SX
    Xcvr 1       REV 01   740-011782   P920E7B           SFP-SX
    Xcvr 2       REV 01   740-011613   AM0812S8XAU       SFP-SX
    Xcvr 4       REV 01   740-011613   AM0812S8XAK       SFP-SX
    Xcvr 5       REV 01   740-011613   AM0812S8XAA       SFP-SX
    Xcvr 6       REV 01   740-011613   PAJ4NKY           SFP-SX
    Xcvr 7       REV 01   740-011613   AM0812S8UJW       SFP-SX
    Xcvr 8       REV 01   740-011782   PB81X89           SFP-SX
    Xcvr 9       REV 01   740-011613   AM0812S8UJX       SFP-SX
  PIC 1          REV 06   750-015217   DK3280            8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P8P0A3T           SFP-SX
    Xcvr 1       REV 01   740-013111   5090002           SFP-T
    Xcvr 2       REV 01   740-011613   AM0814S93BQ       SFP-SX
    Xcvr 4                NON-JNPR     PDE0FAN           SFP-SX
    Xcvr 5       REV 01   740-011782   P8Q20XY           SFP-SX
    Xcvr 6       REV 01   740-011613   AM0812S8UJV       SFP-SX
    Xcvr 7       REV 01   740-011613   AM0812S8UP7       SFP-SX
  PIC 2          REV 05   750-004695   HT4383            1x Tunnel
  PIC 3          REV 17   750-009553   RL0204            4x OC-48 SONET
    Xcvr 0       REV 01   740-011785   PDS3T23           SFP-SR
    Xcvr 1       REV 01   740-011785   P6Q0F3E           SFP-SR
  MMB 0          REV 03   710-004047   HD5843            MMB-288mbit
  MMB 1          REV 03   710-004047   HE3208            MMB-288mbit
  PPB 0          REV 02   710-002845   HA4524            PPB Type 3
  PPB 1          REV 02   710-002845   HA4766            PPB Type 3
```

```
FPC 3            REV 01   710-010154   HR0863            E-FPC Type 3
  CPU            REV 01   710-010169   HN3422            FPC CPU-Enhanced
  PIC 0          REV 07   750-012793   WF5096            1x 10GE(LAN/WAN) IQ2
    Xcvr 0                NON-JNPR     M64294TP          XFP-10G-LR
  PIC 1          REV 25   750-007141   DV2127            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011613   PFA6LTJ           SFP-SX
    Xcvr 1       REV 01   740-011782   P9P0XV4           SFP-SX
    Xcvr 2       REV 01   740-011782   P9M0TNX           SFP-SX
    Xcvr 4       REV 01   740-011782   P9B0TTP           SFP-SX
    Xcvr 5                NON-JNPR     PBS4LED           SFP-SX
  PIC 2          REV 17   750-009553   RL0212            4x OC-48 SONET
    Xcvr 0       REV 01   740-011785   PDS3T8G           SFP-SR
  PIC 3          REV 32   750-003700   DL1279            1x OC-192 12xMM VSR
  MMB 0          REV 01   710-010171   HR0821            MMB-288mbit
  MMB 1          REV 01   710-010171   HR0818            MMB-288mbit
FPC 4            REV 16   710-013037   EB4919            FPC Type 4-ES
  CPU            REV 09   710-016744   BBAA4382          ST-PMB2
  PIC 0          REV 03   711-029996   EB1569            100GE
  PIC 1          REV 05   711-029999   EB9983            100GE CFP
    Xcvr 0       REV 0    740-032210   J10G80746         CFP-100G-LR4
  BRIDGE 0       REV 02   711-029995   EB2235            100GE Bridge Board
  MMB 0          REV 04   710-025563   BBAA7112          ST-MMB2
  MMB 1          REV 04   710-025563   BBAA7149          ST-MMB2
FPC 5            REV 02   710-013037   DE3407            FPC Type 4-ES
  CPU            REV 04   710-016744   DA2124            ST-PMB2
  PIC 0          REV 16   750-012518   DF2554            4x OC-192 SONET XFP
    Xcvr 0       REV 01   740-014279   AA0745N1FX8       XFP-OC192-SR
    Xcvr 1       REV 01   740-014279   AA0748N1HN5       XFP-OC192-SR
    Xcvr 2       REV 01   740-014279   AA0748N1HT6       XFP-OC192-SR
    Xcvr 3       REV 01   740-014279   AA0744N1EC9       XFP-OC192-SR
  PIC 1          REV 01   750-010850   JA0329            1x OC-768 SONET SR
  MMB 0          REV 04   710-016036   DE9577            ST-MMB2
  MMB 1          REV 04   710-016036   DK4060            ST-MMB2
FPC 6            REV 14   710-013037   DV1431            FPC Type 4-ES
  CPU            REV 09   710-016744   DT9020            ST-PMB2
  PIC 0          REV 11   750-017405   DM6261            4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 01   740-014289   C701XU05Q         XFP-10G-SR
    Xcvr 1       REV 01   740-014279   AA0748N1HPT       XFP-10G-LR
    Xcvr 2       REV 01   740-014289   T08E19189         XFP-10G-SR
    Xcvr 3       REV 01   740-014289   C715XU058         XFP-10G-SR
  PIC 1          REV 13   750-017405   DP8772            4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 02   740-011571   C850XJ037         XFP-10G-SR
    Xcvr 1       REV 02   740-014289   C839XU0L9         XFP-10G-SR
    Xcvr 2       REV 02   740-014289   C834XU05A         XFP-10G-SR
    Xcvr 3       REV 02   740-014289   C810XU0CE         XFP-10G-SR
  MMB 0          REV 01   710-025563   DT8454            ST-MMB2
  MMB 1          REV 01   710-025563   DT8366            ST-MMB2
FPC 7            REV 09   710-007529   HZ7624            FPC Type 3
  CPU            REV 15   710-001726   HZ1413            FPC CPU
  PIC 0          REV 10   750-012793   DM5627            1x 10GE(LAN/WAN) IQ2
    Xcvr 0       REV 02   740-011571   C831XJ062         XFP-10G-SR
  PIC 1          REV 01   750-015217   JT6762            8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P8Q25JU           SFP-SX
    Xcvr 1       REV 01   740-011782   P9B0U0K           SFP-SX
  PIC 2          REV 01   750-015217   JS4268            8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011613   AM0812S8XBZ       SFP-SX
    Xcvr 1       REV 01   740-011613   AM0812S8XAP       SFP-SX
    Xcvr 2       REV 01   740-011613   AM0812S8XBY       SFP-SX
    Xcvr 3       REV 01   740-011613   AM0812S8XBX       SFP-SX
    Xcvr 4       REV 01   740-011613   P9F1652           SFP-SX
```

```
    Xcvr 5       REV 01   740-011782   P8Q21YC           SFP-SX
    Xcvr 6       REV 01   740-011782   P8Q27HQ           SFP-SX
    Xcvr 7       REV 01   740-011613   P8E2SSU           SFP-SX
  PIC 3          REV 15   750-009450   NB6790            1x OC-192 SM SR2
  MMB 0          REV 03   710-005555   HZ3450            MMB-288mbit
  MMB 1          REV 03   710-005555   HZ3415            MMB-288mbit
  PPB 0          REV 04   710-002845   HP0887            PPB Type 3
  PPB 1          REV 04   710-002845   HW5255            PPB Type 3
SPMB 0           REV 10   710-003229   HX3699            T-series Switch CPU
SPMB 1           REV 12   710-003229   DT3091            T-series Switch CPU
SIB 0            REV 07   710-013074   DS4747            SIB-I8-SF
SIB 1            REV 07   710-013074   DS4942            SIB-I8-SF
SIB 2            REV 07   710-013074   DS4965            SIB-I8-SF
SIB 3            REV 07   710-013074   DS4990            SIB-I8-SF
SIB 4            REV 07   710-013074   DS4944            SIB-I8-SF
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 2
```

show chassis hardware (TX Matrix Plus Router)

```
user@host> show chassis hardware
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN113186EAHB      TXP
Midplane         REV 05   710-022574   TS3822            SFC Midplane
FPM Display      REV 03   710-024027   DW4701            TXP FPM Display
CIP 0            REV 05   710-023792   DW7998            TXP CIP
CIP 1            REV 05   710-023792   DW7999            TXP CIP
PEM 0            Rev 04   740-027463   UM26367           Power Entry Module
PEM 1            Rev 04   740-027463   UM26346           Power Entry Module
Routing Engine 0 REV 06   740-026942   737A-1081         RE-DUO-2600
Routing Engine 1 REV 06   740-026942   737A-1043         RE-DUO-2600
CB 0             REV 05   710-022606   DW4435            SFC Control Board
CB 1             REV 09   710-022606   DW6100            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 04   750-024564   DW5764            F13 SIB
  B Board        REV 03   710-023431   DW9053            F13 SIB Mezz
SIB F13 3        REV 04   750-024564   DW5785            F13 SIB
  B Board        REV 03   710-023431   DW9030            F13 SIB Mezz
SIB F13 6
SIB F13 8        REV 04   750-024564   DW5752            F13 SIB
  B Board        REV 03   710-023431   DW9051            F13 SIB Mezz
SIB F13 11       REV 04   750-024564   DW5782            F13 SIB
  B Board        REV 03   710-023431   DW9058            F13 SIB Mezz
SIB F13 12       REV 03   750-024564   DT9466            F13 SIB
  B Board        REV 02   710-023431   DT6556            F13 SIB Mezz
SIB F2S 0/0      REV 05   710-022603   DW7898            F2S SIB
  B Board        REV 05   710-023787   DW7625            F2S SIB Mezz
SIB F2S 0/2      REV 05   710-022603   DW7811            F2S SIB
  B Board        REV 05   710-023787   DW7550            F2S SIB Mezz
SIB F2S 0/4      REV 04   710-022603   DW4873            F2S SIB
  B Board        REV 05   710-023787   DW8509            F2S SIB Mezz
SIB F2S 0/6      REV 04   710-022603   DW4867            F2S SIB
  B Board        REV 05   710-023787   DW8472            F2S SIB Mezz
SIB F2S 1/0      REV 04   710-022603   DW4871            F2S SIB
  B Board        REV 05   710-023787   DW8497            F2S SIB Mezz
SIB F2S 1/2      REV 05   710-022603   DW7868            F2S SIB
```

```
  B Board        REV 05   710-023787   DW7551            F2S SIB Mezz
SIB F2S 1/4      REV 04   710-022603   DW4854            F2S SIB
  B Board        REV 05   710-023787   DW8496            F2S SIB Mezz
SIB F2S 1/6      REV 05   710-022603   DW7889            F2S SIB
  B Board        REV 05   710-023787   DW7496            F2S SIB Mezz
SIB F2S 2/0      REV 04   710-022603   DW4852            F2S SIB
  B Board        REV 05   710-023787   DW8498            F2S SIB Mezz
SIB F2S 2/2      REV 04   710-022603   DW4845            F2S SIB
  B Board        REV 05   710-023787   DW8457            F2S SIB Mezz
SIB F2S 2/4      REV 05   710-022603   DW7802            F2S SIB
  B Board        REV 05   710-023787   DW7562            F2S SIB Mezz
SIB F2S 2/6      REV 04   710-022603   DW4822            F2S SIB
  B Board        REV 05   710-023787   DW8467            F2S SIB Mezz
SIB F2S 3/0      REV 05   710-022603   DW7815            F2S SIB
  B Board        REV 05   710-023787   DW7518            F2S SIB Mezz
SIB F2S 3/2      REV 03   710-022603   DV0068            F2S SIB
  B Board        REV 03   710-023787   DT9974            F2S SIB Mezz
SIB F2S 3/4      REV 05   710-022603   DW7874            F2S SIB
  B Board        REV 05   710-023787   DW7601            F2S SIB Mezz
SIB F2S 3/6      REV 03   710-022603   DV0033            F2S SIB
  B Board        REV 03   710-023787   DT9969            F2S SIB Mezz
SIB F2S 4/0      REV 03   710-022603   DV0043            F2S SIB
  B Board        REV 03   710-023787   DT9948            F2S SIB Mezz
SIB F2S 4/2      REV 05   710-022603   DW5446            F2S SIB
  B Board        REV 05   710-023787   DW7611            F2S SIB Mezz
SIB F2S 4/4      REV 04   710-022603   DW4826            F2S SIB
  B Board        REV 05   710-023787   DW8458            F2S SIB Mezz
SIB F2S 4/6      REV 03   710-022603   DV0026            F2S SIB
  B Board        REV 03   710-023787   DT9963            F2S SIB Mezz
Fan Tray 0       REV 02   760-024497   DR8290            Front Fan Tray
Fan Tray 1       REV 02   760-024497   DR8293            Front Fan Tray
Fan Tray 2       REV 05   760-024502   DR8280            Rear Fan Tray
Fan Tray 3
Fan Tray 4       REV 05   760-024502   DR8276            Rear Fan Tray
Fan Tray 5       REV 02   760-024502   DP5643            Rear Fan Tray

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11036F8AHA      T1600
Midplane         REV 03   710-017247   RC3799            T-series Backplane
FPM GBUS         REV 10   710-002901   DP7009            T640 FPM Board
FPM Display      REV 01   710-021387   DN7026            T1600 FPM Display
CIP              REV 06   710-002895   DP6024            T-series CIP
PEM 1           Rev 02   740-023211   WA50019           Power Entry Module 4x60A
SCG 0            REV 15   710-003423   DR6757            T640 Sonet Clock Gen.
SCG 1            REV 15   710-003423   DS2225            T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-026941   737F-1040         RE-DUO-1800
Routing Engine 1 REV 01   740-026941   737F-1016         RE-DUO-1800
CB 0             REV 06   710-022597   DX4011            LCC Control Board
CB 1             REV 06   710-022597   DX4017            LCC Control Board
FPC 1            REV 07   710-013035   DN5847            FPC Type 3-ES
  CPU            REV 08   710-016744   DP2570            ST-PMB2
  PIC 0          REV 05   750-015217   DB0418            8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P8Q27ZG           SFP-SX
    Xcvr 1                NON-JNPR     PDA1U0D           SFP-SX
    Xcvr 2       REV 01   740-011613   P9F1ALW           SFP-SX
    Xcvr 3       REV 01   740-011782   PBA403V           SFP-SX
    Xcvr 4                NON-JNPR     PDE09DP           SFP-SX
    Xcvr 5       REV 01   740-011782   PCH2P4K           SFP-SX
```

```
    Xcvr 6       REV 01   740-011782   PB94K0F           SFP-SX
    Xcvr 7       REV 01   740-011782   PBA2R2A           SFP-SX
  PIC 1          REV 03   750-004424   HJ4020            1x 10GE(LAN),DWDM
  PIC 2          REV 01   750-003336   HG6073            4x OC-48 SONET, SMSR
  MMB 0          REV 04   710-016036   DP3401            ST-MMB2
FPC 3            REV 12   710-013037   DR1169            FPC Type 4-ES
  CPU            REV 08   710-016744   DP9429            ST-PMB2
  PIC 0          REV 02   750-010850   JA0332            1x OC-768 SONET SR
  MMB 0          REV 04   710-016036   DR0628            ST-MMB2
  MMB 1          REV 04   710-016036   DR0592            ST-MMB2
FPC 4            REV 05   710-021534   DR7350            FPC Type 1-ES
  CPU            REV 08   710-016744   DP8096            ST-PMB2
  PIC 0          REV 04   750-014627   DP9171            4x OC-3 1x OC-12 SFP
    Xcvr 0       REV 02   740-011615   PDE2RVR           SFP-SR
  PIC 1          REV 22   750-005634   DS5815            1x CHOC12 IQ SONET, SMIR

  PIC 2          REV 09   750-002911   CF4539            4x F/E, 100 BASE-TX
  PIC 3          REV 08   750-021652   DR2827            1x CHOC12 IQE SONET
    Xcvr 0                NON-JNPR     8                 UNKNOWN
  MMB 0          REV 04   710-016036   DR0809            ST-MMB2
FPC 5            REV 07   710-007529   HS5608            FPC Type 3
  CPU            REV 15   710-001726   HX4351            FPC CPU
  PIC 0          REV 14   750-009567   WJ8961            1x 10GE(LAN),XENPAK
    Xcvr 0       REV 01   740-013170   J05K05961         XENPAK-LR
  PIC 1          REV 16   750-007141   JJ8146            10x 1GE(LAN), 1000 BASE

    Xcvr 1       REV 01   740-011613   P9F117T           SFP-SX
    Xcvr 2       REV 01   740-011782   PBA2VCL           SFP-SX
    Xcvr 3       REV 01   740-011782   PB83DRB           SFP-SX
    Xcvr 4       REV 01   740-011613   AM0812S8UP8       SFP-SX
  PIC 2          REV 12   750-009567   WF3566            1x 10GE(LAN),XENPAK
    Xcvr 0       REV 02   740-013170   T07C94489         XENPAK-LR
  MMB 0          REV 03   710-005555   HZ1907            MMB-288mbit
  MMB 1          REV 03   710-005555   HW5283            MMB-288mbit
  PPB 0          REV 04   710-002845   HZ7717            PPB Type 3
  PPB 1          REV 04   710-002845   HS0110            PPB Type 3
FPC 6            REV 07   710-013035   DP7486            FPC Type 3-ES
  CPU            REV 08   710-016744   DP2545            ST-PMB2
  PIC 0          REV 09   750-009567   NE6323            1x 10GE(LAN),XENPAK
    Xcvr 0       REV 02   740-013170   T09C71959         XENPAK-LR
  PIC 1          REV 06   750-015217   DN4775            8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P7E0T6M           SFP-SX
    Xcvr 1       REV 01   740-011613   AM0812S8XAY       SFP-SX
    Xcvr 2       REV 01   740-011782   P7E0T6J           SFP-SX
    Xcvr 3       REV 01   740-011782   PCH2P7D           SFP-SX
    Xcvr 4       REV 01   740-011782   P9B0QYT           SFP-SX
    Xcvr 5       REV 01   740-011613   AM0812S8WQJ       SFP-SX
    Xcvr 6       REV 02   740-013111   9301220           SFP-T
    Xcvr 7       REV 01   740-011782   P9B0TZ5           SFP-SX
  PIC 2          REV 06   750-015217   DM6747            8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011613   PAP0ZB2           SFP-SX
    Xcvr 1       REV 01   740-013111   70191002          SFP-T
    Xcvr 6       REV 01   740-011782   PBA29H8           SFP-SX
    Xcvr 7       REV 01   740-011613   AM0812S8WQG       SFP-SX
  MMB 0          REV 04   710-016036   DP3238            ST-MMB2
FPC 7            REV 03   710-021540   DV3154            FPC Type 2-ES
  CPU            REV 09   710-016744   DT9053            ST-PMB2
  PIC 0          REV 13   750-001901   HB4225            4x OC-12 SONET, SMIR
  PIC 1          REV 05   750-001900   AD3644            1x OC-48 SONET, SMSR
  PIC 2          REV 10   750-008155   HV0335            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011782   PCH2UKF           SFP-SX
```

```
    Xcvr 1       REV 01   740-011782   PCH2V19           SFP-SX
  PIC 3          REV 03   750-014638   JS9493            1x OC-48-12-3 SFP
    Xcvr 0       REV 01   740-011785   P6Q0ENK           SFP-SR
  MMB 0          REV 05   710-016036   DP3323            ST-MMB2
SPMB 0           REV 04   710-023321   DX3004            LCC Switch CPU
SPMB 1           REV 04   710-023321   DX3009            LCC Switch CPU
SIB 0            REV 07   710-022594   DW4195            LCC SIB
  B Board        REV 07   710-023185   DW3930            LCC SIB Mezz
SIB 1            REV 07   710-022594   DW4179            LCC SIB
  B Board        REV 07   710-023185   DW3919            LCC SIB Mezz
SIB 2
SIB 3            REV 06   710-022594   DT8251            LCC SIB
  B Board        REV 06   710-023185   DT5792            LCC SIB Mezz
SIB 4            REV 08   710-022594   DW8014            LCC SIB
  B Board        REV 07   710-023185   DW3917            LCC SIB Mezz
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 3

lcc1-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1102270AHA      T1600
Midplane         REV 04   710-017247   RC5358            T-series Backplane
FPM GBUS         REV 10   710-002901   DS3443            T640 FPM Board
FPM Display      REV 01   710-021387   DS6411            T1600 FPM Display
CIP              REV 06   710-002895   DS4235            T-series CIP
PEM 0           Rev 02   740-023211   VM82438           Power Entry Module 4x60A
SCG 0            REV 15   710-003423   DS6649            T640 Sonet Clock Gen.
SCG 1            REV 15   710-003423   DR6775            T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-026941   737F-1083         RE-DUO-1800
Routing Engine 1 REV 01   740-026941   737F-1104         RE-DUO-1800
CB 0             REV 06   710-022597   DW8542            LCC Control Board
CB 1             REV 06   710-022597   DW8530            LCC Control Board
FPC 0            REV 02   710-010845   JE2392            FPC Type 4
  CPU            REV 02   710-011481   JF6820            FPC CPU-Enhanced
  PIC 0          REV 11   750-017405   DP7259            4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 01   740-014279   AA0741N1C8T       XFP-10G-LR
    Xcvr 1       REV 01   740-014279   AA0746N1GAM       XFP-10G-LR
    Xcvr 2       REV 01   740-014279   AA0747N1H0B       XFP-10G-LR
    Xcvr 3       REV 01   740-014279   AA0748N1HZ5       XFP-10G-LR
  MMB 0          REV 03   710-010842   HY7601            ST-MMB
FPC 1            REV 16   710-013037   BBAA7398          FPC Type 4-ES
  CPU            REV 09   710-016744   BBAA2329          ST-PMB2
  PIC 0          REV 03   711-029996   EB1575            100GE
  PIC 1          REV 06   750-034781   EB9980            100GE CFP
  MMB 0          REV 04   710-025563   BBAA5325          ST-MMB2
  MMB 1          REV 04   710-025563   BBAA5444          ST-MMB2
FPC 2            REV 16   710-013037   BBAA7185          FPC Type 4-ES
  CPU            REV 09   710-016744   BBAA3522          ST-PMB2
  PIC 0          REV 03   711-029996   EB1557            100GE
  PIC 1          REV 05   750-034781   EB4660            100GE CFP
    Xcvr 0       REV 0    740-032210   J10F73666         CFP-100G-LR4
  BRIDGE 0       REV 02   711-029995   EB2237            100GE Bridge Board
  MMB 0          REV 04   710-025563   BBAA5347          ST-MMB2
  MMB 1          REV 04   710-025563   BBAA5401          ST-MMB2
FPC 3            REV 10   710-021534   DZ0941            FPC Type 1-ES
  CPU            REV 09   710-016744   DY6364            ST-PMB2
  PIC 0          REV 13   750-012266   DK9192            4x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   AM0812S8WVD       SFP-SX
```

```
    Xcvr 1                NON-JNPR     PDD63Q4           SFP-SX
    Xcvr 2                NON-JNPR     PDE4G54           SFP-SX
    Xcvr 3                NON-JNPR     PD40MAG           SFP-SX
  PIC 1          REV 01   750-007641   HJ2003            1x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   AM0812S8WVG       SFP-SX
  PIC 3          REV 17   750-007444   JB6873            1x CHSTM1 IQ SDH, SMIR
  MMB 0          REV 04   710-025563   DZ0281            ST-MMB2
FPC 4            REV 06   710-013035   DK0614            FPC Type 3-ES
  CPU            REV 07   710-016744   DK1616            ST-PMB2
  PIC 0          REV 22   750-007141   DM1870            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011782   PCL3UKW           SFP-SX
    Xcvr 1       REV 01   740-011782   P7E0T73           SFP-SX
    Xcvr 2       REV 01   740-007326   P4T0WLR           SFP-SX
    Xcvr 3       REV 01   740-011782   PAR1LRL           SFP-SX
    Xcvr 4       REV 01   740-011782   P9M0U3Z           SFP-SX
    Xcvr 5       REV 01   740-011782   P9M0U0C           SFP-SX
    Xcvr 6       REV 01   740-011782   P9M0TLG           SFP-SX
    Xcvr 7       REV 01   740-011782   P9M0U0F           SFP-SX
    Xcvr 8       REV 01   740-011613   PFA6LAP           SFP-SX
    Xcvr 9       REV 01   740-011782   PCH2P0U           SFP-SX
  PIC 1          REV 16   750-009450   CV2565            1x OC-192 SM SR2
  PIC 2          REV 05   750-004424   HH3057            1x 10GE(LAN),10GBASE-LR

  PIC 3          REV 12   750-013423   DP0403            MultiServices 500
  MMB 0          REV 04   710-016036   DK1988            ST-MMB2
FPC 5            REV 07   710-013560   DR0004            E2-FPC Type 3
  CPU            REV 05   710-013563   DR0089            FPC CPU-Enhanced
  PIC 0          REV 11   750-012793   DR6107            1x 10GE(LAN/WAN) IQ2
    Xcvr 0       REV 01   740-014289   C743XU074         XFP-10G-SR
  PIC 1          REV 01   750-004695   HD5980            1x Tunnel
  PIC 2          REV 32   750-003700   DL3770            1x OC-192 12xMM VSR
  PIC 3          REV 12   750-009553   WB8901            4x OC-48 SONET
    Xcvr 0       REV 01   740-011785   P9D1GTQ           SFP-SR
    Xcvr 1       REV 01   740-011785   PDS0MMB           SFP-SR
    Xcvr 3       REV 01   740-011785   PDE1KXP           SFP-SR
  MMB 0          REV 07   710-010171   DP7374            MMB-5M3-288mbit
  MMB 1          REV 07   710-010171   DP7404            MMB-5M3-288mbit
FPC 6            REV 07   710-013035   DM0994            FPC Type 3-ES
  CPU            REV 07   710-016744   DM3651            ST-PMB2
  PIC 0          REV 07   750-015217   DN4743            8x 1GE(TYPE3), IQ2
    Xcvr 3       REV 01   740-011613   AM0812S8XB0       SFP-SX
    Xcvr 4       REV 01   740-011782   PB829RB           SFP-SX
    Xcvr 5       REV 01   740-011782   P8J1SYX           SFP-SX
  PIC 1          REV 03   750-003336   HJ9954            4x OC-48 SONET, SMSR
  PIC 3          REV 02   750-012793   JM7665            1x 10GE(LAN/WAN) IQ2
  MMB 0          REV 04   710-016036   DN6913            ST-MMB2
FPC 7            REV 08   710-010845   JM3958            FPC Type 4
  CPU            REV 04   710-011481   JK3669            FPC CPU-Enhanced
  PIC 0          REV 11   750-017405   DP8837            4x 10GE (LAN/WAN) XFP
    Xcvr 1       REV 01   740-014279   753019A00277      XFP-10G-LR
    Xcvr 2       REV 02   740-011571   C850XJ00P         XFP-10G-SR
    Xcvr 3       REV 01   740-014279   AA0813N1RTG       XFP-10G-LR
  MMB 0          REV 04   710-010842   JN1971            ST-MMB
SPMB 0           REV 04   710-023321   DW3629            LCC Switch CPU
SPMB 1           REV 04   710-023321   DW3621            LCC Switch CPU
SIB 0            REV 07   710-022594   DW4200            LCC SIB
  B Board        REV 07   710-023185   DW3932            LCC SIB Mezz
SIB 1            REV 07   710-022594   DW4193            LCC SIB
  B Board        REV 07   710-023185   DW3904            LCC SIB Mezz
SIB 2
```

```
SIB 3            REV 07   710-022594   DW4210            LCC SIB
  B Board        REV 06   710-023185   DT5780            LCC SIB Mezz
SIB 4            REV 08   710-022594   DW8019            LCC SIB
  B Board        REV 06   710-023185   DT5795            LCC SIB Mezz
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 3
```

show chassis hardware sfc (TX Matrix Plus Router)

```
user@host> show chassis hardware sfc 0
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN112F007AHB      TXP
Midplane         REV 05   710-022574   TS4027            SFC Midplane
FPM Display      REV 03   710-024027   DX0282            TXP FPM Display
CIP 0            REV 04   710-023792   DW4889            TXP CIP
CIP 1            REV 04   710-023792   DW4887            TXP CIP
PEM 0            Rev 07   740-027463   UM26368           Power Entry Module
Routing Engine 0 REV 01   740-026942   737A-1064         SFC RE
Routing Engine 1 REV 01   740-026942   737A-1082         SFC RE
CB 0             REV 09   710-022606   DW6099            SFC Control Board
CB 1             REV 09   710-022606   DW6096            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 04   710-022600   DX0841            F13 SIB
  B Board        REV 03   710-023431   DX0966            F13 SIB Mezz
SIB F13 1        REV 04   750-024564   DW5776            F13 SIB
  B Board        REV 03   710-023431   DW9028            F13 SIB
SIB F13 3        REV 04   750-024564   DW5762            F13 SIB
  B Board        REV 03   710-023431   DW9059            F13 SIB
SIB F13 4        REV 04   750-024564   DW5797            F13 SIB
  B Board        REV 03   710-023431   DW9041            F13 SIB
SIB F13 6        REV 04   750-024564   DW5770            F13 SIB
  B Board        REV 03   710-023431   DW9079            F13 SIB Mezz
SIB F13 7        REV 04   750-024564   DW5758            F13 SIB
  B Board        REV 03   710-023431   DW9047            F13 SIB
SIB F13 8        REV 04   750-024564   DW5761            F13 SIB
  B Board        REV 03   710-023431   DW9043            F13 SIB Mezz
SIB F13 9        REV 04   750-024564   DW5754            F13 SIB
  B Board        REV 03   710-023431   DW9078            F13 SIB Mezz
SIB F13 11       REV 04   710-022600   DX0826            F13 SIB
  B Board        REV 03   710-023431   DX0967            F13 SIB Mezz
SIB F13 12       REV 04   750-024564   DW5794            F13 SIB
  B Board        REV 03   710-023431   DW9044            F13 SIB Mezz
SIB F2S 0/0      REV 05   710-022603   DW7897            F2S SIB
  B Board        REV 05   710-023787   DW7657            NEO PMB
SIB F2S 0/2      REV 05   710-022603   DW7833            F2S SIB
  B Board        REV 05   710-023787   DW7526            NEO PMB
SIB F2S 0/4      REV 05   710-022603   DW7875            F2S SIB
  B Board        REV 05   710-023787   DW7588            NEO PMB
SIB F2S 0/6      REV 05   710-022603   DW7860            F2S SIB
  B Board        REV 05   710-023787   DW7589            NEO PMB
SIB F2S 1/0      REV 04   710-022603   DW4820            F2S SIB
  B Board        REV 05   710-023787   DW8510            NEO PMB
SIB F2S 1/2      REV 05   710-022603   DW7849            F2S SIB
  B Board        REV 05   710-023787   DW7525            NEO PMB
SIB F2S 1/4      REV 05   710-022603   DW7927            F2S SIB
  B Board        REV 05   710-023787   DW7556            F2S SIB Mezz
```

```
SIB F2S 1/6      REV 05   710-022603   DW7866            F2S SIB
  B Board        REV 05   710-023787   DW7651            NEO PMB
SIB F2S 2/0      REV 05   710-022603   DW7880            F2S SIB
  B Board        REV 05   710-023787   DW7523            NEO PMB
SIB F2S 2/2      REV 05   710-022603   DW7895            F2S SIB
  B Board        REV 05   710-023787   DW7591            NEO PMB
SIB F2S 2/4      REV 05   710-022603   DW7907            F2S SIB
  B Board        REV 05   710-023787   DW7590            NEO PMB
SIB F2S 2/6      REV 05   710-022603   DW7785            F2S SIB
  B Board        REV 05   710-023787   DW7524            NEO PMB
SIB F2S 3/0      REV 05   710-022603   DW7782            F2S SIB
  B Board        REV 05   710-023787   DW7634            NEO PMB
SIB F2S 3/2      REV 05   710-022603   DW7793            F2S SIB
  B Board        REV 05   710-023787   DW7548            NEO PMB
SIB F2S 3/4      REV 05   710-022603   DW7779            F2S SIB
  B Board        REV 05   710-023787   DW7587            NEO PMB
SIB F2S 3/6      REV 05   710-022603   DW7930            F2S SIB
  B Board        REV 05   710-023787   DW7505            NEO PMB
SIB F2S 4/0      REV 05   710-022603   DW7867            F2S SIB
  B Board        REV 05   710-023787   DW7656            NEO PMB
SIB F2S 4/2      REV 05   710-022603   DW7917            F2S SIB
  B Board        REV 05   710-023787   DW7640            NEO PMB
SIB F2S 4/4      REV 05   710-022603   DW7929            F2S SIB
  B Board        REV 05   710-023787   DW7643            NEO PMB
SIB F2S 4/6      REV 05   710-022603   DW7870            F2S SIB
  B Board        REV 05   710-023787   DW7635            NEO PMB
Fan Tray 0       REV 06   760-024497   DV7831            Front Fan Tray
Fan Tray 1       REV 06   760-024497   DV9614            Front Fan Tray
Fan Tray 2       REV 06   760-024502   DV9618            Rear Fan Tray
Fan Tray 3       REV 06   760-024502   DV9616            Rear Fan Tray
Fan Tray 4       REV 06   760-024502   DV7807            Rear Fan Tray
Fan Tray 5       REV 06   760-024502   DV7828            Rear Fan Tray
```

show chassis hardware extensive (TX Matrix Plus Router)

```
user@host> show chassis hardware extensive
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN112F007AHB      TXP
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN112F007AHB
 Assembly ID:  0x052c            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: TXP
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 2c 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 32 46 30 30 37 41 48 42 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 05   710-022574   TS4027            SFC Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-022574        S/N:               TS4027
 Assembly ID:  0x0962            Assembly Version:  01.05
```

```
 Date:         03-23-2009        Assembly Flags:    0x00
 Version:      REV 05
 ID: SFC Midplane
 Board Information Record:
  Address 0x00: ad 01 ff ff 00 1d b5 14 00 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 62 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 32 32 35 37 34 00 00
  Address 0x20: 53 2f 4e 20 54 53 34 30 32 37 00 00 00 17 03 07
  Address 0x30: d9 ff ff ff ad 01 ff ff 00 1d b5 14 00 00 ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Display      REV 03   710-024027   DX0282           TXP FPM Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-024027        S/N:               DX0282
 Assembly ID:  0x096c            Assembly Version:  01.03
 Date:         02-10-2009        Assembly Flags:    0x00
 Version:      REV 03
 ID: TXP FPM Display             FRU Model Number:  CRAFT-TXP
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 6c 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 32 34 30 32 37 00 00
  Address 0x20: 53 2f 4e 20 44 58 30 32 38 32 00 00 00 0a 02 07
  Address 0x30: d9 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 52 41 46 54 2d 54 58 50 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CIP 0            REV 04   710-023792   DW4889           TXP CIP
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-023792        S/N:               DW4889
 Assembly ID:  0x0969            Assembly Version:  01.04
 Date:         01-26-2009        Assembly Flags:    0x00
 Version:      REV 04
 ID: TXP CIP                     FRU Model Number:  CIP-TXP
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware clei-models (TX Matrix Plus Router)

```
user@host> show chassis hardware clei-models
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 05   710-022574                     CHAS-BP-TXP-S
FPM Display      REV 03   710-024027                     CRAFT-TXP-S
CIP 0            REV 05   710-023792                     CIP-TXP-S
CIP 1            REV 05   710-023792                     CIP-TXP-S
PEM 0            Rev 04   740-027463   IPUPAFGKTA        PWR-TXP-7-60-DC
PEM 1            Rev 04   740-027463   IPUPAFGKTA        PWR-TXP-7-60-DC
Routing Engine 0 REV 06   740-026942                     RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942                     RE-DUO-C2600-16G-S
CB 0             REV 05   710-022606                     CB-TXP-S
CB 1             REV 09   710-022606                     CB-TXP-S
SIB F13 0        REV 04   750-024564                     SIB-TXP-F13
SIB F13 3        REV 04   750-024564                     SIB-TXP-F13
```

```
SIB F13 8        REV 04   750-024564                    SIB-TXP-F13
SIB F13 11       REV 04   750-024564                    SIB-TXP-F13
SIB F13 12       REV 03   750-024564                    SIB-TXP-F13
SIB F2S 0/0      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 0/2      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 0/4      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 0/6      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/0      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/2      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/4      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/6      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/0      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/2      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/4      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/6      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/0      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/2      REV 03   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/4      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/6      REV 03   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/0      REV 03   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/2      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/4      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/6      REV 03   710-022603                    SIB-TXP-F2S-S
Fan Tray 0       REV 02   760-024497                    FANTRAY-TXP-H-S
Fan Tray 1       REV 02   760-024497                    FANTRAY-TXP-H-S
Fan Tray 2       REV 05   760-024502                    FANTRAY-TXP-V-S
Fan Tray 3
Fan Tray 4       REV 05   760-024502                    FANTRAY-TXP-V-S
Fan Tray 5       REV 02   760-024502                    FANTRAY-TXP-V-S

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 03   710-017247                     CHAS-BP-T1600-S
FPM Display      REV 01   710-021387                     CRAFT-T1600-S
CIP              REV 06   710-002895                     CIP-L-T640-S
PEM 1            Rev 02   740-023211   IPUPAC8KTA        PWR-T1600-4-60-DC-S
SCG 0            REV 15   710-003423                     SCG-T-S
SCG 1            REV 15   710-003423                     SCG-T-S
Routing Engine 0 REV 01   740-026941                     RE-DUO-C1800-8G-S
Routing Engine 1 REV 01   740-026941                     RE-DUO-C1800-8G-S
CB 0             REV 06   710-022597                     CB-LCC-S
CB 1             REV 06   710-022597                     CB-LCC-S
FPC 1            REV 07   710-013035                     T640-FPC3-ES
  PIC 0          REV 05   750-015217                     PC-8GE-TYPE3-SFP-IQ2
  PIC 1          REV 03   750-004424                     PC-1XGE-LR
  PIC 2          REV 01   750-003336                     PC-4OC48-SON-SMSR
FPC 3            REV 12   710-013037                     T1600-FPC4-ES
  PIC 0          REV 02   750-010850                     PD-1OC768-SON-SR
FPC 4            REV 05   710-021534                     T640-FPC1-ES
  PIC 0          REV 04   750-014627                     PB-4OC3-1OC12-SON-SFP
  PIC 1          REV 22   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 2          REV 09   750-002911                     PB-4FE-TX
  PIC 3          REV 08   750-021652                     PB-1CHOC12-STM4-IQE-SFP
FPC 5            REV 07   710-007529                     T640-FPC3
  PIC 0          REV 14   750-009567                     PC-1XGE-XENPAK
  PIC 1          REV 16   750-007141                     PC-10GE-SFP
  PIC 2          REV 12   750-009567                     PC-1XGE-XENPAK
FPC 6            REV 07   710-013035                     T640-FPC3-ES
  PIC 0          REV 09   750-009567                     PC-1XGE-XENPAK
```

```
  PIC 1          REV 06   750-015217                    PC-8GE-TYPE3-SFP-IQ2
  PIC 2          REV 06   750-015217                    PC-8GE-TYPE3-SFP-IQ2
FPC 7            REV 03   710-021540                    T640-FPC2-ES
  PIC 0          REV 13   750-001901                    PB-4OC12-SON-SMIR
  PIC 1          REV 05   750-001900                    PB-1OC48-SON-SMSR
  PIC 2          REV 10   750-008155                    PB-2GE-SFP-QPP
  PIC 3          REV 03   750-014638                    PB-1OC48-SON-B-SFP
SIB 0            REV 07   710-022594                    SIB-TXP-T1600-S
SIB 1            REV 07   710-022594                    SIB-TXP-T1600-S
SIB 3            REV 06   710-022594                    SIB-TXP-T1600-S
SIB 4            REV 08   710-022594                    SIB-TXP-T1600-S
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T-S
Fan Tray 2                                              FANTRAY-TXP-R-S

lcc1-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   710-017247                     CHAS-BP-T1600-S
FPM Display      REV 01   710-021387                     CRAFT-T1600-S
CIP              REV 06   710-002895                     CIP-L-T640-S
PEM 0            Rev 02   740-023211   IPUPAC8KTA        PWR-T1600-4-60-DC-S
SCG 0            REV 15   710-003423                     SCG-T-S
SCG 1            REV 15   710-003423                     SCG-T-S
Routing Engine 0 REV 01   740-026941                     RE-DUO-C1800-8G-S
Routing Engine 1 REV 01   740-026941                     RE-DUO-C1800-8G-S
CB 0             REV 06   710-022597                     CB-LCC-S
CB 1             REV 06   710-022597                     CB-LCC-S
FPC 0            REV 02   710-010845                     T640-FPC4-ES
  PIC 0          REV 11   750-017405                     PD-4XGE-XFP
FPC 1            REV 16   710-013037                     T1600-FPC4-ES
  PIC 1          REV 06   750-034781                     PD-1CE-CFP
FPC 2            REV 16   710-013037                     T1600-FPC4-ES
  PIC 1          REV 05   750-034781                     PD-1CE-CFP
FPC 3            REV 10   710-021534                     T640-FPC1-ES
  PIC 0          REV 13   750-012266                     PB-4GE-TYPE1-SFP-IQ2
  PIC 1          REV 01   750-007641                     PE-1GE-SFP-QPP
  PIC 3          REV 17   750-007444                     PB-1CHSTM1-SMIR-QPP
FPC 4            REV 06   710-013035                     T640-FPC3-ES
  PIC 0          REV 22   750-007141                     PC-10GE-SFP
  PIC 1          REV 16   750-009450                     PC-1OC192-SON-SR2
  PIC 2          REV 05   750-004424                     PC-1XGE-LR
  PIC 3          REV 12   750-013423                     PC-MS-500-3
FPC 5            REV 07   710-013560                     T640-FPC3-E2
  PIC 0          REV 11   750-012793                     PC-1XGE-TYPE3-XFP-IQ2
  PIC 1          REV 01   750-004695                     PC-TUNNEL
  PIC 2          REV 32   750-003700                     PC-1OC192-SON-VSR
  PIC 3          REV 12   750-009553                     PC-4OC48-SON-SFP
FPC 6            REV 07   710-013035                     T640-FPC3-ES
  PIC 0          REV 07   750-015217                     PC-8GE-TYPE3-SFP-IQ2
  PIC 1          REV 03   750-003336                     PC-4OC48-SON-SMSR
  PIC 3          REV 02   750-012793                     PC-1XGE-TYPE3-XFP-IQ2
FPC 7            REV 08   710-010845                     T640-FPC4-ES
  PIC 0          REV 11   750-017405                     PD-4XGE-XFP
SIB 0            REV 07   710-022594                     SIB-TXP-T1600-S
SIB 1            REV 07   710-022594                     SIB-TXP-T1600-S
SIB 3            REV 07   710-022594                     SIB-TXP-T1600-S
SIB 4            REV 08   710-022594                     SIB-TXP-T1600-S
Fan Tray 0                                              FANTRAY-T-S
```

```
Fan Tray 1                                                FANTRAY-T-S
Fan Tray 2                                                FANTRAY-TXP-R-S
```

show chassis hardware detail (TX Matrix Plus Router)

```
user@host> show chassis hardware detail
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN111B023AHB      TXP
Midplane         REV 01   710-022574   TR7990            SFC Midplane
FPM Display      REV 03   710-024027   DW4699            TXP FPM Display
CIP 0            REV 01   710-023792   DR1437            TXP CIP
CIP 1            REV 02   710-023792   DS4564            TXP CIP
PEM 0            Rev 07   740-027463   UM26360           Power Entry Module
Routing Engine 0 REV 01   740-026942   737A-1024         SFC RE
  ad0    3887 MB  SMART CF             200811050193CEB1CEB1 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A0762     Disk 1
Routing Engine 1 REV 01   740-026942   737A-1024         SFC RE
  ad0    3887 MB  SMART CF             20081105004C19A019A0 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A0794     Disk 1
CB 0             REV 03   710-022606   DR7134            SFC Control Board
CB 1             REV 01   710-022606   DP8890            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 03   750-024564   DT9478            F13 SIB
  B Board        REV 02   710-023431   DT6554            F13 SIB
SIB F13 1        REV 03   750-024564   DT9454            F13 SIB
  B Board        REV 02   710-023431   DT6551            F13 SIB
SIB F2S 0/0      REV 02   710-022603   DT2838            F2S SIB
  B Board        REV 02   710-023787   DT1725            NEO PMB
SIB F2S 0/2      REV 02   710-022603   DT2824            F2S SIB
  B Board        REV 02   710-023787   DT1706            NEO PMB
SIB F2S 0/4      REV 02   710-022603   DT2822            F2S SIB
  B Board        REV 02   710-023787   DT1696            NEO PMB
SIB F2S 0/6      REV 02   710-022603   DT2823            F2S SIB
  B Board        REV 02   710-023787   DT1717            NEO PMB
SIB F2S 1/0      REV 03   710-022603   DV0059            F2S SIB
  B Board        REV 03   710-023787   DT9942            NEO PMB
SIB F2S 1/2      REV 02   710-022603   DT2826            F2S SIB
  B Board        REV 02   710-023787   DT1713            NEO PMB
SIB F2S 1/4      REV 03   710-022603   DV0092            F2S SIB
  B Board        REV 03   710-023787   DV0000            NEO PMB
SIB F2S 1/6      REV 03   710-022603   DV0079            F2S SIB
  B Board        REV 03   710-023787   DT9972            NEO PMB
SIB F2S 2/0      REV 03   710-022603   DV0100            F2S SIB
  B Board        REV 03   710-023787   DT9925            NEO PMB
SIB F2S 2/2      REV 03   710-022603   DV0050            F2S SIB
  B Board        REV 03   710-023787   DV0005            NEO PMB
SIB F2S 2/4      REV 03   710-022603   DV0097            F2S SIB
  B Board        REV 03   710-023787   DT9936            NEO PMB
Fan Tray 0       REV 02   760-024497   DR8286            Front Fan Tray
Fan Tray 1       REV 06   760-024497   DV9624            Front Fan Tray
Fan Tray 2       REV 02   760-024502   DR8259            Rear Fan Tray
Fan Tray 3       REV 02   760-024502   DR8270            Rear Fan Tray
Fan Tray 4       REV 02   760-024502   DR8284            Rear Fan Tray
Fan Tray 5       REV 06   760-024502   DV7813            Rear Fan Tray

lcc0-re0:
--------------------------------------------------------------------------
```

```
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1101F27AHA      T1600
Midplane         REV 04   710-017247   RC5317            T Series Backplane
FPM GBUS         REV 10   710-002901   DS8197            T640 FPM Board
FPM Display      REV 01   710-021387   DS6433            T1600 FPM Display
CIP              REV 06   710-002895   DS1493            T Series CIP
PEM 0            Rev 08   740-017906   UD26601           Power Entry Module 3x80
SCG 0            REV 15   710-003423   DP5847            T640 Sonet Clock Gen.
SCG 1            REV 15   710-003423   DR0924            T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-026942   737F-1024         LCC RE
  ad0    3887 MB  SMART CF             2008110502B63E513E51 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A1208     Disk 1
Routing Engine 1 REV 01   740-026942   737F-1024         LCC RE
  ad0    3887 MB  SMART CF             2008110500F9A8A8A8A8 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A1076     Disk 1
CB 0             REV 05   710-022597   DV4264            LCC Control Board
CB 1             REV 03   710-022597   DP8558            LCC Control Board
FPC 0            REV 14   710-013037   DS9967            FPC Type 4-ES
  CPU            REV 08   710-016744   DS3989            ST-PMB2
  PIC 0          REV 12   750-013198   DL7506            1x Tunnel
  PIC 1          REV 12   750-013198   DL7505            1x Tunnel
  MMB 0          REV 01   710-025563   DS8524            ST-MMB2
  MMB 1          REV 01   710-025563   DS8373            ST-MMB2
FPC 1            REV 14   710-013037   DT0027            FPC Type 4-ES
  CPU            REV 09   710-016744   DS7684            ST-PMB2
  PIC 0          REV 12   750-013198   DL7512            1x Tunnel
  PIC 1          REV 12   750-013198   DL7498            1x Tunnel
  MMB 0          REV 01   710-025563   DS8494            ST-MMB2
  MMB 1          REV 01   710-025563   DS8436            ST-MMB2
SPMB 0           REV 04   710-023321   DV3867            LCC Switch CPU
SPMB 1           REV 02   710-023321   DP0238            LCC Switch CPU
SIB 0            REV 06   710-022594   DT8268            LCC SIB
  B Board        REV 06   710-023185   DT5791            LCC SIB Mezz
SIB 1            REV 06   710-022594   DT8261            LCC SIB
  B Board        REV 06   710-023185   DT5769            LCC SIB Mezz
SIB 2            REV 04   710-022594   DS2315            LCC SIB
  B Board        REV 06   710-023185   DT5788            LCC SIB Mezz
SIB 3            REV 06   710-022594   DT8253            LCC SIB
  B Board        REV 06   710-023185   DT5811            LCC SIB Mezz
SIB 4            REV 06   710-022594   DT8248            LCC SIB
  B Board        REV 06   710-023185   DT5812            LCC SIB Mezz
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray
```

show chassis hardware models (TX Matrix Plus Router)

```
user@host> show chassis hardware models
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
FPM Display      REV 03   710-024027   DX0282            CRAFT-TXP
CIP 0            REV 04   710-023792   DW4889            CIP-TXP
CIP 1            REV 04   710-023792   DW4887            CIP-TXP
PEM 0            Rev 07   740-027463   UM26368           ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
Routing Engine 0 REV 01   740-026942   737A-1064         RE-TXP-SFC-DUO-2600-16G
Routing Engine 1 REV 01   740-026942   737A-1082         RE-TXP-SFC-DUO-2600-16G
CB 0             REV 09   710-022606   DW6099            CB-TXP
CB 1             REV 09   710-022606   DW6096            CB-TXP
```

```
SIB F13 1        REV 04   750-024564   DW5776            SIB-TXP-F13
SIB F13 3        REV 04   750-024564   DW5762            SIB-TXP-F13
SIB F13 4        REV 04   750-024564   DW5797            SIB-TXP-F13
SIB F13 6        REV 04   750-024564   DW5770            SIB-TXP-F13
SIB F13 7        REV 04   750-024564   DW5758            SIB-TXP-F13
SIB F13 8        REV 04   750-024564   DW5761            SIB-TXP-F13
SIB F13 9        REV 04   750-024564   DW5754            SIB-TXP-F13
SIB F13 12       REV 04   750-024564   DW5794            SIB-TXP-F13
SIB F2S 0/0      REV 05   710-022603   DW7897
SIB F2S 0/2      REV 05   710-022603   DW7833
SIB F2S 0/4      REV 05   710-022603   DW7875
SIB F2S 0/6      REV 05   710-022603   DW7860
SIB F2S 1/0      REV 04   710-022603   DW4820
SIB F2S 1/2      REV 05   710-022603   DW7849
SIB F2S 1/4      REV 05   710-022603   DW7927            SIB-TXP-F2S
SIB F2S 1/6      REV 05   710-022603   DW7866
SIB F2S 2/0      REV 05   710-022603   DW7880
SIB F2S 2/2      REV 05   710-022603   DW7895
SIB F2S 2/4      REV 05   710-022603   DW7907
SIB F2S 2/6      REV 05   710-022603   DW7785
SIB F2S 3/0      REV 05   710-022603   DW7782
SIB F2S 3/2      REV 05   710-022603   DW7793
SIB F2S 3/4      REV 05   710-022603   DW7779
SIB F2S 3/6      REV 05   710-022603   DW7930
SIB F2S 4/0      REV 05   710-022603   DW7867
SIB F2S 4/2      REV 05   710-022603   DW7917
SIB F2S 4/4      REV 05   710-022603   DW7929
SIB F2S 4/6      REV 05   710-022603   DW7870
Fan Tray 0       REV 06   760-024497   DV7831            FANTRAY-TXP-F
Fan Tray 1       REV 06   760-024497   DV9614            FANTRAY-TXP-F
Fan Tray 2       REV 06   760-024502   DV9618            FANTRAY-TXP-R
Fan Tray 3       REV 06   760-024502   DV9616            FANTRAY-TXP-R
Fan Tray 4       REV 06   760-024502   DV7807            FANTRAY-TXP-R
Fan Tray 5       REV 06   760-024502   DV7828            FANTRAY-TXP-R

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 03   710-017247   RC3765            CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DN5441            CRAFT-T1600-S
CIP              REV 06   710-002895   DP6021            CIP-L-T640-S
PEM 0            Rev 07   740-017906   UA26384           PWR-T1600-3-80-DC-S
PEM 1            Rev 07   740-017906   UA26296           PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DR0875            SCG-T-S
CB 0             REV 06   710-022597   DW8534            CB-LCC
CB 1             REV 06   710-022597   DW8527            CB-LCC
FPC 4            REV 12   710-013037   DJ8717            T1600-FPC4-ES
  PIC 0          REV 11   750-017405   DP8795            PD-4XGE-XFP
  PIC 1          REV 11   750-017405   DP8794            PD-4XGE-XFP
FPC 6            REV 14   710-013037   DS5335            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7634            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7637            PD-4XGE-XFP
FPC 7            REV 07   710-013035   DM0990            T1600-FPC3-ES
  PIC 0          REV 16   750-007141   JJ8067            PC-10GE-SFP
  PIC 1          REV 08   750-015749   WE9598            PC-1OC192-SON-XFP
  PIC 2          REV 10   750-009450   HX6466            PC-1OC192-SON-SR2
SIB 0            REV 08   710-022594   DW8033            SIB-TXP-T1600-S
SIB 1            REV 08   710-022594   DW8044            SIB-TXP-T1600-S
SIB 2            REV 08   710-022594   DW8020            SIB-TXP-T1600-S
SIB 3            REV 08   710-022594   DW8063            SIB-TXP-T1600-S
```

```
SIB 4            REV 08   710-022594   DW8064            SIB-TXP-T1600-S
Fan Tray 0                                               FANTRAY-T-S
Fan Tray 1                                               FANTRAY-T-S
Fan Tray 2                                               FANTRAY-TXP-R-S

lcc1-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 04   710-017247   RC5361            CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DS6430            CRAFT-T1600-S
CIP              REV 06   710-002895   DS4239            CIP-L-T640-S
PEM 0            Rev 08   740-017906   UD26649           PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DP5820            SCG-T-S
CB 0             REV 06   710-022597   DW8523            CB-LCC
CB 1             REV 06   710-022597   DW8528            CB-LCC
FPC 4            REV 12   710-013037   DP8509            T1600-FPC4-ES
  PIC 0          REV 11   750-017405   DP8808            PD-4XGE-XFP
  PIC 1          REV 11   750-017405   DP7263            PD-4XGE-XFP
FPC 6            REV 14   710-013037   DS9961            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS5532            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7639            PD-4XGE-XFP
FPC 7            REV 03   710-013035   DF5564            T1600-FPC3-ES
  PIC 0          REV 16   750-007141   JJ8063            PC-10GE-SFP
SIB 0            REV 08   710-022594   DW8035            SIB-TXP-T1600-S
SIB 1            REV 10   710-022594   DX7672            SIB-TXP-T1600-S
SIB 2            REV 08   710-022594   DW8060            SIB-TXP-T1600-S
SIB 3            REV 08   710-022594   DW8072            SIB-TXP-T1600-S
SIB 4            REV 08   710-022594   DW8043            SIB-TXP-T1600-S
Fan Tray 0                                               FANTRAY-T-S
Fan Tray 1                                               FANTRAY-T-S
Fan Tray 2                                               FANTRAY-TXP-R-S

lcc2-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 03   710-017247   RC3956            CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DN7030            CRAFT-T1600-S
CIP              REV 06   710-002895   DM3962            CIP-L-T640-S
PEM 0            Rev 08   740-017906   UD26519           PWR-T1600-3-80-DC-S
PEM 1            Rev 07   740-017906   UC26601           PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DP0277            SCG-T-S
CB 0             REV 06   710-022597   DW8524            CB-LCC
CB 1             REV 06   710-022597   DW8536            CB-LCC
FPC 4            REV 12   710-013037   DR1194            T1600-FPC4-ES
  PIC 0          REV 11   750-017405   DP8811            PD-4XGE-XFP
  PIC 1          REV 11   750-017405   DP8823            PD-4XGE-XFP
FPC 5            REV 12   710-013037   DR1184            T1600-FPC4-ES
  PIC 1          REV 11   750-017405   DP4744            PD-4XGE-XFP
FPC 6            REV 12   710-013037   DN8622            T1600-FPC4-ES
  PIC 0          REV 14   750-012518   JY9924            PD-4OC192-SON-XFP
  PIC 1          REV 11   750-017405   DP8776            PD-4XGE-XFP
FPC 7            REV 04   710-013560   JR3968            T640-FPC3-E2
  PIC 0          REV 16   750-007141   NC9330            PC-10GE-SFP
SIB 0            REV 07   710-022594   DW4217            SIB-TXP-T1600-S
SIB 1            REV 07   710-022594   DW4213            SIB-TXP-T1600-S
SIB 2            REV 07   710-022594   DW4189            SIB-TXP-T1600-S
SIB 3            REV 07   710-022594   DW4173            SIB-TXP-T1600-S
SIB 4            REV 07   710-022594   DW4201            SIB-TXP-T1600-S
Fan Tray 0                                               FANTRAY-T-S
```

```
Fan Tray 1                                                FANTRAY-T-S
Fan Tray 2                                                FANTRAY-TXP-R-S

lcc3-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 04   710-017247   RC5319            CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DS6402            CRAFT-T1600-S
CIP              REV 06   710-002895   DR9973            CIP-L-T640-S
PEM 0            Rev 07   740-017906   UC26496           PWR-T1600-3-80-DC-S
PEM 1            Rev 07   740-017906   UC26599           PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DP5831            SCG-T-S
CB 0             REV 06   710-022597   DW8533            CB-LCC
CB 1             REV 06   710-022597   DW8538            CB-LCC
FPC 0            REV 14   710-013037   DS5345            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7641            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS5479            PD-4XGE-XFP
FPC 1            REV 14   710-013037   DS7338            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7631            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7632            PD-4XGE-XFP
FPC 2            REV 14   710-013037   DS9962            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7581            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7627            PD-4XGE-XFP
FPC 4            REV 10   710-010845   JZ6573            T640-FPC4-ES
  PIC 0          REV 14   750-012518   JT5124            PD-4OC192-SON-XFP
FPC 5            REV 14   710-013037   DT0016            T1600-FPC4-ES
  PIC 0          REV 14   750-012518   JY9918            PD-4OC192-SON-XFP
FPC 7            REV 07   710-013035   DM0967            T1600-FPC3-ES
  PIC 0          REV 16   750-007141   JJ8059            PC-10GE-SFP
  PIC 1          REV 13   750-004695   DM5712            PC-TUNNEL
SIB 0            REV 07   710-022594   DW4174            SIB-TXP-T1600-S
SIB 1            REV 07   710-022594   DW4207            SIB-TXP-T1600-S
SIB 2            REV 06   710-022594   DT8231            SIB-TXP-T1600-S
SIB 3            REV 07   710-022594   DW4175            SIB-TXP-T1600-S
SIB 4            REV 07   710-022594   DW4209            SIB-TXP-T1600-S
Fan Tray 0                                                FANTRAY-T-S
Fan Tray 1                                                FANTRAY-T-S
Fan Tray 2                                                FANTRAY-TXP-R-S
```

show chassis hardware (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11CAAA4AHB      TXP
Midplane         REV 05   710-022574   ABAC4696          SFC Midplane
FPM Display      REV 09   710-024027   EH3138            TXP FPM Display
CIP 0            REV 12   710-023792   EF6349            TXP CIP
CIP 1            REV 12   710-023792   EG5294            TXP CIP
PEM 0            Rev 06   740-027463   XH04595           Power Entry Module
PEM 1            Rev 06   740-027463   XH04592           Power Entry Module
Routing Engine 0 REV 07   740-026942   P737A-002541      RE-DUO-2600
Routing Engine 1 REV 07   740-026942   P737A-002602      RE-DUO-2600
CB 0             REV 15   710-022606   EH4376            SFC Control Board
CB 1             REV 15   710-022606   EH4379            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 10   750-035002   EM9305            F13 SIB 3D
```

```
  B Board        REV 06   711-035082   EM9667           F13 SIB 3D Mezz
  P Board        REV 05   711-043544   EM9708           F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB34FB00S        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01H        CXP Module
  Xcvr 4         REV 01   740-047547   XB34FB02W        CXP Module
  Xcvr 6         REV 01   740-047547   XB34FB01T        CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB00W        CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01S        CXP Module
  Xcvr 12        REV 01   740-047547   XB34FB03H        CXP Module
  Xcvr 14        REV 01   740-047547   XB34FB023        CXP Module
SIB F13 3        REV 01   710-035001   EJ2612           F13 SIB 3D
  B Board        REV 01   711-035082   EJ3815           F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2678           F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB04C        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB00Z        CXP Module
  Xcvr 4         REV 01   740-047547   XB47FB036        CXP Module
  Xcvr 6         REV 01   740-047547   XB47FB029        CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02N        CXP Module
  Xcvr 10        REV 01   740-047547   XB42FB0CS        CXP Module
  Xcvr 12        REV 01   740-047547   XB47FB01X        CXP Module
  Xcvr 14        REV 01   740-047547   XB48FB02F        CXP Module
SIB F13 6        REV 05   750-035002   EK2675           F13 SIB 3D
  B Board        REV 03   711-035082   EK2612           F13 SIB 3D Mezz
  P Board        REV 04   711-043544   EK1179           F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB01T        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB02M        CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB031        CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB04P        CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02T        CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01V        CXP Module
  Xcvr 12        REV 01   740-047547   XB48FB02C        CXP Module
  Xcvr 14                 NON-JNPR                      No Module
SIB F13 12       REV 01   710-035001   EJ2631           F13 SIB 3D
  B Board        REV 01   711-035082   EJ3808           F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2676           F13 SIB 3D Power
SIB F2S 0/0      REV 01   711-034977   EH9829           F2S SIB 3D
  B Board        REV 01   711-034979   EH9927           F2S SIB 3D Mezz
SIB F2S 0/2      REV 01   711-034977   EH9791           F2S SIB 3D
  B Board        REV 01   711-034979   EH9852           F2S SIB 3D Mezz
SIB F2S 0/4      REV 01   711-034977   EH9803           F2S SIB 3D
  B Board        REV 01   711-034979   EH9915           F2S SIB 3D Mezz
SIB F2S 0/6      REV 01   711-034977   EH9763           F2S SIB 3D
  B Board        REV 01   711-034979   EH9880           F2S SIB 3D Mezz
SIB F2S 1/0      REV 01   711-034977   EH9757           F2S SIB 3D
  B Board        REV 01   711-034979   EH9889           F2S SIB 3D Mezz
SIB F2S 1/2      REV 01   711-034977   EH9815           F2S SIB 3D
  B Board        REV 01   711-034979   EH9890           F2S SIB 3D Mezz
SIB F2S 1/4      REV 08   750-034978   EN1954           F2S SIB 3D
  B Board        REV 02   711-034979   EN1436           F2S SIB 3D Mezz
SIB F2S 1/6      REV 01   711-034977   EJ7054           F2S SIB 3D
  B Board        REV 01   711-034979   EJ8238           F2S SIB 3D Mezz
SIB F2S 2/0      REV 01   711-034977   EH9830           F2S SIB 3D
  B Board        REV 01   711-034979   EH9844           F2S SIB 3D Mezz
SIB F2S 2/2      REV 01   711-034977   EH9818           F2S SIB 3D
  B Board        REV 01   711-034979   EH9888           F2S SIB 3D Mezz
SIB F2S 2/4      REV 01   711-034977   EH9795           F2S SIB 3D
  B Board        REV 01   711-034979   EH9869           F2S SIB 3D Mezz
SIB F2S 2/6      REV 01   711-034977   EJ7026           F2S SIB 3D
  B Board        REV 01   711-034979   EJ8273           F2S SIB 3D Mezz
SIB F2S 3/0      REV 01   711-034977   EH9811           F2S SIB 3D
  B Board        REV 01   711-034979   EH9892           F2S SIB 3D Mezz
```

```
SIB F2S 3/2      REV 01   711-034977   EH9812            F2S SIB 3D
  B Board        REV 01   711-034979   EH9877            F2S SIB 3D Mezz
SIB F2S 3/4      REV 08   750-034978   EN1947            F2S SIB 3D
  B Board        REV 02   711-034979   EN1471            F2S SIB 3D Mezz
Fan Tray 0       REV 10   760-024497   EH3313            Front Fan Tray
Fan Tray 1       REV 10   760-024497   EH3290            Front Fan Tray
Fan Tray 2       REV 10   760-024502   EH3292            Rear Fan Tray
Fan Tray 3       REV 10   760-024502   EH3287            Rear Fan Tray
Fan Tray 4       REV 10   760-024502   EH3286            Rear Fan Tray
Fan Tray 5       REV 10   760-024502   EH3285            Rear Fan Tray

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B23FEAHA      T1600
Midplane         REV 01   710-027486   RC9787            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5132          T640 FPM Board
FPM Display      REV 04   710-021387   BBAL9612          T1600 FPM Display
CIP              REV 06   710-002895   BBAN0605          T-series CIP
PEM 0            REV 05   740-036442   1G022060143       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060011       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAL7318          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7255          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002933      RE-DUO-1800
Routing Engine 1 REV 06   740-026941   P737F-002749      RE-DUO-1800
CB 0             REV 11   710-022597   EH3611            LCC Control Board
CB 1             REV 11   710-022597   EH4798            LCC Control Board
FPC 5            REV 17   710-013037   BBAC5333          FPC Type 4-ES
  CPU            REV 10   710-016744   BBAB7619          ST-PMB2
  PIC 0          REV 18   750-017405   BBAE3420          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10C90659         XFP-10G-SR
  MMB 0          REV 05   710-025563   BBAB9538          ST-MMB2
  MMB 1          REV 05   710-025563   BBAB9502          ST-MMB2
FPC 7            REV 01   750-045173   BBAV0032          FPC Type 5-3D
  CPU
SPMB 0           REV 05   710-023321   EG9434            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3878            LCC Switch CPU
SIB 0            REV 01   750-041657   EH7997            LCC SIB 3D
  B Board        REV 01   711-042424   EH7674            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB014         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB05A         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB052         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB01B         CXP Module
SIB 1            REV 01   750-041657   EH8023            LCC SIB 3D
  B Board        REV 01   711-042424   EH7659            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05J         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01E         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB01J         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB02S         CXP Module
SIB 2            REV 03   750-041657   EJ6554            LCC SIB 3D
  B Board        REV 02   711-042424   EJ5756            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB34FB01Z         CXP Module
  Xcvr 2         REV 01   740-047547   XB34FB013         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04Z         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05N         CXP Module
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 4

lcc2-re0:
```

```
---------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B3975AHA      T1600
Midplane         REV 01   710-027486   RC9826            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5124          T640 FPM Board
FPM Display      REV 03   710-021387   BBAJ1112          T1600 FPM Display
CIP              REV 06   710-002895   BBAL3744          T-series CIP
PEM 0            REV 05   740-036442   1G022060081       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060188       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAH8775          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7272          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002992      RE-DUO-1800
Routing Engine 1 REV 07   740-026941   P737F-002938      RE-DUO-1800
CB 0             REV 11   710-022597   EH4805            LCC Control Board
CB 1             REV 11   710-022597   EH4786            LCC Control Board
FPC 1            REV 01   710-033873   BBAH0320          FPC Type 3-ES
  CPU            REV 11   710-016744   BBAF3281          ST-PMB2
  MMB 0          REV 06   710-025563   BBAF5061          ST-MMB2
FPC 5            REV 04   710-033871   BBAM5070          FPC Type 4-ES
  CPU            REV 11   710-016744   BBAM6653          ST-PMB2
  PIC 1          REV 20   750-017405   BBAM1296          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10B42981         XFP-10G-SR
  MMB 0          REV 07   710-025563   BBAN2631          ST-MMB2
  MMB 1          REV 07   710-025563   BBAN2538          ST-MMB2
SPMB 0           REV 05   710-023321   EH3903            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3902            LCC Switch CPU
SIB 0            REV 01   750-041657   EH8019            LCC SIB 3D
  B Board        REV 01   711-042424   EH7680            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB04F         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB04S         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04B         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB043         CXP Module
SIB 1            REV 01   750-041657   EH8012            LCC SIB 3D
  B Board        REV 01   711-042424   EH7658            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05E         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01Z         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB018         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB054         CXP Module
SIB 2            REV 01   750-041657   EH7993            LCC SIB 3D
  B Board        REV 01   711-042424   EH7678            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05C         CXP Module
  Xcvr 2         REV 01   740-047547   XB47FB00N         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB05U         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05L         CXP Module
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 4
```

show chassis hardware clei-models (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware clei-models
sfc0-re0:
---------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 05   710-022574                     CHAS-BP-TXP-S
FPM Display      REV 09   710-024027                     CRAFT-TXP-S
CIP 0            REV 12   710-023792                     CIP-TXP-S
CIP 1            REV 12   710-023792                     CIP-TXP-S
PEM 0            Rev 06   740-027463   IPUPAFGKTA        PWR-TXP-7-60-DC-S
```

```
Routing Engine 0 REV 07   740-026942                     RE-DUO-C2600-16G-S
Routing Engine 1 REV 07   740-026942                     RE-DUO-C2600-16G-S
CB 0             REV 13   710-022606                     CB-TXP-S
CB 1             REV 14   710-022606                     CB-TXP-S
SIB F13 0        REV 10   750-035002   PROTOXCLEI        SIB-TXP-3D-F13-S
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
  Xcvr 8         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                     CXP-TXP-3D
SIB F13 1        REV 10   750-035002   PROTOXCLEI        SIB-TXP-3D-F13-S
  Xcvr 0         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 1         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 2         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 3         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 4         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
  Xcvr 8         REV 01   740-048813
  Xcvr 10        REV 01   740-048813
  Xcvr 12        REV 01   740-048813
  Xcvr 14        REV 01   740-048813
  Xcvr 0         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 1         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 2         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 3         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 4         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                     CXP-TXP-3D
SIB F13 6        REV 16   750-035002   PROTOXCLEI        SIB-TXP-3D-F13
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
```

```
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
SIB F13 7        REV 10   750-035002   PROTOXCLEI       SIB-TXP-3D-F13-S
  Xcvr 0         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 4         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
SIB F13 9        REV 16   750-035002   PROTOXCLEI       SIB-TXP-3D-F13
  Xcvr 0         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 4         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
SIB F13 11       REV 10   750-035002   PROTOXCLEI       750-035002
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7         REV 01   740-048813
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
SIB F13 12       REV 16   750-035002   PROTOXCLEI       SIB-TXP-3D-F13
  Xcvr 0         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3         REV 01   740-047547                    CXP-TXP-3D
```

```
  Xcvr 4         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                     CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                     CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                     CXP-TXP-3D
SIB F2S 0/0      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 0/2      REV 07   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 0/4      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 0/6      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 1/0      REV 07   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 1/2      REV 07   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 1/4      REV 07   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 1/6      REV 08   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 2/0      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 2/2      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 2/4      REV 07   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 2/6      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 3/0      REV 07   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 3/2      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 3/4      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 3/6      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 4/0      REV 07   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 4/2      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 4/4      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
SIB F2S 4/6      REV 06   750-034978   PROTOXCLEI        SIB-TXP-3D-F2S
Fan Tray 0       REV 10   760-024497                     FANTRAY-TXP-H-S
Fan Tray 1       REV 10   760-024497                     FANTRAY-TXP-H-S
Fan Tray 2       REV 10   760-024502                     FANTRAY-TXP-V-S
Fan Tray 3       REV 10   760-024502                     FANTRAY-TXP-V-S
Fan Tray 4       REV 10   760-024502                     FANTRAY-TXP-V-S
Fan Tray 5       REV 10   760-024502                     FANTRAY-TXP-V-S

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   710-027486   IPMJ700DRD        CHAS-BP-T1600-S
FPM Display      REV 04   710-021387                     CRAFT-T1600-S
CIP              REV 06   710-002895                     CIP-L-T640-S
PEM 0            REV 05   740-036442   IPUPAG6KAA        PWR-T-6-60-DC-S
PEM 1            REV 05   740-036442   IPUPAG6KAA        PWR-T-6-60-DC-S
SCG 0            REV 18   710-003423                     SCG-T-S
SCG 1            REV 18   710-003423                     SCG-T-S
Routing Engine 0 REV 10   740-026941                     RE-DUO-C1800-8G-S
Routing Engine 1 REV 07   740-026941                     RE-DUO-C1800-8G-S
CB 0             REV 11   710-022597                     CB-LCC-S
CB 1             REV 11   710-022597                     CB-LCC-S
FPC 0            REV 01   750-045173   IP9IAL4DAB        T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
  PIC 1          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
FPC 3            REV 01   750-045173   IP9IAL4DAB        T4000-FPC5-3D
  PIC 0          REV 13   750-033423   XXXXXXXXDD        PF-12-24XGE-SFPP
FPC 4            REV 02   750-045173   IP9IAL4DAC        T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
  PIC 1          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
FPC 5            REV 01   750-045173   IP9IAL4DAB        T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
  PIC 1          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
```

```
FPC 6            REV 01   750-045173   IP9IAL4DAB        T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
  PIC 1          REV 10   750-035293   IP9IAL3DAA        PF-1CGE-CFP
SIB 0            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 1            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 2            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 3            REV 07   750-041657   PROTOXCLEI        SIB-TXP-3D-LLC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 4            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
Fan Tray 0                                            FANTRAY-T-S
Fan Tray 1                                            FANTRAY-T-S
Fan Tray 2                                            FANTRAY-TXP3D-LCC-R-S
[Output Truncated]
```

show chassis hardware detail (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware detail
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11CAAA4AHB      TXP
```

```
Midplane         REV 05   710-022574   ABAC4696          SFC Midplane
FPM Display      REV 09   710-024027   EH3138            TXP FPM Display
CIP 0            REV 12   710-023792   EF6349            TXP CIP
CIP 1            REV 12   710-023792   EG5294            TXP CIP
PEM 0            Rev 06   740-027463   XH04595           Power Entry Module
PEM 1            Rev 06   740-027463   XH04592           Power Entry Module
Routing Engine 0 REV 07   740-026942   P737A-002541      RE-DUO-2600
  ad0    3823 MB  SMART CF             2011030400062C132C13 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201105100009A452A452 Disk 1
Routing Engine 1 REV 07   740-026942   P737A-002602      RE-DUO-2600
  ad0    3823 MB  SMART CF             20110508085EE471E471 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201110210089DF39DF39 Disk 1
CB 0             REV 15   710-022606   EH4376            SFC Control Board
CB 1             REV 15   710-022606   EH4379            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 10   750-035002   EM9305            F13 SIB 3D
  B Board        REV 06   711-035082   EM9667            F13 SIB 3D Mezz
  P Board        REV 05   711-043544   EM9708            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB34FB00S         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01H         CXP Module
  Xcvr 4         REV 01   740-047547   XB34FB02W         CXP Module
  Xcvr 6         REV 01   740-047547   XB34FB01T         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB00W         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01S         CXP Module
  Xcvr 12        REV 01   740-047547   XB34FB03H         CXP Module
  Xcvr 14        REV 01   740-047547   XB34FB023         CXP Module
SIB F13 3        REV 01   710-035001   EJ2612            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3815            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2678            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB04C         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB00Z         CXP Module
  Xcvr 4         REV 01   740-047547   XB47FB036         CXP Module
  Xcvr 6         REV 01   740-047547   XB47FB029         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02N         CXP Module
  Xcvr 10        REV 01   740-047547   XB42FB0CS         CXP Module
  Xcvr 12        REV 01   740-047547   XB47FB01X         CXP Module
  Xcvr 14        REV 01   740-047547   XB48FB02F         CXP Module
SIB F13 6        REV 05   750-035002   EK2675            F13 SIB 3D
  B Board        REV 03   711-035082   EK2612            F13 SIB 3D Mezz
  P Board        REV 04   711-043544   EK1179            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB01T         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB02M         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB031         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB04P         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02T         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01V         CXP Module
  Xcvr 12        REV 01   740-047547   XB48FB02C         CXP Module
  Xcvr 14                 NON-JNPR                       No Module
SIB F13 12       REV 01   710-035001   EJ2631            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3808            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2676            F13 SIB 3D Power
SIB F2S 0/0      REV 01   711-034977   EH9829            F2S SIB 3D
  B Board        REV 01   711-034979   EH9927            F2S SIB 3D Mezz
SIB F2S 0/2      REV 01   711-034977   EH9791            F2S SIB 3D
  B Board        REV 01   711-034979   EH9852            F2S SIB 3D Mezz
SIB F2S 0/4      REV 01   711-034977   EH9803            F2S SIB 3D
  B Board        REV 01   711-034979   EH9915            F2S SIB 3D Mezz
SIB F2S 0/6      REV 01   711-034977   EH9763            F2S SIB 3D
  B Board        REV 01   711-034979   EH9880            F2S SIB 3D Mezz
SIB F2S 1/0      REV 01   711-034977   EH9757            F2S SIB 3D
```

```
  B Board        REV 01   711-034979   EH9889            F2S SIB 3D Mezz
SIB F2S 1/2      REV 01   711-034977   EH9815            F2S SIB 3D
  B Board        REV 01   711-034979   EH9890            F2S SIB 3D Mezz
SIB F2S 1/4      REV 08   750-034978   EN1954            F2S SIB 3D
  B Board        REV 02   711-034979   EN1436            F2S SIB 3D Mezz
SIB F2S 1/6      REV 01   711-034977   EJ7054            F2S SIB 3D
  B Board        REV 01   711-034979   EJ8238            F2S SIB 3D Mezz
SIB F2S 2/0      REV 01   711-034977   EH9830            F2S SIB 3D
  B Board        REV 01   711-034979   EH9844            F2S SIB 3D Mezz
SIB F2S 2/2      REV 01   711-034977   EH9818            F2S SIB 3D
  B Board        REV 01   711-034979   EH9888            F2S SIB 3D Mezz
SIB F2S 2/4      REV 01   711-034977   EH9795            F2S SIB 3D
  B Board        REV 01   711-034979   EH9869            F2S SIB 3D Mezz
SIB F2S 2/6      REV 01   711-034977   EJ7026            F2S SIB 3D
  B Board        REV 01   711-034979   EJ8273            F2S SIB 3D Mezz
SIB F2S 3/0      REV 01   711-034977   EH9811            F2S SIB 3D
  B Board        REV 01   711-034979   EH9892            F2S SIB 3D Mezz
SIB F2S 3/2      REV 01   711-034977   EH9812            F2S SIB 3D
  B Board        REV 01   711-034979   EH9877            F2S SIB 3D Mezz
SIB F2S 3/4      REV 08   750-034978   EN1947            F2S SIB 3D
  B Board        REV 02   711-034979   EN1471            F2S SIB 3D Mezz
Fan Tray 0       REV 10   760-024497   EH3313            Front Fan Tray
Fan Tray 1       REV 10   760-024497   EH3290            Front Fan Tray
Fan Tray 2       REV 10   760-024502   EH3292            Rear Fan Tray
Fan Tray 3       REV 10   760-024502   EH3287            Rear Fan Tray
Fan Tray 4       REV 10   760-024502   EH3286            Rear Fan Tray
Fan Tray 5       REV 10   760-024502   EH3285            Rear Fan Tray

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B23FEAHA      T1600
Midplane         REV 01   710-027486   RC9787            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5132          T640 FPM Board
FPM Display      REV 04   710-021387   BBAL9612          T1600 FPM Display
CIP              REV 06   710-002895   BBAN0605          T-series CIP
PEM 0            REV 05   740-036442   1G022060143       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060011       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAL7318          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7255          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002933      RE-DUO-1800
  ad0    3823 MB  SMART CF             201103030490604E604E Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 20110729028B11D411D4 Disk 1
Routing Engine 1 REV 06   740-026941   P737F-002749      RE-DUO-1800
  ad0    3823 MB  SMART CF             2011010504EB99649964 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201102140058934A934A Disk 1
CB 0             REV 11   710-022597   EH3611            LCC Control Board
CB 1             REV 11   710-022597   EH4798            LCC Control Board
FPC 5            REV 17   710-013037   BBAC5333          FPC Type 4-ES
  CPU            REV 10   710-016744   BBAB7619          ST-PMB2
  PIC 0          REV 18   750-017405   BBAE3420          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10C90659         XFP-10G-SR
  MMB 0          REV 05   710-025563   BBAB9538          ST-MMB2
  MMB 1          REV 05   710-025563   BBAB9502          ST-MMB2
FPC 7            REV 01   750-045173   BBAV0032          FPC Type 5-3D
  CPU
SPMB 0           REV 05   710-023321   EG9434            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3878            LCC Switch CPU
SIB 0            REV 01   750-041657   EH7997            LCC SIB 3D
  B Board        REV 01   711-042424   EH7674            LCC SIB 3D Mezz
```

```
  Xcvr 0         REV 01   740-047547   XB48FB014         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB05A         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB052         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB01B         CXP Module
SIB 1            REV 01   750-041657   EH8023            LCC SIB 3D
  B Board        REV 01   711-042424   EH7659            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05J         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01E         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB01J         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB02S         CXP Module
SIB 2            REV 03   750-041657   EJ6554            LCC SIB 3D
  B Board        REV 02   711-042424   EJ5756            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB34FB01Z         CXP Module
  Xcvr 2         REV 01   740-047547   XB34FB013         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04Z         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05N         CXP Module
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 4

lcc2-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B3975AHA      T1600
Midplane         REV 01   710-027486   RC9826            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5124          T640 FPM Board
FPM Display      REV 03   710-021387   BBAJ1112          T1600 FPM Display
CIP              REV 06   710-002895   BBAL3744          T-series CIP
PEM 0            REV 05   740-036442   1G022060081       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060188       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAH8775          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7272          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002992      RE-DUO-1800
  ad0    3823 MB  SMART CF             20110303035632 9E329E Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 2011051000488D8B8D8B Disk 1
Routing Engine 1 REV 07   740-026941   P737F-002938      RE-DUO-1800
  ad0    3823 MB  SMART CF             20110304000F02680268 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201105300A70F325F325 Disk 1
CB 0             REV 11   710-022597   EH4805            LCC Control Board
CB 1             REV 11   710-022597   EH4786            LCC Control Board
FPC 1            REV 01   710-033873   BBAH0320          FPC Type 3-ES
  CPU            REV 11   710-016744   BBAF3281          ST-PMB2
  MMB 0          REV 06   710-025563   BBAF5061          ST-MMB2
FPC 5            REV 04   710-033871   BBAM5070          FPC Type 4-ES
  CPU            REV 11   710-016744   BBAM6653          ST-PMB2
  PIC 1          REV 20   750-017405   BBAM1296          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10B42981         XFP-10G-SR
  MMB 0          REV 07   710-025563   BBAN2631          ST-MMB2
  MMB 1          REV 07   710-025563   BBAN2538          ST-MMB2
SPMB 0           REV 05   710-023321   EH3903            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3902            LCC Switch CPU
SIB 0            REV 01   750-041657   EH8019            LCC SIB 3D
  B Board        REV 01   711-042424   EH7680            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB04F         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB04S         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04B         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB043         CXP Module
SIB 1            REV 01   750-041657   EH8012            LCC SIB 3D
  B Board        REV 01   711-042424   EH7658            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05E         CXP Module
```



```
  Xcvr 2         REV 01   740-047547   XB48FB01Z         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB018         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB054         CXP Module
SIB 2            REV 01   750-041657   EH7993            LCC SIB 3D
  B Board        REV 01   711-042424   EH7678            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05C         CXP Module
  Xcvr 2         REV 01   740-047547   XB47FB00N         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB05U         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05L         CXP Module
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 4
```

show chassis hardware lcc (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B23FEAHA      T1600
Midplane         REV 01   710-027486   RC9787            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5132          T640 FPM Board
FPM Display      REV 04   710-021387   BBAL9612          T1600 FPM Display
CIP              REV 06   710-002895   BBAN0605          T-series CIP
PEM 0            REV 05   740-036442   1G022060143       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060011       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAL7318          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7255          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002933      RE-DUO-1800
Routing Engine 1 REV 06   740-026941   P737F-002749      RE-DUO-1800
CB 0             REV 11   710-022597   EH3611            LCC Control Board
CB 1             REV 11   710-022597   EH4798            LCC Control Board
FPC 5            REV 17   710-013037   BBAC5333          FPC Type 4-ES
  CPU            REV 10   710-016744   BBAB7619          ST-PMB2
  PIC 0          REV 18   750-017405   BBAE3420          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10C90659         XFP-10G-SR
  MMB 0          REV 05   710-025563   BBAB9538          ST-MMB2
  MMB 1          REV 05   710-025563   BBAB9502          ST-MMB2
FPC 7            REV 01   750-045173   BBAV0032          FPC Type 5-3D
  CPU
SPMB 0           REV 05   710-023321   EG9434            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3878            LCC Switch CPU
SIB 0            REV 01   750-041657   EH7997            LCC SIB 3D
  B Board        REV 01   711-042424   EH7674            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB014         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB05A         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB052         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB01B         CXP Module
SIB 1            REV 01   750-041657   EH8023            LCC SIB 3D
  B Board        REV 01   711-042424   EH7659            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05J         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01E         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB01J         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB02S         CXP Module
SIB 2            REV 03   750-041657   EJ6554            LCC SIB 3D
  B Board        REV 02   711-042424   EJ5756            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB34FB01Z         CXP Module
  Xcvr 2         REV 01   740-047547   XB34FB013         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04Z         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05N         CXP Module
```

```
Fan Tray 0                                                    Front Top Fan Tray
Fan Tray 1                                                    Front Bottom Fan Tray
Fan Tray 2                                                    Rear Fan Tray -- Rev 4
```

show chassis hardware sfc (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware sfc 0
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11CAAA4AHB      TXP
Midplane         REV 05   710-022574   ABAC4696          SFC Midplane
FPM Display      REV 09   710-024027   EH3138            TXP FPM Display
CIP 0            REV 12   710-023792   EF6349            TXP CIP
CIP 1            REV 12   710-023792   EG5294            TXP CIP
PEM 0            Rev 06   740-027463   XH04595           Power Entry Module
PEM 1            Rev 06   740-027463   XH04592           Power Entry Module
Routing Engine 0 REV 07   740-026942   P737A-002541      RE-DUO-2600
Routing Engine 1 REV 07   740-026942   P737A-002602      RE-DUO-2600
CB 0             REV 15   710-022606   EH4376            SFC Control Board
CB 1             REV 15   710-022606   EH4379            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 10   750-035002   EM9305            F13 SIB 3D
  B Board        REV 06   711-035082   EM9667            F13 SIB 3D Mezz
  P Board        REV 05   711-043544   EM9708            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB34FB00S         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01H         CXP Module
  Xcvr 4         REV 01   740-047547   XB34FB02W         CXP Module
  Xcvr 6         REV 01   740-047547   XB34FB01T         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB00W         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01S         CXP Module
  Xcvr 12        REV 01   740-047547   XB34FB03H         CXP Module
  Xcvr 14        REV 01   740-047547   XB34FB023         CXP Module
SIB F13 3        REV 01   710-035001   EJ2612            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3815            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2678            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB04C         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB00Z         CXP Module
  Xcvr 4         REV 01   740-047547   XB47FB036         CXP Module
  Xcvr 6         REV 01   740-047547   XB47FB029         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02N         CXP Module
  Xcvr 10        REV 01   740-047547   XB42FB0CS         CXP Module
  Xcvr 12        REV 01   740-047547   XB47FB01X         CXP Module
  Xcvr 14        REV 01   740-047547   XB48FB02F         CXP Module
SIB F13 6        REV 05   750-035002   EK2675            F13 SIB 3D
  B Board        REV 03   711-035082   EK2612            F13 SIB 3D Mezz
  P Board        REV 04   711-043544   EK1179            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB01T         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB02M         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB031         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB04P         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02T         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01V         CXP Module
  Xcvr 12        REV 01   740-047547   XB48FB02C         CXP Module
  Xcvr 14                 NON-JNPR                       No Module
SIB F13 12       REV 01   710-035001   EJ2631            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3808            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2676            F13 SIB 3D Power
SIB F2S 0/0      REV 01   711-034977   EH9829            F2S SIB 3D
```



```
  B Board        REV 01   711-034979   EH9927            F2S SIB 3D Mezz
SIB F2S 0/2      REV 01   711-034977   EH9791            F2S SIB 3D
  B Board        REV 01   711-034979   EH9852            F2S SIB 3D Mezz
SIB F2S 0/4      REV 01   711-034977   EH9803            F2S SIB 3D
  B Board        REV 01   711-034979   EH9915            F2S SIB 3D Mezz
SIB F2S 0/6      REV 01   711-034977   EH9763            F2S SIB 3D
  B Board        REV 01   711-034979   EH9880            F2S SIB 3D Mezz
SIB F2S 1/0      REV 01   711-034977   EH9757            F2S SIB 3D
  B Board        REV 01   711-034979   EH9889            F2S SIB 3D Mezz
SIB F2S 1/2      REV 01   711-034977   EH9815            F2S SIB 3D
  B Board        REV 01   711-034979   EH9890            F2S SIB 3D Mezz
SIB F2S 1/4      REV 08   750-034978   EN1954            F2S SIB 3D
  B Board        REV 02   711-034979   EN1436            F2S SIB 3D Mezz
SIB F2S 1/6      REV 01   711-034977   EJ7054            F2S SIB 3D
  B Board        REV 01   711-034979   EJ8238            F2S SIB 3D Mezz
SIB F2S 2/0      REV 01   711-034977   EH9830            F2S SIB 3D
  B Board        REV 01   711-034979   EH9844            F2S SIB 3D Mezz
SIB F2S 2/2      REV 01   711-034977   EH9818            F2S SIB 3D
  B Board        REV 01   711-034979   EH9888            F2S SIB 3D Mezz
SIB F2S 2/4      REV 01   711-034977   EH9795            F2S SIB 3D
  B Board        REV 01   711-034979   EH9869            F2S SIB 3D Mezz
SIB F2S 2/6      REV 01   711-034977   EJ7026            F2S SIB 3D
  B Board        REV 01   711-034979   EJ8273            F2S SIB 3D Mezz
SIB F2S 3/0      REV 01   711-034977   EH9811            F2S SIB 3D
  B Board        REV 01   711-034979   EH9892            F2S SIB 3D Mezz
SIB F2S 3/2      REV 01   711-034977   EH9812            F2S SIB 3D
  B Board        REV 01   711-034979   EH9877            F2S SIB 3D Mezz
SIB F2S 3/4      REV 08   750-034978   EN1947            F2S SIB 3D
  B Board        REV 02   711-034979   EN1471            F2S SIB 3D Mezz
Fan Tray 0       REV 10   760-024497   EH3313            Front Fan Tray
Fan Tray 1       REV 10   760-024497   EH3290            Front Fan Tray
Fan Tray 2       REV 10   760-024502   EH3292            Rear Fan Tray
Fan Tray 3       REV 10   760-024502   EH3287            Rear Fan Tray
Fan Tray 4       REV 10   760-024502   EH3286            Rear Fan Tray
Fan Tray 5       REV 10   760-024502   EH3285            Rear Fan Tray
```

show chassis hardware (16-Port 10-Gigabit Ethernet MPC with SFP+ Optics [MX Series Routers])

```
user@host> show chassis hardware
Hardware inventory:
    Item             Version  Part number  Serial number     Description
    Chassis                                JN112D865AFA      MX960
    Midplane         REV 03   710-013698   TS3339            MX960 Backplane
    FPM Board        REV 03   710-014974   WW6267            Front Panel Display

    PDM              Rev 03   740-013110   QCS12485026       Power Distribution
Module
    PEM 0            Rev 04   740-013682   QCS12434086       PS 1.7kW; 200-240VAC
 in
    PEM 1            Rev 04   740-013682   QCS1243408Z       PS 1.7kW; 200-240VAC
 in
    PEM 2            Rev 04   740-013682   QCS1243407X       PS 1.7kW; 200-240VAC
 in
    Routing Engine 0 REV 07   740-015113   9009009677        RE-S-1300
    Routing Engine 1 REV 07   740-015113   9009011510        RE-S-1300
    CB 0             REV 03   710-021523   XF0394            MX SCB
    CB 1             REV 03   710-021523   XF0550            MX SCB
    CB 2             REV 03   710-021523   XD7455            MX SCB
    FPC 4            REV 02   750-028467   JR6127            MPC M 16x 10GE
      CPU            REV 02   711-029089   JX0129            AS PMB
      PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
```

```
    PIC 1                    BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    PIC 2                    BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    PIC 3                    BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
  Fan Tray 0       REV 05   740-014971   TP9990            Fan Tray
  Fan Tray 1       REV 05   740-014971   VS1709            Fan Tray
```

show chassis hardware (MPC3E [MX Series Routers])

```
user@host> show chassis hardware
Hardware inventory:
   Item             Version  Part number   Serial number     Description
   Chassis                                 JN1101AFEAFB      MX480
   Midplane         REV 05   710-017414    TR4444            MX480 Midplane
   FPM Board        REV 02   710-017254    KG6056            Front Panel Display

   PEM 0           Rev 03   740-017330    QCS082090FC      PS 1.2-1.7kW; 100-240V

   PEM 1           Rev 03   740-017330    QCS082090FD      PS 1.2-1.7kW; 100-240V

   Routing Engine 0 REV 07   740-013063    9009004124        RE-S-2000
   Routing Engine 1 REV 07   740-013063    9009005569        RE-S-2000
   CB 0             REV 07   710-021523    XZ3587            MX SCB
   CB 1             REV 03   710-021523    KH8306            MX SCB
   FPC 1            REV 04.1.07 750-033205 P1240             MPC Type 3
    CPU             REV 01   711-035209    YL0504            HMPC PMB 2G
    MIC 1           REV 10   750-033199    YX4495            1X100GE CFP
     PIC 2                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0        REV 01   740-032210    C22CQNE           CFP-100G-LR4
   FPC 2            REV 26   750-016670    KH0045            DPCE 40x 1GE R EQ
    CPU             REV 07   710-013713    KF5448            DPC PMB
    PIC 0                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 0         REV 01   740-011613    PF21JHU           SFP-SX
    PIC 1                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 9         REV 01   740-011613    AM0813S8ZL6       SFP-SX
    PIC 2                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 0         REV 02   740-011613    PGL2KYF           SFP-SX
     Xcvr 2         REV 01   740-011613    AM0806S8N4P       SFP-SX
    PIC 3                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 5         REV 01   740-011613    AM0815S967N       SFP-SX
     Xcvr 7         REV 01   740-011613    AM0806S8N1X       SFP-SX
     Xcvr 8         REV 01   740-011613    AM0815S967J       SFP-SX
     Xcvr 9         REV 01   740-011613    AM0815S967M       SFP-SX
   FPC 3            REV 12.2.09 750-033205 YR9443            MPC Type 3
    CPU             REV 03   711-035209    YL6931            HMPC PMB 2G
    MIC 0           REV 05   750-033199    YR3269            1X100GE CFP
     PIC 0                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0        REV 01   740-032210    ULH0KG3           CFP-100G-LR4
    MIC 1           REV 02   750-033199    YG3245            1X100GE CFP
     PIC 2                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0        REV 01   740-032210    ULH0KGF           CFP-100G-LR4
   FPC 4            REV 12.3.09 750-033205 YR9437            MPC Type 3
    CPU             REV 03   711-035209    YT5857            HMPC PMB 2G
    MIC 0           REV 05   750-033199    YR3295            1X100GE CFP
     PIC 0                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0                 NON-JNPR      X12000187         CFP-100G-SR10
    MIC 1           REV 10   750-033199    YX4518            1X100GE CFP
     PIC 2                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0        REV 01   740-035329    X12J00008         CFP-100G-SR10
   FPC 5            REV 06   750-024884    JW9769            MPC Type 2 3D EQ
   CPU              REV 02   711-028401    JR6158            MPC PMB 2G Proto
   MIC 0            REV 05   750-028387    JR6197            3D 4x 10GE  XFP
```

```
  PIC 0                      BUILTIN       BUILTIN           2x 10GE  XFP
   Xcvr 0         REV 01    740-014289    T07M71112         XFP-10G-SR
   Xcvr 1         REV 02    740-014289    T08L85610         XFP-10G-SR
   PIC 1                    BUILTIN       BUILTIN           2x 10GE  XFP
 MIC 1            REV 22    750-028392    YM0053            3D 20x 1GE(LAN) SFP

  PIC 2                     BUILTIN       BUILTIN           10x 1GE(LAN) SFP
   Xcvr 0         REV 01    740-011613    AM0703S005B       SFP-SX
   Xcvr 1         REV 01    740-011613    E07L01352         SFP-SX
  PIC 3                     BUILTIN       BUILTIN           10x 1GE(LAN) SFP
   Xcvr 5         REV 01    740-013111    6500217           SFP-T
   Xcvr 9         REV 02    740-013111    8499527           SFP-T
 Fan Tray                                                   Left Fan Tray
```

The PIC number for MIC 1 always starts from 2 (even if the first MIC is a 1X100GE CFP or a legacy MIC).

show chassis hardware (QFX3500 Switches)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  QFX3500
Routing Engine 0          BUILTIN      BUILTIN           QFX Routing Engine
FPC 0            REV 04   750-044071   BBAR3902          QFX3500-48S4Q-AFI
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x 10G-SFP+
  PIC 1                   BUILTIN      BUILTIN           15x 10G-SFP+
  MGMT BRD       REV 02   750-044063   BBAR0398          QFX3500-MGMT-SFP-AFO
    Xcvr 0       REV 01   740-011614   AC0946S0BD1       SFP-LX10
    Xcvr 1       REV 02   740-013111   A281922           SFP-T
Power Supply 0   Rev 04   740-032091   UI00677           JPSU-650W-AC-AFI
Power Supply 1   REV 00   740-041741   VJ00162           JPSU-650W-AC-AFO
Fan Tray 0                                               QFX Fan Tray, Back to
Front Airlfow
Fan Tray 1                                               QFX Fan Tray, Back to
Front Airlfow
Fan Tray 2                                               QFX Fan Tray, Back to
Front Airlfow
```

show chassis hardware detail (QFX3500 Switches)

```
user@switch> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN000TEST5        QFX3500
Routing Engine 0          BUILTIN      BUILTIN           QFX Routing Engine
FPC 0            REV 05   750-036931   EE0823            QFX3500-48S4Q-AFI


  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x 10G-SFP+
    Xcvr 0       REV 01   740-030589   S99E270079        SFP+-10G-LPBK
    Xcvr 1       REV 01   740-030589   S9AK450099        SFP+-10G-LPBK
    Xcvr 2       REV 01   740-030589   S99E270078        SFP+-10G-LPBK
    Xcvr 3       REV 01   740-030589   S9AK450098        SFP+-10G-LPBK
    Xcvr 4       REV 01   740-030589   S99E270075        SFP+-10G-LPBK
    Xcvr 5       REV 01   740-030589   S9AK450093        SFP+-10G-LPBK
    Xcvr 6       REV 01   740-030589   S9AK450097        SFP+-10G-LPBK
    Xcvr 7       REV 01   740-030589   S9AK450095        SFP+-10G-LPBK
```

```
    Xcvr 8       REV 01   740-030589   S99E270072        SFP+-10G-LPBK
    Xcvr 9       REV 01   740-030589   S99E270073        SFP+-10G-LPBK
    Xcvr 10      REV 01   740-030589   S99E270080        SFP+-10G-LPBK
    Xcvr 11      REV 01   740-030589   S9AK450169        SFP+-10G-LPBK
    Xcvr 12      REV 01   740-030589   S99E270076        SFP+-10G-LPBK
    Xcvr 13      REV 01   740-030589   S9AK450167        SFP+-10G-LPBK
    Xcvr 14      REV 01   740-030589   S9AK450170        SFP+-10G-LPBK
    Xcvr 15      REV 01   740-030589   S9AK450166        SFP+-10G-LPBK
    Xcvr 16      REV 01   740-030589   S9AK450092        SFP+-10G-LPBK
    Xcvr 17      REV 01   740-030589   S9AK450163        SFP+-10G-LPBK
    Xcvr 18      REV 01   740-030589   S9AK450094        SFP+-10G-LPBK
    Xcvr 19      REV 01   740-030589   S9AK450100        SFP+-10G-LPBK
    Xcvr 20      REV 01   740-030589   S9AK450168        SFP+-10G-LPBK
    Xcvr 21      REV 01   740-030589   S9AK450165        SFP+-10G-LPBK
    Xcvr 22      REV 01   740-030589   S9AK450073        SFP+-10G-LPBK
    Xcvr 23      REV 01   740-030589   S9AK450164        SFP+-10G-LPBK
    Xcvr 24      REV 01   740-030589   S9AK450074        SFP+-10G-LPBK
    Xcvr 25      REV 01   740-030589   SA62270195        SFP+-10G-LPBK
    Xcvr 26      REV 01   740-030589   S9AK450078        SFP+-10G-LPBK
    Xcvr 27      REV 01   740-030589   S9AK450024        SFP+-10G-LPBK
    Xcvr 28      REV 01   740-030589   S9AK450027        SFP+-10G-LPBK
    Xcvr 29      REV 01   740-030589   S9AK450080        SFP+-10G-LPBK
    Xcvr 30      REV 01   740-030589   S9AK450030        SFP+-10G-LPBK
    Xcvr 31      REV 01   740-030589   S9AK450025        SFP+-10G-LPBK
    Xcvr 32      REV 01   740-030589   S9AK450023        SFP+-10G-LPBK
    Xcvr 33      REV 01   740-030589   S9AK450075        SFP+-10G-LPBK
    Xcvr 34      REV 01   740-030589   S9AK450161        SFP+-10G-LPBK
    Xcvr 35      REV 01   740-030589   S9AK450071        SFP+-10G-LPBK
    Xcvr 36      REV 01   740-030589   S9AK450072        SFP+-10G-LPBK
    Xcvr 37      REV 01   740-030589   S9AK450022        SFP+-10G-LPBK
    Xcvr 38      REV 01   740-030589   S9AK450021        SFP+-10G-LPBK
    Xcvr 39      REV 01   740-030589   S9AK450175        SFP+-10G-LPBK
    Xcvr 40      REV 01   740-030589   S9AK450162        SFP+-10G-LPBK
    Xcvr 41      REV 01   740-030589   S99E270074        SFP+-10G-LPBK
    Xcvr 42      REV 01   740-030589   S9AK450174        SFP+-10G-LPBK
    Xcvr 43      REV 01   740-030589   S9AK450077        SFP+-10G-LPBK
    Xcvr 44      REV 01   740-030589   S9AK450076        SFP+-10G-LPBK
    Xcvr 45      REV 01   740-030589   S9AK450026        SFP+-10G-LPBK
    Xcvr 46      REV 01   740-030589   S9AK450079        SFP+-10G-LPBK
    Xcvr 47      REV 01   740-030589   S9AK450029        SFP+-10G-LPBK
  PIC 1                   BUILTIN      BUILTIN           15x 10G-SFP+
    Xcvr 1       REV 01   740-032986   QA170087          QSFP+-40G-SR4
    Xcvr 4       REV 01   740-032986   QA360442          QSFP+-40G-SR4
    Xcvr 8       REV 01   740-032986   QA170091          QSFP+-40G-SR4
    Xcvr 12      REV 01   740-032986   QA170042          QSFP+-40G-SR4
MGMT BRD       REV 08   750-036946   EE0731            QFX3500-MB
Power Supply 0   Rev 04   740-032091   UI00690           QFX PS 650W AC
Power Supply 1   Rev 04   740-032091   UI00679           QFX PS 650W AC
Fan Tray 0                                               QFX Fan Tray
Fan Tray 1                                               QFX Fan Tray
```

show chassis hardware models (QFX3500 Switches)

```
user@switch> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0          BUILTIN      BUILTIN
FPC 0            REV 02   711-032234   EC4074
Power Supply 0   PSMI 2C  11-d65800    --
```

show chassis hardware clei-models (QFX3500 Switches)

```
user@switch> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN
FPC 0            REV 02   711-032234
Power Supply 0   PSMI 2C  11-d65800
```

show chassis hardware clei-models (QFX5100 Switches)

```
user@switch> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN      CMMNV10BRA
FPC 0            REV 01   611-053010   CMMNV10BRA
  PIC 0                   BUILTIN      CMMNV10BRA
Power Supply 0   REV 03   740-053352   MUPABHBAA         JPSU-850W-AC-AFO
Power Supply 1   REV 03   740-053352   MUPABHBAA         JPSU-850W-AC-AFO
Fan Tray 0                                               QFX5100-96S-FANAFO
Fan Tray 1                                               QFX5100-96S-FANAFO
Fan Tray 2                                               QFX5100-96S-FANAFO
```

show chassis hardware (QFX10002 Switches)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                12345             QFX10002-36Q
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-QFX10002-36Q
FPC 0            REV 26   750-059497   ACNL1387          QFX10002-36Q
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           36X40G
    Xcvr 0       REV 01   740-038623   MOC15476230389    QSFP+-40G-CU1M
    Xcvr 1       REV 01   740-038623   MOC15476230438    QSFP+-40G-CU1M
    Xcvr 2       REV 01   740-038623   MOC15446231917    QSFP+-40G-CU1M
    Xcvr 3       REV 01   740-038623   MOC15446232043    QSFP+-40G-CU1M
    Xcvr 4       REV      740-038624   APF15470032AVB    QSFP+-40G-CU3M
    Xcvr 5       REV      740-038624   APF15470032H15    QSFP+-40G-CU3M
    Xcvr 6       REV      740-038624   APF15470032A9J    QSFP+-40G-CU3M
    Xcvr 7       REV      740-038624   APF15470032AG7    QSFP+-40G-CU3M
    Xcvr 8       REV      740-038624   APF15470032ALD    QSFP+-40G-CU3M
    Xcvr 9       REV 01   740-053203   APF15470071V43    QSFP+-40G-ACU7M
    Xcvr 10      REV 01   740-053203   APF15470071V15    QSFP+-40G-ACU7M
    Xcvr 11      REV 01   740-053203   APF15470071V12    QSFP+-40G-ACU7M
    Xcvr 13      REV      740-038624   APF15470032H1N    QSFP+-40G-CU3M
    Xcvr 18      REV 01   740-053203   APF154800738HW    QSFP+-40G-ACU7M
    Xcvr 19      REV 01   740-038153   MOC12161530041    QSFP+-40G-CU3M
    Xcvr 20      REV 01   740-038153   APF15500034A29    QSFP+-40G-CU3M
    Xcvr 30      REV 01   740-038623   MOC15476230444    QSFP+-40G-CU1M
    Xcvr 31      REV 01   740-032986   QC330038          QSFP+-40G-SR4
    Xcvr 32      REV 01   740-032986   QC290540          QSFP+-40G-SR4
  Mezz           REV 02   711-059316   ACNG9344          QFX10002 36X40G Mezz
Power Supply 0   REV 03   740-054405   1EDN5389293       AC AFO 1600W PSU
Power Supply 1   REV 03   740-054405   1EDN5346300       AC AFO 1600W PSU
Fan Tray 0                                               QFX10002 Fan Tray 0,
Front to Back Airflow - AFO
Fan Tray 1                                               QFX10002 Fan Tray 1,
```

```
Front to Back Airflow - AFO
Fan Tray 2                                                QFX10002 Fan Tray 2,
Front to Back Airflow - AFO
```

show chassis hardware detail (QFX10002 Switches)

```
user@switch> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                12345             QFX10002-72Q
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-QFX10002-72Q
ada0   8193 MB  QEMU                 QM00001           Virtio Block Disk
ada1   4096 MB  QEMU                 QM00002           Virtio Block Disk
ada2    512 MB  QEMU                 QM00003           Virtio Block Disk
ada3   1024 MB  QEMU                 QM00004           Virtio Block Disk
usb0 (addr 0.1)  UHCI root HUB 0     Intel             uhub0
usb0 (addr 1.1)  EHCI root HUB 0     Intel             uhub1
usb0 (addr 1.2)  product 0x0020 32   vendor 0x8087     uhub2
usb0 (addr 1.3)  Ultra Fit  21891    SanDisk           umass0
FPC 0            REV 05   750-055415 ACAM4724          QFX10002-72Q
CPU                     BUILTIN      BUILTIN           FPC CPU
```

show chassis hardware (QFX10008 and QFX10016 Switches)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DE994             QFX10008
Midplane         REV 28   750-054097   ACPG3671          QFX10008 Midplane
Routing Engine 0          BUILTIN      BUILTIN           Routing Engine
Routing Engine 1          BUILTIN      BUILTIN           Routing Engine
CB 0             REV 03   750-068820   ACPA3224          Control Board
CB 1             REV 03   750-068820   ACPM9059          Control Board
FPC 0            REV 33   750-051354   ACNP4522          ULC-36Q-12Q28
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           36X40G
    Xcvr 0       REV 01   740-038623   MOC16016230802    QSFP+-40G-CU1M
    Xcvr 1       REV 01   740-038623   MOC16016230802    QSFP+-40G-CU1M
    Xcvr 2       REV 01   740-038623   MOC16016231080    QSFP+-40G-CU1M
    Xcvr 3       REV 01   740-038623   MOC16016231080    QSFP+-40G-CU1M
    Xcvr 4       REV      740-038624   APF16220038H15    QSFP+-40G-CU3M
    Xcvr 5       REV      740-038624   APF16220038H5M    QSFP+-40G-CU3M
    Xcvr 6       REV      740-038624   APF160600308W8    QSFP+-40G-CU3M
    Xcvr 8       REV      740-038624   APF16210038FFL    QSFP+-40G-CU3M
    Xcvr 9       REV      740-038624   APF16210038F6F    QSFP+-40G-CU3M
    Xcvr 10      REV      740-038624   APF1605003032B    QSFP+-40G-CU3M
    Xcvr 11      REV      740-038624   APF16070030CDB    QSFP+-40G-CU3M
    Xcvr 13      REV      740-038624   APF16210038FEW    QSFP+-40G-CU3M
    Xcvr 15      REV 01   740-052307   APF16100071C1L    QSFP+-40G-ACU7M
    Xcvr 16      REV      740-038625   APF1623005048E    QSFP+-40G-CU5M
    Xcvr 17      REV      740-038625   APF16230050471    QSFP+-40G-CU5M
    Xcvr 18      REV      740-038625   APF1623005044D    QSFP+-40G-CU5M
    Xcvr 19      REV 01   740-052307   APF16100071C30    QSFP+-40G-ACU7M
    Xcvr 20      REV      740-038625   APF16290055004    QSFP+-40G-CU5M
    Xcvr 21      REV 01   740-038153   APF1622003970G    QSFP+-40G-CU3M
    Xcvr 22      REV      740-038624   APF16190036R90    QSFP+-40G-CU3M
    Xcvr 23      REV      740-038624   APF16050030374    QSFP+-40G-CU3M
    Xcvr 24      REV 01   740-038153   APF162400318HC    QSFP+-40G-CU3M
```

```
    Xcvr 30      REV      740-038624   APF1606003097A    QSFP+-40G-CU3M
    Xcvr 31      REV 01   740-052307   APF160500702R9    QSFP+-40G-ACU7M
    Xcvr 32      REV      740-038624   APF16220038GVR    QSFP+-40G-CU3M
FPD Board        REV 07   711-054687   ACPC7158          QFX10000 FPD
Power Supply 0   REV 02   740-049388   1EDL63104D6       QFX10000 AC
Power Supply 1   REV 02   740-049388   1EDL62503XC       QFX10000 AC
Power Supply 2   REV 02   740-049388   1EDL62503XS       QFX10000 AC
Power Supply 3   REV 02   740-049388   1EDL62503T8       QFX10000 AC
Power Supply 4   REV 02   740-049388   1EDL62503TR       QFX10000 AC
Power Supply 5   REV 02   740-049388   1EDL62503T5       QFX10000 AC
FTC 0            REV 15   750-050108   ACPF4227          QFX10000 FTC
FTC 1            REV 15   750-050108   ACPF4228          QFX10000 FTC
Fan Tray 0       REV 09   760-054372   ACNV5506          QFX10008 FHB
Fan Tray 1       REV 09   760-054372   ACNV5365          QFX10008 FHB
SIB 0            REV 27   750-050058   ACPM4212          QFX10008 SIB
SIB 1            REV 27   750-050058   ACPM4253          QFX10008 SIB
SIB 2            REV 27   750-050058   ACPM4174          QFX10008 SIB
SIB 3            REV 27   750-050058   ACPM4191          QFX10008 SIB
SIB 4            REV 27   750-050058   ACPM4216          QFX10008 SIB
SIB 5            REV 27   750-050058   ACPM4286          QFX10008 SIB
```

show chassis hardware detail (QFX10008 and QFX10016 Switches)

```
user@switch> show chassis hardware details
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                12345             QFX10008
Midplane         REV 01   750-054097   ACAM1754          QFX10008 Midplane
Routing Engine 0          BUILTIN      BUILTIN           Routing Engine
ada0   8193 MB  QEMU                 QM00001          Virtio Block Disk
ada1   4096 MB  QEMU                 QM00002          Virtio Block Disk
ada2    512 MB  QEMU                 QM00003          Virtio Block Disk
ada3   1024 MB  QEMU                 QM00004          Virtio Block Disk
usb0 (addr 1)  UHCI root HUB 0       Intel            uhub0
usb0 (addr 1)  EHCI root HUB 0       Intel            uhub1
usb0 (addr 2)  product 0x0020 32     vendor 0x8087    uhub2
Routing Engine 1          BUILTIN      BUILTIN           Routing Engine
ada0   8193 MB  QEMU                 QM00001          Virtio Block Disk
ada1   4096 MB  QEMU                 QM00002          Virtio Block Disk
ada2    512 MB  QEMU                 QM00003          Virtio Block Disk
ada3   1024 MB  QEMU                 QM00004          Virtio Block Disk
usb0 (addr 0.1)  UHCI root HUB 0     Intel            uhub0
usb0 (addr 1.1)  EHCI root HUB 0     Intel            uhub1
usb0 (addr 1.2)  product 0x0020 32   vendor 0x8087    uhub2
CB 0             REV 16   750-052688   ACAM7936          Control Board
CB 1             REV 18   750-052688   ACAM7708          Control Board
FPC 0            REV 26   750-051351   ACPJ1372          ULC-60S-6Q Main Board
CPU                      BUILTIN      BUILTIN           FPC CPU
```

show chassis hardware interconnect-device (QFabric Systems)

```
user@switch> show chassis hardware interconnect-device interconnect1
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis          REV 07                                  QFX_olive
Midplane         REV 07   750-021261   BH0208188289      QFX Midplane
CB 0             REV 07   750-021261   BH0208188289      QFXIC08-CB4S
```

show chassis hardware node-device (QFabric Systems)

```
user@switch> show chassis hardware node-device node1
Routing Engine 0   BUILTIN      BUILTIN           QFX Routing Engine
node1            REV 05   711-032234   ED3694            QFX3500-48S4Q-AFI


  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x 10G-SFP+
    Xcvr 8       REV 01   740-030658   AD0946A028B       SFP+-10G-USR
...
```

show chassis hardware (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11D1FD7AJA      PTX5000
Midplane         REV 03   711-031896   ABAC5589          Midplane-8S
FPM              REV 08   760-030647   EG1679            Front Panel Display
PDU 0            Rev 05   740-032019   ZE00006           DC Power Dist Unit
  PSM 0          Rev 05   740-032022   ZJ00018           DC 12V Power Supply
  PSM 1          Rev 04   740-032022   ZC00052           DC 12V Power Supply
  PSM 2          Rev 04   740-032022   ZD00051           DC 12V Power Supply
  PSM 3          Rev 05   740-032022   ZJ00060           DC 12V Power Supply
CCG 0            REV 04   750-030653   EG3703            Clock Generator
CCG 1            REV 04   750-030653   EG3698            Clock Generator
Routing Engine 0 REV 05   740-026942   P737A-002231      RE-DUO-2600
Routing Engine 1 REV 06   740-026942   P737A-002438      RE-DUO-2600
CB 0             REV 08   750-030625   EG5519            Control Board
CB 1             REV 08   750-030625   EG5516            Control Board
FPC 0            REV 18   750-036844   EJ3080            FPC
  CPU            REV 12   711-030686   EJ3260            SNG PMB
FPC 2            REV 13   750-036844   EG5065            FPC
  CPU            REV 09   711-030686   EG4082            SNG PMB
  PIC 0          REV 14   750-031913   EG5127            24x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   143363A00240      SFP+-10G-SR
    Xcvr 1       REV 01   740-031981   UK90PZ1           SFP+-10G-LR
    Xcvr 2       REV 01   740-031980   AD1141A04XH       SFP+-10G-SR
    Xcvr 3       REV 01   740-031981   UK90Q46           SFP+-10G-LR
    Xcvr 4       REV 01   740-031980   AD1141A04X4       SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11H02560         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11C01589         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AD1141A04XF       SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01094      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LKF           SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   183363A01528      SFP+-10G-SR
    Xcvr 14      REV 01   740-031980   193363A01079      SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   AK80MC8           SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   AJC0BHC           SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08D26856         SFP+-10G-LR
    Xcvr 21      REV 01   740-031980   AK80KCT           SFP+-10G-SR
    Xcvr 22      REV 01   740-031981   UK90PZL           SFP+-10G-LR
    Xcvr 23      REV 01   740-031980   AK80N1V           SFP+-10G-SR
FPC 3            REV 13   750-036844   EG5074            FPC
  CPU            REV 09   711-030686   EG4064            SNG PMB
  PIC 1          REV 10   750-031903   EG0325            SNG Load
FPC 5            REV 06   750-036844   EH3198            FPC
  CPU
  PIC 0          REV 14   750-031913   EG5134            24x 10GE(LAN) SFP+
```

```
    Xcvr 0       REV 01   740-031980   AK80LBH           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11B03724         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FMH           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J00818         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00743      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11B06125         SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11H02529         SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LFB           SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   193363A01061      SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   B11J00687         SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   193363A00738      SFP+-10G-SR
    Xcvr 18      REV 01   740-031980   AK80MQX           SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08C17257         SFP+-10G-LR
    Xcvr 22      REV 01   740-031980   B11J00730         SFP+-10G-SR
    Xcvr 23      REV 01   740-031980   AK80KEE           SFP+-10G-SR
  PIC 1          REV 08   750-036710   EG3105            2x 40GE CFP
    Xcvr 0       REV 01   740-034554   B260HLT           CFP-40G-LR4
    Xcvr 1       REV 01   740-034554   B11C02847         CFP-40G-LR4
FPC 6            REV 18   750-036844   EJ4391            FPC
  CPU            REV 12   711-030686   EJ3257            SNG PMB
FPC 7            REV 18   750-036844   EJ4382            FPC
  CPU            REV 12   711-030686   EJ3238            SNG PMB
SPMB 0           REV 10   711-030686   EG5418            SNG PMB
SPMB 1           REV 09   711-030686   EG5373            SNG PMB
SIB 0            REV 07   750-030631   EG4858            SIB-I-8S
SIB 1            REV 07   750-030631   EG4872            SIB-I-8S
SIB 2            REV 07   750-030631   EG4866            SIB-I-8S
SIB 3            REV 07   750-030631   EG6011            SIB-I-8S
SIB 4            REV 07   750-030631   EG4907            SIB-I-8S
SIB 5            REV 07   750-030631   EG4879            SIB-I-8S
SIB 6            REV 07   750-030631   EG4864            SIB-I-8S
SIB 7            REV 07   750-030631   EG4899            SIB-I-8S
SIB 8            REV 07   750-030631   EG4880            SIB-I-8S
Fan Tray 0       REV 04   760-032784   EG1496            Vertical Fan Tray
Fan Tray 1       REV 04   760-030642   EG1335            Horizontal Fan Tray
Fan Tray 2       REV 02   760-030642   ED4952            Horizontal Fan Tray
```

show chassis hardware (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN12223A6AJA      PTX5000
Midplane         REV 16   750-035893   ACRA1350          Midplane-8S
FPM              REV 12   760-030647   BBBD5625          Front Panel Display
PDU 0           Rev 01   740-048338   1GB83360005       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360074       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360001       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360104       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360042       High Capacity AC PSM
  PSM 4          Rev 01   740-048334   1GB43360068       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360080       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360046       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360100       High Capacity AC PSM
PDU 1           Rev 01   740-048338   1GB83360006       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360069       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360099       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360050       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360095       High Capacity AC PSM
```

```
  PSM 4          Rev 01   740-048334   1GB43360101       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360075       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360047       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360019       High Capacity AC PSM
CCG 0            REV 09   750-030653   BBAZ5345          Clock Generator
...
```

show chassis hardware (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1204FC0AJA      PTX5000
Midplane         REV 11   750-035893   ACAB8038          Midplane-8S
FPM              REV 12   760-030647   BBBD5619          Front Panel
Display
PDU 0            Rev 04   740-048336   1GB93470043       High Capacity DC PDU
  PSM 0          Rev 04   740-046988   1GB63500184       High Capacity DC PSM
  PSM 2          Rev 04   740-046988   1GB63500169       High Capacity DC PSM
  PSM 4          Rev 04   740-046988   1GB63500306       High Capacity DC PSM
  PSM 6          Rev 04   740-046988   1GB63500074       High Capacity DC PSM
PDU 1            Rev 04   740-048336   1GB93470045       High Capacity DC PDU
  PSM 1          Rev 04   740-046988   1GB63500193       High Capacity DC PSM
  PSM 3          Rev 04   740-046988   1GB63500143       High Capacity DC PSM
  PSM 5          Rev 04   740-046988   1GB63500146       High Capacity DC PSM
  PSM 7          Rev 04   740-046988   1GB63500192       High Capacity DC PSM
CCG 0            REV 09   750-030653   BBBC1909          Clock Generator
CCG 1            REV 09   750-030653   BBBD2970          Clock Generator
...
```

show chassis hardware clei-models (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
FPM              REV 08   760-030647   PROTOXCLEI        CRAFT-PTX5000-S
PDU 0            Rev 05   740-032019   IPUPAHLKAA        PWR-SAN-PDU-DC
  PSM 0          Rev 05   740-032022   IPUPAHNKAA        PSM-PTX-DC-120-S
  PSM 1          Rev 04   740-032022   032022XXXX        PWR-SAN-12-DC
  PSM 2          Rev 04   740-032022   032022XXXX        PWR-SAN-12-DC
  PSM 3          Rev 05   740-032022   IPUPAHNKAA        PSM-PTX-DC-120-S
CCG 0            REV 04   750-030653   PROTOXCLEI        CCG-PTX-S
CCG 1            REV 04   750-030653   PROTOXCLEI        CCG-PTX-S
Routing Engine 0 REV 05   740-026942                     RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942                     RE-DUO-C2600-16G-S
CB 0             REV 08   750-030625   PROTOXCLEI        CB-PTX-S
CB 1             REV 08   750-030625   PROTOXCLEI        CB-PTX-S
FPC 0            REV 18   750-036844   PROTOXCLEI        FPC-PTX-P1-A
FPC 2            REV 13   750-036844   PROTOXCLEI        FPC-PTX-P1-A
  PIC 0          REV 14   750-031913   PROTOXCLEI        P1-PTX-24-10GE-SFPP
FPC 3            REV 13   750-036844   PROTOXCLEI        FPC-PTX-P1-A
FPC 5
  PIC 0          REV 14   750-031913   PROTOXCLEI        P1-PTX-24-10GE-SFPP
FPC 6            REV 18   750-036844   PROTOXCLEI        FPC-PTX-P1-A
FPC 7            REV 18   750-036844   PROTOXCLEI        FPC-PTX-P1-A
SIB 0            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 1            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 2            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 3            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 4            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
```

```
SIB 5            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 6            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 7            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 8            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
Fan Tray 1       REV 04   760-030642   PROTOXCLEI        FAN-PTX-H-S
```

show chassis hardware clei-models (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 16   750-035893   IPMUN00ARA        CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   IPUCA7SCAA        CRAFT-PTX5000-S
PDU 0            Rev 01   740-048338   PROTOACPDU        PDU2-PTX-AC-W
  PSM 0          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
PDU 1            Rev 01   740-048338   PROTOACPDU        PDU2-PTX-AC-W
  PSM 0          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
CCG 0            REV 09   750-030653   IPUCA7DCAA        CCG-PTX-S
...
```

show chassis hardware clei-models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 11   750-035893   IPMUN00ARA        CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   IPUCA7SCAA        CRAFT-PTX5000-S
PDU 0            Rev 04   740-048336   IPUPAL7KAA        PDU2-PTX-DC-S
  PSM 0          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 2          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 4          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 6          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
PDU 1            Rev 04   740-048336   IPUPAL7KAA        PDU2-PTX-DC-S
  PSM 1          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 3          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 5          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 7          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
CCG 0            REV 09   750-030653   IPUCA7DCAA        CCG-PTX-S
CCG 1            REV 09   750-030653   IPUCA7DCAA        CCG-PTX-S
...
```

show chassis hardware detail (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
```

```
Chassis                                 JN11D1FD7AJA      PTX5000
Midplane         REV 03   711-031896   ABAC5589          Midplane-8S
FPM              REV 08   760-030647   EG1679            Front Panel Display
PDU 0            Rev 05   740-032019   ZE00006           DC Power Dist Unit
  PSM 0          Rev 05   740-032022   ZJ00018           DC 12V Power Supply
  PSM 1          Rev 04   740-032022   ZC00052           DC 12V Power Supply
  PSM 2          Rev 04   740-032022   ZD00051           DC 12V Power Supply
  PSM 3          Rev 05   740-032022   ZJ00060           DC 12V Power Supply
CCG 0            REV 04   750-030653   EG3703            Clock Generator
CCG 1            REV 04   750-030653   EG3698            Clock Generator
Routing Engine 0 REV 05   740-026942   P737A-002231      RE-DUO-2600
  ad0    3823 MB  SMART CF             201006190039C02DC02D Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 2011042300CF4C6B4C6B Disk 1
Routing Engine 1 REV 06   740-026942   P737A-002438      RE-DUO-2600
  ad0    3823 MB  SMART CF             20100619053455F055F0 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 20110423000AE8E7E8E7 Disk 1
CB 0             REV 08   750-030625   EG5519            Control Board
CB 1             REV 08   750-030625   EG5516            Control Board
FPC 0            REV 18   750-036844   EJ3080            FPC
  CPU            REV 12   711-030686   EJ3260            SNG PMB
FPC 2            REV 13   750-036844   EG5065            FPC
  CPU            REV 09   711-030686   EG4082            SNG PMB
  PIC 0          REV 14   750-031913   EG5127            24x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   143363A00240      SFP+-10G-SR
    Xcvr 1       REV 01   740-031981   UK90PZ1           SFP+-10G-LR
    Xcvr 2       REV 01   740-031980   AD1141A04XH       SFP+-10G-SR
    Xcvr 3       REV 01   740-031981   UK90Q46           SFP+-10G-LR
    Xcvr 4       REV 01   740-031980   AD1141A04X4       SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11H02560         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11C01589         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AD1141A04XF       SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01094      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LKF           SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   183363A01528      SFP+-10G-SR
    Xcvr 14      REV 01   740-031980   193363A01079      SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   AK80MC8           SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   AJC0BHC           SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08D26856         SFP+-10G-LR
    Xcvr 21      REV 01   740-031980   AK80KCT           SFP+-10G-SR
    Xcvr 22      REV 01   740-031981   UK90PZL           SFP+-10G-LR
    Xcvr 23      REV 01   740-031980   AK80N1V           SFP+-10G-SR
FPC 3            REV 13   750-036844   EG5074            FPC
  CPU            REV 09   711-030686   EG4064            SNG PMB
  PIC 1          REV 10   750-031903   EG0325            SNG Load
FPC 5            REV 06   750-036844   EH3198            FPC
  CPU
  PIC 0          REV 14   750-031913   EG5134            24x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LBH           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11B03724         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FMH           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J00818         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00743      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11B06125         SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11H02529         SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LFB           SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   193363A01061      SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   B11J00687         SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   193363A00738      SFP+-10G-SR
    Xcvr 18      REV 01   740-031980   AK80MQX           SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08C17257         SFP+-10G-LR
    Xcvr 22      REV 01   740-031980   B11J00730         SFP+-10G-SR
```

```
    Xcvr 23      REV 01   740-031980   AK80KEE           SFP+-10G-SR
  PIC 1          REV 08   750-036710   EG3105            2x 40GE CFP
    Xcvr 0       REV 01   740-034554   B260HLT           CFP-40G-LR4
    Xcvr 1       REV 01   740-034554   B11C02847         CFP-40G-LR4
FPC 6            REV 18   750-036844   EJ4391            FPC
  CPU            REV 12   711-030686   EJ3257            SNG PMB
FPC 7            REV 18   750-036844   EJ4382            FPC
  CPU            REV 12   711-030686   EJ3238            SNG PMB
SPMB 0           REV 10   711-030686   EG5418            SNG PMB
SPMB 1           REV 09   711-030686   EG5373            SNG PMB
SIB 0            REV 07   750-030631   EG4858            SIB-I-8S
SIB 1            REV 07   750-030631   EG4872            SIB-I-8S
SIB 2            REV 07   750-030631   EG4866            SIB-I-8S
SIB 3            REV 07   750-030631   EG6011            SIB-I-8S
SIB 4            REV 07   750-030631   EG4907            SIB-I-8S
SIB 5            REV 07   750-030631   EG4879            SIB-I-8S
SIB 6            REV 07   750-030631   EG4864            SIB-I-8S
SIB 7            REV 07   750-030631   EG4899            SIB-I-8S
SIB 8            REV 07   750-030631   EG4880            SIB-I-8S
Fan Tray 0       REV 04   760-032784   EG1496            Vertical Fan Tray
Fan Tray 1       REV 04   760-030642   EG1335            Horizontal Fan Tray
Fan Tray 2       REV 02   760-030642   ED4952            Horizontal Fan Tray
```

show chassis hardware detail (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN12223A6AJA      PTX5000
Midplane         REV 16   750-035893   ACRA1350          Midplane-8S
FPM              REV 12   760-030647   BBBD5625          Front Panel Display
PDU 0           Rev 01   740-048338   1GB83360005       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360074       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360001       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360104       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360042       High Capacity AC PSM
  PSM 4          Rev 01   740-048334   1GB43360068       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360080       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360046       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360100       High Capacity AC PSM
PDU 1           Rev 01   740-048338   1GB83360006       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360069       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360099       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360050       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360095       High Capacity AC PSM
  PSM 4          Rev 01   740-048334   1GB43360101       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360075       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360047       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360019       High Capacity AC PSM
CCG 0            REV 09   750-030653   BBAZ5345          Clock Generator
```

show chassis hardware detail (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1204FC0AJA      PTX5000
Midplane         REV 11   750-035893   ACAB8038          Midplane-8S
```

```
FPM              REV 12   760-030647   BBBD5619          Front Panel
Display
PDU 0            Rev 04   740-048336   1GB93470043       High Capacity DC PDU
  PSM 0          Rev 04   740-046988   1GB63500184       High Capacity DC PSM
  PSM 2          Rev 04   740-046988   1GB63500169       High Capacity DC PSM
  PSM 4          Rev 04   740-046988   1GB63500306       High Capacity DC PSM
  PSM 6          Rev 04   740-046988   1GB63500074       High Capacity DC PSM
PDU 1            Rev 04   740-048336   1GB93470045       High Capacity DC PDU
  PSM 1          Rev 04   740-046988   1GB63500193       High Capacity DC PSM
  PSM 3          Rev 04   740-046988   1GB63500143       High Capacity DC PSM
  PSM 5          Rev 04   740-046988   1GB63500146       High Capacity DC PSM
  PSM 7          Rev 04   740-046988   1GB63500192       High Capacity DC PSM
CCG 0            REV 09   750-030653   BBBC1909          Clock Generator
CCG 1            REV 09   750-030653   BBBD2970          Clock Generator
...
```

show chassis hardware models (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
FPM              REV 08   760-030647   EG1679            CRAFT-PTX5000-S
PDU 0            Rev 05   740-032019   ZE00006           PWR-SAN-PDU-DC
  PSM 0          Rev 05   740-032022   ZJ00018           PSM-PTX-DC-120-S
  PSM 1          Rev 04   740-032022   ZC00052           PWR-SAN-12-DC
  PSM 2          Rev 04   740-032022   ZD00051           PWR-SAN-12-DC
  PSM 3          Rev 05   740-032022   ZJ00060           PSM-PTX-DC-120-S
CCG 0            REV 04   750-030653   EG3703            CCG-PTX-S
CCG 1            REV 04   750-030653   EG3698            CCG-PTX-S
Routing Engine 0 REV 05   740-026942   P737A-002231      RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942   P737A-002438      RE-DUO-C2600-16G-S
CB 0             REV 08   750-030625   EG5519            CB-PTX-S
CB 1             REV 08   750-030625   EG5516            CB-PTX-S
FPC 0            REV 18   750-036844   EJ3080            FPC-PTX-P1-A
FPC 2            REV 13   750-036844   EG5065            FPC-PTX-P1-A
  PIC 0          REV 14   750-031913   EG5127            P1-PTX-24-10GE-SFPP
FPC 3            REV 13   750-036844   EG5074            FPC-PTX-P1-A
FPC 5
  PIC 0          REV 14   750-031913   EG5134            P1-PTX-24-10GE-SFPP
FPC 6            REV 18   750-036844   EJ4391            FPC-PTX-P1-A
FPC 7            REV 18   750-036844   EJ4382            FPC-PTX-P1-A
SIB 0            REV 07   750-030631   EG4858            SIB-I-PTX5008
SIB 1            REV 07   750-030631   EG4872            SIB-I-PTX5008
SIB 2            REV 07   750-030631   EG4866            SIB-I-PTX5008
SIB 3            REV 07   750-030631   EG6011            SIB-I-PTX5008
SIB 4            REV 07   750-030631   EG4907            SIB-I-PTX5008
SIB 5            REV 07   750-030631   EG4879            SIB-I-PTX5008
SIB 6            REV 07   750-030631   EG4864            SIB-I-PTX5008
SIB 7            REV 07   750-030631   EG4899            SIB-I-PTX5008
SIB 8            REV 07   750-030631   EG4880            SIB-I-PTX5008
Fan Tray 1       REV 04   760-030642   EG1335            FAN-PTX-H-S
```

show chassis hardware models (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 16   750-035893   ACRA1350          CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   BBBD5625          CRAFT-PTX5000-S
PDU 0            Rev 01   740-048338   1GB83360005       PDU2-PTX-AC-W
```

```
  PSM 0          Rev 01   740-048334   1GB43360074       PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   1GB43360001       PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   1GB43360104       PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   1GB43360042       PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   1GB43360068       PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   1GB43360080       PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   1GB43360046       PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   1GB43360100       PSM2-PTX-AC
PDU 1            Rev 01   740-048338   1GB83360006       PDU2-PTX-AC-W
  PSM 0          Rev 01   740-048334   1GB43360069       PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   1GB43360099       PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   1GB43360050       PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   1GB43360095       PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   1GB43360101       PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   1GB43360075       PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   1GB43360047       PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   1GB43360019       PSM2-PTX-AC
CCG 0            REV 09   750-030653   BBAZ5345          CCG-PTX-S
...
```

show chassis hardware models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 11   750-035893   ACAB8038          CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   BBBD5619          CRAFT-PTX5000-S
PDU 0            Rev 04   740-048336   1GB93470043       PDU2-PTX-DC-S
  PSM 0          Rev 04   740-046988   1GB63500184       PSM2-PTX-DC-S
  PSM 2          Rev 04   740-046988   1GB63500169       PSM2-PTX-DC-S
  PSM 4          Rev 04   740-046988   1GB63500306       PSM2-PTX-DC-S
  PSM 6          Rev 04   740-046988   1GB63500074       PSM2-PTX-DC-S
PDU 1            Rev 04   740-048336   1GB93470045       PDU2-PTX-DC-S
  PSM 1          Rev 04   740-046988   1GB63500193       PSM2-PTX-DC-S
  PSM 3          Rev 04   740-046988   1GB63500143       PSM2-PTX-DC-S
  PSM 5          Rev 04   740-046988   1GB63500146       PSM2-PTX-DC-S
  PSM 7          Rev 04   740-046988   1GB63500192       PSM2-PTX-DC-S
CCG 0            REV 09   750-030653   BBBC1909          CCG-PTX-S
CCG 1            REV 09   750-030653   BBBD2970          CCG-PTX-S
...
```

show chassis hardware extensive (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
...............
PDU 0            Rev 04   740-032019   UE0003            DC Power Dist Unit
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-032019        S/N:               UE0003
 Assembly ID:  0x043d            Assembly Version:  04.00
 Date:         11-29-2010        Assembly Flags:    0x00
 Version:      Rev 04            CLEI Code:         032022XXXX
 ID: DC Power Dist Unit          FRU Model Number:  PWR-SAN-PDU-DC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 3d 04 00 52 65 76 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 32 30 31 39 00 00
  Address 0x20: 53 2f 4e 20 55 45 30 30 30 33 00 00 00 1d 0b 07
```

```
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 30 33 32 30 32 32 58 58 58 58 50
  Address 0x50: 57 52 2d 53 41 4e 2d 50 44 55 2d 44 43 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 a3 ff ff ff ff ff ff ff ff ff ff ff ff
  PSM 0          Rev 04   740-032022   YG00065           DC 12V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-032022        S/N:               YG00065
 Assembly ID:  0x0440            Assembly Version:  04.00
 Date:         07-30-2010        Assembly Flags:    0x00
 Version:      Rev 04            CLEI Code:         032022XXXX
 ID: DC 12V Power Supply Module  FRU Model Number:  PWR-SAN-12-DC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 40 04 00 52 65 76 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 32 30 32 32 00 00
  Address 0x20: 53 2f 4e 20 59 47 30 30 30 36 35 00 00 1e 07 07
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 30 33 32 30 32 32 58 58 58 58 50
  Address 0x50: 57 52 2d 53 41 4e 2d 31 32 2d 44 43 20 20 20 20
  Address 0x60: 20 20 20 20 20 20 01 00 ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 0c ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware extensive (PTX1000 Packet Transport Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                UNDEFINED         PTX1000
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX1000
FPC 0            REV 06   750-053330   ACAM4850          PTX1000-FPC-P2-BUILTIN
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                  BUILTIN      BUILTIN           288X10GE/72X40GE/24X100GE

    Xcvr 2       REV 01   740-046565   QE240845          QSFP+-40G-SR4
    Xcvr 3       REV 01   740-046565   QE240962          QSFP+-40G-SR4
    Xcvr 5       REV 01   740-032986   ES400LZ           QSFP+-40G-SR4
    Xcvr 12      REV 01   740-054053   QE419452          QSFP+-4X10G-SR
    Xcvr 18      REV 01   740-054053   QE419481          QSFP+-4X10G-SR
    Xcvr 30      REV 01   740-046565   QE440485          QSFP+-40G-SR4
    Xcvr 48      REV 01   740-032986   ES400K3           QSFP+-40G-SR4
    Xcvr 68      REV 01   740-046565   QF2805J3          QSFP+-40G-SR4
  Mezz           REV 05   711-053333   ACAM4282          Mezzanine Board
Power Supply 2   REV 01   740-054405   1EDN4470131       AC AFO 1600W PSU
Power Supply 3   REV 01   740-054405   1EDN4470112       AC AFO 1600W PSU
Fan Tray 0                                               PTX1000 Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                               PTX1000 Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                               PTX1000 Fan Tray 2, Front
 to Back Airflow - AFO
```

show chassis hardware extensive (PTX5000 with Control Board 2)

```
user@host> show chassis hardware grep CB
CB 0             REV 06   750-055537   ACLZ9541          Control Board 2
CB 1             REV 06   750-055537   ACLY5329          Control Board 2
```

show chassis hardware (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1100FB1AFB      MX480
Midplane         REV 05   710-017414   TR3310            MX480 Midplane
FPM Board        REV 02   710-017254   KG1872            Front Panel Display
PEM 2            Rev 02   740-017343   QCS0812A00N       DC Power Entry Module
PEM 3            Rev 02   740-017343   QCS0812A00U       DC Power Entry Module
Routing Engine 0 REV 07   740-015113   1000740938        RE-S-1300
CB 0             REV 03   710-021523   KF4630            MX SCB
FPC 1            REV 11   750-037207   ZW9726            AS-MCC
  CPU            REV 04   711-038173   ZW4819            AS-MCC PMB
  MIC 0          REV 06   750-037214   ZW3574            AS-MSC
    PIC 0                 BUILTIN      BUILTIN           AS-MSC
  MIC 1          REV 00   750-037211                     AS-MXC
    PIC 2                 BUILTIN      BUILTIN           AS-MXC
```

show chassis hardware extensive (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis hardware extensive
FPC 1            REV 11   750-037207   ZW9726            AS-MCC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-037207        S/N:               ZW9726
 Assembly ID:  0x0b37            Assembly Version:  01.11
 Date:         02-17-2012        Assembly Flags:    0x00
 Version:      REV 11            CLEI Code:         PROTOXCLEI
 ID: AS-MCC          FRU Model Number:  750-037207
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
  Address 0x20: 53 2f 4e 20 5a 57 39 37 32 36 00 00 00 11 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 04   711-038173   ZW4819            AS-MCC-PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-038173        S/N:               ZW4819
 Assembly ID:  0x0b38            Assembly Version:  01.04
 Date:         12-30-2011        Assembly Flags:    0x00
 Version:      REV 04
 ID: AS-MCC PMB
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
  Address 0x20: 53 2f 4e 20 5a 57 34 38 31 39 00 00 00 1e 0c 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00 00
  MIC 0          REV 06   750-037214   ZW3574            AS-MSC
```

```
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-037214        S/N:               ZW3574
Assembly ID:  0x0a44            Assembly Version:  01.06
Date:         02-19-2012        Assembly Flags:    0x00
Version:      REV 06            CLEI Code:         PROTOXCLEI
ID: AS-MSC          FRU Model Number:  750-037214
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 44 01 06 52 45 56 20 30 36 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 34 00 00
 Address 0x20: 53 2f 4e 20 5a 57 33 35 37 34 00 00 00 13 02 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
 Address 0x50: 35 30 2d 30 33 37 32 31 34 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 30 36 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 60 c0 03 e5 f4 00 00 00 00 00 00 00 00
   PIC 0                 BUILTIN      BUILTIN           AS-MSC
 MIC 1          REV 00   750-037211                     AS-MXC
Jedec Code:   0x7fb0            EEPROM Version:    0x01
P/N:          750-037211
Assembly ID:  0x0a43            Assembly Version:  01.00
Date:         255-255-65535     Assembly Flags:    0x00
Version:      REV 00
ID: AS-MXC
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 0a 43 01 00 52 45 56 20 30 30 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 31 00 00
 Address 0x20: 00 00 00 00 00 00 00 00 00 00 00 00 00 ff ff ff
 Address 0x30: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff c0 02 e6 6c 7f b0 02 ff 0a 44 01 06
   PIC 2                 BUILTIN      BUILTIN           AS-MXC
```

show chassis hardware (ACX5048 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VF3714170810      ACX5048
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
FPC 0            REV 05   650-056267   VF3714170810      ACX5048
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x10G-6x40G
    Xcvr 0       REV 02   740-011613   NR2051S           SFP-SX
    Xcvr 33      REV 01   740-030589   SE5N290041        SFP+-10G-LPBK
    Xcvr 35      REV 01   740-030589   SE5N290926        SFP+-10G-LPBK
    Xcvr 37      REV 01   740-030589   SE5N290049        SFP+-10G-LPBK
    Xcvr 39      REV 01   740-030589   SE5N290046        SFP+-10G-LPBK
    Xcvr 48               NON-JNPR     409310098         UNKNOWN
Power Supply 1   REV 03   740-041741   1GA24081097       JPSU-650W-AC-AFO
Fan Tray 0                                               ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                               ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
```

```
Fan Tray 2                                                  ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
Fan Tray 3                                                  ACX5K Fan Tray 3, Front
 to Back Airflow - AFO
Fan Tray 4                                                  ACX5K Fan Tray 4, Front
 to Back Airflow - AFO
```

show chassis hardware detail (ACX5048 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VF3714170810      ACX5048
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
  ad0     509 MB  QEMU HARDDISK        QM00001           Hard Disk
  ad1    4095 MB  QEMU HARDDISK        QM00002           Hard Disk
  ad2     511 MB  QEMU HARDDISK        QM00003           Hard Disk
  ad3    1023 MB  QEMU HARDDISK        QM00004           Hard Disk
  usb0 (addr 1)  product 0x0000 0      vendor 0x0000     uhub1
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub2
FPC 0            REV 05   650-056267   VF3714170810      ACX5048
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x10G-6x40G
    Xcvr 0       REV 02   740-011613   NR2051S           SFP-SX
    Xcvr 33      REV 01   740-030589   SE5N290041        SFP+-10G-LPBK
    Xcvr 35      REV 01   740-030589   SE5N290926        SFP+-10G-LPBK
    Xcvr 37      REV 01   740-030589   SE5N290049        SFP+-10G-LPBK
    Xcvr 39      REV 01   740-030589   SE5N290046        SFP+-10G-LPBK
    Xcvr 48               NON-JNPR     409310098         UNKNOWN
Power Supply 1   REV 03   740-041741   1GA24081097       JPSU-650W-AC-AFO
Fan Tray 0                                                ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                                ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                                ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
Fan Tray 3                                                ACX5K Fan Tray 3, Front
 to Back Airflow - AFO
Fan Tray 4                                                ACX5K Fan Tray 4, Front
 to Back Airflow - AFO
```

show chassis hardware clei-models (ACX5048 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN      CMMRG00BRA        ACX5048
FPC 0            REV 05   650-056267   CMMRG00BRA        ACX5048
  PIC 0                   BUILTIN      CMMRG00BRA        ACX5048
Power Supply 1   REV 03   740-041741   CMUPABHBAA        JPSU-650W-AC-AFO
Fan Tray 0                                               ACX5K-FAN
Fan Tray 1                                               ACX5K-FAN
Fan Tray 2                                               ACX5K-FAN
Fan Tray 3                                               ACX5K-FAN
Fan Tray 4                                               ACX5K-FAN
```

show chassis hardware models (ACX5048 Router)

```
user@host> show chassis hardware models
```

```
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0          BUILTIN      BUILTIN           ACX5048
FPC 0            REV 05   650-056267   VF3714170810      ACX5048
  PIC 0                   BUILTIN      BUILTIN           ACX5048
Power Supply 1   REV 03   740-041741   1GA24081097       JPSU-650W-AC-AFO
Fan Tray 0                                               ACX5K-FAN
Fan Tray 1                                               ACX5K-FAN
Fan Tray 2                                               ACX5K-FAN
Fan Tray 3                                               ACX5K-FAN
Fan Tray 4                                               ACX5K-FAN
```

show chassis hardware (ACX5096 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VB3714510139      ACX5096
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
FPC 0            REV 09   650-053391   VB3714510139      ACX5096
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           96x10G-8x40G
    Xcvr 0       REV 01   740-021308   ARS186H           SFP+-10G-SR
    Xcvr 2       REV 01   740-031851   AM1045SUA1G       SFP-SX
    Xcvr 10      REV 02   740-011613   NS11KRP           SFP-SX
    Xcvr 14      REV 01   740-031980   AMC0LKL           SFP+-10G-SR
    Xcvr 20      REV 01   740-021308   ARS18A2           SFP+-10G-SR
    Xcvr 30      REV 02   740-011613   PJ21954           SFP-SX
    Xcvr 35      REV 01   740-031851   PN344LV           SFP-SX
    Xcvr 40      REV 01   740-031851   PLG028R           SFP-SX
    Xcvr 41      REV 01   740-021308   L12D01919         SFP+-10G-SR
    Xcvr 46      REV 01   740-011613   PD91F10           SFP-SX
    Xcvr 64      REV 01   740-031980   AMS0YSS           SFP+-10G-SR
    Xcvr 96      REV 01   740-032986   QE481421          QSFP+-40G-SR4
    Xcvr 99      REV 01   740-032986   QE494942          QSFP+-40G-SR4
    Xcvr 100     REV 01   740-032986   QE494756          QSFP+-40G-SR4
Power Supply 0   REV 01   740-053352   1GD14220106       JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   1GD14220102       JPSU-850W-AC-AFO
Fan Tray 0                                               ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                               ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                               ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
```

show chassis hardware detail (ACX5096 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VB3714510139      ACX5096
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
  ad0      509 MB  QEMU HARDDISK        QM00001           Hard Disk
  ad1     4095 MB  QEMU HARDDISK        QM00002           Hard Disk
  ad2      511 MB  QEMU HARDDISK        QM00003           Hard Disk
  ad3     1023 MB  QEMU HARDDISK        QM00004           Hard Disk
  usb0 (addr 1)  product 0x0000 0       vendor 0x0000     uhub1
  usb0 (addr 2)  product 0x0020 32      vendor 0x8087     uhub2
```

```
FPC 0            REV 09   650-053391   VB3714510139      ACX5096
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           96x10G-8x40G
    Xcvr 0       REV 01   740-021308   ARS186H           SFP+-10G-SR
    Xcvr 10      REV 02   740-011613   NS11KRP           SFP-SX
    Xcvr 14      REV 01   740-031980   AMC0LKL           SFP+-10G-SR
    Xcvr 20      REV 01   740-021308   ARS18A2           SFP+-10G-SR
    Xcvr 30      REV 02   740-011613   PJ21954           SFP-SX
    Xcvr 41      REV 01   740-021308   L12D01919         SFP+-10G-SR
    Xcvr 46      REV 01   740-011613   PD91F10           SFP-SX
    Xcvr 64      REV 01   740-031980   AMS0YSS           SFP+-10G-SR
    Xcvr 78      REV 01   740-031851   AM1045SUA1G       SFP-SX
    Xcvr 96      REV 01   740-032986   QE481421          QSFP+-40G-SR4
    Xcvr 99      REV 01   740-032986   QE494942          QSFP+-40G-SR4
    Xcvr 100     REV 01   740-032986   QE494756          QSFP+-40G-SR4
Power Supply 0   REV 01   740-053352   1GD14220106       JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   1GD14220102       JPSU-850W-AC-AFO
Fan Tray 0                                               ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                               ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                               ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
```

show chassis hardware clei-models (ACX5096 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN      CMMNX10BRA        ACX5096
FPC 0            REV 09   650-053391   CMMNX10BRA        ACX5096
  PIC 0                   BUILTIN      CMMNX10BRA        ACX5096
Power Supply 0   REV 01   740-053352   CMUPACSBAA        JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   CMUPACSBAA        JPSU-850W-AC-AFO
Fan Tray 0                                               ACX5K-FAN
Fan Tray 1                                               ACX5K-FAN
Fan Tray 2                                               ACX5K-FAN
```

show chassis hardware models (ACX5096 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0          BUILTIN      BUILTIN           ACX5096
FPC 0            REV 09   650-053391   VB3714510139      ACX5096
  PIC 0                   BUILTIN      BUILTIN           ACX5096
Power Supply 0   REV 01   740-053352   1GD14220106       JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   1GD14220102       JPSU-850W-AC-AFO
Fan Tray 0                                               ACX5K-FAN
Fan Tray 1                                               ACX5K-FAN
Fan Tray 2                                               ACX5K-FAN
```

show chassis hardware (ACX500 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               VJ0214510035      ACX500-AC
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
Routing Engine            BUILTIN      BUILTIN           Routing Engine
```

```
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           FPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           2x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           2x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   PMF2Y3C           SFP-SX
      Xcvr 1     REV 01   740-031851   PN342QN           SFP-SX
  MIC 1                   BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
    PIC 1                 BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
      Xcvr 0     REV 01   740-011613   PF30K0L           SFP-SX
  MIC 2                   BUILTIN      BUILTIN           MS BUILTIN
    PIC 2                 BUILTIN      BUILTIN           MS BUILTIN
```

show chassis hardware detail (ACX500 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VJ0214510035      ACX500-AC
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
Routing Engine            BUILTIN      BUILTIN           Routing Engine
  da0    3820 MB  USB DISK 2.0                            Nand Flash 0
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           FPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           2x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           2x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   PMF2Y3C           SFP-SX
      Xcvr 1     REV 01   740-031851   PN342QN           SFP-SX
  MIC 1                   BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
    PIC 1                 BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
      Xcvr 0     REV 01   740-011613   PF30K0L           SFP-SX
  MIC 2                   BUILTIN      BUILTIN           MS BUILTIN
    PIC 2                 BUILTIN      BUILTIN           MS BUILTIN
```

show chassis hardware extensive (ACX500 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VJ0214510035      ACX500-AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               VJ0214510035
 Assembly ID:  0x057c            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: ACX500-AC
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 7c 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          650-055932        S/N:               VJ0214510035
```

```
 Assembly ID:  0x057c            Assembly Version:  01.00
 Date:         12-23-2014        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         PROTOXCLEI
 ID: ACX500-AC                   FRU Model Number:  ACX500-AC
 Board Information Record:
  Address 0x00: ad 01 00 80 f0 1c 2d 1b 60 80 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 05 7c 01 00 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 36 35 30 2d 30 35 35 39 33 32 00 00
  Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 17 0c 07
  Address 0x30: de ff ff ff ad 01 00 80 f0 1c 2d 1b 60 80 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 41
  Address 0x50: 43 58 35 30 30 2d 41 43 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 30 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 93 56 4a 30 32 31 34 35 31 30 30 33 35
Routing Engine            BUILTIN      BUILTIN           Routing Engine
  da0    3820 MB  USB DISK 2.0                           Nand Flash 0
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           FPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           2x 1GE(LAN) SFP
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0a40            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 2x 1GE(LAN) SFP
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 40 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
  Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 de ad be ef 64 20 22 a8 60 af 21 38
    PIC 0                 BUILTIN      BUILTIN           2x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   PMF2Y3C           SFP-SX
      Xcvr 1     REV 01   740-031851   PN342QN           SFP-SX
  MIC 1                   BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0aac            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 4x 1GE(LAN) SFP, RJ45
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a ac 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
  Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 64 20 b5 c0 60 af 21 38
    PIC 1                 BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
      Xcvr 0     REV 01   740-011613   PF30K0L           SFP-SX
  MIC 2                   BUILTIN      BUILTIN           MS BUILTIN
 Jedec Code:   0x0000            EEPROM Version:    0x00
```

```
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0aaf            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MS BUILTIN
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a af 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
  Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 de ad be ef 64 22 cd 48 60 af 21 38
    PIC 2                 BUILTIN      BUILTIN           MS BUILTIN
```

show chassis hardware clei-models (ACX500 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   650-055932   PROTOXCLEI        ACX500-AC
Routing Engine            BUILTIN
FEB 0                     BUILTIN
FPC 0                     BUILTIN
```

show chassis hardware models (ACX500 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
Routing Engine            BUILTIN      BUILTIN
FEB 0                     BUILTIN      BUILTIN
FPC 0                     BUILTIN      BUILTIN
```

show chassis pic

List of Syntax

Syntax

show chassis pic fpc-slot *slot-number* pic-slot *slot-number*

Syntax (TX Matrix and TX Matrix Plus Routers)

show chassis pic fpc-slot *slot-number* pic-slot *slot-number*
<lcc *number*>

Syntax (MX Series Routers and EX Series Switches)

show chassis pic fpc-slot *slot-number* pic-slot *slot-number*
<all-members>
<local>
<member *member-id*>

Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 3D Universal Edge Routers)

show chassis pic fpc-slot *slot-number* pic-slot *slot-number*

Syntax (PTX Series Packet Transport Router and MX240, MX480, MX960, MX2010, and MX2020 Routers)

show chassis pic transport fpc-slot *slot-number* pic-slot *slot-number*

Syntax (QFX Series)

show chassis pic fpc-slot *slot-number* pic-slot *slot-number*
<interconnect-device *name* (fpc-slot *slot-number* | pic-slot *slot-number*)>
<node-device *name* pic-slot *slot-number*>

Syntax (OCX Series)

show chassis pic fpc-slot *slot-number* pic-slot *slot-number*

Syntax (ACX Series Universal Access Routers)

show chassis pic fpc-slot *slot-number* pic-slot *slot-number*

Syntax (ACX5048 and ACX5096 Routers)

show chassis pic
(fpc-slot *slot-number* | pic-slot *slot-number*)

Syntax (ACX500 Routers)

show chassis pic
(fpc-slot *slot-number* | pic-slot *slot-number*)

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for QFX Series.
Command introduced in Junos OS Release 12.2 for ACX Series Universal Access Routers.
Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.
Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.
Command introduced in Junos OS Release 13.2 for PTX Series Packet Transport Routers.
Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
transport option introduced in Junos OS Release 16.1R1 for MX Series Routers.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.
Command introduced in Junos OS Release 17.4 for MX204 3D Universal Edge Routers.

Description

Display status information about the PIC installed in the specified Flexible PIC Concentrator (FPC) and PIC slot.

Options

fpc-slot *slot-number*—Display information about the PIC in this particular FPC slot:

- On a TX Matrix router, if you specify the number of the T640 router by using the **lcc *number*** option (the recommended method), replace ***slot-number*** with a value from **0** through **7**. Otherwise, replace ***slot-number*** with a value from **0** through **31**.

  Likewise, on a TX Matrix Plus router, if you specify the number of the T1600 router by using the **lcc *number*** option (the recommended method), replace ***slot-number*** with a value from **0** through **7**. Otherwise, replace ***slot-number*** with a value from **0** through **31**. For example, the following commands have the same result:

  ```
  user@host> show chassis pic fpc-slot 1 lcc 1 pic-slot 1
  user@host> show chassis pic fpc-slot 9 pic-slot 1
  ```

- M120 routers only—Replace ***slot-number*** with a value from **0** through **5**.
- MX80 routers only—Replace ***slot-number*** with a value from **0** through **1**.
- MX104 routers only—Replace ***slot-number*** with a value from **0** through **2**.
- MX240 routers only—Replace ***slot-number*** with a value from **0** through **2**.
- MX480 routers only—Replace ***slot-number*** with a value from **0** through **5**.

- MX960 routers only—Replace ***slot-number*** with a value from **0** through **11**.
- MX2010 routers only—Replace ***slot-number*** with a value from **0** through **9**.
- MX2020 routers only—Replace ***slot-number*** with a value from **0** through **19**.
- MX2008 routers only—Replace ***slot-number*** with a value from **0** through **9**.
- MX10003 routers only—Replace ***slot-number*** with a value from **0** through **1**.
- Other routers—Replace ***slot-number*** with a value from **0** through **7**.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—Replace ***slot-number*** with 0.
  - EX4200 switches in a Virtual Chassis configuration—Replace ***slot-number*** with a value from 0 through 9 (switch's member ID).
  - EX8208 switches—Replace ***slot-number*** with a value from 0 through 7 (line card).
  - EX8216 switches—Replace ***slot-number*** with a value from 0 through 15 (line card).
- QFX Series:
  - QFX3500, QFX3600, QFX5100, and OCX Series standalone switches—Replace ***slot-number*** with 0. In the command output, FPC refers to a line card. The FPC number equals the slot number for the line card.
  - QFabric systems—Replace ***slot-number*** with any number between 0 and 15. In the command output, FPC refers to a line card. The FPC number equals the slot number for the line card.

all-members—(MX Series routers and EX Series switches only) (Optional) Display PIC information for all member routers in the Virtual Chassis configuration.

interconnect-device *name*—(QFabric systems only) (Optional) Display PIC information for a specified Interconnect device.

lcc *number*—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display PIC information for a specified T640 router (or line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display PIC information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.

- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(MX Series routers and EX Series switches only) (Optional) Display PIC information for the local Virtual Chassis member.

member ***member-id***—(MX Series routers and EX Series switches only) (Optional) Display PIC information for the specified member of the Virtual Chassis configuration. Replace ***member-id*** with a value of 0 or 1.

node-device ***name***—(QFabric systems only) (Optional) Display PIC information for a specified Node device.

pic-slot ***slot-number***—Display information about the PIC in this particular PIC slot. For routers, replace ***slot-number*** with a value from **0** through **3**. For EX3200 and EX4200 switches, replace ***slot-number*** with 0 for built-in network interfaces and 1 for interfaces on uplink modules. For EX8208 and EX8216 switches, replace ***slot-number*** with 0. For the QFX3500 standalone switch and the QFabric system, replace ***slot-number*** with 0 or 1.

transport—Display PIC information for optical transport network.

Required Privilege Level

view

Related Documentation

- *request chassis pic*
- show chassis hardware on page 224
- *100-Gigabit Ethernet Type 4 PIC with CFP Overview*

List of Sample Output

show chassis pic fpc-slot 0 pic-slot 0 (ACX500 Router) on page 487
show chassis pic fpc-slot 0 pic-slot 1 (ACX500 Router) on page 488
show chassis pic transport fpc-slot pic-slot (PTX Series Packet Transport Routers) on page 488
show chassis pic transport fpc-slot pic-slot (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC) on page 488

Output Fields

Table 11 on page 468 lists the output fields for the **show chassis pic** command. Output fields are listed in the approximate order in which they appear.

Table 11: show chassis pic Output Fields

Field Name	Field Description
Type	PIC type. NOTE: On the 1-port OC192/STM64 MICs with the SDH framing mode, the type is displayed as **MIC-3D-1STM64-XFP** and with the SONET framing mode, the type is displayed as **MIC-3D-1OC192-XFP**. By default, the 1-port OC192/STM64 MICs displays the type as **MIC-3D-1OC192-XFP**.
Account Layer2 Overhead	(MX Series routers) Indicates whether functionality to count the Layer 2 overhead bytes in the interface statistics at the PIC level is enabled or disabled.
ASIC type	Type of ASIC on the PIC.
State	Status of the PIC. State is displayed only when a PIC is in the slot. • **Online**— PIC is online and running. • **Offline**—PIC is powered down.
PIC version	PIC hardware version.
Uptime	How long the PIC has been online.
Package	(Multiservices PICs only) Services package supported: **Layer-2** or **Layer-3**.
Port Number	Port number for the PIC.
Cable Type	Type of cable connected to the port: **LH**, **LX**, or **SX.**

Table 11: show chassis pic Output Fields *(continued)*

Field Name	Field Description
PIC Port Information (MX480 Router 100-Gigabit Ethernet CFP)	Port-level information for the PIC. • Port—Port number • Cable type—Type of optical transceiver installed. • Fiber type—Type of fiber. SM is single-mode. • Xcvr vendor—Transceiver vendor name. • Xcvr vendor part number—Transceiver vendor part number. • Wavelength—Wavelength of the transmitted signal. Uplinks and downlinks are always 1550 nm. There is a separate fiber for each direction • Xcvr Firmware—Transceiver firmware version.

PIC Port Information (MX960 Router Bidirectional Optics)	Port-level information for the PIC.
	• Port—Port number
	• Cable type—Type of small form-factor pluggable (SFP) optical transceiver installed. Uplink interfaces display -U. Down link interfaces display -D.
	• Fiber type—Type of fiber. SM is single-mode.
	• Xcvr vendor—Transceiver vendor name.
	• Xcvr vendor part number—Transceiver vendor part number.
	  ◦ BX10-10-km bidirectional optics.
	  ◦ BX40-40-km bidirectional optics.
	  ◦ SFP-LX-40-km SFP optics.
	• Wavelength—Wavelength of the transmitted signal. Uplinks are always 1310 nm. Downlinks are either 1490 nm or 1550 nm.

PIC Port Information (Next-Generation SONET/SDH SFP)	Port-level information for the next-generation SONET/SDH SFP PIC. • Port—Port number. • Cable type—Type of small form-factor pluggable (SFP) optical transceiver installed. • Fiber type—Type of fiber: **SM** (single-mode) or **MM** (multimode). • Xcvr vendor—Transceiver vendor name. • Xcvr vendor part number—Transceiver vendor part number. • Wavelength—Wavelength of the transmitted signal. Next-generation SONET/SDH SFPs use 1310 nm.
PIC port information (MX104 router)	Port-level information for the PIC. • Port—Port number • Cable type—Type of optical transceiver installed. • Fiber type—Type of fiber. SM is single-mode. • Xcvr vendor—Transceiver vendor name. • Xcvr vendor part number—Transceiver vendor part number. • Wavelength—Wavelength of the transmitted signal. • Xcvr Firmware—Firmware version of the transceiver.

Table 11: show chassis pic Output Fields *(continued)*

Field Name	Field Description
Port speed information	Information pertaining to port speed: • Port—Port number. • PFE—Packet Forwarding Engine slot number. • Capable Port Speed—Speed supported by each port.
Multirate Mode	Rate-selectabilty status for the MIC: **Enabled** or **Disabled**.
Channelization	Indicates whether channelization is enabled or disabled on the DS3/E3 MIC.
Administrative State	Indicates the administrative state of the PIC. Possible values are: In Service (Default) and Out of Service.
Operational State	Indicates the operational state of the PIC. Possible values are: Normal and Fault.

Sample Output

show chassis pic fpc-slot pic-slot

```
user@host> show chassis pic fpc-slot 2 pic-slot 0
PIC fpc slot 2 pic slot 0 information:
  Type                            10x 1GE(LAN), 1000 BASE
  ASIC type                       H chip
  State                           Online
  PIC version                     1.1
  Uptime                          1 day, 50 minutes, 58 seconds
PIC Port Information:
  Port         Cable           Xcvr               Xcvr Vendor
  Number       Type            Vendor Name        Part Number
  0            GIGE 1000EX     FINISAR CORP.      FTRJ8519P1BNL-J3
  1            GIGE 1000EX     FINISAR CORP.      FTRJ-8519-7D-JUN
```

show chassis pic fpc-slot pic-slot (PIC Offline)

```
user@host> show chassis pic fpc-slot 1 pic-slot 0
PIC fpc slot 1 pic slot 0 information:
  State                           Offline
```

show chassis pic fpc-slot pic-slot (FPC Offline)

```
user@host> show chassis pic fpc-slot 1 pic-slot 0
FPC 1 is not online
```

show chassis pic fpc-slot pic-slot (FPC Not Present)

```
user@host> show chassis pic fpc-slot 4 pic-slot 0
FPC slot 4 is empty
```

show chassis pic fpc-slot pic-slot (PIC Not Present)

```
user@host> show chassis pic fpc-slot 5 pic-slot 2
FPC 5, PIC 2 is empty
```

show chassis pic fpc-slot 3 pic-slot 0 (M120 Router)

```
user@host>  show chassis pic fpc-slot 3 pic-slot 0
PC slot 3, PIC slot 0 information:
  Type                              2x G/E IQ, 1000 BASE
  ASIC type                         IQ GE 2 VLAN-TAG FPGA
  State                             Online
  PIC version                 1.16
  Uptime                        3 hours, 3 minutes

PIC Port Information:
  Port        Cable             Xcvr               Xcvr Vendor
  Number      Type              Vendor Name        Part Number
  0           GIGE 1000SX       FINISAR CORP.      FTRJ8519P1BNL-J3
  1           GIGE 1000SX       FINISAR CORP.      FTRJ-8519-7D-JUN
```

show chassis pic fpc-slot pic-slot (MX150)

```
user@host>  show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                              Virtual
  State                             Online
  PIC version                 0.0
  Uptime                        7 days, 19 hours, 44 minutes, 40 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  10   GIGE 1000T        n/a   Methode Elec.      SP7041-M1-JN      n/a      0.0

  11   GIGE 1000T        n/a   Methode Elec.      SP7041-M1-JN      n/a      0.0
```

show chassis pic fpc-slot pic-slot (MX104 Router)

```
user@host>  show chassis pic fpc-slot 1 pic-slot 1
FPC slot 1, PIC slot 1 information:
  Type                              10x 1GE(LAN) -E  SFP
  State                             Online
  PIC version                 1.1
  Uptime                        1 hour, 30 minutes, 59 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  3    GIGE 1000T        n/a   Methode Elec.      SP7041-M1-JN      n/a      0.0

  6    GIGE 1000LX10     SM    FINISAR CORP.      FTLF1318P2BTL-J1  1310 nm  0.0

  8    GIGE 1000T        n/a   Methode Elec.      SP7041-M1-JN      n/a      0.0
```

```
  9    GIGE 1000T        n/a   Methode Elec.      SP7041-M1-JN      n/a      0.0
```

show chassis pic fpc-slot pic-slot (MX960 Router with Bidirectional Optics)

```
user@host> show chassis pic fpc-slot 4 pic-slot 1
FPC slot 4, PIC slot 1 information:
  Type                          10x 1GE(LAN)
  Account Layer2 Overhead       Enabled
  State                         Online
  PIC version                   0.0
  Uptime                        18 days, 5 hours, 41 minutes, 54 seconds

PIC port information:
                          Fiber                    Xcvr vendor
  Port  Cable type        type  Xcvr vendor        part number       Wavelength
  0     SFP-1000BASE-BX10-D SM  SumitomoElectric   SBP6H44-J3-BW-49  1490 nm
  1     SFP-1000BASE-BX10-D SM  SumitomoElectric   SBP6H44-J3-BW-49  1490 nm
  2     SFP-1000BASE-BX10-D SM  SumitomoElectric   SBP6H44-J3-BW-49  1490 nm
  3     SFP-1000BASE-BX10-D SM  OCP                TRXBG1LXDBVM2-JW  1490 nm
  4     SFP-1000BASE-BX10-D SM  OCP                TRXBG1LXDBVM2-JW  1490 nm
  5     SFP-1000BASE-BX10-U SM  SumitomoElectric   SBP6H44-J3-BW-31  1310 nm
  6     SFP-1000BASE-BX10-U SM  SumitomoElectric   SBP6H44-J3-BW-31  1310 nm
  7     SFP-1000BASE-BX10-U SM  OCP                TRXBG1LXDBBMH-J1  1310 nm
  8     SFP-1000BASE-BX10-U SM  OCP                TRXBG1LXDBBMH-J1  1310 nm
  9     SFP-1000BASE-BX10-U SM  SumitomoElectric   SBP6H44-J3-BW-31  1310 nm
```

show chassis pic fpc-slot pic-slot (MX480 Router with 100-Gigabit Ethernet MIC)

```
user@host> show chassis pic fpc-slot 1 pic-slot 2
FPC slot 1, PIC slot 2 information:
  Type                       1X100GE CFP
  State                      Online
  PIC version                2.10
  Uptime                     4 minutes, 48 seconds

PIC port information:
        Fiber                    Xcvr vendor
  Port  Cable type        type  Xcvr vendor        part number       Wavelength
  0     100GBASE LR4      SM    FINISAR CORP.      FTLC1181RDNS-J3   1310 nm

        Xcvr vendor
        firmware version
        1.8
```

show chassis pic fpc-slot pic-slot (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```
user@host>show chassis pic fpc-slot 1 pic-slot 2
FPC slot 1, PIC slot 2 information:
  Type                            AS-MXC
  State                           Online
  PIC version                 1.0
  Uptime                          11 hours, 18 minutes, 3 seconds
```

show chassis pic fpc-slot pic-slot (MX960 Router with MPC5EQ)

```
user@host> show chassis pic fpc-slot 0 pic-slot 3
FPC slot 0, PIC slot 3 information:
  Type                            1X100GE CFP2 OTN
```

```
  State                             Online
  PIC version                  0.0
  Uptime                         1 hour, 22 minutes, 42 seconds

PIC port information:
                         Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    100GBASE LR4      n/a   Oclaro Inc.        TRB5E20FNF-LF150  1309 nm  1.0
```

show chassis pic fpc-slot pic-slot (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis pic fpc-slot 3 pic-slot 0
FPC slot 3, PIC slot 0 information:
  Type                              1X100GE DWDM CFP2-ACO
  State                             Online
  PIC version                  1.3
  Uptime                         9 hours, 4 minutes, 43 seconds

PIC port information:
                         Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    100G LH           SM    OCLARO             TRB100AJ-01       1528.77 nm -
 1568.36 nm 20.10
```

show chassis pic fpc-slot pic-slot

```
user@host> show chassis pic fpc-slot 1 pic-slot 1

FPC slot 1, PIC slot 1 information:
  Type                              MIC1-MACSEC
  State                             Online
  PIC version                  1.5
  Uptime                         2 hours, 52 minutes, 1 second

PIC port information:
                         Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  8    40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU2   850 nm   0.0

  10   40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU2   850 nm   0.0

Port speed information:

  Port  PFE      Capable Port Speeds
  0      0       4x10GE, 40GE, 100GE
  1      0       4x10GE, 40GE, 100GE
  2      0       4x10GE, 40GE, 100GE
  3      0       4x10GE, 40GE, 100GE
  4      0       4x10GE, 40GE, 100GE
  5      0       4x10GE, 40GE, 100GE
  6      0       4x10GE, 40GE, 100GE
  7      0       4x10GE, 40GE, 100GE
  8      0       4x10GE, 40GE, 100GE
```

```
  9      0       4x10GE, 40GE, 100GE
  10     0       4x10GE, 40GE, 100GE
  11     0       4x10GE, 40GE, 100GE
```

show chassis pic fpc-slot pic-slot (MX10003 Routers)

```
user@host > show chassis pic fpc-slot 0 pic-slot 0

FPC slot 0, PIC slot 1 information:
  Type                              MIC1
  State                             Online
  PIC version                  1.5
  Uptime                         13 hours, 54 minutes, 33 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU2   850 nm   0.0

  11   40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU2   850 nm   0.0

Port speed information:

  Port  PFE      Capable Port Speeds
  0      0       4x10GE, 40GE, 100GE
  1      0       4x10GE, 40GE, 100GE
  2      0       4x10GE, 40GE, 100GE
  3      0       4x10GE, 40GE, 100GE
  4      1       4x10GE, 40GE, 100GE
  5      1       4x10GE, 40GE, 100GE
  6      1       4x10GE, 40GE, 100GE
  7      1       4x10GE, 40GE, 100GE
  8      2       4x10GE, 40GE, 100GE
  9      2       4x10GE, 40GE, 100GE
  10     2       4x10GE, 40GE, 100GE
  11     2       4x10GE, 40GE, 100GE
```

show chassis pic fpc-slot pic-slot (MX204 Routers)

```
user@host > show chassis pic fpc-slot 0 pic-slot 0

FPC slot 0, PIC slot 0 information:
  Type                              4XQSFP28 PIC
  State                             Online
  PIC version                  0.0
  Uptime                         2 days, 7 hours, 6 minutes, 10 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr
         JNPR
  Port Cable type        type  Xcvr vendor        part number       length
Firmware     Rev
  0    100GBASE SR4      MM    JUNIPER-FINISAR    FTLC9551REPM-J1   850 nm   0.0
          REV 01
  1    4X10GBASE SR      MM    AVAGO              AFBR-79EEPZ-JU2   850 nm   0.0
          REV 01
  2    100GBASE LR4      SM    JUNIPER-FINISAR    FTLC1151RDPL-J3   1302 nm  0.0
          REV 01
```

```
  3    100GBASE LR4      SM    JUNIPER-FINISAR    FTLC1151RDPL-J3   1302 nm  0.0
          REV 01

Port speed information:

  Port  PFE      Capable Port Speeds
  0      0       4x10GE, 40GE, 100GE
  1      0       4x10GE, 40GE, 100GE
  2      0       4x10GE, 40GE, 100GE
  3      0       4x10GE, 40GE, 100GE
```

show chassis pic fpc-slot pic-slot (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC

```
user@host > show chassis pic fpc-slot 4 pic-slot 0
FPC slot 4, PIC slot 0 information:
  Type                              5X100GE DWDM CFP2-ACO
  State                             Online
  PIC version                 1.17
  Uptime                         1 day, 5 hours, 15 minutes, 17 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    100G LH           SM    MULTILANE SAL      ML4030-ACO-2      1528.77 nm -
 1568.36 nm 1.0
  1    100G LH           SM    MULTILANE SAL      ML4030-ACO-2      1528.77 nm -
 1568.36 nm 1.0
  2    100G LH           SM    JUNIPER-FUJITSU    FIM38500/222      1528.77 nm -
 1568.36 nm 1.16
  3    100G LH           SM    FUJITSU            FIM38500/222      1528.77 nm -
 1568.36 nm 1.16
  4    100G LH           SM    FUJITSU            FIM38500/222      1528.77 nm -
 1568.36 nm 1.16
```

show chassis pic fpc-slot pic-slot (MX480 Router with MPC4E)

```
user@host> show chassis pic fpc-slot 3 pic-slot 0
FPC slot 3, PIC slot 0 information:
  Type                              4x10GE SFPP
  State                             Online
  PIC version                  0.0
  Uptime                         41 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    10GBASE SR        MM    OPNEXT, INC.       TRS2001EM-0014    850 nm   0.0

  1    10GBASE SR        MM    OPNEXT, INC.       TRS2001EM-0014    850 nm   0.0
```

show chassis pic fpc-slot pic-slot (MX480 router with OTN Interface)

```
user@host> show chassis pci fpc-slot 4 pic-slot 0
FPC slot 4, PIC slot 0 information:
  Type                              12X10GE SFPP OTN
```

```
  State                             Online
  PIC version                  0.0
  Uptime                         5 hours, 28 minutes, 23 seconds

PIC port information:
                         Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0

  1    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0

  2    10GBASE SR        MM    OPNEXT, INC.       TRS2001EM-0014    850 nm   0.0
```

show chassis pic fpc-slot pic-slot (MX2010 Router with OTN Interfaces)

```
user@host> show chassis pic fpc-slot 9 pic-slot 0
FPC slot 9, PIC slot 0 information:
  Type                              2X100GE CFP2 OTN
  State                             Online
  PIC version                  1.9
  Uptime                         3 hours, 56 minutes, 16 seconds

PIC port information:
                         Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    100GBASE LR4-D    SM    FUJITSU            FIM37300/222      1310 nm  1.3

  1    100GBASE SR10     MM    AVAGO              AFBR-8420Z        n/a      1.0
```

show chassis pic fpc-slot pic-slot (MX2010 Router)

```
user@host> show chassis pic fpc-slot 9 pic-slot 3
FPC slot 9, PIC slot 3 information:
  Type                              1X100GE CFP
  Account Layer2 Overhead           Enabled
  State                             Online
  PIC version                       0.0
  Uptime                            14 hours, 51 seconds
```

show chassis pic fpc-slot pic-slot (MX2020 Router)

```
user@host> show chassis pic fpc-slot 19 pic-slot 3
FPC slot 19, PIC slot 3 information:
  Type                              4x 10GE(LAN) SFP+
  Account Layer2 Overhead           Enabled
  State                             Online
  PIC version                  0.0
  Uptime                         1 day, 11 hours, 26 minutes, 36 seconds

PIC port information:
                         Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    10GBASE SR        MM    SumitomoElectric   SPP5200SR-J6-M    850 nm   0.0
```

```
  1    10GBASE SR        MM    SumitomoElectric   SPP5200SR-J6-M    850 nm   0.0

  2    10GBASE SR        MM    SumitomoElectric   SPP5200SR-J6-M    850 nm   0.0

  3    10GBASE SR        MM    SumitomoElectric   SPP5200SR-J6-M    850 nm   0.0
```

show chassis pic fpc-slot pic-slot (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis pic fpc-slot 18 pic-slot 2
FPC slot 18, PIC slot 2 information:
  Type                              3X40GE QSFPP
  State                             Online
  PIC version                  0.0
  Uptime                         6 minutes, 31 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    40GBASE SR4       MM    AVAGO              AFBR-79E4Z-D-JU2  850 nm   0.0

  1    40GBASE SR4       MM    AVAGO              AFBR-79E4Z-D-JU2  850 nm   0.0

  2    40GBASE SR4       MM    AVAGO              AFBR-79E4Z-D-JU2  850 nm   0.0
```

show chassis pic fpc-slot pic-slot (MX2020 Router with MPC6E and OTN MIC)

```
user@host> show chassis pic fpc-slot 3 pic-slot 0
FPC slot 0, PIC slot 1 information:
  Type                              24X10GE SFPP OTN
  State                             Online
  PIC version                  1.1
  Uptime                         1 hour, 33 minutes, 59 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  7    10GBASE SR        MM    SumitomoElectric   SPP5200SR-J6-M    850 nm   0.0

  9    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0

  12   10GBASE LR        SM    FINISAR CORP.      FTLX1472M3BNL-J3  1310 nm  0.0

  20   10GBASE ZR        SM    FINISAR CORP.      FTLX1871M3BNL-J3  1550 nm  0.0

  21   10GBASE ER        SM    FINISAR CORP.      FTLX1671D3BTL-J4  1550 nm  0.0

  22   10GBASE LR        SM    SOURCEPHOTONICS    SPP10SLREDFCJNP   1310 nm  0.0

  23   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BNL-J1  1310 nm  0.0
```

show chassis pic fpc-slot pic-slot (MX2020 Router with MPC4E)

```
user@host> show chassis pic fpc-slot 14 pic-slot 0
```

```
FPC slot 14, PIC slot 2 information:
  Type                              4x10GE SFPP
  State                             Online
  PIC version                  0.0
  Uptime                         1 day, 14 hours, 49 minutes, 9 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0

  1    10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0

  3    10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
```

show chassis pic fpc-slot pic-slot (MX2010 Router)

```
user@host> show chassis pic fpc-slot 9 pic-slot 3
FPC slot 9, PIC slot 3 information:
  Type                              1X100GE CFP
  Account Layer2 Overhead           Enabled
  State                             Online
  PIC version                       0.0
  Uptime                            14 hours, 51 seconds
```

show chassis pic fpc-slot pic-slot (T1600 Router with 100-Gigabit Ethernet PIC)

```
user@host> run show chassis pic fpc-slot 3 pic-slot 1
FPC slot 3, PIC slot 1 information:
  Type                              100GE SLOT1
  ASIC type                         Brooklyn 100GE FPGA
  State                             Online
  PIC version                  1.3
  Uptime                         10 minutes, 44 seconds

PIC port information:
                          Fiber                    Xcvr vendor
  Port  Cable type        type  Xcvr vendor        part number       Wavelength
  0     100GBASE LR4      SM    Opnext Inc.        TRC5E20ENFSF000F  1310 nm
```

show chassis pic fpc-slot pic-slot lcc (TX Matrix Router)

```
user@host> show chassis pic fpc-slot 1 pic-slot 1 lcc 0
lcc0-re0:
--------------------------------------------------------------------------
PIC fpc slot 1 pic slot 1 information:
  Type                              4x OC-3 SONET, SMIR
  ASIC type                         D chip
  State                             Online
  PIC version                  1.2
  Uptime                         5 days, 2 hours, 12 minutes, 8 seconds
```

show chassis pic fpc-slot pic-slot lcc (TX Matrix Plus Router)

```
user@host> show chassis pic pic-slot 0 fpc-slot 8
lcc0-re0:
--------------------------------------------------------------------------
```

```
FPC slot 8, PIC slot 0 information:
  Type                              1x 10GE(LAN/WAN)
  State                             Online
  Uptime                          2 hours, 46 minutes, 23 seconds

PIC port information:
                           Fiber
  Port  Cable type         type  Xcvr vendor         part number       Wavelength

  0     10GBASE ZR         SM    Opnext Inc.         TRF7061BN-LF150   1550 nm
  0     10GBASE ZR         SM    FINISAR CORP.       FTRX-1811-3-J2    1550 nm
```

show chassis pic fpc-slot pic-slot (Next-Generation SONET/SDH SFP)

```
user@host> show chassis pic fpc-slot 4 pic-slot 0
FPC slot 4, PIC slot 0 information:
   Type                              4x OC-3 1x OC-12 SFP
   ASIC type                         D FPGA
   State                             Online
   PIC version                  1.3
   Uptime                        1 day, 50 minutes, 4 seconds

 PIC port information:
                            Fiber                    Xcvr vendor
   Port  Cable type         type  Xcvr vendor        part number       Wavelength

   0     OC48 short reach   SM    FINISAR CORP.      FTRJ1321P1BTL-J2  1310 nm
   1     OC3 short reach    MM    OCP                TRPA03MM3BAS-JE   1310 nm
   2     OC3 short reach    MM    OCP                TRXA03MM3BAS-JW   1310 nm
   3     OC12 inter reach   SM    FINISAR CORP.      FTLF1322P1BTR     1310 nm
```

show chassis pic fpc-slot pic-slot (12-Port T1/E1)

```
user@host> show chassis pic fpc-slot 0 pic-slot 3
FPC slot 0, PIC slot 3 information:
  Type                              12x T1/E1 CE
  State                             Online
  PIC version                  1.1
  CPU load average               1 percent
  Interrupt load average         0 percent
  Total DRAM size              128 MB
  Memory buffer utilization    100 percent
  Memory heap utilization        4 percent
  Uptime                         1 day, 22 hours, 28 minutes, 12 seconds
  Internal Clock Synchronization   Normal
```

show chassis pic fpc-slot 0 pic-slot 1 (4x CHOC3 SONET CE SFP)

```
user@host> show chassis pic fpc-slot 0 pic-slot 1
FPC slot 0, PIC slot 1 information:
  Type                              4x CHOC3 SONET CE SFP
  State                             Online
  PIC version                  1.3
  CPU load average               1 percent
  Interrupt load average         0 percent
  Total DRAM size              128 MB
  Memory buffer utilization     99 percent
  Memory heap utilization        4 percent
  Uptime                         1 day, 22 hours, 55 minutes, 37 seconds
  Internal Clock Synchronization   Normal
```

```
PIC port information:
                           Fiber                    Xcvr vendor
  Port  Cable type         type  Xcvr vendor        part number       Wavelength
  0     OC3 short reach    MM    AVAGO              HFBR-57E0P-JU2    n/a
  1     OC3 short reach    MM    AVAGO              HFBR-57E0P-JU2    n/a
  3     OC3 long reach     SM    OPNEXT INC         TRF5456AVLB314    1310 nm
```

show chassis pic fpc-slot 0 pic-slot 0 (SONET/SDH OC3/STM1 [Multi-Rate] MIC with SFP)

```
user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                              MIC-3D-8OC3OC12-4OC48
  State                             Online
  PIC version                   1.8
  Uptime                          3 days, 22 hours, 3 minutes, 50 seconds

PIC port information:
                           Fiber                    Xcvr vendor
  Port  Cable type         type  Xcvr vendor        part number       Wavelength
  1     OC12 inter reach    SM   FINISAR CORP       FTRJ1322P1BTR-J3  1310 nm
  7     OC12 inter reach    SM   FINISAR CORP       FTRJ1322P1BTR-J3  1310 nm
Multirate Mode                      Enabled
```

show chassis pic fpc-slot 3 pic-slot 0 (8-port Channelized SONET/SDH OC3/STM1 [Multi-Rate] MIC with SFP)

```
user@host> show chassis pic fpc-slot 3 pic-slot 0
FPC slot 3, PIC slot 0 information:
  Type                              MIC-3D-8CHOC3-4CHOC12
  State                             Online
  PIC version                      1.9
  Uptime                            1 hour, 21 minutes, 24 seconds

PIC port information:
                           Fiber                    Xcvr vendor
  Port  Cable type         type  Xcvr vendor        part number       Wavelength
  0     OC12 short reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
  1     OC12 short reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
  2     OC12 inter reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J2  1310 nm
  4     OC12 short reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
  5     OC12 short reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
  6     OC12 short reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
  7     OC12 short reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
```

show chassis pic fpc-slot 5 pic-slot 0 (4-port Channelized SONET/SDH OC3/STM1 [Multi-Rate] MIC with SFP)

```
user@host> show chassis pic fpc-slot 5 pic-slot 0
FPC slot 5, PIC slot 0 information:
  Type                        MIC-3D-4CHOC3-2CHOC12
  State                       Online
  PIC version                 1.9
  Uptime                      1 hour, 21 minutes

PIC port information:
                           Fiber                    Xcvr vendor
  Port  Cable type         type  Xcvr vendor        part number       Wavelength
  1     OC12 inter reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
  2     OC12 inter reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
  3     OC12 short reach   SM    FINISAR CORP.      FTRJ1322P1BTR-J3  1310 nm
```

show chassis pic fpc-slot 1 pic-slot 0 (1-port OC192/STM64 MIC with XFP)

```
user@host> show chassis pic fpc-slot 1 pic-slot 0
FPC slot 1, PIC slot 0 information:
  Type                            MIC-3D-1OC192-XFP
  State                           Online
  PIC version                     1.2
  Uptime                          1 day, 11 hours, 4 minutes, 6 seconds

PIC port information:
                           Fiber                    Xcvr vendor
  Port  Cable type         type  Xcvr vendor        part number       Wavelength
  0     OC192 short reach n/a   FINISAR CORP.      FTLX1412M3BCL-J3  1310 nm
```

show chassis pic fpc-slot 1 pic-slot 2 (8-port DS3/E3 MIC)

```
user@host> show chassis pic fpc-slot 1 pic-slot 2
FPC slot 1, PIC slot 2 information:
  Type                            MIC-3D-8DS3-E3
  State                           Online
  PIC version                     1.10
  Uptime                          4 days, 1 hour, 29 minutes, 19 seconds
  Channelization Mode             Disabled
```

show chassis pic fpc-slot pic-slot (OTN)

```
user@host> show chassis pic fpc-slot 5 pic-slot 0
PIC fpc slot 5 pic slot 0 information:
     Type                            1x10GE(LAN),OTN
     ASIC type                       H chip
     State                           Online
     PIC version                  1.0
     Uptime                       5 minutes, 50 seconds
```

show chassis pic fpc-slot pic-slot (QFX3500 Switch)

```
user@switch> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
Type 48x 10G-SFP+ Builtin
State Online
Uptime 3 days, 3 hours, 5 minutes, 20 seconds
```

show chassis pic fpc-slot pic-slot (QFX5100 Switches and OCX Series)

```
user@switch> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                            Unknown Builtin
  State                           Online
  Uptime                        1 day, 17 hours, 5 minutes, 9 seconds
```

show chassis pic interconnect-device fpc-slot pic-slot (QFabric Systems)

```
user@switch> show chassis pic interconnect-device interconnect1 fpc-slot 9 pic-slot 0
FPC slot 9, PIC slot 0 information:
  Type                            16x 40G-GEBuiltin
  State                           Online
  Uptime                        2 hours, 47 minutes, 40 seconds
```

show chassis pic node-device fpc-slot pic-slot (QFabric System)

```
user@switch> show chassis pic node-device node1 pic-slot 0
FPC slot node1, PIC slot 0 information:
  Type                            48x 10G-SFP+Builtin
  State                           Online
  Uptime                        2 hours, 52 minutes, 37 seconds

PIC port information:
                          Fiber                     Xcvr vendor
  Port  Cable type        type  Xcvr vendor         part number       Wavelength
  0     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  1     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  2     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  3     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  4     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  5     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  6     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  7     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  8     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  9     10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  10    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  11    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  12    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  13    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  14    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  15    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  16    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  17    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  18    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  19    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  20    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  21    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  22    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  23    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  24    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  25    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  26    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  27    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  28    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  29    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  30    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  31    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  32    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  33    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  34    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  35    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  36    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  37    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  38    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  39    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  40    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  41    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  42    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  43    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  44    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  45    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  46    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
  47    10GBASE SR        MM    SumitomoElectric    SPP5101SR-J3      850 nm
```

show chassis pic fpc-slot 0 pic-slot 1 (ACX2000 Universal Access Router)

```
user@host> show chassis pic fpc-slot 0 pic-slot 1
FPC slot 0, PIC slot 1 information:
  Type                              8x 1GE(LAN) RJ45 Builtin
  State                             Online
  Uptime                          6 days, 2 hours, 51 minutes, 11 seconds
```

show chassis pic FPC-slot 1 PIC-slot 0 (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis pic fpc-slot 1 pic-slot 0
FPC slot 1, PIC slot 0 information:
  Type                              AS-MSC
  State                             Online
  PIC version                   1.6
  Uptime                          11 hours, 17 minutes, 56 seconds
```

show chassis pic FPC slot 1, PIC slot 2 (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis pic fpc-slot 1 pic-slot 2
Type                              AS-MXC
  State                             Online
  PIC version                   1.0
  Uptime                          11 hours, 18 minutes, 3 seconds
```

show chassis pic transport fpc-slot pic-slot (PTX Series Packet Transport Routers)

```
user@host> show chassis pic transport fpc-slot 2 pic-slot 0
Administrative State:      In Service
Operational    State:      Normal
```

show chassis pic transport fpc-slot pic-slot (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis pic transport fpc-slot 3 pic-slot 0
Administrative State:      In Service
Operational    State:      Normal
```

show chassis pic fpc-slot 0 pic-slot 0 (ACX5096 Router)

```
user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                              96x10G-8x40G
  State                             Online
  PIC version                   2.9
  Uptime                          21 hours, 28 minutes, 13 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0

  1    10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BCL-J1  1310 nm  0.0

  3    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
```

```
4    10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
5    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
6    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
7    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
8    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
9    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
10   10GBASE SR        MM    OPNEXT, INC.       TRS2001EN-0014    850 nm   0.0
11   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
12   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
13   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
14   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
15   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
16   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
17   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
18   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
19   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BCL-J1  1310 nm  0.0
20   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BNL-J1  1310 nm  0.0
21   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
22   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
23   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
24   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
25   10GBASE USR       MM    FINISAR CORP.      FTLX8570D3BCL-J1  850 nm   0.0
26   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
27   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
28   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
29   GIGE 1000SX       MM    FINISAR CORP.      FTLF8519P3BNL-J1  850 nm   0.0
31   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
32   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
33   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
34   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
35   10GBASE USR       MM    FINISAR CORP.      FTLX8570D3BCL-J1  850 nm   0.0
```

```
36   10GBASE USR       MM    FINISAR CORP.      FTLX8570D3BCL-J1  850 nm   0.0
37   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
38   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
40   GIGE 1000LX10     SM    FINISAR CORP.      FTLF1318P2BTL-J1  1310 nm  0.0
41   10GBASE LR        SM    OPNEXT,INC         TRS5021EN-S201    1310 nm  0.0
42   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BCL-J1  1310 nm  0.0
43   10GBASE LR        SM    SumitomoElectric   SPP5100LR-J3      1310 nm  0.0
44   10GBASE LR        SM    SumitomoElectric   SPP5100LR-J3      1310 nm  0.0
45   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BCL-J1  1310 nm  0.0
46   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BCL-J1  1310 nm  0.0
47   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
48   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
49   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
50   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
51   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
52   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
53   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
54   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
55   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
56   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
57   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
58   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
59   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
60   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
61   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
62   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
63   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
64   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
65   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
66   10GBASE SR        MM    SumitomoElectric   SPP5200SR-J6-M    850 nm   0.0
```

```
67   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
68   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
69   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
70   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
71   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BNL-J1  1310 nm  0.0
72   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BCL-J1  1310 nm  0.0
73   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
74   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
75   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0
76   10GBASE SR        MM    SumitomoElectric   SPP5100SR-J3      850 nm   0.0
77   10GBASE USR       MM    OPNEXT, INC.       TRS20A0EN-0014    850 nm   0.0
78   10GBASE USR       MM    OPNEXT, INC.       TRS20A0EN-0014    850 nm   0.0
79   10GBASE LRM       MM    OPNEXT INC         TRS5001EN-0014    1310 nm  0.0
80   10GBASE LRM       MM    OPNEXT INC         TRS5001EN-0014    1310 nm  0.0
81   10GBASE USR       MM    OPNEXT, INC.       TRS20A0EN-0014    850 nm   0.0
82   10GBASE USR       MM    OPNEXT, INC.       TRS20A0EN-0014    850 nm   0.0
83   10GBASE USR       MM    OPNEXT, INC.       TRS20A0EN-0014    850 nm   0.0
84   10GBASE USR       MM    OPNEXT, INC.       TRS20A0EN-0014    850 nm   0.0
85   10GBASE LR        SM    OPNEXT,INC         TRS5021EN-S201    1310 nm  0.0
86   10GBASE ER        SM    OPNEXT,INC         TRS7050EN-S201    1550 nm  0.0
87   10GBASE LRM       MM    OPNEXT INC         TRS5001EN-0014    1310 nm  0.0
88   10GBASE LRM       MM    OPNEXT INC         TRS5001EN-0014    1310 nm  0.0
89   10GBASE LRM       MM    OPNEXT INC         TRS5001EN-0014    1310 nm  0.0
90   10GBASE LRM       MM    OPNEXT INC         TRS5001EN-0014    1310 nm  0.0
91   10GBASE USR       MM    FINISAR CORP.      FTLX8570D3BCL-J1  850 nm   0.0
92   10GBASE USR       MM    FINISAR CORP.      FTLX8570D3BCL-J1  850 nm   0.0
93   10GBASE LR        SM    SumitomoElectric   SPP5100LR-J3      1310 nm  0.0
94   10GBASE LR        SM    FINISAR CORP.      FTLX1471D3BNL-J1  1310 nm  0.0
95   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0
96   40GBASE SR4       MM    AVAGO              AFBR-79E4Z-D-JU1  850 nm   0.0
97   40GBASE SR4       MM    AVAGO              AFBR-79E4Z-D-JU1  850 nm   0.0
```

```
  98   40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU1   850 nm   0.0

  99   40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU1   850 nm   0.0

  100  40GBASE CU 1M     n/a   Molex Inc.         1110409055        n/a      0.0

  101  40GBASE CU 1M     n/a   Molex Inc.         1110409055        n/a      0.0

  102  40GBASE CU 1M     n/a   Molex Inc.         1110409055        n/a      0.0

  103  40GBASE CU 1M     n/a   Molex Inc.         1110409055        n/a      0.0
```

show chassis pic fpc-slot 0 pic-slot 0 (ACX5048 Router)

```
user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                              96x10G-8x40G
  State                             Online
  PIC version                  2.9
  Uptime                         1 day, 5 hours, 27 minutes, 25 seconds

PIC port information:
                        Fiber                    Xcvr vendor       Wave-    Xcvr

  Port Cable type        type  Xcvr vendor        part number       length
Firmware
  0    10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0

  10   GIGE 1000SX       MM    FINISAR CORP.      FTLF8519P3BNL-J1  850 nm   0.0

  14   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0

  20   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BCL-J1  850 nm   0.0

  30   GIGE 1000SX       MM    FINISAR CORP.      FTLF8519P2BNL-J1  850 nm   0.0

  41   10GBASE SR        MM    OPNEXT, INC.       TRS2001EN-0014    850 nm   0.0

  46   GIGE 1000SX       MM    FINISAR CORP.      FTLF8519P2BNL-J1  850 nm   0.0

  64   10GBASE SR        MM    FINISAR CORP.      FTLX8571D3BNL-J1  850 nm   0.0

  78   GIGE 1000SX       MM    AVAGO              AFBR-5715PZ-JU2   850 nm   0.0

  96   40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU1   850 nm   0.0

  99   40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU1   850 nm   0.0

  100  40GBASE SR4       MM    AVAGO              AFBR-79EQDZ-JU1   850 nm   0.0
```

show chassis pic fpc-slot 0 pic-slot 0 (ACX500 Router)

```
user@host> show chassis pic fpc-slot 0 pic-slot 0
FPC slot 0, PIC slot 0 information:
  Type                              2x 1GE(LAN) SFP Builtin
  State                             Online
  Uptime                           17 hours, 54 minutes, 45 seconds
```

show chassis pic fpc-slot 0 pic-slot 1 (ACX500 Router)

```
user@host> show chassis pic fpc-slot 0 pic-slot 1
FPC slot 0, PIC slot 1 information:
  Type                              4x 1GE(LAN) RJ45, SFP Builtin
  State                             Online
  Uptime                          17 hours, 54 minutes, 45 seconds
```

show chassis pic transport fpc-slot pic-slot (PTX Series Packet Transport Routers)

```
user@host> show chassis pic transport fpc-slot 2 pic-slot 0
Administrative State:      In Service
Operational    State:      Normal
```

show chassis pic transport fpc-slot pic-slot (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis pic transport fpc-slot 3 pic-slot 0
Administrative State:      In Service
Operational    State:      Normal
```

show forwarding-options port-mirroring

Syntax

show forwarding-options port-mirroring
<terse | detail>
<instance-name>

Release Information

Command introduced in Junos OS Release 9.6.
Command introduced in Junos OS Release 12.3R2 for EX Series switches.

Description

Display current state of port-mirroring instances.

Options

terse | detail—(Optional) Display the specified level of output.

instance-name—(Optional) Display a single port-mirroring instance.

Required Privilege Level

view

Related Documentation

List of Sample Output

show forwarding-options port-mirroring terse on page 490
show forwarding-options port-mirroring detail on page 490

Output Fields

Table 12 on page 489 lists the output fields for the **show forwarding-options port-mirroring** command. Output fields are listed in the approximate order in which they appear.

Table 12: show forwarding-options port-mirroring Output Fields

Field Name	Field Description	Level of Output
Instance Name	Name of port-mirroring instance.	All levels
Instance Id	Instance identification number.	All levels
State	Instance state, either **up** or **down**.	All levels
Input parameters		
Rate	Rate (ratio of packets sampled).	**detail**
Run-length	Run length (number of consecutive packets sampled).	**detail**
Maximum-packet-length	Maximum packet length.	**detail**
Output parameters		
Family	Protocol family.	**detail**
State	Instance state, either **up** or **down**.	**detail**

Table 12: show forwarding-options port-mirroring Output Fields *(continued)*

Field Name	Field Description	Level of Output
Destination	Destination (next-hop group name).	**detail**

Sample Output

show forwarding-options port-mirroring terse

```
user@host> show forwarding-options port-mirroring terse
Instance Name        Instance Id    State
&global_instance       1      up
inst1         2      up
```

show forwarding-options port-mirroring detail

```
user@host> show forwarding-options port-mirroring detail
Instance Name: &global_instance
Instance Id: 1      State: up
  Input parameters:
     Rate:      10
     Run-length:     4
     Maximum-packet-length: 0
  Output parameters:
     Family: inet   State: up Destination: inet_nhg
     Family: vpls/eth-switch  State: up     Destination: vpls_nhg

Instance Name: inst1
Instance Id: 2      State: up
  Input parameters:
     Rate:      1
     Run-length:     0
     Maximum-packet-length: 200
  Output parameters:
     Family: inet         State: up     Destination: inet_nhg
     Family: vpls/eth-switch  State: down   Destination: vpls_nhg_2
```

clear firewall

List of Syntax

Syntax on page 491
Syntax (EX Series Switches) on page 491

Syntax

clear firewall (all | counter *counter-name* | filter *filter-name* | log (all | *logical-system-name*) | logical-system *logical-system-name*)

Syntax (EX Series Switches)

clear firewall (all | counter *counter-name* | filter *filter-name* | log (all | *logical-system-name*) | policer counter (all | counter-id *counter-index*))

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
logical-system option introduced in Junos OS Release 9.3.
log option introduced before Junos OS Release 11.4.

Description

Clear statistics about configured firewall filters.

When you clear the counters of a filter, this impacts not only the counters shown by the CLI, but also the ones tracked by SNMP2.

Subscriber management uses firewall filters to capture and report the volume-based service accounting counters that are used for subscriber billing. The **clear firewall** command also clears the service accounting counters that are reported to the RADIUS accounting server. For this reason, you must be cautious in specifying which firewall statistics you want to clear.

NOTE: The clear firewall command cannot be used to clear the Routing Engine filter counters on a backup Routing Engine that is enabled for graceful Routing Engine switchover (GRES).

If you clear statistics for firewall filters that are applied to Trio-based DPCs and that also use the **prefix-action** action on matched packets, wait at least 5 seconds before you enter the **show firewall prefix-action-stats** command. A 5-second pause between issuing the **clear firewall** and **show firewall prefix-action-stats** commands avoids a possible timeout of the **show firewall prefix-action-stats** command.

Options

all—Clear the packet and byte counts for all filters. On EX Series switches, this option also clears the packet counts for all policer counters.

counter *counter-name*—Clear the packet and byte counts for a filter counter that has been configured with the counter firewall filter action.

filter *filter-name*—Clear the packet and byte counts for the specified firewall filter.

log (all | *logical-system-name*)—Clear log entries for IPv4 firewall filters that have **then log** as an action. Use **log all** to clear all log entries or **log *logical-system-name*** to clear log entries for the specified logical system.

logical-system *logical-system-name*—Clear the packet and byte counts for the specified logical system.

policer counter (all | counter-id *counter-index*)—(EX8200 switches only) Clear all policer counters using the **policer counter all** command, or clear a specific policer counter using the **policer counter counter-id *counter-index*** command. The value of *counter-index* can be 0, 1, or 2.

Required Privilege Level clear

Related Documentation

- show firewall on page 493

List of Sample Output

Sample Output

clear firewall all

```
user@host> clear firewall all
```

clear firewall (counter counter-name)

```
user@host> clear firewall counter port-filter-counter
```

clear firewall (filter filter-name)

```
user@host> clear firewall filter ingress-port-filter
```

clear firewall (policer counter all) (EX8200 Switch)

```
user@switch> clear firewall policer counter all
```

clear firewall (policer counter counter-id counter-index) (EX8200 Switch)

```
user@switch> clear firewall policer counter counter-id 0
```


show firewall

List of Syntax

Syntax on page 493
Syntax (EX Series Switches) on page 493

Syntax

show firewall
<application (CFM | eswd | RMPS)>>
<counter *counter-name*>
<detail>
<filter *filter-name*>
<filter regex *regular-expression*>
<logical-system (all | *logical-system-name*)>
<terse>

Syntax (EX Series Switches)

show firewall
<application (CFM | eswd | RMPS)>>
<counter *counter-name*>
<detail>
<filter *filter-name*>
<filter regex *regular-expression*>
<log <(detail | interface *interface-name*)>>
<policer counters <(detail | counter-id *counter-index* <detail>)>>
<terse>

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Option **logical-system** introduced in Junos OS Release 9.3.
Option **terse** introduced in Junos OS Release 9.4.
Option **policer counters** introduced in Junos OS Release 12.2 for EX Series switches.
Option **detail** introduced in Junos OS Release 12.3 for EX Series switches.
Option **detail** introduced in Junos OS Release 14.1 for MX Series routers.
Option **regex *regular-expression*** introduced in Junos OS Release 14.2.

Description

Display enhanced statistics and counters for all configured firewall filters.

Options

none—(Optional) Display statistics and counters for all configured firewall filters and counters. For EX Series switches, this command also displays statistics about all configured policers.

application (CFM | eswd | RMPS)—(Optional) Show firewall elements owned by the selected software component:

- Connectivity Fault Management (CFM)
- Ethernet switching daemon (eswd)—Shows only on devices that support it.
- Resource Management and Packet Steering (RMPS)

counter *counter-name*—(Optional) Name of a filter counter.

detail—(EX Series switches and MX Series routers only) (Optional) Display firewall filter statistics and enhanced policer statistics and counters.

filter ***filter-name***—(Optional) Name of a configured filter.

filter regex ***regular-expression***—(Optional) Regular expression that matches the names of a subset of filters.

logical-system (all | ***logical-system-name*****)**—(Optional) Perform this operation on all logical systems or on a particular logical system.

log—(Optional) Display log entries for firewall filters.

log <(detail | interface ***interface-name*****)>**—(EX Series switches only) (Optional) Display detailed log entries of firewall activity or log information about a specific interface.

policer counters <(detail | counter-id ***counter-index*** **<detail>)>**—(EX8200 switches only) (Optional) Display enhanced policer counter statistics in brief or in detail.

terse—(Optional) Display firewall filter names only.

Required Privilege Level

view

Related Documentation

- clear firewall on page 491
- show firewall log on page 501
- *Verifying That Firewall Filters Are Operational*
- *Verifying That Policers Are Operational*
- *show policer*
- *Enhanced Policer Statistics Overview*
- *enhanced-policer*

List of Sample Output

Output Fields

Table 13 on page 495 lists the output fields for the **show firewall** command. Output fields are listed in the approximate order in which they appear.

Table 13: show firewall Output Fields

Field Name	Field Description
Filter	Name of a filter that has been configured with the **filter** statement at the **[edit firewall]** hierarchy level. Except on EX Series switches: • When an interface-specific filter is displayed, the name of the filter is followed by the full interface name and by either **-i** for an input filter or **-o** for an output filter. • When dynamic filters are displayed, the name of the filter is followed by the full interface name and by either **-in** for an input filter or **-out** for an output filter. When a logical system–specific filter is displayed, the name of the filter is prefixed with two underscore (__) characters and the name of the logical system (for example, **__ls1/filter1**). • When a service filter is displayed that uses a service set, the separator between the service-set name and the service-filter name is a semicolon (:). NOTE: For **bridge family filter**, the **ip-protocol** match criteria is supported only for IPv4 and not for IPv6. This is applicable for line cards that support the Junos Trio chipset, such as the MX 3D MPC line cards.
Counters	Display filter counter information: • **Name**—Name of a filter counter that has been configured with the **counter** firewall filter action. • **Bytes**—Number of bytes that match the filter term under which the **counter** action is specified. • **Packets**—Number of packets that matched the filter term under which the **counter** action is specified. NOTE: On M and T Series routers, firewall filters cannot count **ip-options** packets on a per option type and per interface basis. A limited work around is to use the **show pfe statistics ip options** command to see **ip-options** statistics on a per Packet Forwarding Engine (PFE) basis. See *show pfe statistics ip* for sample output.
Policers	Display policer information: • **Name**—Name of policer. • **Bytes**—(For two-color policers on MX Series routers and EX Series switches, and for hierarchical policers on interfaces hosted on MICs and MPCs in MX Series routers) Number of bytes that match the filter term under which the policer action is specified. This is only the number out-of-specification (out-of-spec) byte counts, not all the bytes in all packets policed by the policer. For other combinations of policer type, device, and line card type, this field is blank. • **Packets**—Number of packets that matched the filter term under which the policer action is specified. This is only the number of out-of-specification (out-of-spec) packet counts, not all packets policed by the policer.
Policer Counter Index	(EX8200 switch only) Global management counter ID. The counter ID value (*counter-index*) can be 0, 1, or 2.
Green	(EX8200 switch only) Number of packets within the limits. The number of packets is smaller than the committed information rate (CIR).
Yellow	(EX8200 switch only) Number of packets partially within the limits. The number of packets is greater than the CIR, but the burst size is within the excess burst size (EBS) limit.

Table 13: show firewall Output Fields *(continued)*

Field Name	Field Description
Discard	(EX8200 switch only) Number of discarded packets.
Bytes	(EX8200 switch only) Number of green, yellow, red, or discarded packets in bytes.
Packets	(EX8200 switch only) Number of green, yellow, red, or discarded packets.
Filter name	(EX8200 switch only) Name of the filter with a term associated to a policer.
Term name	(EX8200 switch only) Name of the term associated with a policer.
Policer name	(EX8200 switch only) Name of the policer that is associated with a global management counter.
P1-t1	• OOS packet statistics for packets that are marked out-of-specification (out-of-spec) by the policer. Changes to all packets that have out-of-spec actions, such as discard, color marking, or forwarding-class, are included in this counter. • Offered packet statistics for traffic subjected to policing. • Transmitted packet statistics for traffic that is not discarded by the policer. When the policer action is discard, the statistics are the same as the in-spec statistics; when the policer action is non-discard (loss-priority or forwarding-class), the statistics are included in this counter.

Sample Output

show firewall filter (MX Series Router and EX Series Switch)

```
user@host> show firewall filter test
Filter: test
Counters:
Name                                Bytes              Packets
Counter-1                               0                    0
Counter-2                               0                    0
Policers:
Name                                Bytes              Packets
Policer-1                            2770                   70
```

show firewall filter (non MX Series Router and EX Series Switch)

```
user@host> show firewall filter test
Filter: test
Counters:
Name                                Bytes              Packets
Counter-1                               0                    0
Counter-2                               0                    0
Policers:
Name                                Bytes              Packets
Policer-1                                                   70
```

show firewall filter (Dynamic Input Filter)

```
user@host> show firewall filter dfwd-ge-5/0/0.1-in
Filter: dfwd-ge-5/0/0.1-in
Counters:
Name                                                  Bytes              Packets
c1-ge-5/0/0.1-in                                          0                    0
```

show firewall (Logical Systems)

```
user@host> show firewall

Filter: __lr1/test
Counters:
Name                                                  Bytes              Packets
icmp                                                    420                    5
Filter: __default_bpdu_filter__
Filter: __lr1/inet_filter1
Counters:
Name                                                  Bytes              Packets
inet_tcp_count                                            0                    0
inet_udp_count                                            0                    0
Filter: __lr1/inet_filter2
Counters:
Name                                                  Bytes              Packets
inet_icmp_count                                           0                    0
inet_pim_count                                            0                    0
Filter: __lr2/inet_filter1
Counters:
Name                                                  Bytes              Packets
inet_tcp_count                                            0                    0
```

```
inet_udp_count                                          0                    0
```

show firewall (counter counter-name)

```
user@host> show firewall counter icmp-counter
Filter: ingress-port-voip-class-filter
Counters:
Name                                                Bytes              Packets
icmp-counter                                            0                    0
```

show firewall log

```
user@host> show firewall log
Log :

Time      Filter    Action Interface     Protocol        Src Addr
          Dest Addr
08:00:53  pfe       R      ge-1/0/1.0    ICMP            192.168.3.5
        192.168.3.4
08:00:52  pfe       R      ge-1/0/1.0    ICMP            192.168.3.5
        192.168.3.4
08:00:51  pfe       R      ge-1/0/1.0    ICMP            192.168.3.5
        192.168.3.4
08:00:50  pfe       R      ge-1/0/1.0    ICMP            192.168.3.5
        192.168.3.4
08:00:49  pfe       R      ge-1/0/1.0    ICMP            192.168.3.5
        192.168.3.4
08:00:48  pfe       R      ge-1/0/1.0    ICMP            192.168.3.5
        192.168.3.4
08:00:47  pfe       R      ge-1/0/1.0    ICMP            192.168.3.5
        192.168.3.4
```

show firewall policer counters (EX8200 Switch)

```
user@switch> show firewall policer counters
Policer Counter Index 0:
                           Bytes            Packets
Green:                        73              15914
Yellow:                        9               1962
Discard:                     119              25942

Policer Counter Index 1:
                            Bytes            Packets
Green:                          0                  0
Yellow:                         0                  0
Discard:                        0                  0

Policer Counter Index 2:
                            Bytes            Packets
Green:                          0                  0
Yellow:                         0                  0
Discard:                        0                  0
```

show firewall policer counters (detail) (EX8200 Switch)

```
user@switch> show firewall policer counters detail
Policer Counter Index 0:
                           Bytes            Packets
```

```
Green:                        73              15914
Yellow:                        9               1962
Discard:                     119              25942

Filter name                Term name           Policer name
myfilter                   polcr-term-1        myfilter-polcr-1
inet-filter-ae             ae-snmp             policer-1
inet-filter-ae             ae-ssh              policer-2

Policer Counter Index 1:
                           Bytes            Packets
Green:                         0                  0
Yellow:                        0                  0
Discard:                       0                  0

Filter name                Term name           Policer name

Policer Counter Index 2:
                           Bytes            Packets
Green:                         0                  0
Yellow:                        0                  0
Discard:                       0                  0

Filter name                Term name           Policer name
```

show firewall policer counters (counter-id counter-index) (EX8200 Switch)

```
user@switch> show firewall policer counters counter-id 0
Policer Counter Index 0:
                           Bytes            Packets
Green:                        73              15914
Yellow:                        9               1962
Discard:                     119              25942
```

show firewall policer counters (counter-id counter-index detail) (EX8200 Switch)

```
user@switch> show firewall policer counters counter-id 0 detail
Policer Counter Index 0:
                           Bytes            Packets
Green:                        73              15914
Yellow:                        9               1962
Discard:                     119              25942

Filter name                Term name           Policer name
myfilter                   polcr-term-1        myfilter-polcr-1
inet-filter-ae             ae-snmp             policer-1
inet-filter-ae             ae-ssh              policer-2
```

show firewall detail

```
user@host> show firewall detail
Filter: __default_bpdu_filter__

Filter: foo
Counters:
Name                                                  Bytes              Packets
c1                                                 17652140               160474
Policers:
Name                                                  Bytes              Packets
P1-t1
```

```
OOS                                                    0                18286
Offered                                                0 18446744073709376546
Transmitted                                            0 18446744073709358260
```

show firewall log

List of Syntax

Syntax on page 501
Syntax (EX Series Switches) on page 501

Syntax

show firewall log
<detail>
<extensive>
<interface *interface-name*>
<logical-system (*logical-system-name* | all)>

Syntax (EX Series Switches)

show firewall log
<detail>
<interface *interface-name*>

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
extensive option introduced in Junos OS Release 16.1.
logical-system option introduced in Junos OS Release 9.3.

Description

Display log information about firewall filters.

Options

none—Display log information about firewall filters.

detail—(Optional) Display detailed information.

extensive—(Optional) Display hex dump of packet captured by log action.

interface *interface-name*—(Optional) Display log information about a specific interface.

logical-system (*logical-system-name* | all)—(Optional) Perform this operation on all logical systems or on a particular system.

Required Privilege Level

view

List of Sample Output

show firewall log on page 502
show firewall log detail on page 502
show firewall log extensive on page 503

Output Fields

Table 14 on page 501 lists the output fields for the **show firewall log** command. Output fields are listed in the approximate order in which they appear.

Table 14: show firewall log Output Fields

Field Name	Field Description
Time of Log	Time that the event occurred.

Table 14: show firewall log Output Fields *(continued)*

Field Name	Field Description
Filter	• Displays the name of a configured firewall filter or service filter only if the packet hit the filter's **log** action in a kernel filter (in the control plane). For any traffic that reaches the Routing Engine, the packets hit the **log** action in the kernel. • For all other logged packets (packet hit the filter's **log** action in the Packet Forwarding Engine), this field displays **pfe** instead of a configured filter name.
Filter Action	Filter action: • **A**—Accept • **D**—Discard • **R**—Reject
Name of Interface	• Displays a physical interface name if the packet arrived at a port on a line card. • Displays **local** if the packet was generated by the device's internal Ethernet interface, **em1** or **fxp1**, which connects the Routing Engine with the router's packet-forwarding components.
Name of protocol	Packet's protocol name: **egp**, **gre**, **icmp**, **ipip**, **ospf**, **pim**, **rsvp**, **tcp**, or **udp**.
Packet length	Length of the packet.
Source address	Packet's source address.
Destination address	Packet's destination address and port.

Sample Output

show firewall log

```
user@host>show firewall log
Time      Filter    Action Interface     Protocol  Src Addr      Dest Addr

13:10:12  pfe       D      rlsq0.902     ICMP      192.0.2.2   192.0.2.1

13:10:11  pfe       D      rlsq0.902     ICMP      192.0.2.2   192.0.2.1
```

show firewall log detail

```
user@host> show firewall log detail
Time of Log: 2004-10-13 10:37:17 PDT, Filter: f, Filter action: accept, Name of
interface: fxp0.0Name of protocol: TCP, Packet Length: 50824, Source address:
203.0.113.108:829,
Destination address: 192.168.70.66:513
Time of Log: 2004-10-13 10:37:17 PDT, Filter: f, Filter action: accept, Name of
interface: fxp0.0
Name of protocol: TCP, Packet Length: 1020, Source address: 203.0.113.108:829,
Destination address: 192.168.70.66:513
```

```
Time of Log: 2004-10-13 10:37:17 PDT, Filter: f, Filter action: accept, Name of
interface: fxp0.0
Name of protocol: TCP, Packet Length: 49245, Source address: 203.0.113.108:829,
Destination address: 192.168.70.66:513
Time of Log: 2004-10-13 10:37:17 PDT, Filter: f, Filter action: accept, Name of
interface: fxp0.0
Name of protocol: TCP, Packet Length: 49245, Source address: 203.0.113.108:829,
Destination address: 192.168.70.66:513
Time of Log: 2004-10-13 10:37:17 PDT, Filter: f, Filter action: accept, Name of
interface: fxp0.0
Name of protocol: TCP, Packet Length: 49245, Source address: 203.0.113.108:829,
Destination address: 192.168.70.66:513
Time of Log: 2004-10-13 10:37:17 PDT, Filter: f, Filter action: accept, Name of
interface: fxp0.0
Name of protocol: TCP, Packet Length: 49245, Source address: 203.0.113.108:829,
Destination address: 192.168.70.66:513
....
```

show firewall log extensive

```
user@host> show firewall log extensive
Time of Log: 2016-01-17 22:16:21 PST, Filter: pfe, Filter action: accept, Name
of interface: xe-0/0/1.0
Name of protocol: UDP, Packet Length: 98, Source address: 203.0.113.1, Destination
 address: 203.0.113.1
 :  00-0F: 00 01 03 ee ee ff 00 01 - 09 22 55 ee 81 00 02 58
 :  10-1F: 08 00 45 00 00 62 00 00 - 00 00 40 11 77 8a 01 00
 :  20-2F: 00 01 02 00 00 01 1c 00 - 1c 00 00 4e 19 83 00 01
 :  30-3F: 02 03 04 05 06 07 08 09 - 0a 0b 0c 0d 0e 0f 10 11
 :  40-4F: 12 13 14 15 16 17 18 19 - 1a 1b 1c 1d 1e 1f 20 21
 :  50-5F: 22 23 24 25 26 27 28 29 - 2a 2b 00 00 00 00 00 00
 :  60-6F: 00 00 00 00 00 00 00 00 - 00 00 00 00 00 00 00 00
 :  70-7F: 00 00 00 00 00 00 00 00 - 00 00 00 00 00 00 00 00
```

show forwarding-options next-hop-group

Syntax

show forwarding-options next-hop-group
<terse | brief | detail>
<group-name>

Release Information

Command introduced in Junos OS Release 9.6.
Command introduced in Junos OS Release 12.3R2 for EX Series switches.
Support for IPv6 introduced in Junos OS Release 14.2 for the MX Series routers.

Description

Display current state of next-hop groups.

Options

terse | brief | detail—(Optional) Display the specified level of output.

group-name—(Optional) Display a single next-hop group.

Required Privilege Level

view

Related Documentation

- show forwarding-options port-mirroring on page 489

List of Sample Output

show forwarding-options next-hop-group terse on page 505
show forwarding-options next-hop-group brief on page 505
show forwarding-options next-hop-group detail on page 505

Output Fields

Table 15 on page 504 lists the output fields for the **show forwarding-options next-hop-group** command. Output fields are listed in the approximate order in which they appear.

Table 15: show forwarding-options next-hop-group Output Fields

Field Name	Field Description	Level of Output
Next-hop-group	Name of next-hop group.	All levels
Type	Next-hop group type, such as **inet**, **inet6** or **layer-2**.	All levels
State	Next-hop group state, either **up** or **down**.	All levels
Members Interfaces	Names of interfaces to which next-hop group members belong.	**brief detail**
Member Subgroup	Names of subgroups to which next-hop group members belong.	**brief detail**
Number of members configured	Number of next-hop group members configured.	**detail**

Table 15: show forwarding-options next-hop-group Output Fields *(continued)*

Field Name	Field Description	Level of Output
Number of members that are up	Number of next-hop group members that are up.	detail
Number of subgroups configured	Number of subgroups configured.	detail
Number of subgroups that are up	Number of subgroups that are up.	detail

Sample Output

show forwarding-options next-hop-group terse

```
user@host> show forwarding-options next-hop-group terse
Next-hop-group                  Type              State
  nhg                             inet              up
  nhg6                            inet6             up
  vpls_nhg_2                    layer-2           down
```

show forwarding-options next-hop-group brief

```
user@host> show forwarding-options next-hop-group brief

Next-hop-group: nhg
      Type:  inet
      State: up
      Members Interfaces:
        ge-0/2/8.0             next-hop  192.0.2.10
        ge-5/1/8.0             next-hop  198.51.100.10
        ge-5/1/9.0             next-hop  203.0.113.10

Next-hop-group: nhg6
      Type:  inet6
      State: up
      Members Interfaces:
        ge-5/1/5.0             next-hop  2001:db8::1:10
        ge-5/1/6.0             next-hop  2001:db8::20:10        Member Subgroup:
 nhsg6
          Members Interfaces:
            ge-5/0/4.0             next-hop  2001:db8::3:1
            ge-5/1/4.0             next-hop  2001:db8::4:1

Next-hop-group: vpls_nhg_2
Type: layer-2        State: down
```

show forwarding-options next-hop-group detail

```
user@host> show forwarding-options next-hop-group detail

Next-hop-group: nhg
```

```
Type: inet
State: up
Number of members configured    : 3
Number of members that are up   : 3
Number of subgroups configured  : 0
Number of subgroups that are up : 0
Members Interfaces:                                 State
  ge-0/2/8.0             next-hop  192.0.2.10        up
  ge-5/1/8.0             next-hop  203.0.113.10        up
  ge-5/1/9.0             next-hop  198.51.100.10.10        up

Next-hop-group: nhg6
Type: inet6
State: up
Number of members configured    : 2
Number of members that are up   : 2
Number of subgroups configured  : 1
Number of subgroups that are up : 1
Members Interfaces:                                 State
ge-5/1/5.0             next-hop  2001:db8::1:10       up
ge-5/1/6.0             next-hop  2001:db8::20:10      up
Member Subgroup: nhsg6                            up
       Number of members configured    : 2
       Number of members that are up   : 2
       Members Interfaces:                                 State
           ge-5/0/4.0             next-hop  2001:db8::3:1   up
           ge-5/1/4.0             next-hop  2001:db8::4:1   up

Next-hop-group: vpls_nhg_2
Number of members configured    : 2
Number of members that are up   : 0
Number of subgroups configured  : 0
Number of subgroups that are up : 0
Type: layer-2        State: down
Members Interfaces:       State
   ge-2/2/1.100        down
   ge-2/3/9.0        down
```

show forwarding-options analyzer

Syntax **show forwarding-options analyzer** ***analyzer-name***

Release Information Hierarchy level **[edit forwarding-options]** introduced in Junos OS Release 13.2X50-D10 (ELS).

Description Display information about analyzers configured for mirroring.

Options ***analyzer-name***—(Optional) Displays the status of a specific analyzer on the switch.

Required Privilege Level view

Related Documentation
- *Understanding Port Mirroring and Analyzers on EX2300, EX3400, and EX4300 Switches*

List of Sample Output show forwarding-options analyzer on page 507

Output Fields Table 16 on page 507 lists the output fields for the **show forwarding-options analyzer** command. Output fields are listed in the approximate order in which they appear.

Table 16: show forwarding-options analyzer Output Fields

Field Name	Field Description
Analyzer name	Displays the name of the analyzer.
Output interface	Specifies a local interface to which mirrored packets are sent. An analyzer can have output to either an interface or a VLAN, not both.
Output VLAN	Specifies a VLAN to which mirrored packets are sent. An analyzer can have output to either an interface or a VLAN, not both.
Mirror ratio	Displays the ratio of packets to be mirrored.
Egress monitored interfaces	Displays interfaces for which traffic exiting the interfaces is mirrored.
Ingress monitored interfaces	Displays interfaces for which traffic entering the interfaces is mirrored.
Ingress monitored VLANs	Displays VLANs for which traffic entering the VLAN is mirrored.

Sample Output

show forwarding-options analyzer

```
user@switch> show forwarding-options analyzer
```

```
Analyzer name                    : employee-monitor
  Mirror rate                      : 1
  Maximum packet length            : 0
  State                            : up
  Ingress monitored interfaces     : ge-0/0/0.0
  Ingress monitored interfaces     : ge-0/0/1.0
  Output VLAN                      : default-switch/remote-analyzer
```