

Port Mirroring



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Juniper Networks, Inc.
1194 North Mathilda Avenue
Sunnyvale, California 94089
USA
408-745-2000
www.juniper.net

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Port Mirroring

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Table of Contents

	About the Documentation	xi
	Documentation and Release Notes	xi
	Supported Platforms	xi
	Using the Examples in This Manual	xi
	Merging a Full Example	xii
	Merging a Snippet	xii
	Documentation Conventions	xiii
	Documentation Feedback	xv
	Requesting Technical Support	xv
	Self-Help Online Tools and Resources	xv
	Opening a Case with JTAC	xvi
Part 1	Overview	
Chapter 1	Port Mirroring Overview	3
	Layer 2 Port Mirroring Overview	3
	Layer 2 Port Mirroring Properties	4
	Packet-Selection Properties	4
	Packet Address Family	4
	Mirror Destination Properties	5
	Mirror-Once Option	5
	Layer 2 Port Mirroring Global Instance	5
	Layer 2 Port Mirroring Named Instances	6
	Layer 2 Port Mirroring Named Instances Overview	6
	Mirroring at Ports Grouped at the FPC Level	7
	Mirroring at Ports Grouped at the PIC Level	7
	Mirroring at a Group of Ports Bound to Multiple Named Instances	7
	Layer 2 Port Mirroring of PE Router Logical Interfaces	8
	Layer 2 Port Mirroring Firewall Filters	10
	Layer 2 Port Mirroring Firewall Filters Overview	10
	Mirroring of Packets Received or Sent on a Logical Interface	11
	Mirroring of Packets Forwarded or Flooded to a VLAN	11
	Mirroring of Packets Forwarded or Flooded to a VPLS Routing Instance	12
	Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups	12
	Layer 2 Port Mirroring to Remote Destination by Using Destination as VLAN	13
Chapter 2	Configuration Guidelines for Layer 2 Port Mirroring	15
	Application of Layer 2 Port Mirroring Types	15
	Restrictions on Layer 2 Port Mirroring	17

Chapter 3	Behavior of Layer 2 Port Mirroring at Physical Interfaces	19
	Precedence of Multiple Levels of Layer 2 Port Mirroring on a Physical Interface	19
Chapter 4	Behavior of Layer 2 Port Mirroring on PE Routers and PE Switches	21
	Layer 2 Port Mirroring of PE Router or PE Switch Logical Interfaces	21
	Layer 2 Port Mirroring of PE Router or PE Switch Aggregated Ethernet Interfaces	23
Part 2	Configuration	
Chapter 5	Configuration Tasks for Layer 2 Port Mirroring at Physical Interfaces	27
	Configuring the Global Instance of Layer 2 Port Mirroring	27
	Configuration Layer 2 Port Mirroring to a Remote VLAN	30
	Configuring Port Mirroring to a Remote VLAN	30
	Defining a Named Instance of Layer 2 Port Mirroring	32
	Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level	36
	Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level	38
	Disabling Layer 2 Port Mirroring Instances	39
Chapter 6	Examples for Layer 2 Port Mirroring at Physical Interfaces	41
	Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis	41
	Layer 2 Port Mirroring at the FPC Level	41
	Layer 2 Port Mirroring at the PIC Level	42
	Layer 2 Port Mirroring at the FPC and PIC Levels	42
	Example: Layer 2 Port Mirroring with Multiple Instances	43
	Example: Configuring Multiple Instances of Layer 2 Port Mirroring	43
	Explicit Reference of a Port Mirroring Instance	45
	Implicit Reference of Port Mirroring on the Underlying Physical Interface	46
Chapter 7	Configuration Tasks for Layer 2 Port Mirroring at Logical Interfaces	47
	Defining a Layer 2 Port-Mirroring Firewall Filter	47
	Applying Layer 2 Port Mirroring to a Logical Interface	51
	Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VLAN	54
	Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance	56
Chapter 8	Examples for Layer 2 Port Mirroring at Logical Interfaces	59
	Example: Layer 2 Port Mirroring at a Logical Interface	59
	Example: Layer 2 Port Mirroring for a Layer 2 VPN	62
	Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links	64
Chapter 9	Configuration Tasks for Layer 2 Port Mirroring at Multiple Destinations	67
	Defining a Layer 2 Port-Mirroring Firewall Filter	67
	Defining a Next-Hop Group for Layer 2 Port Mirroring	70
	Applying Layer 2 Port Mirroring to a Logical Interface	72
Chapter 10	Example of Layer 2 Port Mirroring at Multiple Destinations	75
	Example: Layer 2 Port Mirroring to Multiple Destinations	75
Chapter 11	Example for Layer 2 Port Mirroring to a Remote VLAN	79
	Example: Configuring Layer 2 Port Mirroring to Remote VLAN	79

Chapter 12	Configuring Inline Port Mirroring	87
	Configuring Inline Port Mirroring	87
Chapter 13	Configuration Statements	89
	[edit forwarding-options port-mirroring] Hierarchy Level	89
	disable (Forwarding Options)	91
	disable-all-instances	91
	forwarding-options	92
	family (Port Mirroring)	93
	input (Port Mirroring)	94
	instance	95
	interface (Port Mirroring)	96
	interface (Next-Hop Group)	96
	maximum-packet-length	97
	mirror-once	98
	next-hop-group (Port Mirroring)	98
	no-filter-check	99
	no-tag	99
	output (Port Mirroring)	100
	rate (Forwarding Options)	100
	run-length	101
	vlan (Port Mirroring)	102
Part 3	Administration	
Chapter 14	Displaying Information	105
	Displaying Layer 2 Port-Mirroring Instance Settings and Status	105
	Displaying Next-Hop Group Settings and Status	105
Chapter 15	Operational Mode Commands for Packet Forwarding Engine Components	107
	show chassis fabric fpcs	108
	show chassis fpc	146
	show chassis hardware	177
	show chassis pic	305
Chapter 16	Operational Mode Commands for Layer 2 Port-Mirroring Instances	321
	show forwarding-options port-mirroring	322
Chapter 17	Operational Mode Commands for Firewall Filter Statistics and Logs	325
	clear firewall	326
	show firewall	328
	show firewall log	335
Chapter 18	Operational Mode Commands for Next-Hop Groups for Layer 2 Port Mirroring	339
	show forwarding-options port-mirroring	340
	show forwarding-options next-hop-group	342

List of Figures

Part 2	Configuration	
Chapter 11	Example for Layer 2 Port Mirroring to a Remote VLAN	79
	Figure 1: Remote Mirroring Network Topology Example	80

List of Tables

	About the Documentation	xi
	Table 1: Notice Icons	xiii
	Table 2: Text and Syntax Conventions	xiii
Part 1	Overview	
Chapter 1	Port Mirroring Overview	3
	Table 3: Application of Layer 2 Port Mirroring Firewall Filters on PE Routers and PE Switches	9
Chapter 2	Configuration Guidelines for Layer 2 Port Mirroring	15
	Table 4: Application of Layer 2 Port Mirroring Types	15
Chapter 4	Behavior of Layer 2 Port Mirroring on PE Routers and PE Switches	21
	Table 5: Application of Layer 2 Port Mirroring Firewall Filters on PE Devices	22
Part 3	Administration	
Chapter 15	Operational Mode Commands for Packet Forwarding Engine Components	107
	Table 6: show chassis fabric fpcs Output Fields	111
	Table 7: show chassis fpc Output Fields	153
	Table 8: Routing Engines Displaying DIMM Information	180
	Table 9: show chassis hardware Output Fields	183
	Table 10: show chassis pic Output Fields	309
Chapter 16	Operational Mode Commands for Layer 2 Port-Mirroring Instances	321
	Table 11: show forwarding-options port-mirroring Output Fields	322
Chapter 17	Operational Mode Commands for Firewall Filter Statistics and Logs	325
	Table 12: show firewall Output Fields	329
	Table 13: show firewall log Output Fields	335
Chapter 18	Operational Mode Commands for Next-Hop Groups for Layer 2 Port Mirroring	339
	Table 14: show forwarding-options port-mirroring Output Fields	340
	Table 15: show forwarding-options next-hop-group Output Fields	342

About the Documentation

- Documentation and Release Notes on page xi
- Supported Platforms on page xi
- Using the Examples in This Manual on page xi
- Documentation Conventions on page xiii
- Documentation Feedback on page xv
- Requesting Technical Support on page xv

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:

- EX 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.xml;
    }
  }
}
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.xml; }
```

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 the *CLI User Guide*.

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 xiii 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

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

Convention	Description	Examples
Fixed-width text like this	Represents output that appears on the terminal screen.	<pre>user@host> show chassis alarms</pre> <p>No alarms currently active</p>
<i>Italic text like this</i>	<ul style="list-style-type: none"> Introduces or emphasizes important new terms. Identifies guide names. Identifies RFC and Internet draft titles. 	<ul style="list-style-type: none"> A policy <i>term</i> is a named structure that defines match conditions and actions. <i>Junos OS CLI User Guide</i> RFC 1997, <i>BGP Communities Attribute</i>
<i>Italic text like this</i>	Represents variables (options for which you substitute a value) in commands or configuration statements.	<p>Configure the machine's domain name:</p> <pre>[edit] root@# set system domain-name domain-name</pre>
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"> To configure a stub area, include the stub statement at the <code>[edit protocols ospf area area-id]</code> hierarchy level. The console port is labeled CONSOLE.
< > (angle brackets)	Encloses optional keywords or variables.	stub <default-metric <i>metric</i> >;
(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 <i>(string1 string2 string3)</i>
# (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]
Indentation and braces ({ })	Identifies a level in the configuration hierarchy.	<pre>[edit] routing-options { static { route default { nexthop <i>address</i>; retain; } } }</pre>
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
GUI Conventions		
Bold text like this	Represents graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"> In the Logical Interfaces box, select All Interfaces. To cancel the configuration, click Cancel.

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

Convention	Description	Examples
> (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:

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- 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 JNASC 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.

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- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- 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://tools.juniper.net/SerialNumberEntitlementSearch/>

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

Overview

- [Port Mirroring Overview on page 3](#)
- [Configuration Guidelines for Layer 2 Port Mirroring on page 15](#)
- [Behavior of Layer 2 Port Mirroring at Physical Interfaces on page 19](#)
- [Behavior of Layer 2 Port Mirroring on PE Routers and PE Switches on page 21](#)

CHAPTER 1

Port Mirroring Overview

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Properties on page 4](#)
- [Layer 2 Port Mirroring Global Instance on page 5](#)
- [Layer 2 Port Mirroring Named Instances on page 6](#)
- [Layer 2 Port Mirroring of PE Router Logical Interfaces on page 8](#)
- [Layer 2 Port Mirroring Firewall Filters on page 10](#)
- [Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 12](#)
- [Layer 2 Port Mirroring to Remote Destination by Using Destination as VLAN on page 13](#)

Layer 2 Port Mirroring Overview

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 for Routing Devices* 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 *Junos OS Class of Service Library for Routing Devices*.

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 Policy Feature Guide for Routing Devices*.

Related Documentation

- [Layer 2 Port Mirroring Properties on page 4](#)
- *Restrictions on Layer 2 Port Mirroring*
- *Application of Layer 2 Port Mirroring Types*
- *Application of Layer 2 Port Mirroring Types*

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 the *Junos OS, Release 14.1*. 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



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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Restrictions on Layer 2 Port Mirroring](#)
- [Application of Layer 2 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 “[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*.

Related Documentation

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Configuring the Global Instance of Layer 2 Port Mirroring](#)
- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances](#)
- [Example: Layer 2 Port Mirroring to Multiple Destinations](#)

Layer 2 Port Mirroring Named Instances

This topic describes the following information:

- [Layer 2 Port Mirroring Named Instances Overview on page 6](#)
- [Mirroring at Ports Grouped at the FPC Level on page 7](#)
- [Mirroring at Ports Grouped at the PIC Level on page 7](#)
- [Mirroring at a Group of Ports Bound to Multiple Named Instances on page 7](#)

Layer 2 Port Mirroring Named Instances Overview

On an MX Series router and on an EX Series switch, you can define a set of port-mirroring properties that you can explicitly bind to physical ports on the router or switch. 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 an MX Series router's or an EX Series switch's Packet Forwarding Engine components at different levels of the router (or switch) 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 or switch 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 or switch 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 and EX Series switches support port mirroring of VPLS (**family ethernet-switching** or **family vpls**) traffic and Layer 2 VPN traffic with **family ccc**.

For a general description of Layer 2 port-mirroring properties, see “[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*.

Mirroring at 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 FPC installed in the router (or switch) 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 (or switch) chassis.

Mirroring at 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 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 and on an EX Series switch, 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, 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 and on an EX Series switch.



NOTE: You can configure more than two port mirroring instances for each FPC by configuring inline port mirroring. For information on inline port mirroring, see [“Configuring Inline Port Mirroring” on page 87](#).

**Related
Documentation**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Defining a Named Instance of Layer 2 Port Mirroring](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level on page 36](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level on page 38](#)
- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances](#)

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 3 on page 9](#) 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 3: 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.	<p>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.</p> <p>Traffic received on an aggregated Ethernet interface is forwarded over a different interface based on a lookup of the destination MAC (DMAC) address:</p> <ul style="list-style-type: none"> • 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). 	<p>See <i>Applying Layer 2 Port Mirroring to a Logical Interface</i>.</p> <p>For more information about VPLS routing instances, see <i>Configuring a VPLS Routing Instance</i> and <i>Configuring VLAN Identifiers for Bridge Domains and VPLS Routing Instances</i>.</p>
Egress Customer-Facing Logical Interface	<p>Unicast packets being forwarded by the MX Series router or the EX Series switch to another PE router or PE switch.</p> <p>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.</p>	<p>Traffic received on an aggregated Ethernet interface is forwarded over a different interface based on a lookup of the destination MAC (DMAC) address:</p> <ul style="list-style-type: none"> • 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 <i>Applying Layer 2 Port Mirroring to a Logical Interface</i> .
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 <i>Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain</i> . For information about flooding behavior in VPLS, see the <i>Junos OS VPNs Library for Routing Devices</i> .
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 <i>Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance</i> . For information about flooding behavior in VPLS, see the <i>Junos OS VPNs Library for Routing Devices</i> .

Related Documentation

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Example: Layer 2 Port Mirroring at a Logical Interface](#)

Layer 2 Port Mirroring Firewall Filters

This topic describes the following information:

- [Layer 2 Port Mirroring Firewall Filters Overview on page 10](#)
- [Mirroring of Packets Received or Sent on a Logical Interface on page 11](#)
- [Mirroring of Packets Forwarded or Flooded to a VLAN on page 11](#)
- [Mirroring of Packets Forwarded or Flooded to a VPLS Routing Instance on page 12](#)

Layer 2 Port Mirroring Firewall Filters Overview

On an MX Series router and on an EX Series switch, 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 VLAN, or traffic forwarded or flooded to a VPLS routing instance.

MX Series routers and EX Series switches support Layer 2 port mirroring of VPLS (**family ethernet-switching** or **family vpls**) traffic and Layer 2 VPN traffic with **family ccc** in 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; /* comment: 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 [“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*.



NOTE: If you associate integrated routing and bridging (IRB) with the VLAN (or VPLS routing instance), and also configure within the VLAN (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 VLAN (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*.

For detailed information about how you can use Layer 2 port-mirroring firewall filters with MX Routers and EX Series switches configured as provider edge (PE) routers or PE switches, see [“Layer 2 Port Mirroring of PE Router Logical Interfaces” on page 8](#). For detailed information about configuring firewall filters in general (including in a Layer 3 environment), see the *Routing Policy Feature Guide for Routing Devices*.

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 *Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces*.



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 or switch 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 VLAN

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

For more information about VLANs, see *Layer 2 Bridge Domains Overview*. For information about flooding behavior in a VLAN, see *Layer 2 Learning and Forwarding for Bridge Domains Overview*.



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

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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Example: Layer 2 Port Mirroring at a Logical Interface](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links](#)
- [Example: Layer 2 Port Mirroring to Multiple Destinations](#)

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**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Overview on page 3](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Defining a Next-Hop Group for Layer 2 Port Mirroring on page 70](#)
- [Example: Layer 2 Port Mirroring to Multiple Destinations](#)

Layer 2 Port Mirroring to Remote Destination by Using Destination as VLAN

You configure port mirroring on an EX9200 switch to send copies of traffic to an output destination, such as an interface, a routing-instance, or a VLAN; and for the input traffic, you can configure a firewall filter term with various match conditions and actions.

When you configure VLAN as the output destination in a port-mirroring configuration, the traffic for each port-mirroring session is carried over a user-specified VLAN that is dedicated for that mirroring session in all participating switches. The mirrored traffic is copied onto that VLAN (also called as mirror VLAN) and forwarded to interfaces, which are members of the mirror VLAN. The destination interfaces, which are members of the mirror VLAN, can span across multiple switches in the network provided that the same remote mirroring VLAN is used for a mirroring session in all the switches.

You can use the **port-mirror** or **port-mirror-instance** action in the firewall filter configuration when you mirror traffic to remote destinations by configuring a VLAN as a port-mirroring output destination.

**Related
Documentation**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Configuration Layer 2 Port Mirroring to a Remote VLAN on page 30](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)

Configuration Guidelines for Layer 2 Port Mirroring

- [Application of Layer 2 Port Mirroring Types on page 15](#)
- [Restrictions on Layer 2 Port Mirroring on page 17](#)

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 or of an EX Series route.

[Table 4 on page 15](#) describes the three types of Layer 2 port mirroring you can configure on an MX Series router and EX Series switch: the global instance, named instances, and firewall filters.

Table 4: Application of Layer 2 Port Mirroring Types

Type of Layer2PortMirroring Definition	Point of Application	Scope of Mirroring	Description	Configuration Details
Global Instance of Layer2PortMirroring	All ports in the MX Series router (or switch) chassis	VPLS packets received on all ports in the MX Series router (or switch) chassis	If configured, the global port-mirroring properties implicitly apply to all VPLS packets received on all ports in the router (or switch) chassis.	See <i>Configuring the Global Instance of Layer 2 Port Mirroring</i>

Table 4: Application of Layer 2 Port Mirroring Types (*continued*)

Type of Layer2PortMirroring Definition	Point of Application	Scope of Mirroring	Description	Configuration Details
Named Instance of Layer2PortMirroring	Ports grouped at the FPC level See “Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level” on page 36.	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 <i>Defining a Named Instance of Layer 2 Port Mirroring</i> . NOTE: The number of port-mirroring destinations supported for an MX Series router and for an EX Series switch is limited to the number of Packet Forwarding Engines contained on the DPCs or FPCs installed in the router or switch chassis.
	Ports grouped at the PIC level See “Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level” on page 38.	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.	
Layer2Port-Mirroring Firewall Filter	Logical interface (including an aggregated Ethernet interface) See <i>Applying Layer 2 Port Mirroring to a Logical Interface</i> .	VPLS packets received or sent on a logical interface.	In the firewall filter configuration, include <i>action</i> and <i>action-modifier</i> 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 <i>Defining a Layer 2 Port-Mirroring Firewall Filter</i> . 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.
	VLAN forwarding table or flood table See <i>Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain</i> .	Layer 2 traffic forwarded or flooded to a VLAN		
	VPLS routing instance forwarding table or flood table See <i>Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance</i> .	Layer 2 traffic forwarded or flooded to a VPLS routing instance		

- Related Documentation**
- [Layer 2 Port Mirroring Overview on page 3](#)
 - [Restrictions on Layer 2 Port Mirroring](#)
 - [Precedence of Multiple Levels of Layer 2 Port Mirroring on a Physical Interface on page 19](#)
 - [Layer 2 Port Mirroring of PE Router Logical Interfaces on page 8](#)
 - [Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces](#)

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 or switch 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) are not mirrored.
- 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 VLAN or virtual private LAN service (VPLS) routing instance.
- The mirror destination device should be on a dedicated VLAN 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 (ethernet-switching | ccc | vpls) output** statement, the previous **interface** statement is overridden.
- Layer 2 port-mirroring firewall filtering is not supported for logical systems.

In a Layer 2 port-mirroring firewall filter definition, the filter **action-modifier (port-mirror or port-mirror-instance pm-instance-name)** 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, the filter **term** cannot support Layer 2 port mirroring 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 do not support the use of next-hop subgroups for load-balancing mirrored traffic.

**Related
Documentation**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Application of Layer 2 Port Mirroring Types](#)
- [Precedence of Multiple Levels of Layer 2 Port Mirroring on a Physical Interface on page 19](#)
- [Layer 2 Port Mirroring of PE Router Logical Interfaces on page 8](#)
- [Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces](#)

CHAPTER 3

Behavior of Layer 2 Port Mirroring at Physical Interfaces

- [Precedence of Multiple Levels of Layer 2 Port Mirroring on a Physical Interface on page 19](#)

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*.
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 36](#).
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 38](#).

Related Documentation

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Restrictions on Layer 2 Port Mirroring](#)
- [Application of Layer 2 Port Mirroring Types](#)

- [Layer 2 Port Mirroring of PE Router Logical Interfaces on page 8](#)
- *Layer 2 Port Mirroring of PE Router Aggregated Ethernet Interfaces*

CHAPTER 4

Behavior of Layer 2 Port Mirroring on PE Routers and PE Switches

- [Layer 2 Port Mirroring of PE Router or PE Switch Logical Interfaces on page 21](#)
- [Layer 2 Port Mirroring of PE Router or PE Switch Aggregated Ethernet Interfaces on page 23](#)

Layer 2 Port Mirroring of PE Router or PE Switch Logical Interfaces

For a router or switch configured as a provider edge (PE) device 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 router or switch and customer edge (CE) devices, which are typically also routers and Ethernet switches.

[Table 3 on page 9](#) describes the ways in which you can apply Layer 2 port-mirroring firewall filters to a router or switch configured as a PE device.

Table 5: Application of Layer 2 Port Mirroring Firewall Filters on PE Devices

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 the PE device.	<p>You can also configure aggregated Ethernet interfaces between CE devices and PE devices for VPLS routing instances. Traffic is load-balanced across all of the links in the aggregated interface.</p> <p>Traffic received on an aggregated Ethernet interface is forwarded over a different interface based on a lookup of the destination MAC (DMAC) address:</p>	<p>See <i>Applying Layer 2 Port Mirroring to a Logical Interface</i>.</p> <p>For more information about VPLS routing instances, see <i>Configuring a VPLS Routing Instance</i> and <i>Configuring VLAN Identifiers for Bridge Domains and VPLS Routing Instances</i>.</p>
Egress Customer-Facing Logical Interface	<p>Unicast packets being forwarded by the PE device to another PE device.</p> <p>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 VLAN or VPLS routing instance.</p>	<ul style="list-style-type: none"> • 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 <i>Applying Layer 2 Port Mirroring to a Logical Interface</i> .
Input to a VLAN Forwarding Table or Flood Table	Forwarding traffic or flood traffic sent to the VLAN 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 <i>Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain</i> . For information about flooding behavior in VPLS, see the <i>Junos OS VPNs Library for Routing Devices</i> .
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 <i>Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance</i> . For information about flooding behavior in VPLS, see the <i>Junos OS VPNs Library for Routing Devices</i> .

- Related Documentation**
- [Layer 2 Port Mirroring Overview on page 3](#)
 - [Layer 2 Port Mirroring Firewall Filters](#)
 - [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
 - [Example: Layer 2 Port Mirroring at a Logical Interface](#)

Layer 2 Port Mirroring of PE Router or PE Switch 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 devices 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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN](#)

PART 2

Configuration

- [Configuration Tasks for Layer 2 Port Mirroring at Physical Interfaces on page 27](#)
- [Examples for Layer 2 Port Mirroring at Physical Interfaces on page 41](#)
- [Configuration Tasks for Layer 2 Port Mirroring at Logical Interfaces on page 47](#)
- [Examples for Layer 2 Port Mirroring at Logical Interfaces on page 59](#)
- [Configuration Tasks for Layer 2 Port Mirroring at Multiple Destinations on page 67](#)
- [Example of Layer 2 Port Mirroring at Multiple Destinations on page 75](#)
- [Example for Layer 2 Port Mirroring to a Remote VLAN on page 79](#)
- [Configuring Inline Port Mirroring on page 87](#)
- [Configuration Statements on page 89](#)

CHAPTER 5

Configuration Tasks for Layer 2 Port Mirroring at Physical Interfaces

- [Configuring the Global Instance of Layer 2 Port Mirroring on page 27](#)
- [Configuration Layer 2 Port Mirroring to a Remote VLAN on page 30](#)
- [Defining a Named Instance of Layer 2 Port Mirroring on page 32](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level on page 36](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level on page 38](#)
- [Disabling Layer 2 Port Mirroring Instances on page 39](#)

Configuring the Global Instance of Layer 2 Port Mirroring

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

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

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
```

The valid range is 0 through 9216. The default value is 0, which means the mirrored packets are not truncated.

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 **ethernet-switching**, **ccc**, or **vpls**.



NOTE: Under the [edit forwarding-options port-mirroring] hierarchy level, the protocol family statement family ethernet-switching 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 ethernet-switching. Use family ethernet-switching 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 or an EX Series switch 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 'ethernet-switching' 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**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Global Instance on page 5](#)
- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances](#)

Configuration Layer 2 Port Mirroring to a Remote VLAN

EX9200 switches enable you to configure mirroring to send copies of packets to either a local interface for local monitoring or to a VLAN for remote monitoring. You can use mirroring to copy the following packets:

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



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

- Disable port mirroring that you have configured when you are not using them.
- Specify individual interfaces as input rather than specifying all interfaces as input in a port mirroring configuration.
- Limit the amount of mirrored traffic by:
 - Using statistical sampling.
 - Setting ratios to select statistical samples.
 - Using firewall filters.

-
- [Configuring Port Mirroring to a Remote VLAN on page 30](#)

Configuring Port Mirroring to a Remote VLAN

To filter packets to be mirrored to a port-mirroring instance, create the instance and then use it as the action in the firewall filter. You can use firewall filters in both local and remote mirroring configurations.

If the same port-mirroring instance is used in multiple filters or terms, the packets are copied to the port-mirroring output port or port-mirroring VLAN only once.

To filter mirrored traffic, create a port-mirroring instance under the **[edit forwarding-options]** hierarchy level, and then create a firewall filter. The filter can use any of the available match conditions and must have **port-mirror-instance *instance-name*** as an action. This action in the firewall filter configuration provides the input to the port-mirroring instance.

To configure a port-mirroring instance with firewall filters:

1. Configure the port-mirroring instance name and set the output destination to a VLAN:

```
[edit forwarding-options]
user@switch# set port-mirroring instance instance-name output vlan (vlan-ID | vlan-name)
```

For example, configure a port-mirroring instance **employee-monitor** and set the output destination to a VLAN ID **999**:

```
[edit forwarding-options]
user@switch# set port-mirroring instance employee-monitor output vlan 999
```

2. Create a firewall filter by using any of the available match conditions and assign the port-mirroring instance name as an action in the firewall filter configuration.

```
[edit firewall family ethernet-switching]
user@switch set filter filter-name term term-name from match-condition
user@switch set filter filter-name term term-name then match-condition
user@switch# set filter filter-name term term-name then port-mirror-instance instance-name
```

For example, create a firewall filter called **example-filter** with two terms **no-analyzer** and **to-analyzer**, and assign the **to-analyzer** term to the **employee-monitor** port-mirroring instance:

- a. Create the first term to define the traffic that should not pass through to the port-mirroring instance **employee-monitor**:

```
[edit firewall family ethernet-switching]
user@switch# set filter (Firewall Filters) example-filter term no-analyzer from
source-address 192.0.2.14
[edit firewall family ethernet-switching]
user@switch# set filter example-filter term no-analyzer from protocol tcp
[edit firewall family ethernet-switching]
user@switch# set filter example-filter term no-analyzer then accept
```

- b. Create the second term to define the traffic that should pass through to the port-mirroring instance **employee-monitor**:

```
[edit firewall family ethernet-switching]
user@switch# set filter example-filter term to-analyzer from destination-port 80
[edit firewall family ethernet-switching]
user@switch# set filter example-filter term to-analyzer then port-mirror-instance
employee-monitor
[edit firewall family ethernet-switching]
user@switch# set filter example-filter term to-analyzer then accept
```

3. Apply the firewall filter to an interface or VLAN that provides input to the port-mirroring instance.

To apply a firewall filter to an interface:

```
[edit]
user@switch# set interfaces interface-name unit 0 family ethernet-switching filter (input |
output) filter-name
```

To apply a firewall filter to a VLAN:

```
[edit]
user@switch# set vlan (vlan-ID or vlan-name) filter (input | output) filter-name
```

For example, to apply the **example-filter** firewall filter to the **ge-0/0/1** interface:

```
[edit]
user@switch# set interfaces ge-0/0/1 unit 0 family ethernet-switching filter input
example-filter
```

For example, to apply the **example-filter** filter to the **source-vlan** VLAN:

```
[edit]
user@switch# set vlan source-vlan filter input example-filter
```

**Related
Documentation**

- [Example: Configuring Layer 2 Port Mirroring to Remote VLAN on page 79](#)
- [Layer 2 Port Mirroring to Remote Destination by Using Destination as VLAN on page 13](#)

Defining a Named Instance of Layer 2 Port Mirroring

On an MX Series router and on an EX Series switch, 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 or switch chassis) or to a group of Packet Forwarding Engines (at the DPC or FPC level of the chassis).

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

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
```

The valid range is 0 through 9216. The default value is 0, which means the mirrored packets are not truncated.



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 `ethernet-switching`, `ccc`, or `vpls`.



NOTE: Under the `[edit forwarding-options port-mirroring]` hierarchy level, the protocol family statement `family ethernet-switching` 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 ethernet-switching`. Use `family ethernet-switching` when the physical interface is configured with `encapsulation ethernet-bridge`.

Enable configuration of the mirror destination properties:

- b. [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 or an EX Series switch 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 'ethernet-switching' 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**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Named Instances](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level on page 36](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level on page 38](#)
- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances](#)

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*.
- 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. See *Displaying Information About DPCs or FPCs in an MX Series Router*.

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**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Named Instances](#)
- [Defining a Named Instance of Layer 2 Port Mirroring](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the PIC Level on page 38](#)
- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances](#)

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*.
- 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. See *Displaying Information About DPCs or FPCs in an MX Series Router*.

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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Named Instances](#)
- [Defining a Named Instance of Layer 2 Port Mirroring](#)
- [Binding Layer 2 Port Mirroring to Ports Grouped at the FPC Level on page 36](#)
- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances](#)

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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Global Instance on page 5](#)
- [Layer 2 Port Mirroring Named Instances](#)
- [Displaying Layer 2 Port-Mirroring Instance Settings and Status on page 105](#)

CHAPTER 6

Examples for Layer 2 Port Mirroring at Physical Interfaces

- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances on page 43](#)

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 41](#)
- [Layer 2 Port Mirroring at the PIC Level on page 42](#)
- [Layer 2 Port Mirroring at the FPC and PIC Levels on page 42](#)

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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Global Instance on page 5](#)
- *Layer 2 Port Mirroring Named Instances*
- *Configuring the Global Instance of Layer 2 Port Mirroring*
- *Defining a Named Instance of Layer 2 Port Mirroring*

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 43](#)
- [Explicit Reference of a Port Mirroring Instance on page 45](#)
- [Implicit Reference of Port Mirroring on the Underlying Physical Interface on page 46](#)

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 (or switch) 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 or an EX Series switch.

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

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

```

    }
  }
}

```



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

2. Apply the Layer 2 port mirroring instances to the same group of ports in the router (or switch) 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 VLAN 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 ethernet-switching {
    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 ethernet-switching {
        filter { # Explicitly references a named instance of port mirroring.
          input pm_filter_1;
        }
      }
    }
    unit 1 {
      vlan-id 202;
      family ethernet-switching {
        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 (or switch) chassis at FPC 2, PIC 0, the port mirroring properties specified in `pm_instance_1` remain in effect at logical interface `ge-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 (or switch) 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 (or switch) chassis at the **[edit chassis fpc 2 pic 0]** hierarchy level, which is the instance **pm_instance_1**.

Related Documentation

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Named Instances](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Defining a Named Instance of Layer 2 Port Mirroring](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)

CHAPTER 7

Configuration Tasks for Layer 2 Port Mirroring at Logical Interfaces

- [Defining a Layer 2 Port-Mirroring Firewall Filter on page 47](#)
- [Applying Layer 2 Port Mirroring to a Logical Interface on page 51](#)
- [Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VLAN on page 54](#)
- [Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance on page 56](#)

Defining a Layer 2 Port-Mirroring Firewall Filter

For virtual private LAN service (VPLS) traffic (**family ethernet-switching** 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 VLAN.
- 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 and on an EX Series switch, see *Application of Layer 2 Port Mirroring Types*.

For information about configuring firewall filters in general (including in a Layer 3 environment), see *Stateless Firewall Filter Overview* and *How Firewall Filters Evaluate Packets* in the *Junos OS Firewall Filters and Traffic Policers Library for Routing Devices*.

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 VLAN, 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 **ethernet-switching**, **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 *Junos OS Firewall Filters and Traffic Policers Library for Routing Devices*.

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 *Junos OS Firewall Filters and Traffic Policers Library for Routing Devices*.

- For detailed information about Layer 2 bridging firewall filter match conditions (which are supported on MX Series routers and EX Series switches 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 (ethernet-switching | ccc | 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**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 12](#)
- [Example: Layer 2 Port Mirroring at a Logical Interface](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links](#)
- [Example: Layer 2 Port Mirroring to Multiple Destinations](#)

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*.



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-ethernet-switching
```

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 **ethernet-switching**, **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 or switch 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-ethernet-switching;
    unit number { # Apply a filter to the input of this interface
      vlan-id number;
      family (ethernet-switching | 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 (ethernet-switching | ccc | vpls) {
        filter {
          output pm-filter-for-logical-interface-output;
        }
      }
    }
  }
}
```

```
}  
}  
}
```

**Related
Documentation**

- [Layer 2 Port Mirroring Overview on page 3](#)
- *Layer 2 Port Mirroring Firewall Filters*
- *Defining a Layer 2 Port-Mirroring Firewall Filter*
- *Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain*
- *Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance*
- *Example: Layer 2 Port Mirroring at a Logical Interface*
- *Example: Layer 2 Port Mirroring for a Layer 2 VPN*
- *Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links*

Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VLAN

You can apply a Layer 2 port-mirroring firewall filter to traffic being forwarded or flooded to a VLAN. Only packets of the specified family type and forwarded or flooded to that VLAN 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 VLAN or flooded to a VLAN. For details, see *Defining a Layer 2 Port-Mirroring Firewall Filter*.



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

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

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

- For a VLAN:

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

- For a VLAN 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 VLAN:

```
[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 VLAN:

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

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

- To mirror packets being forwarded to the VLAN:

```
[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 VLAN:

```
[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 VLAN.

- a. Navigate to the hierarchy level at which the VLAN is configured:

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

- b. Display the VLAN configurations:

```
user@host# show vlans
```

```
vlans {
  vlan-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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Applying Layer 2 Port Mirroring to a Logical Interface](#)
- [Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance](#)
- [Example: Layer 2 Port Mirroring at a Logical Interface](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links](#)

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 VLAN. For details, see *Defining a Layer 2 Port-Mirroring Firewall Filter*.



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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Applying Layer 2 Port Mirroring to a Logical Interface](#)
- [Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain](#)
- [Example: Layer 2 Port Mirroring at a Logical Interface](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links](#)

CHAPTER 8

Examples for Layer 2 Port Mirroring at Logical Interfaces

- [Example: Layer 2 Port Mirroring at a Logical Interface on page 59](#)
- [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 64](#)

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 VLAN **example-bd-with-analyzer**, which contains the external packet analyzer, and the VLAN **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 VLAN interface associated with the external analyzer (logical interface **ge-2/0/0.0** on VLAN **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 ethernet-switching {
    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 ethernet-switching]** 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 ethernet-switching {
    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 ethernet-switching;
    }
}
ge-2/0/6 { # Define the traffic input port
    flexible-vlan-tagging;
    encapsulation extended-vlan-bridge;
    unit 0 {
        vlan-id 100;
        family ethernet-switching {
            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 ethernet-switching;
    }
}
}

```

Packets received at logical interface **ge-2/0/6.0** on VLAN **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 VLAN, **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**
- [Layer 2 Port Mirroring Overview on page 3](#)
 - [Layer 2 Port Mirroring Firewall Filters](#)
 - [Defining a Layer 2 Port-Mirroring Firewall Filter](#)

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 VLAN **port-mirror-bd**, which contains the external packet analyzer:

```
[edit]
vpls {
  port-mirror-vlan { # 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 VLAN interface associated with the external analyzer (logical interface **ge-2/2/9.0** on VLAN **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 ethernet-switching;
    }
  }
  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**

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)

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 VLAN **port_mirror_bd**, which contains the external packet analyzer:

```
[edit]  
vllans {  
  port_mirror_vllan { # 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 VLAN interface associated with the external analyzer (logical interface **ge-2/2/9.0** on VLAN **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 ethernet-switching;
    }
}
}
```

- Related Documentation**
- [Layer 2 Port Mirroring Overview on page 3](#)
 - *Layer 2 Port Mirroring Firewall Filters*
 - *Defining a Layer 2 Port-Mirroring Firewall Filter*

CHAPTER 9

Configuration Tasks for Layer 2 Port Mirroring at Multiple Destinations

- [Defining a Layer 2 Port-Mirroring Firewall Filter on page 67](#)
- [Defining a Next-Hop Group for Layer 2 Port Mirroring on page 70](#)
- [Applying Layer 2 Port Mirroring to a Logical Interface on page 72](#)

Defining a Layer 2 Port-Mirroring Firewall Filter

For virtual private LAN service (VPLS) traffic (**family ethernet-switching** 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 VLAN.
- 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 and on an EX Series switch, see *Application of Layer 2 Port Mirroring Types*.

For information about configuring firewall filters in general (including in a Layer 3 environment), see *Stateless Firewall Filter Overview* and *How Firewall Filters Evaluate Packets* in the *Junos OS Firewall Filters and Traffic Policers Library for Routing Devices*.

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 VLAN, 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 **ethernet-switching**, **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 *Junos OS Firewall Filters and Traffic Policers Library for Routing Devices*.

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 *Junos OS Firewall Filters and Traffic Policers Library for Routing Devices*.

- For detailed information about Layer 2 bridging firewall filter match conditions (which are supported on MX Series routers and EX Series switches 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 (ethernet-switching | ccc | 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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Firewall Filters](#)
- [Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 12](#)
- [Example: Layer 2 Port Mirroring at a Logical Interface](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN](#)
- [Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links](#)
- [Example: Layer 2 Port Mirroring to Multiple Destinations](#)

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*.

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) r:

```
[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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 12](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Displaying Next-Hop Group Settings and Status on page 105](#)
- [Example: Layer 2 Port Mirroring to Multiple Destinations](#)

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*.



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:

- Configure the underlying physical interface for the logical interface.

- 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.

- 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
```

- 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-ethernet-switching
```

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

- 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 **ethernet-switching**, **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 or switch 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-ethernet-switching;
    unit number { # Apply a filter to the input of this interface
      vlan-id number;
      family (ethernet-switching | 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 (ethernet-switching | ccc | vpls) {
        filter {
          output pm-filter-for-logical-interface-output;
        }
      }
    }
  }
}
```

```
}  
}  
}
```

**Related
Documentation**

- [Layer 2 Port Mirroring Overview on page 3](#)
- *Layer 2 Port Mirroring Firewall Filters*
- *Defining a Layer 2 Port-Mirroring Firewall Filter*
- *Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain*
- *Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance*
- *Example: Layer 2 Port Mirroring at a Logical Interface*
- *Example: Layer 2 Port Mirroring for a Layer 2 VPN*
- *Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links*

CHAPTER 10

Example of Layer 2 Port Mirroring at Multiple Destinations

- [Example: Layer 2 Port Mirroring to Multiple Destinations on page 75](#)

Example: Layer 2 Port Mirroring to Multiple Destinations

On MX Series routers and EX Series switches, 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 VLANs and one Layer 2 VPN CCC:

- VLAN **bd** will span logical interfaces **ge-2/0/1.0** and **ge-2/0/1.1**.
- VLAN **bd_next_hop_group** will span logical interfaces **ge-2/2/9.0** and **ge-2/0/2.0**.
- VLAN **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 ethernet-switching {
            filter {
                input pm_bridge;
            }
        }
    }
    unit 1 { # An interface on bridge domain 'bd'.
        encapsulation vlan-bridge;
        vlan-id 201;
        family ethernet-switching {
            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 ethernet-switching;
    }
}
lt-2/0/10 {
    unit 1 {
        encapsulation ethernet-ccc;
        peer-unit 2;
    }
    unit 2 {
        encapsulation ethernet-bridge;
        peer-unit 1;
        family ethernet-switching {
            filter {
                output redirect_to_nhg;
            }
        }
    }
}
ge-2/2/9 {
    encapsulation ethernet-bridge;
    unit 0 { # For 'bd_next_hop_group'
        family ethernet-switching;
    }
}
}
```

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

- VLAN **bd** spans logical interfaces **ge-2/0/1.0** and **ge-2/0/1.1**.
- VLAN **bd_next_hop_group** spans logical interfaces **ge-2/2/9.0** and **ge-2/0/2.0**.
- VLAN **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]
vpls {
  vlans {
    vlans {
      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 VLAN **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

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 12](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Defining a Next-Hop Group for Layer 2 Port Mirroring on page 70](#)
- [Displaying Next-Hop Group Settings and Status on page 105](#)

Example for Layer 2 Port Mirroring to a Remote VLAN

- [Example: Configuring Layer 2 Port Mirroring to Remote VLAN on page 79](#)

Example: Configuring Layer 2 Port Mirroring to Remote VLAN

EX9200 switches enable you to configure mirroring to send copies of packets to either a local interface for local monitoring or to a VLAN for remote monitoring. You can use mirroring to copy these packets:

- Packets entering or exiting a port
- Packets entering or existing a VLAN

You can analyze the mirrored traffic by using a protocol analyzer application running on a remote monitoring station if you are sending mirrored traffic to an analyzer VLAN.

This topic includes two related examples that describe how to mirror traffic entering ports on the switch to the **remote-analyzer** VLAN so that you can perform analysis from a remote monitoring station. The first example shows how to mirror all traffic entering the ports connected to employee computers. The second example shows the same scenario but includes a filter to mirror only the employee traffic going to the Web.



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

- 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 firewall filters.

This example describes how to configure remote mirroring:

- [Requirements on page 80](#)
- [Overview and Topology on page 80](#)

- [Mirroring Employee-to-Web Traffic for Remote Analysis on page 81](#)
- [Verification on page 84](#)

Requirements

This example uses the following hardware and software components:

- An EX9200 switch connected to another EX9200 switch
- Junos OS Release 13.2X50-D10 or later for EX Series switches

Before you configure remote mirroring, be sure that:

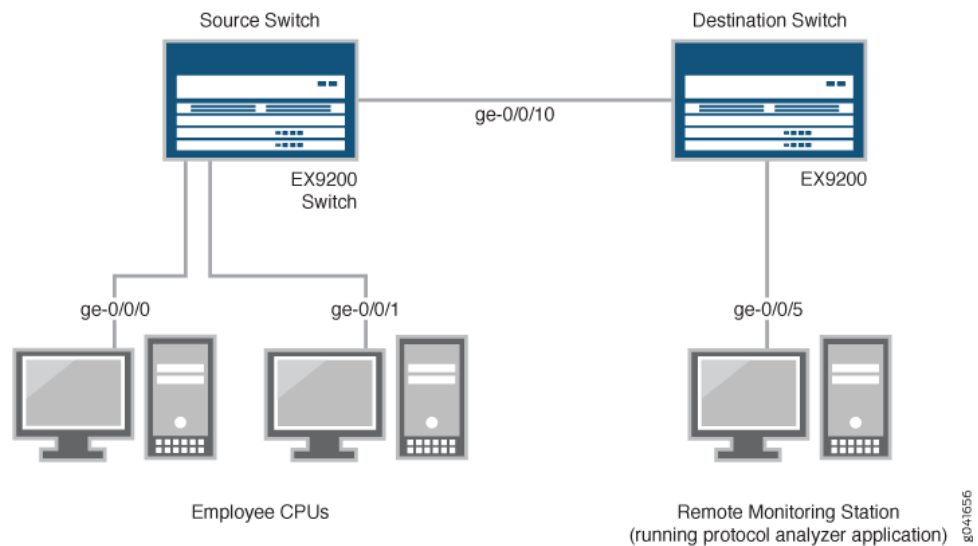
- You have an understanding of mirroring concepts.
- The interfaces that port-mirroring will use as output interfaces have been configured on the switch.

Overview and Topology

This topic includes two related examples that describe how to configure mirroring to the **remote-analyzer** VLAN so that analysis can be performed from a remote monitoring station. The first example shows how to configure a switch to mirror all traffic from employee computers. The second example shows the same scenario, but the setup includes a filter to mirror only the employee traffic going to the Web.

[Figure 1 on page 80](#) shows the network topology for both these example scenarios.

Figure 1: Remote Mirroring Network Topology Example



In this example:

- a. Interface ge-0/0/0 is a Layer 2 interface, and interface ge-0/0/1 is a Layer 2 interface (both interfaces on the source switch) that serve as connections for employee computers.
- b. Interface ge-0/0/10 is a Layer 2 interface that connects the source switch to the destination switch.
- c. Interface ge-0/0/5 is a Layer 2 interface that connects the destination switch to the remote monitoring station.
- d. VLAN **remote-analyzer** is configured on all switches in the topology to carry the mirrored traffic.

Mirroring Employee-to-Web Traffic for Remote Analysis

To configure port mirroring for remote traffic analysis of employee-to-Web traffic, perform these tasks:

CLI Quick Configuration

To quickly configure port-mirroring to mirror employee traffic to the external Web, copy the following commands and paste them into the switch terminal window:

- Copy and paste the following commands in the source switch terminal window:


```
[edit]
set forwarding-options port-mirroring instance employee-web-monitor output vlan 999
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 firewall family ethernet-switching filter watch-employee term employee-to-corp from
destination-address 192.0.2.16/28
set firewall family ethernet-switching filter watch-employee term employee-to-corp from
source-address 192.0.2.16/28
set firewall family ethernet-switching filter watch-employee term employee-to-corp then
accept
set firewall family ethernet-switching filter watch-employee term employee-to-web from
destination-port 80
set firewall family ethernet-switching filter watch-employee term employee-to-web then
port-mirror-instance employee-web-monitor
set interfaces ge-0/0/0 unit 0 family ethernet-switching filter input watch-employee
set interfaces ge-0/0/1 unit 0 family ethernet-switching filter input watch-employee
```
- Copy and paste the following commands in the destination switch terminal window:


```
[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 interfaces ge-0/0/5 unit 0 family ethernet-switching vlan members 999
```

Step-by-Step Procedure

To configure port mirroring of all traffic from the two ports connected to employee computers to the **remote-analyzer** VLAN for use from a remote monitoring station:

1. On the source switch:
 - a. Configure the **employee-web-monitor** port-mirroring instance:

```
[edit ]
user@switch# set interfaces ge-0/0/10 unit 0 family ethernet-switching port mode
access
user@switch# set forwarding-options port-mirroring instance employee-web-monitor
output vlan 999
```

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

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

- c. Configure the interface to associate it with the **remote-analyzer** VLAN:

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

- d. Configure the firewall filter called **watch-employee**:

```
[edit firewall family ethernet-switching]
user@switch# set filter watch-employee term employee-to-corp from
destination-address 192.0.2.16/28
user@switch# set filter watch-employee term employee-to-corp from source-address
192.0.2.16/28
user@switch# set filter watch-employee term employee-to-corp then accept
user@switch# set filter watch-employee term employee-to-web from destination-port
80
user@switch# set filter watch-employee term employee-to-web then
port-mirror-instance employee-web-monitor
```

In this configuration, the **employee-to-corp** term defines that traffic from destination-address **192.0.2.16/28** and source address **192.0.2.16/28** can be accepted to pass through the switch, and the **employee-to-web** term defines that traffic from port **80** must be sent to the port-mirroring instance **employee-web-monitor**.

- e. Apply the firewall filter to the employee interfaces:

```
[edit interfaces]
user@switch# set ge-0/0/0 unit 0 family ethernet-switching filter input watch-employee
user@switch# set ge-0/0/1 unit 0 family ethernet-switching filter input watch-employee
```

2. On the destination switch:

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

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

- Configure the interface on the destination switch for access mode and associate it with the **remote-analyzer** VLAN:

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

- Configure the interface connected to the destination switch for access mode and associate it with the **remote-analyzer** VLAN:

```
[edit interfaces]
user@switch# set ge-0/0/5 unit 0 family ethernet-switching interface-mode access
user@switch# set ge-0/0/5 unit 0 family ethernet-switching vlan members 999
```

Results Check the results of the configuration on the source switch:

[edit]

```
user@switch> show
interfaces {
  ge-0/0/10 {
    unit 0 {
      family ethernet-switching {
        interface-mode access;
        vlan {
          members remote-analyzer;
        }
      }
    }
  }
  ge-0/0/0 {
    unit 0 {
      family ethernet-switching {
        filter {
          input watch-employee;
        }
      }
    }
  }
  ge-0/0/1 {
    unit 0 {
      family ethernet-switching {
        filter {
          input watch-employee;
        }
      }
    }
  }
}
firewall {
  family ethernet-switching {
    filter watch-employee {
      term employee-to-corp {
        from {
          source-address {
            192.0.2.16/28;
          }
          destination-address {
            192.0.2.16/28;
          }
        }
        then accept;
      }
      term employee-to-web {
        from {
          destination-port 80;
        }
        then port-mirror-instance employee-web-monitor;
      }
    }
  }
}
forwarding-options {
  analyzer employee-web-monitor {
```

```
        output {
            vlan {
                999;
            }
        }
    }
    vlans {
        remote-analyzer {
            vlan-id 999;
        }
    }
}
```

Check the results of the configuration on the destination switch:

```
[edit]
user@switch> show
vlans {
    remote-analyzer {
        vlan-id 999;
    }
}
interfaces {
    ge-0/0/10 {
        unit 0 {
            family ethernet-switching {
                interface-mode access;
                vlan {
                    members remote-analyzer;
                }
            }
        }
    }
    ge-0/0/5 {
        unit 0 {
            family ethernet-switching {
                interface-mode access;
                vlan {
                    members remote-analyzer;
                }
            }
        }
    }
}
```

Verification

To confirm that the configuration is working properly, perform these tasks:

- [Verifying That the Port-Mirroring Instance Has Been Correctly Created on page 84](#)

Verifying That the Port-Mirroring Instance Has Been Correctly Created

Purpose Verify that the port-mirror instance **employee-web-monitor** has been created on the switch with the appropriate output VLAN.

Action You can verify that the port-mirror is configured as expected by using the **show forwarding-options port-mirror** command. To view previously created analyzers that are disabled, go to the J-Web interface.

To verify that the port-mirror is configured as expected while monitoring employee traffic on the source switch, run the **show forwarding-options port-mirror** command on the source switch. The following output is displayed for this configuration example:

```
user@switch> show forwarding-options port-mirror
```

```
Instance Name: employee-web-monitor
Instance Id: 3
Input parameters:
  Rate           : 1
  Run-length     : 0
  Maximum-packet-length : 0
Output parameters:
  Family      State      Destination      Next-hop
  ethernet-switching up      default-switch/remote-analyzer
```

Meaning This output shows that the **employee-web-monitor** instance has a ratio of 1 (mirroring every packet, which is the default), the maximum size of the original packet that was mirrored (0 indicates the entire packet), the state of the configuration is up (which indicates the proper state and that the analyzer is programmed, is mirroring the traffic entering ge-0/0/0 and ge-0/0/1, and is sending the mirrored traffic to the VLAN called **remote-analyzer**).

Related Documentation

- [Layer 2 Port Mirroring to Remote Destination by Using Destination as VLAN on page 13](#)

Configuring Inline Port Mirroring

- [Configuring Inline Port Mirroring on page 87](#)

Configuring Inline Port Mirroring

Inline port mirroring provides you with the ability to specify instances that are not bound to the flexible PIC concentrator (FPC) in the firewall filter's **then port-mirror-instance** action. This way, you are not limited to only two port-mirror instances per FPC. Inline port mirroring decouples the port-mirror destination from the input parameters like **rate**. While the input parameters are programmed in the switch interface board, the next-hop destination of the mirrored packet is available in the packet itself. Inline port mirroring is supported only on Trio-based modular port concentrators (MPCs).

Using inline port mirroring, a port-mirror instance will have an option to inherit input parameters from another instance that specifies it, as shown in the following CLI configuration example:

```
instance pm2 {
  + input-parameters-instance pm1;
  family inet {
    output {
      interface ge-1/2/3.0 {
        next-hop 50.0.0.3;
      }
    }
  }
}
```

Multiple levels of inheritance are not allowed. One instance can be referred by multiple instances. An instance can refer to another instance that is defined before it. Forward references are not allowed and an instance cannot refer to itself, doing so will cause an error during configuration parsing.

The user can specify an instance that is not bound to the FPC in the firewall filter. The specified filter should inherit one of the two instances that have been bound to the FPC. If it does not, the packet is not marked for port-mirroring. If it does, then the packet will be sampled using the input parameters specified by the referred instance but the copy will be sent to the its own destination.

**Related
Documentation**

- [Layer 2 Port Mirroring Overview on page 3](#)
- *Defining a Layer 2 Port-Mirroring Firewall Filter*
- *Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain*
- *Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance*
- *Example: Layer 2 Port Mirroring at a Logical Interface*
- *Example: Layer 2 Port Mirroring for a Layer 2 VPN*
- *Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links*

CHAPTER 13

Configuration Statements

- [\[edit forwarding-options port-mirroring\] Hierarchy Level on page 89](#)
- [disable \(Forwarding Options\) on page 91](#)
- [disable-all-instances on page 91](#)
- [forwarding-options on page 92](#)
- [family \(Port Mirroring\) on page 93](#)
- [input \(Port Mirroring\) on page 94](#)
- [instance on page 95](#)
- [interface \(Port Mirroring\) on page 96](#)
- [interface \(Next-Hop Group\) on page 96](#)
- [maximum-packet-length on page 97](#)
- [mirror-once on page 98](#)
- [next-hop-group \(Port Mirroring\) on page 98](#)
- [no-filter-check on page 99](#)
- [no-tag on page 99](#)
- [output \(Port Mirroring\) on page 100](#)
- [rate \(Forwarding Options\) on page 100](#)
- [run-length on page 101](#)
- [vlan \(Port Mirroring\) on page 102](#)

[\[edit forwarding-options port-mirroring\] Hierarchy Level](#)

```
forwarding-options {  
  port-mirroring {  
    disable;  
    disable-all-instances;  
    family (ccc | ethernet-switching | inet | inet6 | vpls) {  
      output {  
        (interface interface-name | next-hop-group group-name);  
        no-filter-check;  
        routing-instance instance-name;  
        vlan (vlan-name | vlan-id) <no-tag>;  
      }  
    }  
  }  
}
```

```
family ccc {
  output {
    interface interface-name
    next-hop-group group-name;
    no-filter-check;
  }
}
family ethernet-switching {
  output {
    interface interface-name
    next-hop-group group-name;
    no-filter-check;
  }
}
family inet {
  output {
    interface interface-name {
      next-hop ipv4-address;
    }
    next-hop-group group-name;
    no-filter-check;
  }
}
family inet6 {
  output {
    interface interface-name {
      next-hop ipv6-address;
    }
    no-filter-check;
  }
}
family vpls {
  output {
    interface interface-name
    next-hop-group group-name;
    no-filter-check;
  }
}
input {
  maximum-packet-length bytes;
  rate rate;
}
instance instance-name {
  disable;
  family family-name {
    ... same statements as at the [edit forwarding-options port-mirroring family (ccc |
    inet | inet6 | vpls)] hierarchy levels ...
  }
  input {
    ... same statements as at the [edit forwarding-options port-mirroring input] hierarchy
    level ...
  }
}
mirror-once;
traceoptions {
```

```

        file <filename> <files number> <match regular-expression> <size maximum-file-size>
          <world-readable | no-world-readable>;
        no-remote-trace;
      }
    }
  }

```

- Related Documentation**
- *Notational Conventions Used in Junos OS Configuration Hierarchies*
 - *[edit forwarding-options] Hierarchy Level*

disable (Forwarding Options)

Syntax	disable;
Hierarchy Level	[edit forwarding-options port-mirror], [edit forwarding-options port-mirror instance <i>instance-name</i>], [edit forwarding-options sampling], [edit forwarding-options sampling instance <i>instance-name</i>], [edit forwarding-options sampling family (inet inet6 mpls)], [edit forwarding-options sampling family (inet inet6 mpls) output file]
Release Information	Statement introduced before Junos OS Release 7.4. Statement added to port-mirror hierarchy in Junos OS Release 9.6.
Description	Disable traffic accounting, port mirroring, or sampling.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"> • <i>Configuring Traffic Sampling</i> • <i>Configuring Port Mirroring</i>

disable-all-instances

Syntax	disable-all-instances;
Hierarchy Level	[edit forwarding-options port-mirror]
Release Information	Statement introduced in Junos OS Release 9.6.
Description	Disable all port mirroring instances globally.
Usage Guidelines	See <i>Configuring Port Mirroring</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

forwarding-options

```
Syntax forwarding-options {
    dhcp-security {
        arp-inspection;
        group group-name {
            interface interface-name {
                static-ip ip-address {
                    mac mac-address;
                }
            }
        }
        overrides {
            no-option82;
            (trusted | untrusted);
        }
    }
    ip-source-guard;
    no-dhcp-snooping;
    option-82 {
        circuit-id {
            prefix {
                host-name;
                logical-system-name;
                routing-instance-name;
            }
            use-interface-description (device | logical);
            use-vlan-id;
        }
        remote-id {
            host-name hostname;
            use-interface-description (device | logical);
            use-string string;
        }
        vendor-id {
            use-string string;
        }
    }
}
```

Hierarchy Level (All Devices) [edit]

Hierarchy Level (MX Series) [edit bridge-domains *bridge-domain-name*]

Release Information Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 11.3 for QFX Series switches.
Hierarchy level [edit bridge-domains *bridge-domain-name*] introduced in Junos OS Release 14.1 for MX Series routers.

Description Configure traffic forwarding.

The statements are explained separately.

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

Related Documentation

- *Configuring Traffic Forwarding and Monitoring*
- *[edit forwarding-options] Hierarchy Level*

family (Port Mirroring)

Syntax

```
family (inet | inet6) {
    output {
        interface interface-name {
            next-hop address;
        }
        no-filter-check;
    }
}
```

Hierarchy Level [edit forwarding-options port-mirroring]

Release Information Statement introduced before Junos OS Release 7.4.

Description Configure the protocol family to be sampled. Only IPv4 (**inet**) and IPv6 (**inet6**) are supported.

The statements are explained separately.

Usage Guidelines See *Configuring Port Mirroring*.

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

input (Port Mirroring)

Syntax	<pre>input { maximum-packet-length <i>bytes</i> rate <i>number</i>; run-length <i>number</i>; }</pre>
Hierarchy Level	[edit forwarding-options port-mirroring], [edit forwarding-options port-mirroring instance <i>instance-name</i>] [edit forwarding-options port-mirroring family (inet inet6)]
Release Information	Statement introduced before Junos OS Release 7.4.
Description	Configure port mirroring on a logical interface. The statements are explained separately.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Port Mirroring</i>

instance

Syntax	<pre> instance { instance-name { input { maximum-packet-length bytes; rate number; run-length number; } family (ccc inet inet6 mpls vpls) { output { interface interface-name { next-hop address; } no-filter-check; server-profile server-profile-name; } } } } </pre>
Hierarchy Level	<p>[edit forwarding-options port-mirroring],</p> <p>[edit routing-instances <i>routing-instance-name</i> forwarding-options port-mirroring]</p>
Release Information	<p>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.</p> <p>maximum-packet-length and ccc options introduced in Junos OS Release 9.6 for M120 and M320 routers only.</p> <p>server-profile option introduced in Junos OS Release 13.2 for PTX Series Packet Transport Routers only.</p>
Description	Configure a port-mirroring instance.
Options	<p>port-mirroring-instance-name—Name of the port-mirroring instance.</p> <p>The remaining statements are explained separately.</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control-level—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> Configuring Port Mirroring Configuring Active Flow Monitoring on PTX Series Packet Transport Routers

interface (Port Mirroring)

Syntax	<code>interface <i>interface-name</i> { next-hop <i>address</i>; }</code>
Hierarchy Level	[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	<i>interface-name</i> —Name of the interface. The remaining statements are explained separately.
Usage Guidelines	See <i>Configuring Port Mirroring</i> .
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

interface (Next-Hop Group)

Syntax	<code>interface <i>interface-name</i> { next-hop <i>address</i>; }</code>
Hierarchy Level	[edit forwarding-options next-hop-group <i>group-name</i>]
Release Information	Statement introduced before Junos OS Release 7.4.
Description	Specify the output interface for sending copies of packets elsewhere to be analyzed. The commit operation fails when a next-hop group has only one interface configured. It is implicitly assumed that a subgroup is up only if more than one interface in the subgroup is up.
Options	<i>interface-name</i> —Name of the interface. The remaining statements are explained separately.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Next-Hop Groups</i>

maximum-packet-length

Syntax	<code>maximum-packet-length bytes;</code>
Hierarchy Level	[edit forwarding-options port-mirroring input], [edit forwarding-options port-mirroring instance <i>instance-name</i> input], [edit forwarding-options sampling input], [edit forwarding-options sampling instance <i>instance-name</i> 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.
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 on MX80 routers.



NOTE: For MX-Series devices 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 would be effective only for the first member interface of the next-hop-group. The mirrored packet copy sent to the rest of the interfaces would not be clipped.

Options	<p><i>bytes</i>—Maximum length (in bytes) of the mirrored packet or the sampled packet.</p> <p>Range: 0 through 9216</p> <p>Default: 0</p> <p>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 <code>maximum-packet-length</code> value of zero represents that truncation is disabled, and the entire packet is mirrored or sampled.</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • Configuring Port Mirroring • Configuring Traffic Sampling

mirror-once

Syntax	mirror-once;
Hierarchy Level	[edit forwarding-options port-mirroring]
Release Information	Statement introduced in Junos OS Release 9.3 (MX Series routers only). Support extended to M120 routers in Junos OS Release 9.5. Statement introduced in Junos OS Release 12.1X48 for PTX Packet Transport Routers.
Description	Configure the router to mirror packets only once. This feature is useful if you configure port mirroring on both ingress and egress interfaces, which could result in the same packet being mirrored twice.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Port Mirroring</i>

next-hop-group (Port Mirroring)

Syntax	next-hop-group <i>group-name</i> ;
Hierarchy Level	[edit forwarding-options port-mirroring family (inet vpls) output], [edit forwarding-options port-mirroring instance <i>instance-name</i> family (inet vpls) output]
Release Information	Statement introduced in Junos OS Release 9.6.
Description	<p>Specify the next-hop address for sending copies of packets to an analyzer. This configuration enables multipacket port mirroring on MX Series routers and EX Series switches without the use of a Tunnel PIC.</p> <p>The commit operation fails when a next-hop group has only one interface configured. It is implicitly assumed that a subgroup is up only if more than one interface in the subgroup is up.</p>
Options	<i>group-name</i> —Name of next-hop group.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Port Mirroring with Next-Hop Groups</i>

no-filter-check

Syntax	no-filter-check;
Hierarchy Level	[edit forwarding-options port-mirroring family (inet inet6) output]
Release Information	Statement introduced before Junos OS Release 7.4.
Description	<p>Disable filter checking on the port-mirroring interface.</p> <p>This statement is required when you send port-mirrored traffic to a Tunnel PIC that has a filter applied to it.</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Configuring Port Mirroring</i>

no-tag

Syntax	no-tag;
Hierarchy Level	<p>[edit ethernet-switching-options analyzer <i>name</i> output vlan (vlan-id vlan-name)]</p> <p>[edit forwarding-options port-mirroring family ethernet-switching output vlan (vlan-name vlan-id)]</p> <p>[edit forwarding-options port-mirroring instance instance-name family ethernet-switching output vlan (vlan-name vlan-id)]</p>
Release Information	<p>Statement introduced in Junos OS Release 11.3 for EX Series switches.</p> <p>Hierarchy [edit forwarding-options port-mirroring family ethernet-switching output vlan] introduced in Junos OS Release 13.2.</p> <p>Hierarchy [edit forwarding-options port-mirroring instance instance-name family ethernet-switching output vlan] introduced in Junos OS Release 13.2.</p>
Description	Specify that remote port-mirroring packets are not tagged.
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Example: Configuring AnalyzersPort Mirroring to Multiple Interfaces for Remote Monitoring of Employee Resource Use on EX Series Switches</i> • <i>Example: Configuring Port Mirroring for Local Monitoring of Employee Resource Use on EX Series Switches</i> • <i>Example: Configuring Port Mirroring for Remote Monitoring of Employee Resource Use on EX Series Switches</i>

output (Port Mirroring)

Syntax	<pre>output { interface <i>interface-name</i> { next-hop <i>address</i>; } no-filter-check; }</pre>
Hierarchy Level	[edit forwarding-options port-mirroring family (inet inet6)]
Release Information	Statement introduced before Junos OS Release 7.4.
Description	Configure output interfaces and flow properties. The statements are explained separately.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Port Mirroring</i>

rate (Forwarding Options)

Syntax	<pre>rate <i>number</i>;</pre>
Hierarchy Level	[edit forwarding-options port-mirroring input], [edit forwarding-options sampling input], [edit forwarding-options sampling instance <i>instance-name</i> input], [edit forwarding-options port-mirroring family (inet inet6) 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.
Description	Set a 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.
Options	number —Denominator of the ratio. Range: 1 through 65,535
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Port Mirroring</i>• <i>Configuring Traffic Sampling</i>

run-length

Syntax	<code>run-length <i>number</i>;</code>
Hierarchy Level	<p>[edit forwarding-options port-mirroring input], [edit forwarding-options port-mirroring instance <i>port-mirroring-instance-name</i> input], [edit forwarding-options port-mirroring family (inet inet6) input], [edit forwarding-options sampling input], [edit forwarding-options sampling instance <i>instance-name</i> input]</p>
Release Information	<p>Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.</p>
Description	Set the number of samples following the initial trigger event. The configuration enables you to sample packets following those already being sampled.
Options	<p><i>number</i>—Number of samples. Range: 0 through 20 Default: 0</p>
Required Privilege Level	<p>interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Applying Filters to Forwarding Tables</i> • <i>Configuring Port Mirroring</i> • <i>Configuring Traffic Sampling</i>

vlan (Port Mirroring)

Syntax	<code>vlan (vlan-name vlan-ID);</code>
Hierarchy Level	[edit forwarding-options port-mirroring family ethernet-switching output] [edit forwarding-options port-mirroring instance instance-name family ethernet-switching output]
Release Information	Statement introduced in Junos OS Release 13.2.
Description	Specify the VLAN name or ID for sending copies of packets to an analyzer. This configuration enables remote VLAN port mirroring on EX Series switches.
Options	vlan-name —Name of remote mirroring VLAN. vlan-ID —ID of the remote mirroring VLAN.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• Example: Configuring Layer 2 Port Mirroring to Remote VLAN on page 79• Layer 2 Port Mirroring to Remote Destination by Using Destination as VLAN on page 13

PART 3

Administration

- [Displaying Information on page 105](#)
- [Operational Mode Commands for Packet Forwarding Engine Components on page 107](#)
- [Operational Mode Commands for Layer 2 Port-Mirroring Instances on page 321](#)
- [Operational Mode Commands for Firewall Filter Statistics and Logs on page 325](#)
- [Operational Mode Commands for Next-Hop Groups for Layer 2 Port Mirroring on page 339](#)

Displaying Information

- [Displaying Layer 2 Port-Mirroring Instance Settings and Status on page 105](#)
- [Displaying Next-Hop Group Settings and Status on page 105](#)

Displaying Layer 2 Port-Mirroring Instance Settings and Status

To display the current state of port-mirroring instances, use the **show forwarding-options port-mirroring** `<terse | detail> <instance-name>` operational command.

For more information about displaying port mirroring instance settings and status, see the *Junos OS Administration Library for Routing Devices*.

Related Documentation

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring Global Instance on page 5](#)
- [Layer 2 Port Mirroring Named Instances](#)
- [Configuring the Global Instance of Layer 2 Port Mirroring](#)
- [Defining a Named Instance of Layer 2 Port Mirroring](#)
- [Disabling Layer 2 Port Mirroring Instances on page 39](#)
- [Examples: Layer 2 Port-Mirroring at Multiple Levels of the Chassis on page 41](#)
- [Example: Layer 2 Port Mirroring with Multiple Instances](#)

Displaying Next-Hop Group Settings and Status

To display the current state of next-hop groups, use the **show forwarding-options next-hop-group** `<terse | brief | detail> <group-name>` operational command.

For more information, see the [CLI Explorer](#).

Related Documentation

- [Layer 2 Port Mirroring Overview on page 3](#)
- [Layer 2 Port Mirroring to Multiple Destinations Using Next-Hop Groups on page 12](#)
- [Defining a Layer 2 Port-Mirroring Firewall Filter](#)
- [Defining a Next-Hop Group for Layer 2 Port Mirroring on page 70](#)

- *Example: Layer 2 Port Mirroring to Multiple Destinations*

CHAPTER 15

Operational Mode Commands for Packet Forwarding Engine Components

- `show chassis fabric fpcs`
- `show chassis fpc`
- `show chassis hardware`
- `show chassis pic`

show chassis fabric fpcs

List of Syntax	Syntax on page 108 Syntax (MX Series Routers) on page 108 Syntax (MX2010 and MX2020 3D Universal Edge Routers) on page 108 Syntax (T4000 Core Router) on page 108 Syntax (PTX Series Packet Transport Routers) on page 108 Syntax (TX Matrix Plus Router) on page 108
Syntax	show chassis fabric fpcs <fcc number>
Syntax (MX Series Routers)	show chassis fabric fpcs <all-members> <local> <member member-id>
Syntax (MX2010 and MX2020 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 <fcc number>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.4 for EX Series switches.</p> <p>Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.</p>
Description	(M320, MX Series, and T Series routers, EX8200 switches, and PTX Series Packet Transport Routers only) Display the state of the electrical switch fabric links between the Flexible PIC Concentrators (FPCs) and the Switch Interface Boards (SIBs).
Options	<p>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.</p> <p>all-members—(MX Series routers only) (Optional) Display the switching fabric link states for the FPCs in all members of the Virtual Chassis configuration.</p> <p>fcc 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</p>

(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 Matrix routers.
- From **0** through **3** on a T1600 router on the routing matrix with TX Matrix 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 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 146](#)
- *Displaying Information About DPCs or FPCs in an MX Series Router*

List of Sample Output

- [show chassis fabric fpcs \(M320 Router\) on page 111](#)
- [show chassis fabric fpcs \(MX240 Router\) on page 112](#)
- [show chassis fabric fpcs \(MX480 Router\) on page 112](#)
- [show chassis fabric fpcs \(MX960 Router\) on page 113](#)
- [show chassis fabric fpcs \(MX240 with AS MLC Modular Carrier Card\) on page 115](#)
- [show chassis fabric fpcs \(MX480 with AS MLC Modular Carrier Card\) on page 115](#)
- [show chassis fabric fpcs \(MX480 Router with MPC4E\) on page 116](#)
- [show chassis fabric fpcs \(MX960 with AS MLC Modular Carrier Card on page 117](#)
- [show chassis fabric fpcs \(MX2010 Router\) on page 119](#)
- [show chassis fabric fpcs \(MX2020 Router\) on page 122](#)
- [show chassis fabric fpcs \(MX2020 Router with MPC4E\) on page 125](#)
- [show chassis fabric fpcs \(T320 Router\) on page 126](#)
- [show chassis fabric fpcs \(T640 Router\) on page 127](#)
- [show chassis fabric fpcs \(TX Matrix Router\) on page 127](#)
- [show chassis fabric fpcs \(TX Matrix Router with 3D SIBs\) on page 129](#)
- [show chassis fabric fpcs lcc \(TX Matrix Router with 3D SIBs\) on page 132](#)
- [show chassis fabric fpcs \(T1600 Router\) on page 132](#)

[show chassis fabric fpcs \(T4000 Core Router\) on page 134](#)
[show chassis fabric fpcs \(TX Matrix Plus Router\) on page 135](#)
[show chassis fabric fpcs lcc \(TX Matrix Plus Router\) on page 143](#)
[show chassis fabric fpcs \(EX8200 Switch\) on page 143](#)
[show chassis fabric fpcs \(PTX3000 Router\) on page 144](#)

Output Fields [Table 6 on page 111](#) lists the output fields for the **show chassis fabric fpcs** command. Output fields are listed in the approximate order in which they appear.

Table 6: show chassis fabric fpcs Output Fields

Field Name	Field Description
Fabric management FPC state	<p>Switching fabric link (link from SIB to FPC) state for each FPC:</p> <ul style="list-style-type: none"> • 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 <i>list of PFE numbers</i>—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: <ul style="list-style-type: none"> • 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 only)—The plane is disabled because of link errors detected at the FPC RX. • Plane Disabled, Links Down (PTX Series Packet Transport Routers 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 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 (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
            8   9   10   11   12   13   14   15   16   17   18   19   20   21
        SIB #4
            Destination error on PFES
            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
1cc0-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
1cc0-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
                        8   9   10  11  12  13  14  15  16  17  18  19  20  21
        SIB #4      Destination error on PFEs
                        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
            8   9   10  11  12  13  14  15  16  17  18  19  20  21
            0   1   2   3   4   5   6   7
        SIB #4
            Destination error on PFes
            8   9   10  11  12  13  14  15  16  17  18  19  20  21
            0   1   2   3   4   5   6   7
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
```

```

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
      8   9   10  11  12  13  14  15  16  17  18  19  20  21
    SIB #4
      Destination error on PFes
      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 fpc

List of Syntax	Syntax on page 146 Syntax (EX Series Switches) on page 146 Syntax (T4000 Routers) on page 146 Syntax (TX Matrix and TX Matrix Plus Routers) on page 146 Syntax (MX Series Routers and EX Series switches) on page 146 Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers) on page 146 Syntax (QFX Series) on page 146 Syntax (PTX Series Packet Transport Routers) on page 146 Syntax (ACX Series Universal Access Routers) on page 146
Syntax	<pre>show chassis fpc <detail <slot>> <pic-status <slot>></pre>
Syntax (EX Series Switches)	<pre>show chassis fpc <detail <fpc-slot>> <pic-status <fpc-slot>> <fpc-slot></pre>
Syntax (T4000 Routers)	<pre>show chassis fpc <detail <fpc-slot>> <pic-status <fpc-slot>></pre>
Syntax (TX Matrix and TX Matrix Plus Routers)	<pre>show chassis fpc <detail <fpc-slot>> <pic-status <fpc-slot>> <slot></pre>
Syntax (MX Series Routers and EX Series switches)	<pre>show chassis fpc <detail <slot>> <pic-status <slot>> <all-members> <local> <member member-id></pre>
Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers)	<pre>show chassis fpc <slot> detail <detail <slot>> <pic-status <slot>> <fpc-slot></pre>
Syntax (QFX Series)	<pre>show chassis fpc <detail> <interconnect-device name <fpc-slot fpc-slot>> <node-device name></pre>
Syntax (PTX Series Packet Transport Routers)	<pre>show chassis fpc <detail <fpc-slot>> <pic-status <fpc-slot>> <fpc-slot></pre>
Syntax (ACX Series Universal Access Routers)	<pre>show chassis fpc <detail <fpc-slot>> <pic-status <fpc-slot>> <fpc-slot></pre>
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.

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
```

Utilization (%)	Temp	CPU	Utilization (%)	Memory
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 router 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 router—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.
- 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.
- QFX Series:
 - QFX3500 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](https://www.juniper.net/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     1xC0C12/4xC0C3 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 108](#)
 - *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**
- [show chassis fpc \(EX6210 Switch\) on page 155](#)
 - [show chassis fpc \(M10 Router\) on page 155](#)
 - [show chassis fpc \(M20 Router\) on page 155](#)
 - [show chassis fpc detail \(M Series Routers\) on page 155](#)
 - [show chassis fpc detail \(MX80 Router\) on page 156](#)
 - [show chassis fpc \(MX104 Router\) on page 156](#)
 - [show chassis fpc detail \(MX104 Router\) on page 156](#)
 - [show chassis fpc pic-status \(MX104 Router\) on page 157](#)

[show chassis fpc \(MX240 Router\) on page 157](#)
[show chassis fpc \(EX Series Switch\) on page 157](#)
[show chassis fpc detail \(EX9200 Switch\) on page 157](#)
[show chassis fpc \(MX480 Router\) on page 157](#)
[show chassis fpc \(MX480 Router with 100-Gigabit Ethernet CFP\) on page 158](#)
[show chassis fpc pic-status \(MX480 Router with 100-Gigabit Ethernet CFP\) on page 158](#)
[show chassis fpc pic-status \(EX Series Switch\) on page 158](#)
[show chassis fpc \(MX480 Router with MPC4E\) on page 158](#)
[show chassis fpc detail \(MX480 Router with MPC4E\) on page 159](#)
[show chassis fpc \(MX480 Router with MPC4E\) on page 159](#)
[show chassis fpc detail \(MX480 Router with MPC4E\) on page 159](#)
[show chassis fpc \(MX960 Router\) on page 160](#)
[show chassis fpc \(MX240, MX480, MX960 Routers with Application Services Modular Line Card\) on page 160](#)
[show chassis fpc \(MX240, MX480, MX960 with Application Services Modular Line Card\) on page 160](#)
[show chassis fpc \(MX2010 Routers\) on page 160](#)
[show chassis fpc \(MX2020 Routers\) on page 161](#)
[show chassis fpc \(MX2020 Router with MPC4E\) on page 161](#)
[show chassis fpc detail \(MX2020 Router with MPC4E\) on page 161](#)
[show chassis fpc detail \(MX Series Routers\) on page 162](#)
[show chassis fpc detail \(EX Series Switches\) on page 162](#)
[show chassis fpc \(Hardware Not Supported\) on page 163](#)
[show chassis fpc detail \(Hardware Not Supported\) on page 163](#)
[show chassis fpc pic-status on page 163](#)
[show chassis fpc pic-status \(M Series Routers\) on page 164](#)
[show chassis fpc pic-status \(M120 Router\) on page 164](#)
[show chassis fpc pic-status \(MX240, MX480, and MX960 Routers with Application Services Modular Line Card\) on page 164](#)
[show chassis fpc lcc \(TX Matrix Router\) on page 164](#)
[show chassis fpc pic-status \(TX Matrix Router\) on page 165](#)
[show chassis fpc pic-status lcc \(TX Matrix Router\) on page 165](#)
[show chassis fpc \(TX Matrix Plus Router\) on page 165](#)
[show chassis fpc lcc \(TX Matrix Plus Router\) on page 166](#)
[show chassis fpc detail \(TX Matrix Plus Router\) on page 166](#)
[show chassis fpc pic-status \(TX Matrix Plus Router\) on page 169](#)
[show chassis fpc \(T1600 Router\) on page 170](#)
[show chassis fpc detail \(T1600 Router\) on page 170](#)
[show chassis fpc <fpc-slot> \(EX Series Switch\) on page 170](#)
[show chassis fpc slot \(T1600 Router\) on page 171](#)
[show chassis fpc pic-status \(T1600 Router\) on page 171](#)
[show chassis fpc \(T4000 Router\) on page 171](#)
[show chassis fpc detail \(T4000 Router\) on page 171](#)
[show chassis fpc pic-status \(T4000 Router\) on page 172](#)
[show chassis fpc \(QFX Series\) on page 172](#)
[show chassis fpc detail \(QFX3500 Switches\) on page 172](#)
[show chassis fpc pic-status \(QFX3500 Switches\) on page 172](#)
[show chassis fpc interconnect-device \(QFabric System\) on page 173](#)
[show chassis fpc interconnect-device \(QFabric System\) on page 173](#)

[show chassis fpc interconnect-device detail \(QFabric System\) on page 173](#)
[show chassis fpc pic-status interconnect-device \(QFabric System\) on page 173](#)
[show chassis fpc pic-status node-device \(QFabric System\) on page 174](#)
[show chassis fpc \(PTX5000 Packet Transport Router\) on page 174](#)
[show chassis fpc detail \(PTX5000 Packet Transport Router\) on page 174](#)
[show chassis fpc pic-status \(PTX5000 Packet Transport Router\) on page 175](#)
[show chassis fpc \(ACX2000 Universal Access Router\) on page 175](#)
[show chassis fpc 0 \(ACX2000 Universal Access Router\) on page 176](#)
[show chassis fpc detail \(ACX2000 Universal Access Router\) on page 176](#)
[show chassis fpc pic-status \(ACX2000 Universal Access Router\) on page 176](#)
[show chassis FPC 1 \(MX Routers with Media Services Blade \[MSB\]\) on page 176](#)
[show chassis FPC 1 detail \(MX Routers with Media Services Blade \[MSB\]\) on page 176](#)

Output Fields Table 7 on page 153 lists the output fields for the **show chassis fpc** command. Output fields are listed in the approximate order in which they appear.

Table 7: 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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

Table 7: show chassis fpc Output Fields (*continued*)

Field Name	Field Description	Level of Output
Temperature (PTX Series)	On PTX Series Packet Transport Routers, temperature details are provided in degrees Celsius and Fahrenheit. Output includes: <ul style="list-style-type: none"> • 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 (TLn)—Temperature of the specified Lookup ASIC (TL) of the packet forwarding engine on the FPC. • Temperature (TQn)—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
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
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

Table 7: show chassis fpc Output Fields (*continued*)

Field Name	Field Description	Level of Output
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

Sample Output

show chassis fpc (EX6210 Switch)

```

user@switch> show chassis fpc

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Utilization (%) 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:

```

Slot	State	Temp (C)
0	Online	27
1	Online	28

show chassis fpc (M20 Router)

```

user@host> show chassis fpc
FPC status:

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Utilization (%) 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 (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

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
0	Empty				
1	Online	34	6 0	1024 18	30
2	Online	33	9 0	1024 24	30

show chassis fpc (EX Series Switch)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
0	Empty				
1	Online	41	13 0	2048 19	14
2	Online	42	12 0	2048 19	14

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

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
0	Empty				
1	Online	36	9 0	1024 17	57
2	Empty				
3	Empty				
4	Empty				
5	Empty				

show chassis fpc (MX480 Router with 100-Gigabit Ethernet CFP)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory Interrupt	Utilization (%)	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

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory Interrupt	Utilization (%)	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

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory Utilization (%)	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 RLD RAM                  0 MB
Total DDR DRAM                 0 MB
Max Power Consumption          520 Watts

```

show chassis fpc (MX960 Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	Total	CPU Utilization (%)	Interrupt	Memory DRAM (MB)	Heap	Utilization (%)	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 (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```

user@host> show chassis fpc 1

```

Slot	State	Temp (C)	Total	CPU Utilization (%)	Interrupt	Memory DRAM (MB)	Heap	Utilization (%)	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 RLD RAM                  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 (MX2010 Routers)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	Total	CPU Utilization (%)	Interrupt	Memory DRAM (MB)	Heap	Utilization (%)	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 (MX2020 Routers)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) 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

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) 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 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 RLD RAM              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 RLD RAM              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 RLD RAM              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 RLD RAM              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 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 RLD RAM              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 RLD RAM              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 RLD RAM           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

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory Utilization (%)
			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:
```

```
-----
Slot State      Temp  CPU      Utilization (%)  Memory  Utilization (%)
      (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:

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) 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:

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) 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:

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) 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
```

```
1cc0-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

```

```
1cc2-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

```

```
1cc3-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

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Utilization (%) 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
```

Slot State	Temp (C)	CPU Utilization (%)	Memory Utilization (%)
2 Online	49	3	0
			DRAM (MB) Heap Buffer
			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
```

```
regress@stymphalian# run show chassis fpc
```

Slot State	Temp (C)	CPU Utilization (%)	Memory Utilization (%)
0 Online	48	15	0
1 Empty			
2 Empty			
3 Online	51	15	0
4 Empty			
5 Online	39	8	0
6 Online	49	15	0
7 Empty			
			DRAM (MB) Heap Buffer
			2816 21 27
			2816 21 27
			2048 6 23
			2816 21 27

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)

```

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:

```

Slot	State	Temp (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:

```

Slot	State	Temp (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

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Utilization (%) 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 (ACX2000 Universal Access Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total Interrupt	Memory DRAM (MB)	Utilization (%) Heap Buffer
0	Online	61	17 6	512	21 37

show chassis fpc 0 (ACX2000 Universal Access Router)

```
user@host> show chassis fpc 0
```

Slot	State	Temp (C)	CPU Utilization (%) Total Interrupt	Memory DRAM (MB)	Utilization (%) 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
```

Slot	State	Temp (C)	CPU Utilization (%) Total Interrupt	Memory DRAM (MB)	Utilization (%) 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

show chassis hardware

List of Syntax	Syntax on page 177 Syntax (EX Series) on page 177 Syntax (T4000 Router) on page 177 Syntax (TX Matrix Router) on page 177 Syntax (TX Matrix Plus Router) on page 177 Syntax (MX Series Routers) on page 177 Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers) on page 177 Syntax (QFX Series) on page 178 Syntax (PTX Series Packet Transport Routers) on page 178 Syntax (ACX Series Universal Access Routers) on page 178
Syntax	<pre>show chassis hardware <detail extensive> <clei-models> <models></pre>
Syntax (EX Series)	<pre>show chassis hardware <clei-models> <detail extensive> <models></pre>
Syntax (T4000 Router)	<pre>show chassis hardware <clei-models> <detail extensive> <models></pre>
Syntax (TX Matrix Router)	<pre>show chassis hardware <clei-models> <detail extensive> <models> <lcc number scc></pre>
Syntax (TX Matrix Plus Router)	<pre>show chassis hardware <clei-models> <detail extensive> <models> <lcc number sfc number></pre>
Syntax (MX Series Routers)	<pre>show chassis hardware <detail extensive> <clei-models> <models> <all-members> <local> <member member-id></pre>
Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers)	<pre>show chassis hardware <clei-models> <detail extensive> <models></pre>

Syntax (QFX Series)	<code>show chassis hardware</code> <code><detail extensive></code> <code><clei-models></code> <code><interconnect-device <i>name</i>></code> <code><node-device <i>name</i>></code> <code><models></code>
Syntax (PTX Series Packet Transport Routers)	<code>show chassis hardware</code> <code><detail extensive></code> <code><clei-models></code> <code><models></code>
Syntax (ACX Series Universal Access Routers)	<code>show chassis hardware</code> <code><detail extensive></code> <code><clei-models></code> <code><models></code>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p>models option introduced in Junos OS Release 8.2.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>sfc option introduced for the TX Matrix Plus router in Junos OS Release 9.6.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 12.2 for ACX Series Universal Access Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.</p>
Description	<p>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.</p> <p>In the EX Series switch command output, FPC refers to the following:</p> <ul style="list-style-type: none">• On EX2200 switches, EX3200 switches, EX4200 standalone switches, and EX4500 switches—Refers to the switch; FPC <i>number</i> is always 0.• On EX4200 switches in a Virtual Chassis configuration—Refers to the member of a Virtual Chassis; FPC <i>number</i> equals the member ID, from 0 through 9.• On EX8208 and EX8216 switches—Refers to a line card; FPC <i>number</i> equals the slot number for the line card. <p>On a QFX3500 standalone switch, both the FPC and FPC <i>number</i> are always 0.</p> <p>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.</p> <p>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</p>

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.

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:

Table 8: 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.

Required Privilege Level view

Related Documentation

- [show chassis power](#)

List of Sample Output

- [show chassis hardware \(EX8216 Switch\) on page 185](#)
- [show chassis hardware clei-models \(EX8216 Switch\) on page 187](#)
- [show chassis hardware clei-models \(T1600 Router\) on page 187](#)
- [show chassis hardware detail \(EX4200 Switch\) on page 188](#)
- [show chassis hardware models \(EX4500 Switch\) on page 188](#)
- [show chassis hardware \(J6350 Router\) on page 188](#)
- [show chassis hardware \(J6300 Router\) on page 188](#)
- [show chassis hardware \(M7i Router\) on page 189](#)
- [show chassis hardware \(M10 Router\) on page 189](#)
- [show chassis hardware models \(M10 Router\) on page 190](#)
- [show chassis hardware \(M20 Router\) on page 190](#)
- [show chassis hardware models \(M20 Router\) on page 191](#)
- [show chassis hardware \(M40 Router\) on page 191](#)
- [show chassis hardware \(M40e Router\) on page 192](#)

[show chassis hardware \(M120 Router\) on page 192](#)
[show chassis hardware detail \(M120 Router\) on page 193](#)
[show chassis hardware models \(M120 Router\) on page 194](#)
[show chassis hardware \(M160 Router\) on page 195](#)
[show chassis hardware models \(M160 Router\) on page 195](#)
[show chassis hardware detail \(M160 Router\) on page 196](#)
[show chassis hardware \(M320 Router\) on page 197](#)
[show chassis hardware models \(M320 Router\) on page 198](#)
[show chassis hardware \(MX5 Router\) on page 199](#)
[show chassis hardware \(MX10 Router\) on page 199](#)
[show chassis hardware \(MX40 Router\) on page 200](#)
[show chassis hardware \(Fixed MX80 Router\) on page 200](#)
[show chassis hardware \(Modular MX80 Router\) on page 201](#)
[show chassis hardware \(MX104 Router\) on page 201](#)
[show chassis hardware detail \(MX104 Router\) on page 202](#)
[show chassis hardware extensive \(MX104 Router\) on page 203](#)
[show chassis hardware models \(MX104 Router\) on page 206](#)
[show chassis hardware clei-models \(MX104 Router\) on page 206](#)
[show chassis hardware \(MX240 Router\) on page 206](#)
[show chassis hardware detail \(MX 240 Router with Routing Engine Displaying DIMM information\) on page 207](#)
[show chassis hardware \(MX240 Router with Enhanced MX SCB\) on page 207](#)
[show chassis hardware \(MX480 Router\) on page 208](#)
[show chassis hardware \(MX480 Router with Enhanced MX SCB\) on page 209](#)
[show chassis hardware \(MX960 Router\) on page 209](#)
[show chassis hardware \(MX960 Router with Bidirectional Optics\) on page 209](#)
[show chassis hardware \(MX960 Router with Enhanced MX SCB\) on page 210](#)
[show chassis hardware models \(MX960 Router with Enhanced MX SCB\) on page 212](#)
[show chassis hardware detail \(MX960 Router\) on page 213](#)
[show chassis hardware \(MX2010 Router\) on page 213](#)
[show chassis hardware detail \(MX2010 Router\) on page 215](#)
[show chassis hardware extensive \(MX2010 Router\) on page 220](#)
[show chassis hardware models \(MX2010 Router\) on page 225](#)
[show chassis hardware clei-models \(MX2010 Routers\) on page 226](#)
[show chassis hardware \(MX2020 Router\) on page 227](#)
[show chassis hardware detail \(MX2020 Router\) on page 235](#)
[show chassis hardware models \(MX2020 Router\) on page 244](#)
[show chassis hardware clei-models \(MX2020 Router\) on page 246](#)
[show chassis hardware \(MX Series routers with ATM MIC\) on page 247](#)
[show chassis hardware \(MX240, MX480, MX960 routers with Application Services Modular Line Card\) on page 247](#)
[show chassis hardware extensive \(MX240, MX480, MX960 routers with Application Services Modular Line Card\) on page 248](#)
[show chassis hardware \(MX480 Router with MPC4E\) on page 249](#)
[show chassis hardware \(MX2020 Router with MPC4E\) on page 249](#)
[show chassis hardware \(MX5, MX10, MX40, MX80, MX240, MX480, and MX960 routers with Enhanced 20-port Gigabit Ethernet MIC\) on page 251](#)
[show chassis hardware models \(MX5, MX10, MX40, MX80, MX240, MX480, and MX960 routers with Enhanced 20-port Gigabit Ethernet MIC\) on page 252](#)

[show chassis hardware \(T320 Router\) on page 252](#)
[show chassis hardware \(T640 Router\) on page 254](#)
[show chassis hardware models \(T640 Router\) on page 254](#)
[show chassis hardware extensive \(T640 Router\) on page 255](#)
[show chassis hardware \(T4000 Router\) on page 255](#)
[show chassis hardware \(T4000 Router with 16 GB line card chassis \(LCC\) Routing Engine\) on page 257](#)
[show chassis hardware \(T4000 Router with LSR FPC\) on page 258](#)
[show chassis hardware clei-models \(T4000 Router\) on page 258](#)
[show chassis hardware detail \(T4000 Router\) on page 259](#)
[show chassis hardware models \(T4000 Router\) on page 261](#)
[show chassis hardware lcc \(TX Matrix Router\) on page 261](#)
[show chassis hardware scc \(TX Matrix Router\) on page 262](#)
[show chassis hardware \(T1600 Router\) on page 262](#)
[show chassis hardware \(TX Matrix Plus Router\) on page 265](#)
[show chassis hardware sfc \(TX Matrix Plus Router\) on page 269](#)
[show chassis hardware extensive \(TX Matrix Plus Router\) on page 271](#)
[show chassis hardware clei-models \(TX Matrix Plus Router\) on page 272](#)
[show chassis hardware detail \(TX Matrix Plus Router\) on page 274](#)
[show chassis hardware models \(TX Matrix Plus Router\) on page 276](#)
[show chassis hardware \(TX Matrix Plus router with 3D SIBs\) on page 279](#)
[show chassis hardware clei-models \(TX Matrix Plus router with 3D SIBs\) on page 282](#)
[show chassis hardware detail \(TX Matrix Plus router with 3D SIBs\) on page 286](#)
[show chassis hardware lcc \(TX Matrix Plus router with 3D SIBs\) on page 290](#)
[show chassis hardware sfc \(TX Matrix Plus router with 3D SIBs\) on page 290](#)
[show chassis hardware \(16-Port 10-Gigabit Ethernet MPC with SFP+ Optics \[MX Series Routers\]\) on page 292](#)
[show chassis hardware \(MPC3E \[MX Series Routers\]\) on page 292](#)
[show chassis hardware \(QFX3500 Switches\) on page 294](#)
[show chassis hardware detail \(QFX3500 Switches\) on page 294](#)
[show chassis hardware models \(QFX3500 Switches\) on page 295](#)
[show chassis hardware clei-models \(QFX3500 Switches\) on page 295](#)
[show chassis hardware interconnect-device \(QFabric Systems\) on page 295](#)
[show chassis hardware node-device \(QFabric Systems\) on page 296](#)
[show chassis hardware \(PTX5000 Packet Transport Router\) on page 296](#)
[show chassis hardware \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 297](#)
[show chassis hardware clei-models \(PTX5000 Packet Transport Router\) on page 298](#)
[show chassis hardware clei-models \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 298](#)
[show chassis hardware detail \(PTX5000 Packet Transport Router\) on page 298](#)
[show chassis hardware detail \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 300](#)
[show chassis hardware models \(PTX5000 Packet Transport Router\) on page 300](#)
[show chassis hardware models \(PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 301](#)
[show chassis hardware extensive \(PTX5000 Packet Transport Router\) on page 301](#)
[show chassis hardware \(MX Routers with Media Services Blade \[MSB\]\) on page 302](#)

[show chassis hardware extensive \(MX Routers with Media Services Blade \[MSB\]\) on page 302](#)

Output Fields [Table 9 on page 183](#) lists the output fields for the **show chassis hardware** command. Output fields are listed in the approximate order in which they appear.

Table 9: show chassis hardware Output Fields

Field Name	Field Description	Level of Output
Item	<p>Chassis component:</p> <ul style="list-style-type: none"> (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. See <i>EX Series Switches Hardware and CLI Terminology Mapping</i>. (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, 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 and MX2020 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. 	All levels
Version	Revision level of the chassis component.	All levels
Part number	Part number of the chassis component.	All levels

Table 9: 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	<p>Brief description of the hardware item:</p> <ul style="list-style-type: none"> 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. <p>On EX Series switches, a brief description of the FPC.</p> <p>On the J Series routers, the FPC type corresponds to the Physical Interface Module (PIM). The following list shows the PIM abbreviation in the output and the corresponding PIM name.</p> <ul style="list-style-type: none"> 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) 4x GE Base PIC—Four built-in Gigabit Ethernet ports on a J4350 or J6350 chassis (fixed PIM) 2x Serial—Dual-port serial PIM 2x T1—Dual-port T1 PIM 2x E1—Dual-port E1 PIM 2x CTIE1—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 	All levels

Table 9: show chassis hardware Output Fields (*continued*)

Field Name	Field Description	Level of Output
	<ul style="list-style-type: none"> • 4x BRI U—4-port ISDN BRI U PIM • 1x ADSL Annex A—ADSL 2/2+ Annex A PIM (one port, for POTS) • 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, 4x FXO, 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-SFP 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
FPM Display   REV 05   710-002897
CIP           REV 06   710-002895
PEM 0         Rev 07   740-017906   IPUPAC7KTA     PWR-T1600-3-80-DC-S
PEM 1         Rev 18   740-002595
SCG 0         REV 15   710-003423
Routing Engine 0 REV 08   740-014082
Routing Engine 1 REV 07   740-014082
CB 0          REV 05   710-007655
CB 1          REV 03   710-017707
FPC 0         REV 07   710-013558
  PIC 0       REV 01   750-010618
  PIC 1       REV 06   750-001900
  PIC 2       REV 14   750-001901
  PIC 3       REV 07   750-001900
FPC 1         REV 06   710-013553
  PIC 0       REV 08   750-001072
  PIC 1       REV 10   750-012266
  PIC 2       REV 22   750-005634
FPC 2
  PIC 0       REV 16   750-007141
  PIC 1       REV 06   750-015217
  PIC 2       REV 05   750-004695
  PIC 3       REV 17   750-009553
FPC 3         REV 01   710-010154
  PIC 0       REV 07   750-012793
  PIC 1       REV 25   750-007141
  PIC 2       REV 17   750-009553
  PIC 3       REV 32   750-003700
FPC 4         REV 16   710-013037
  PIC 1       REV 06   750-034781
FPC 5         REV 02   710-013037
  PIC 0       REV 16   750-012518
  PIC 1       REV 01   750-010850
FPC 6         REV 14   710-013037
  PIC 0       REV 11   750-017405
  PIC 1       REV 13   750-017405
FPC 7         REV 09   710-007529
  PIC 0       REV 10   750-012793
  PIC 1       REV 01   750-015217
  PIC 2       REV 01   750-015217

```

PIC 3	REV 15	750-009450	PC-10C192-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 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 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 (J6350 Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1090E07ADB	JSR6350
Midplane	REV 03	710-014593	NP1265	
System IO	REV 01	710-016210	NN9950	JX350 System IO
Crypto Module				Crypto Acceleration
Routing Engine	REV 08	710-015273	NM6509	RE-J6350-3400
ad0	248 MB	256MB	CKS	00102006C24A00000039 Compact
Flash				
FPC 0				FPC
PIC 0				4x GE Base PIC
FPC 1	REV 06	750-010355	AI07030023	FPC
PIC 0				2x T1
FPC 3	REV 06	750-011148	AJ06520151	FPC
PIC 0				2x E1
FPC 6	REV 06	750-013492	NC4170	FPC
PIC 0				4x FE
Power Supply 0				

show chassis hardware (J6300 Router)

```
user@host> show chassis hardware
```

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN000164AB	J6300
Midplane	REV 02.04	710-010001	CORE99570	
System IO	REV 02.00	710-010003	CORE100848	System IO board
Routing Engine	RevX2.6	750-010006	IWGS40735390	RE-J.3
FPC 0				FPC
PIC 0				2x FE
FPC 1	RevX2.0	750-011380	N3960005	FPC
PIC 0				1xADSL pic Annex A
FPC 2	RevX2.0	750-011380	N3960002	FPC
PIC 0				1xADSL pic Annex B
FPC 3	REV 03	750-010354	N0780028	FPC
PIC 0				1x T3

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-40C3-SON-MM
PIC 1	REV 11	750-002992		PE-4FE-TX
PIC 2	REV 03	750-002977		PE-20C3-ATM-MM
PIC 3	REV 08	750-005724		PE-20C3-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-20C3-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)

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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-40C3-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-10C12-SON-SMIR
PIC 2	REV 04	750-001894	PB-1GE-SX
PIC 3	REV 04	750-001896	PB-10C12-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-10C12-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-40C12-SON-SMIR
PIC 1	REV 06	750-001900	PB-10C48-SON-SMSR
PIC 2	REV 07	750-001900	PB-10C48-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:

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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-10C12-SON-SMIR
PIC 2	REV 04	750-001894		PB-1GE-SX
PIC 3	REV 04	750-001896		PB-10C12-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-10C12-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-40C12-SON-SMIR
PIC 1	REV 06	750-001900		PB-10C48-SON-SMSR
PIC 2	REV 07	750-001900		PB-10C48-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	AM1045SUANO	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	P9MOU37	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 (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    2x0C12/8x0C3 CC-CE
    PIC 0      BUILTIN      BUILTIN      2x0C12/8x0C3 CC-CE
      Xcvr 0    REV 01      740-011615    PCQ0U2J     SFP-IR
      Xcvr 1    REV 01      740-016068    PJJL7A6G    SFP-SR
      Xcvr 2    REV 01      740-016068    PJJL7A5J    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    PBKONK3     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    2x0C12/8x0C3 CC-CE
    PIC 0      BUILTIN      BUILTIN      2x0C12/8x0C3 CC-CE
      Xcvr 0    REV 01      740-011615    PCQ0U2J     SFP-IR
      Xcvr 1    REV 01      740-016068    PJJL7A6G    SFP-SR
      Xcvr 2    REV 01      740-016068    PJJL7A5J    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    PBKONK3     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 extensive (MX104 Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
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
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
  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
  Address 0x70: ff ff ff 72 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
  Address 0x70: ff ff ff c2 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
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: 2x0C12/8x0C3 CC-CE FRU Model Number: MIC-3D-80C3-20C12-ATM

Board Information Record:
Address 0x00: 12 01 05 03 05 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      2x0C12/8x0C3 CC-CE
  Xcvr 0    REV 01      740-011615    PCQOU2J      SFP-IR
  Xcvr 1    REV 01      740-016068    P3L7A6G      SFP-SR
  Xcvr 2    REV 01      740-016068    P3L7A5J      SFP-SR
  Xcvr 3    REV 01      740-016065    P3N5HPZ      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    PBKONK3      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
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
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

```

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 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	AARCH00	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 (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                               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	PDSOMRY	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	AHNOX1Z	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	PDSOMPZ	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)

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user@host> show chassis hardware models
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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-40C48-SON-SFP
PIC 1	REV 32	750-003700	DP2113	PC-10C192-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-40C3-10C12-SON2-SFP
PIC 1	REV 08	750-014637	DM3671	PB-40C3-40C12-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 detail (MX960 Router)

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user@host> show chassis hardware detail
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis
Midplane          REV 01    710-013698   AA6082         MX960 Midplane
PIM              Rev 01    740-013110   000008         Power Inlet Module
PEM 2
PEM 3
Routing Engine 0 Rev 00    740-015113   1000617944     PS 1.7kW; 200-240VAC in
ad0              245 MB   SanDisk     SDCFB-256      111419E1805T1141 Compact Flash
ad2              38154 MB FUJITSU     MHT2040BH      NR0WT5925N77   Hard Disk
CB 0
FPC 4            REV 05    710-013725   JK6947         MX960 Test SCB
CPU
FPC 4            REV 01    710-013305   JM7617         MX960 Test DPC
CPU
PIC 0
PIC 1
FPC 7            REV 01    710-013305   JL9634         MX960 Test DPC
CPU
PIC 0
Xcvr 0
PIC 1
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

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show chassis hardware (MX2010 Router)

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user@host > show chassis hardware
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis
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

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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	HMPM 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)

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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 Module	REV 01	740-045050	1E02224000P	DC 52V Power Supply
PSM 1 Module	REV 01	740-045050	1E02224000M	DC 52V Power Supply
PSM 2 Module	REV 01	740-045050	1E022240010	DC 52V Power Supply
PSM 3 Module	REV 01	740-045050	1E02224000G	DC 52V Power Supply
PSM 4 Module	REV 01	740-045050	1E022240013	DC 52V Power Supply
PSM 5 Module	REV 01	740-045050	1E022240007	DC 52V Power Supply
PSM 6 Module	REV 01	740-045050	1E02224001C	DC 52V Power Supply
PSM 7 Module	REV 01	740-045050	1E02224001D	DC 52V Power Supply
PSM 8 Module	REV 01	740-045050	1E02224001B	DC 52V Power Supply
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	HMPD 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	HMPD 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	AJ40JJK	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)

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user@host > show chassis hardware extensive
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis
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:

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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

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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

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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 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 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 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

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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 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 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          H MPC PMB 2G
Jedec Code:    0x7fb0          EEPROM Version:    0x01

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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
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
Address 0x40: 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
Address 0x60: 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
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
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 00 41 00 00 ff ff ff ff ff ff
Address 0x70: ff ff ff 3a 00 00 00 00 00 00 00 00 00 00 00 00
...

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show chassis hardware models (MX2010 Router)

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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	000000000000000000000000
PSM 5	REV 0B	740-033727	VG00015	000000000000000000000000
PSM 6	REV 0B	740-033727	VH00097	000000000000000000000000
PSM 7	REV 0C	740-033727	VJ00151	000000000000000000000000
PSM 8	REV 0C	740-033727	VJ00149	000000000000000000000000
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	000000000000000000000000
PSM 5	REV 0B	740-033727	0000000000	000000000000000000000000
PSM 6	REV 0B	740-033727	0000000000	000000000000000000000000
PSM 7	REV 0C	740-033727	0000000000	000000000000000000000000
PSM 8	REV 0C	740-033727	0000000000	000000000000000000000000
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 (MX2020 Router)

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Hardware inventory:
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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 Module	REV 01	740-045050	1E02224005Z	DC 52V Power Supply
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	ABB11095	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	AJQQQ5G	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

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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	CAA6141	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	AJQQQ5G	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	ABB11084	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	9ZD06A00055	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 (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        2x0C12/8x0C3 CC-CE
PIC 2             BUILtIN   BUILtIN      2x0C12/8x0C3 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 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 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 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
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 00 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-0C192-SR
MIC 1	REV 14	750-031967	ZM6103	MIC-3D-80C30C12-40C48
PIC 2		BUILTIN	BUILTIN	MIC-3D-80C30C12-40C48
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-10C192-XFP
PIC 2		BUILTIN	BUILTIN	MIC-3D-10C192-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	PFROV6J	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
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 (T320 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
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   UNKNOWNON     UNKNOWNON
  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-40C12-SON-SMIR
FPC 6         REV 03   710-001721   T640-FPC3
  PIC 1       REV 01   750-009553   PC-40C48-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
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

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show chassis hardware (T4000 Router)

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user@host> show chassis hardware

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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)

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user@host> show chassis hardware
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Hardware inventory:
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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)

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user@host> show chassis hardware
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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)

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user@host> show chassis hardware clei-models
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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	IPUCAMBCD	T1600-FPC4-ES
PIC 1	REV 03	750-034781	IPUIBKLMMA	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)

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user@host> show chassis hardware detail
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Hardware inventory:
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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)

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user@host> show chassis hardware models
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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)

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user@host> show chassis hardware lcc 0
lcc0-re0:
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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)

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user@host> show chassis hardware scc
scc-re0:
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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)

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user@host> show chassis hardware
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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	PB54LED	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)

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user@host> show chassis hardware
sfc0-re0:
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Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis              Version  Part number  Serial number  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   BUILTIN        SFC Switch CPU
SPMB 1               BUILTIN   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
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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

1cc0-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	P4TOWLR	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	PDSOMMB	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)

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user@host> show chassis hardware sfc 0
sfc0-re0:
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Hardware inventory:
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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)

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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
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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
 Address 0x50: 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
 Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

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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

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show chassis hardware clei-models (TX Matrix Plus Router)

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user@host> show chassis hardware clei-models
sfc0-re0:

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Hardware inventory:

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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

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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-40C48-SON-SMSR
FPC 3	REV 12	710-013037		T1600-FPC4-ES
PIC 0	REV 02	750-010850		PD-10C768-SON-SR
FPC 4	REV 05	710-021534		T640-FPC1-ES
PIC 0	REV 04	750-014627		PB-40C3-10C12-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-40C12-SON-SMIR
PIC 1	REV 05	750-001900		PB-10C48-SON-SMSR
PIC 2	REV 10	750-008155		PB-2GE-SFP-QPP
PIC 3	REV 03	750-014638		PB-10C48-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

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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-10C192-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-10C192-SON-VSR
PIC 3	REV 12	750-009553		PC-40C48-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-40C48-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)

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user@host> show chassis hardware detail
sfc0-re0:
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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

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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

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Hardware inventory:
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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)

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sfc0-re0:
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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	yyyyyyyyyyyyyyyyyyyyyyyy
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

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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-10C192-SON-XFP
PIC 2	REV 10	750-009450	HX6466	PC-10C192-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-40C192-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-40C192-SON-XFP
FPC 5	REV 14	710-013037	DT0016	T1600-FPC4-ES
PIC 0	REV 14	750-012518	JY9918	PD-40C192-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)

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user@host> show chassis hardware
sfc0-re0:
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----- 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

1cc0-re0:

Hardware inventory:

Item	Version	Part number	Serial number	Description
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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)

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user@host> show chassis hardware clei-models
sfc0-re0:
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Hardware inventory:
Item          Version  Part number  CLEI code  FRU model number
Midplane      REV 05   710-022574
FPM Display   REV 09   710-024027
CIP 0         REV 12   710-023792
CIP 1         REV 12   710-023792
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

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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

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lcc0-re0:
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Hardware inventory:
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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		

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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-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 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
Fan Tray 1
Fan Tray 2
[Output Truncated]
FANTRAY-T-S
FANTRAY-T-S
FANTRAY-TXP3D-LCC-R-S

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show chassis hardware detail (TX Matrix Plus router with 3D SIBs)

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user@host> show chassis hardware detail
sfc0-re0:

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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


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Xcvr 6          REV 01  740-047547  XB48FB05N      CXP Module
Fan Tray 0
Fan Tray 1
Fan Tray 2
Front Top Fan Tray
Front Bottom Fan Tray
Rear Fan Tray -- Rev 4

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lcc2-re0:
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Hardware inventory:
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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			201103030356329E329E	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	ULHOKG3	CFP-100G-LR4
MIC 1	REV 02	750-033199	YG3245	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	ULHOKGF	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 interconnect-device (QFabric Systems)

```

user@switch> show chassis hardware interconnect-device interconnect1
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis       REV 07
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
PIC 0            BUILTIN  BUILTIN
Xcvr 8          REV 01  740-030658  AD0946A028B  FPC CPU
                                     48x 10G-SFP+
                                     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  AJCOBHC       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 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 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 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
...

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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

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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 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
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
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
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
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 20 01 00 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 (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   BUILTIN        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
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
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
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
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
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
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
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
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 pic

List of Syntax	Syntax on page 305 Syntax (TX Matrix and TX Matrix Plus Routers) on page 305 Syntax (MX Series Routers) on page 305 Syntax (MX104, MX2010 and MX2020 3D Universal Edge Routers) on page 305 Syntax (PTX Series Packet Transport Router) on page 305 Syntax (QFX Series) on page 305 Syntax (ACX Series Universal Access Routers) on page 305
Syntax	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
Syntax (TX Matrix and TX Matrix Plus Routers)	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i> <lcc <i>number</i>></code>
Syntax (MX Series Routers)	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i> <all-members> <local> <member <i>member-id</i>></code>
Syntax (MX104, MX2010 and MX2020 3D Universal Edge Routers)	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
Syntax (PTX Series Packet Transport Router)	<code>show chassis pic transport fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
Syntax (QFX Series)	<code>show chassis pic <interconnect-device <i>name</i> (fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i>)> <node-device <i>name</i> pic-slot <i>slot-number</i>></code>
Syntax (ACX Series Universal Access Routers)	<code>show chassis pic fpc-slot <i>slot-number</i> pic-slot <i>slot-number</i></code>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Command introduced in Junos OS Release 11.1 for QFX Series.</p> <p>Command introduced in Junos OS Release 12.2 for ACX Series Universal Access Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 13.2 for PTX Series Packet Transport Routers.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.</p>
Description	Display status information about the PIC installed in the specified Flexible PIC Concentrator (FPC) and PIC slot.
Options	fpc-slot <i>slot-number</i> —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.
- 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 and QFX5100 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 (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 177](#)
- *Configuring the PIC Type*
- *100-Gigabit Ethernet Type 4 PIC with CFP Overview*

List of Sample Output [show chassis pic fpc-slot pic-slot on page 310](#)

[show chassis pic fpc-slot pic-slot \(PIC Offline\) on page 311](#)
[show chassis pic fpc-slot pic-slot \(FPC Offline\) on page 311](#)
[show chassis pic fpc-slot pic-slot \(FPC Not Present\) on page 311](#)
[show chassis pic fpc-slot pic-slot \(PIC Not Present\) on page 311](#)
[show chassis pic fpc-slot pic-slot \(M120 Router\) on page 311](#)
[show chassis pic fpc-slot pic-slot \(MX104 Router\) on page 311](#)
[show chassis pic fpc-slot pic-slot \(MX960 Router Bidirectional Optics\) on page 312](#)
[show chassis pic fpc-slot pic-slot \(MX480 Router with 100-Gigabit Ethernet MIC\) on page 312](#)
[show chassis pic fpc-slot pic-slot \(MX240, MX480, MX960 Routers with Application Services Modular Line Card\) on page 312](#)
[show chassis pic fpc-slot pic-slot \(MX480 Router with MPC4E\) on page 313](#)
[show chassis pic fpc-slot pic-slot \(MX2010 Router\) on page 313](#)
[show chassis pic fpc-slot pic-slot \(MX2020 Router\) on page 313](#)
[show chassis pic fpc-slot pic-slot \(MX2020 Routers with MPC4E\) on page 313](#)
[show chassis pic fpc-slot pic-slot \(T1600 Router with 100-Gigabit Ethernet PIC\) on page 314](#)
[show chassis pic fpc-slot pic-slot lcc \(TX Matrix Router\) on page 314](#)
[show chassis pic fpc-slot pic-slot lcc \(TX Matrix Plus Router\) on page 314](#)
[show chassis pic fpc-slot pic-slot \(Next-Generation SONET/SDH SFP\) on page 314](#)
[show chassis pic fpc-slot pic-slot \(12-Port T1/E1\) on page 315](#)
[show chassis pic fpc-slot pic-slot \(4x CHOC3 SONET CE SFP\) on page 315](#)
[show chassis pic fpc-slot pic-slot \(SONET/SDH OC3/STM1 \[Multi-Rate\] MIC with SFP\) on page 315](#)
[show chassis pic fpc-slot pic-slot \(8-port Channelized SONET/SDH OC3/STM1 \[Multi-Rate\] MIC with SFP\) on page 316](#)
[show chassis pic fpc-slot pic-slot \(4-port Channelized SONET/SDH OC3/STM1 \[Multi-Rate\] MIC with SFP\) on page 316](#)
[show chassis pic fpc-slot pic-slot \(1-port OC192/STM64 MIC with XFP\) on page 316](#)
[show chassis pic fpc-slot 1 pic-slot 2 \(8-port DS3/E3 MIC\) on page 316](#)
[show chassis pic fpc-slot pic-slot \(OTN\) on page 317](#)
[show chassis pic fpc-slot pic-slot \(QFX3500 Switch\) on page 317](#)
[show chassis pic fpc-slot pic-slot \(QFX5100 Standalone Switch\) on page 317](#)
[show chassis pic interconnect-device fpc-slot pic-slot \(QFabric Systems\) on page 317](#)
[show chassis pic node-device fpc-slot pic-slot \(QFabric System\) on page 317](#)
[show chassis pic fpc-slot pic-slot \(ACX2000 Universal Access Router\) on page 318](#)
[show chassis pic fpc-slot pic-slot \(MX Routers with Media Services Blade \[MSB\]\) on page 318](#)
[show chassis pic FPC slot PIC slot \(MX Routers with Media Services Blade \[MSB\]\) on page 318](#)
[show chassis pic transport fpc-slot pic-slot \(PTX Series Packet Transport Routers\) on page 319](#)

Output Fields Table 10 on page 309 lists the output fields for the **show chassis pic** command. Output fields are listed in the approximate order in which they appear.

Table 10: show chassis pic Output Fields

Field Name	Field Description
Type	<p>PIC type.</p> <p>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.</p>
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	<p>Status of the PIC. State is displayed only when a PIC is in the slot.</p> <ul style="list-style-type: none"> • 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 .
PIC Port Information (MX480 Router 100-Gigabit Ethernet CFP)	<p>Port-level information for the PIC.</p> <ul style="list-style-type: none"> • 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

Table 10: show chassis pic Output Fields (*continued*)

Field Name	Field Description
PIC Port Information (MX960 Router Bidirectional Optics)	Port-level information for the PIC. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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.
Multirate Mode	Rate-selectability status for the MIC: Enabled or Disabled .
Channelization	Indicates whether channelization is enabled or disabled on the DS3/E3 MIC.

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 pic-slot (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 (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 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:

```

Port	Cable type	Fiber type	Xcvr vendor	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	OCF	TRXBG1LXDBVM2-JW	1490 nm
4	SFP-1000BASE-BX10-D	SM	OCF	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	OCF	TRXBG1LXDBBMH-J1	1310 nm
8	SFP-1000BASE-BX10-U	SM	OCF	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

```

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
0	100GBASE LR4	SM	FINISAR CORP.	FTLC1181RDN3-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 (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:

```

Port	Cable type	Fiber type	Xcvr vendor	part number	Wave-length	Xcvr
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 (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:

```

Port	Cable type	Fiber type	Xcvr vendor	part number	Wave-length	Xcvr
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 Routers 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:

Port	Cable type	Fiber type	Xcvr vendor	part number	Wave-length	Xcvr
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 (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:

Port	Cable type	Fiber 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:

Port	Cable type	Fiber 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:

Port	Cable type	Fiber type	Xcvr vendor	Xcvr vendor part number	Wavelength
0	OC48 short reach	SM	FINISAR CORP.	FTRJ1321P1BTL-J2	1310 nm
1	OC3 short reach	MM	OCF	TRPA03MM3BAS-JE	1310 nm
2	OC3 short reach	MM	OCF	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 pic-slot (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:

Port	Cable type	Fiber type	Xcvr vendor	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	OPNEX INC	TRF5456AVLB314	1310 nm

show chassis pic fpc-slot pic-slot (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-80C30C12-40C48
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 pic-slot (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:

Port	Cable type	Fiber type	Xcvr vendor	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 pic-slot (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:

Port	Cable type	Fiber type	Xcvr vendor	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 pic-slot (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-10C192-XFP
State         Online
PIC version   1.2
Uptime        1 day, 11 hours, 4 minutes, 6 seconds
```

PIC port information:

Port	Cable type	Fiber type	Xcvr vendor	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 Standalone Switch)

```

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-GE Builtin
  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:

Port	Cable type	Fiber type	Xcvr vendor	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 pic-slot (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 Built-in
State                               Online
Uptime                             6 days, 2 hours, 51 minutes, 11 seconds

```

show chassis pic fpc-slot pic-slot (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 PIC slot (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
```


CHAPTER 16

Operational Mode Commands for Layer 2 Port-Mirroring Instances

- `show forwarding-options port-mirroring`

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. Statement 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 323 show forwarding-options port-mirroring detail on page 323
Output Fields	Table 11 on page 322 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 11: 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
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
```


CHAPTER 17

Operational Mode Commands for Firewall Filter Statistics and Logs

- `clear firewall`
- `show firewall`
- `show firewall log`

clear firewall

List of Syntax	Syntax on page 326 Syntax (EX Series Switches) on page 326
Syntax	clear firewall (all counter <i>counter-name</i> filter <i>filter-name</i> log (all <i>logical-system-name</i>) logical-system <i>logical-system-name</i>)
Syntax (EX Series Switches)	clear firewall (all counter <i>counter-name</i> filter <i>filter-name</i> log (all <i>logical-system-name</i>) policer counter (all counter-id <i>counter-index</i>))
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>logical-system option introduced in Junos OS Release 9.3.</p> <p>log option introduced before Junos OS Release 11.4.</p>
Description	<p>Clear statistics about configured firewall filters.</p> <p>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.</p> <p>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.</p>
<div>  <p>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).</p> </div>	
<p>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.</p>	
Options	<p>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.</p> <p>counter <i>counter-name</i>—Clear the packet and byte counts for a filter counter that has been configured with the counter firewall filter action.</p> <p>filter <i>filter-name</i>—Clear the packet and byte counts for the specified firewall filter.</p> <p>log (all <i>logical-system-name</i>)—Clear log entries for IPv4 firewall filters that have then log as an action. Use log all to clear all log entries or log <i>logical-system-name</i> to clear log entries for the specified logical system.</p>

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 328](#)

List of Sample Output

[clear firewall all on page 327](#)
[clear firewall \(counter counter-name\) on page 327](#)
[clear firewall \(filter filter-name\) on page 327](#)
[clear firewall \(policer counter all\) \(EX8200 Switch\) on page 327](#)
[clear firewall \(policer counter counter-id counter-index\) \(EX8200 Switch\) on page 327](#)

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 328 Syntax (EX Series Switches) on page 328
Syntax	<pre>show firewall <counter <i>counter-name</i>> <detail> <filter <i>filter-name</i>> <log> <logical-system (all <i>logical-system-name</i>)> <terse></pre>
Syntax (EX Series Switches)	<pre>show firewall <counter <i>counter-name</i>> <detail> <filter <i>filter-name</i>> <log <(detail interface <i>interface-name</i>)>> <policer counters <(detail counter-id <i>counter-index</i> <detail>)>> <terse></pre>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>Option logical-system introduced in Junos OS Release 9.3.</p> <p>Option terse introduced in Junos OS Release 9.4.</p> <p>Option policer counters introduced in Junos OS Release 12.2 for EX Series switches.</p> <p>Option detail introduced in Junos OS Release 12.3 for EX Series switches.</p> <p>Option detail introduced in Junos OS Release 14.1 for MX Series routers.</p>
Description	Display enhanced statistics and counters for all configured firewall filters.
Options	<p>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.</p> <p>counter <i>counter-name</i>—(Optional) Name of a filter counter.</p> <p>detail—(EX Series switches and MX Series routers only) (Optional) Display firewall filter statistics and enhanced policer statistics and counters.</p> <p>filter <i>filter-name</i>—(Optional) Name of a configured filter.</p> <p>logical-system (all <i>logical-system-name</i>)—(Optional) Perform this operation on all logical systems or on a particular logical system.</p> <p>log—(Optional) Display log entries for firewall filters.</p> <p>log <(detail interface <i>interface-name</i>)>—(EX Series switches only) (Optional) Display detailed log entries of firewall activity or log information about a specific interface.</p> <p>policer counters <(detail counter-id <i>counter-index</i> <detail>)>—(EX8200 switches only) (Optional) Display policer counter statistics in brief or in detail.</p>

terse—(Optional) Display firewall filter names only.

Required Privilege Level view

Related Documentation

- [clear firewall on page 326](#)
- [show firewall log on page 335](#)
- *Verifying That Firewall Filters Are Operational*
- *Verifying That Policers Are Operational*
- *show policer*
- *Enhanced Policer Statistics Overview*
- *enhanced-policer*

List of Sample Output

- [show firewall filter \(MX Series Router and EX Series Switch\) on page 332](#)
- [show firewall filter \(non MX Series Router and EX Series Switch\) on page 332](#)
- [show firewall filter \(Dynamic Input Filter\) on page 332](#)
- [show firewall \(Logical Systems\) on page 332](#)
- [show firewall \(counter counter-name\) on page 333](#)
- [show firewall log on page 333](#)
- [show firewall policer counters \(EX8200 Switch\) on page 333](#)
- [show firewall policer counters \(detail\) \(EX8200 Switch\) on page 333](#)
- [show firewall policer counters \(counter-id counter-index\) \(EX8200 Switch\) on page 334](#)
- [show firewall policer counters \(counter-id counter-index detail\) \(EX8200 Switch\) on page 334](#)
- [show firewall detail on page 334](#)

Output Fields Table 12 on page 329 lists the output fields for the **show firewall** command. Output fields are listed in the approximate order in which they appear.

Table 12: show firewall Output Fields

Field Name	Field Description
Filter	<p>Name of a filter that has been configured with the filter statement at the [edit firewall] hierarchy level.</p> <p>Except on EX Series switches:</p> <ul style="list-style-type: none"> • 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 (:). <p>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.</p>

Table 12: show firewall Output Fields (*continued*)

Field Name	Field Description
Counters	<p>Display filter counter information:</p> <ul style="list-style-type: none"> • 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. <p>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 <i>show pfe statistics ip</i> for sample output.</p>
Policers	<p>Display policer information:</p> <ul style="list-style-type: none"> • Name—Name of policer. • Bytes—(For two-color policers on MX Series routers and EX Series switches, and for hierarchical policers on MS-DPC, MIC, and MPC interfaces on 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 (<i>counter-index</i>) 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.
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.

Table 12: show firewall Output Fields (*continued*)

Field Name	Field Description
PI-t1	<ul style="list-style-type: none">• 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
cl-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 335 Syntax (EX Series Switches) on page 335
Syntax	<pre>show firewall log <detail> <interface <i>interface-name</i>> <logical-system (<i>logical-system-name</i> all)></pre>
Syntax (EX Series Switches)	<pre>show firewall log <detail> <interface <i>interface-name</i>></pre>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>logical-system option introduced in Junos OS Release 9.3.</p>
Description	Display log information about firewall filters.
Options	<p>none—Display log information about firewall filters.</p> <p>detail—(Optional) Display detailed information.</p> <p>interface <i>interface-name</i>—(Optional) Display log information about a specific interface.</p> <p>logical-system (<i>logical-system-name</i> all)—(Optional) Perform this operation on all logical systems or on a particular system.</p>
Required Privilege Level	view
List of Sample Output	show firewall log on page 336 show firewall log detail on page 336
Output Fields	<p>Table 13 on page 335 lists the output fields for the show firewall log command. Output fields are listed in the approximate order in which they appear.</p>

Table 13: show firewall log Output Fields

Field Name	Field Description
Time of Log	Time that the event occurred.
Filter	<ul style="list-style-type: none"> 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.

Table 13: show firewall log Output Fields (*continued*)

Field Name	Field Description
Filter Action	Filter action: <ul style="list-style-type: none"> • A—Accept • D—Discard • R—Reject
Name of Interface	<ul style="list-style-type: none"> • 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      180.1.177.2 180.1.177.1
13:10:11  pfe      D      rlsq0.902     ICMP      180.1.177.2 180.1.177.1

```

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:
172.17.22.108:829,
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: 172.17.22.108:829,
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: 172.17.22.108:829,
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: 172.17.22.108:829,
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: 172.17.22.108:829,  
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: 172.17.22.108:829,  
Destination address: 192.168.70.66:513  
....
```


CHAPTER 18

Operational Mode Commands for Next-Hop Groups for Layer 2 Port Mirroring

- `show forwarding-options port-mirroring`
- `show forwarding-options next-hop-group`

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. Statement introduced in Junos OS Release 12.3R2 for EX Series switches. Hierarchy level [edit forwarding-options] introduced in Junos OS Release 13.2X50-D10 (ELS).
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	<ul style="list-style-type: none"> • [edit forwarding-options port-mirroring] Hierarchy Level
List of Sample Output	show forwarding-options port-mirroring terse on page 341 show forwarding-options port-mirroring detail on page 341
Output Fields	Table 11 on page 322 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 14: 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 14: 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@switch> 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@switch> show forwarding-options port-mirroring detail
Instance Name: &global_instance
Instance Id: 1      State: up
  Input parameters:
    Rate:          1
    Run-length:    0
    Maximum-packet-length: 0
  Output parameters:
    Family: ethernet-switching  State: up      Destination: ge-0/0/10.0

Instance Name: inst1
Instance Id: 2      State: up
  Input parameters:
    Rate:          1
    Run-length:    0
    Maximum-packet-length: 0
  Output parameters:
    Family: ethernet-switching  State: down    Destination: ge-0/0/10.0

```

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. Statement introduced in Junos OS Release 12.3R2 for EX Series switches.
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	<ul style="list-style-type: none"> • show forwarding-options port-mirroring on page 322
List of Sample Output	show forwarding-options next-hop-group terse on page 343 show forwarding-options next-hop-group brief on page 343 show forwarding-options next-hop-group detail on page 343
Output Fields	Table 15 on page 342 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 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
Members 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
Number of members that are up	Number of next-hop group members that are up.	detail

Table 15: show forwarding-options next-hop-group Output Fields (*continued*)

Field Name	Field Description	Level of Output
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
inet_nhg            inet      up
vpls_nhg            layer-2   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: inet_nhg
Type: inet      State: up
Members Interfaces:
  ge-2/0/2.101 next-hop 101.2.0.2

Next-hop-group: vpls_nhg
Type: layer-2   State: up
Members Interfaces:
  ge-2/0/1.100
  ge-2/2/9.0
Members Subgroup: vpls_subg
Members Interfaces:
  ge-2/0/1.101
  ge-2/2/9.1

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: inet_nhg
Type: inet      State: up
Number of members configured      : 2
Number of members that are up    : 1
Number of subgroups configured    : 0
Number of subgroups that are up  : 0
Members Interfaces:              State
  ge-2/0/2.101 next-hop 101.2.0.2  up
  ge-2/2/8.2   next-hop 2.8.0.2    down

Next-hop-group: vpls_nhg
Type: layer-2   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-2/0/1.100                up
    ge-2/2/9.0                  up
Members Subgroup: vpls_subg     up
    Number of members configured : 2
    Number of members that are up : 2
Members Interfaces:
    ge-2/0/1.101                up
    ge-2/2/9.1                  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
```