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Junos<sup>®</sup> OS

## Routing Matrix with a TX Matrix Router Deployment Guide



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# About the Documentation

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- Using the Examples in This Manual on page ix
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## Documentation and Release Notes

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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

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

- [TX Matrix](#)

## Using the Examples in This Manual

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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 [CLI Explorer](#).

## Documentation Conventions

[Table 1 on page xi](#) 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 xi](#) defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
<b>Bold text like this</b>	Represents text that you type.	To enter configuration mode, type the <b>configure</b> command:  user@host> <b>configure</b>

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&gt; show chassis alarms</pre> <p>No alarms currently active</p>
<i>Italic text like this</i>	<ul style="list-style-type: none"> <li>Introduces or emphasizes important new terms.</li> <li>Identifies guide names.</li> <li>Identifies RFC and Internet draft titles.</li> </ul>	<ul style="list-style-type: none"> <li>A policy <i>term</i> is a named structure that defines match conditions and actions.</li> <li><i>Junos OS CLI User Guide</i></li> <li>RFC 1997, <i>BGP Communities Attribute</i></li> </ul>
<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"> <li>To configure a stub area, include the <b>stub</b> statement at the <code>[edit protocols ospf area area-id]</code> hierarchy level.</li> <li>The console port is labeled <b>CONSOLE</b>.</li> </ul>
< > (angle brackets)	Encloses optional keywords or variables.	<b>stub</b> <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.	<b>broadcast</b>   <b>multicast</b> <i>(string1   string2   string3)</i>
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	<b>rsvp { # Required for dynamic MPLS only</b>
[ ] (square brackets)	Encloses a variable for which you can substitute one or more values.	<b>community name members [ community-ids ]</b>
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.	
<b>GUI Conventions</b>		
<b>Bold text like this</b>	Represents graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"> <li>In the Logical Interfaces box, select <b>All Interfaces</b>.</li> <li>To cancel the configuration, click <b>Cancel</b>.</li> </ul>

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 <b>Protocols&gt;Ospf</b> .

## Documentation Feedback

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

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

## Requesting Technical Support

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

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

## Self-Help Online Tools and Resources

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

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- Search for known bugs: <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>.

## CHAPTER 1

# Overview

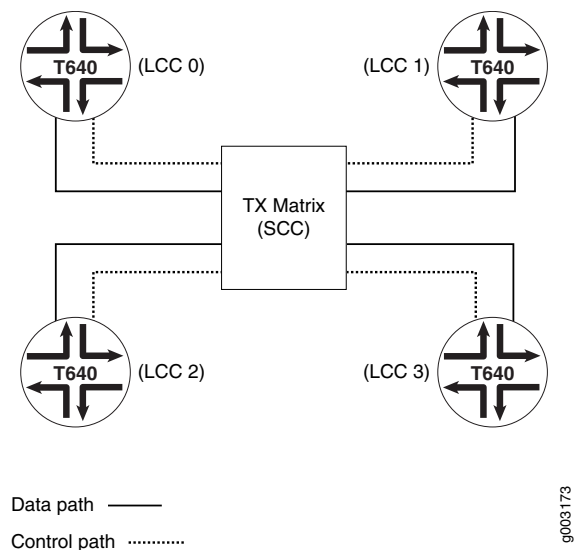
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Terms and Acronyms for the Routing Matrix on page 17](#)

### Overview of the Routing Matrix with a TX Matrix Router

The routing matrix with a TX Matrix router is the first multichassis product from Juniper Networks. The T640 and T320 routers were the first core routers that provided scalable bandwidth and intelligent networking features with a capacity of 80 to 640 gigabits per second (Gbps) of throughput. A key part of the T Series design was the ability to scale individual T640 routers to 2.5 terabits of bandwidth by combining them in a multichassis configuration. Such scalability is now available with the routing matrix.

The physical system of a routing matrix consists of one TX Matrix router and from one to four T640 routers, as shown in [Figure 1 on page 15](#). A key element of the routing matrix design is the ability to migrate existing T640 routers and connect them with the TX Matrix router through fiber-optic cables and Switch Interface Boards (SIBs).

**Figure 1: Routing Matrix with a TX Matrix Router Architecture**



The TX Matrix router connection between the T640 routers uses a scalable, three-stage switch fabric. This system architecture provides terabit bandwidth expansion capacity

and eliminates the use of subscriber line cards to connect devices within points of presence (POPs). As a result, the primary application for the routing matrix is to collapse aggregation and core layers in large POPs and central offices.

The routing matrix appears as a single router to the operator and utilizes the existing Junos OS command-line interface (CLI) for configuration and management. To manage this multichassis system, some enhancements have been made to the CLI that allow you to select the amount of output you wish to receive when you issue operational commands. You can specify the entire routing matrix, the TX Matrix router, a specific T640 router and its Flexible PIC Concentrators (FPCs), or a combination thereof.

Similarly, you can limit which portions of the routing matrix are modified during configuration or maintenance procedures (for example, performing software upgrades or halting Routing Engines).

## Identifying Routing Matrix with a TX Matrix Router Components

A routing matrix with a TX Matrix router contains two types of chassis:

- TX Matrix router—

There is only one TX Matrix router per routing matrix. It is referred to as the switch-card chassis (**scc**) in the Junos OS CLI.

- T640 routers—

There can be one to four T640 routers in a routing matrix. These are referred to as line-card chassis 0 through 3 (**lcc0–lcc3**) in the Junos OS CLI. The T640 router number is set by the hardware. See the *TX Matrix Router Hardware Guide* for further information on installing and connecting the hardware.

## Viewing the Routing Matrix with a TX Matrix Router as a Single Router

Even though a routing matrix with a TX Matrix router can be comprised of five separate physical components (a TX Matrix router and up to four T640 routers), it is best if you consider a routing matrix as a single router. When you issue configuration and operational commands on the TX Matrix router, your view of the routing matrix shows a single routing device with a high number of FPCs and PICs. For a detailed discussion of FPC numbering in a routing matrix with a TX Matrix router, see [“Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router” on page 27](#).

### Related Documentation

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [System Requirements for the Routing Matrix with a TX Matrix Router on page 19](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)



## Terms and Acronyms for the Routing Matrix

### L

**line-card chassis (LCC)** A T640 router or T1600 router installed in a routing matrix.

### R

**routing matrix** A high capacity, multichassis router. The routing matrix with a TX Matrix router combines multiple T640 routers with a TX Matrix router switch fabric. The routing matrix with a TX Matrix Plus router combines multiple T1600 routers with a TX Matrix Plus router switch fabric.

### S

**Switch Interface Board (SIB)** On T640 and T1600 routers and on TX Matrix router and TX Matrix Plus routers, a switch fabric plane component that forwards packets from a source Packet Forwarding Engine to a destination Packet Forwarding Engine.

**switch-card chassis (SCC)** A TX Matrix router installed in a routing matrix.

**switch-fabric chassis (SFC)** A TX Matrix Plus router installed in a routing matrix.

### T

**TX Matrix Plus router** A high-speed centralized switch fabric that connects multiple T1600 routers in a routing matrix.

**TX Matrix router** A high-speed centralized switch fabric that connects multiple T640 routers in a routing matrix.

#### Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)



## CHAPTER 2

# System Requirements

- [System Requirements for the Routing Matrix with a TX Matrix Router on page 19](#)

### System Requirements for the Routing Matrix with a TX Matrix Router

To implement the TX Matrix router, your system must meet these minimum requirements:

- Junos OS Release 7.0 or later
- One TX Matrix router
- Two Juniper Networks T640 routers
- Physical Interface Cards (PICs) of your choice (To view a list of supported PICs, see the *T640 Router PIC Guide*)

#### **Related Documentation**

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)



## CHAPTER 3

# Configuring a Routing Matrix with a TX Matrix Router

- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Connecting to a Routing Matrix with a TX Matrix Router on page 22](#)
- [Configuring Groups to Support a Routing Matrix with a TX Matrix Router Components on page 24](#)
- [Configuring Protocols and Other Features for a Routing Matrix with a TX Matrix Router on page 25](#)
- [Routing Matrix with a TX Matrix Router FPC Numbering on page 26](#)
- [Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router on page 27](#)
- [Configuring Chassis-Specific Statements for a Routing Matrix with a TX Matrix Router on page 28](#)
- [Committing Configurations on a Routing Matrix with a TX Matrix Router on page 29](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

### Roadmap to Configuring a Routing Matrix with a TX Matrix Router

When you configure the routing matrix with a TX Matrix router, you should do some or all of the following:

- You must connect to the Routing Engines of the routing matrix. For information on how to do this, see [“Connecting to a Routing Matrix with a TX Matrix Router” on page 22](#).
- You must configure groups that support the components of the routing matrix. Groups offer a simple way to establish hostnames, management interfaces, and default routes. For more information on how to do this, see [“Configuring Groups to Support a Routing Matrix with a TX Matrix Router Components” on page 24](#).
- You can adjust the configuration to accommodate the number of FPCs installed on the routing matrix. For information on FPC numbering, see [“Routing Matrix with a TX Matrix Router FPC Numbering” on page 26](#). For information on configuring the routing matrix to accommodate FPCs, see [“Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router” on page 27](#).

- You can configure protocols and other features on the routing matrix. Other than the expanded range of FPC numbers for interfaces and the requirement to create groups for the T640 routers, you can configure protocols in exactly the same manner as you would for other Juniper Networks routers.
- For T640 routers, you can configure PIC-specific features, create an alarm for nodes that do not come online, and take a node offline. For more information, see [“Configuring Chassis-Specific Statements for a Routing Matrix with a TX Matrix Router” on page 28](#).
- As with every Junos router, you must commit configurations on the routing matrix before they take effect. For information on how to do this, see [“Committing Configurations on a Routing Matrix with a TX Matrix Router” on page 29](#).
- When you upgrade the software on the routing matrix, the new image is loaded on the TX Matrix and distributed to all T640 routers. For more information, see [“Upgrading the Software for a Routing Matrix with a TX Matrix Router” on page 59](#).
- For information about managing system processes in the routing matrix, see [“Managing System Processes in the Routing Matrix with a TX Matrix Router” on page 51](#).
- For information about rebooting the routing matrix or halting routing matrix software components, see [“Rebooting and Halting Routing Matrix with a TX Matrix Router Components” on page 53](#).
- For information about enabling or temporarily disabling routing matrix hardware components, see [“Enabling and Disabling Specific Routing Matrix with a TX Matrix Router Hardware Components” on page 54](#).
- For information about managing files on the routing matrix, see [“Managing Files on Routing Engines in a Routing Matrix with a TX Matrix Router” on page 52](#).
- For information about commonly used commands for the routing matrix, see [“Monitoring a Routing Matrix with a TX Matrix Router” on page 57](#).

**Related Documentation**

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [System Requirements for the Routing Matrix with a TX Matrix Router on page 19](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

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## Connecting to a Routing Matrix with a TX Matrix Router

The TX Matrix router and every T640 router can each be configured with two Routing Engines to provide redundancy and graceful Routing Engine switchover capabilities. You can connect to each Routing Engine in the following ways:

- Console/AUX—Asynchronous access via the console and auxiliary ports on the TX Matrix router or T640 router Connector Interface Panel (CIP).
- Management Ethernet—Telnet access via the Fast Ethernet ports on the TX Matrix router or T640 router CIPs.

- CLI login from one Routing Engine to another—All Routing Engines in the routing matrix with a TX Matrix router are connected to their respective control boards, which in turn are connected to the CIP on the TX Matrix router (see the *TX Matrix Router Hardware Guide* for more details). After you log in to one Routing Engine, you can connect to another Routing Engine as follows:

```
user@router> request routing-engine login ?
Possible completions:
  backup          Log in to backup RE
  lcc              Log in to LCC (0..3)
  master          Log in to master RE
  other-routing-engine Log in to the other Routing Engine
  re0             Log in to RE0
  re1             Log in to RE1
```

```
user@router> request routing-engine login lcc ?
Possible completions:
<lcc>          Log in to LCC (0..3)
```

```
user@router> request routing-engine login lcc 0 ?
Possible completions:
  backup          Log in to backup RE
  master          Log in to master RE
  re0             Log in to RE0
  re1             Log in to RE1
```



**NOTE:** Because the routing matrix appears as a single router, we recommend that you access the master Routing Engine of the TX Matrix router to perform all configuration tasks for the routing matrix. Under normal operating conditions, you do not need to access or configure the T640 router directly. If you access a Routing Engine on a T640 router, the following warning is displayed:

```
user@router> request routing-engine login lcc 0 re0
--- JUNOS 7.0-20040625.1 built 2004-06-25 19:51:38 UTC
%
% cli
warning: This chassis is a Line Card Chassis (LCC) in a multichassis
system.
warning: Use of interactive commands should be limited to debugging.
warning: Normal CLI access is provided by the Switch Card Chassis
(SCC).
warning: Use 'request routing-engine login scc' to log into the SCC.
```

To manage the backup Routing Engines on all components (for example, to upgrade Junos OS), log in to the TX Matrix router backup Routing Engine and perform the necessary operations.

#### Related Documentation

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Configuring Groups to Support a Routing Matrix with a TX Matrix Router Components

For easy maintenance of the chassis in a routing matrix with a TX Matrix router, you can add a configuration group for each Routing Engine in the T640 router and TX Matrix router. The configuration groups added to the TX Matrix router configuration offer a simple way to establish hostnames, management interfaces, and default routes. In the example below, groups **re0** and **re1** refer to the TX Matrix router Routing Engines, while groups **lcc0-re0** and **lcc0-re1** refer to the Routing Engines on T640 router **LCC0**. To configure groups for the TX Matrix router, include the **re0** and **re1** statements at the **[edit groups]** hierarchy level. To configure groups for the T640 router, include the **lccnumber-re0** and **lccnumber-re1** statements at the **[edit groups]** hierarchy level.

```
[edit]
groups {
  re0 {
    system {
      host-name hostname-scc-re0;
      backup-router ip-address;
    }
    interfaces {
      fxp0 {
        unit 0 {
          family inet {
            address ip-address;
          }
        }
      }
    }
  }
  re1 {
    system {
      host-name hostname-scc-re1;
      backup-router ip-address;
    }
    interfaces {
      fxp0 {
        unit 0 {
          family inet {
            address ip-address;
          }
        }
      }
    }
  }
  lcc0-re0 {
    system {
      host-name hostname-lcc0-re0;
      backup-router ip-address;
    }
    interfaces {
      fxp0 {
        unit 0 {
          family inet {
```



Note that apply groups can be nested. For example, any configuration statements that are common to `lcc0-re0` and `lcc0-re1` can be put into a separate group and then added as an apply group to the `lcc0-re0` and `lcc0-re1` groups, which in turn are applied to the main configuration.

**Related Documentation**

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

For more information on configuring Junos OS-based routers, see the Junos configuration guides.

- 
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- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Routing Matrix with a TX Matrix Router FPC Numbering

A routing matrix with a TX Matrix router can contain up to four T640 routers, and each T640 router can contain up to eight FPCs (numbered 0 through 7). Therefore, the routing matrix as a whole can consist of up to 32 FPCs (numbered 0 through 31).

Each T640 router is assigned a number (LCCs 0 through 3) that depends upon the hardware setup and connectivity to the TX Matrix router. [Table 3 on page 26](#) shows the basic correspondence between the FPC hardware slot numbers in T640 routers and the FPC assignments recognized by a routing matrix.

**Table 3: FPC Correspondence Between T640 Routers and the Routing Matrix with a TX Matrix Router**

T640 Router	T640 FPC Range	Routing Matrix FPC Range
LCC 0	0–7	0–7
LCC 1	0–7	8–15
LCC 2	0–7	16–23
LCC 3	0–7	24–31

To easily convert FPC numbers in the T640 routers to the correct FPC number in a routing matrix, use the conversion chart shown in [Table 4 on page 26](#). You can use the converted FPC number to configure the interfaces on the TX Matrix router in your routing matrix.

**Table 4: T640 to Routing Matrix with a TX Matrix Router FPC Conversion Chart**

FPC Numbering	T640 Routers							
	LCC 0							
T640 FPC Slots	0	1	2	3	4	5	6	7
Routing Matrix FPC Slots Equivalent	0	1	2	3	4	5	6	7
	LCC 1							
T640 FPC Slots	0	1	2	3	4	5	6	7
Routing Matrix FPC Slots Equivalent	8	9	10	11	12	13	14	15
	LCC 2							
T640 FPC Slots	0	1	2	3	4	5	6	7

Table 4: T640 to Routing Matrix with a TX Matrix Router FPC Conversion Chart (*continued*)

FPC Numbering	T640 Routers							
Routing Matrix FPC Slots Equivalent	16	17	18	19	20	21	22	23
	LCC 3							
T640 FPC Slots	0	1	2	3	4	5	6	7
Routing Matrix FPC Slots Equivalent	24	25	26	27	28	29	30	31

**Related Documentation**

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router on page 27](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router

You must adjust the routing matrix with a TX Matrix router configuration to accommodate increased FPC numbers.

For example, if you have a Gigabit Ethernet interface installed in FPC slot 7, PIC slot 0, port 0 of T640 router LCC 3, you can configure this interface on the TX Matrix router by including the **ge-31/0/0** statement at the **[edit interfaces]** hierarchy level.

```
[edit]
interfaces {
  ge-31/0/0 {
    unit 0 {
      family inet {
        address ip-address;
      }
    }
  }
}
```

For more information about physically connecting T640 routers and a TX Matrix router together in a routing matrix, see the *TX Matrix Router Hardware Guide*. For more information about the interface-naming conventions for a routing matrix, see the *Junos Network Interfaces Configuration Guide*.

**Related Documentation**

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Routing Matrix with a TX Matrix Router FPC Numbering on page 26](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)

- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Configuring Chassis-Specific Statements for a Routing Matrix with a TX Matrix Router

You can configure PIC-specific features, such as SONET/SDH framing, on specific T640 routers within the routing matrix with a TX Matrix router. To do so, include the **lcc** **lcc-number** statement at the **[edit chassis]** hierarchy level and specify the chassis-specific feature to configure.

```
[edit]
chassis {
  lcc lcc-number {
    fpc slot-number { # Use the T640 router FPC hardware slot number.
      pic pic-number {
        ...
      }
    }
  }
}
```



**NOTE:** When you include statements at the **[edit chassis lcc lcc-number]** hierarchy level, specify the actual FPC hardware slot number as labeled on the T640 router chassis. Do not use the routing matrix-based FPC number shown in [Table 4 on page 26](#).

By default, the Junos OS allows all T640 routers in the routing matrix to come online. Optionally, you can configure the TX Matrix router to generate an alarm if the T640 routers in the routing matrix do not come online. To configure, include the **online-expected** statement at the **[edit chassis lcc number]** hierarchy level on the TX Matrix router.

```
[edit chassis lcc number]
online-expected;
```

If you do not want a T640 router to be part of the routing matrix, you can configure it to be offline. This is useful when you are performing maintenance on a T640 router. To configure a T640 router so that it is offline, include the **offline** statement at the **[edit chassis lcc number]** hierarchy level.

```
[edit chassis lcc number]
offline;
```

When you are ready to bring the T640 router back online, delete the **offline** configuration statement at the **[edit chassis lcc number]** hierarchy level.



**NOTE:** If you do not configure the **online-expected** or **offline** statement, any T640 router that is part of the routing matrix is allowed to come online. However, if a T640 router does not come online, the TX Matrix router does not generate an alarm.

For more information about chassis-specific statements, see the *Junos System Basics Configuration Guide*.

**Related  
Documentation**

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Committing Configurations on a Routing Matrix with a TX Matrix Router

You must commit configuration changes for a routing matrix with a TX Matrix router on the TX Matrix router rather than on the individual T640 routers. If you commit a configuration directly on a T640 router within a routing matrix, the configuration is not distributed to the TX Matrix router or the other T640 routers in the routing matrix. Conversely, all configuration changes you commit on the TX Matrix router are distributed to all the T640 routers in the routing matrix and override any changes committed directly on a T640 router.

There are two main ways to commit configurations on a TX Matrix router. When you issue the **commit synchronize** command, you synchronize the configurations of both the primary and backup Routing Engines on the TX Matrix router and the primary and backup Routing Engines of all the associated T640 routers.

```
user@router# commit synchronize
scc-re0:
configuration check succeeds
lcc0-re1:
commit complete
lcc0-re0:
commit complete
lcc1-re1:
commit complete
lcc1-re0:
commit complete
scc-re1:
commit complete
scc-re0:
commit complete
```

If you issue the basic form of the **commit** command on the TX Matrix router, this action updates only the master Routing Engines of the TX Matrix router and the T640 routers in the routing matrix.

```
user@router# commit
scc-re0:
configuration check succeeds
lcc0-re0:
commit complete
lcc1-re0:
commit complete
scc-re0:
commit complete
```

**Related Documentation**

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

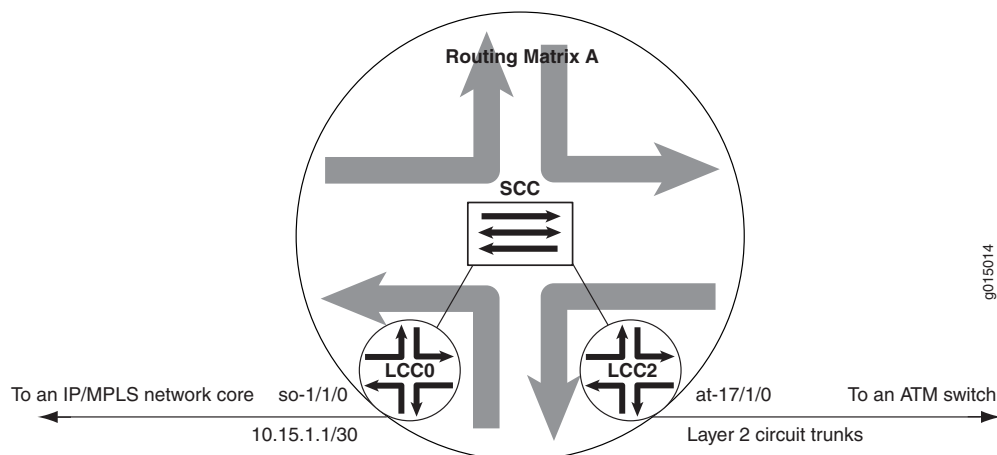
**Example: Routing Matrix with a TX Matrix Router Configuration**

- [Routing Matrix with a TX Matrix Router Topology on page 30](#)
- [TX Matrix Router—SCC on page 31](#)
- [Verifying Your Work on the Routing Matrix with a TX Matrix Router on page 36](#)

**Routing Matrix with a TX Matrix Router Topology**

Figure 2 on page 30 shows Routing Matrix A, a basic routing matrix consisting of a TX Matrix router and two T640 routers. The TX Matrix router is named **SCC** and the nodes are named **LCC0** and **LCC2**. The routing matrix with a TX Matrix router is acting as a provider edge (PE) router in a Layer 2 circuit network. SONET interface **so-1/1/0** in node **LCC0** connects to an IP/MPLS core network, and Asynchronous Transfer Mode 2 (ATM2) intelligent queuing (IQ) interface **at-17/1/0** in node **LCC2** runs Layer 2 circuit trunk mode to connect to an ATM switch. (For more information about Layer 2 see the *Junos VPNs Configuration Guide*.)

**Figure 2: Routing Matrix with a TX Matrix Router Topology Diagram**



Some key considerations for this configuration are as follows:

- Treat the routing matrix like a single router and execute all configuration and operational commands on the TX Matrix router **SCC**.
- Create configuration groups for each Routing Engine in the routing matrix by using groups **re0**, **re1**, **lcc0-re0**, **lcc2-re0**, **lcc0-re1**, and **lcc2-re1**. In the groups, configure hostnames, default routes, and management interfaces.

- To configure interfaces, use the routing matrix FPC numbering convention of slots 0 through 31.
- To enable ATM2 IQ trunk mode and other chassis-based commands, include the **lcc** *lcc-number* statement at the **[edit chassis]** hierarchy level and use the hardware FPC slot numbers 0 through 7 of node **LCC2**.
- Configure most other processes as usual, such as routing, class of service (CoS), and firewalls.

## TX Matrix Router—SCC

```
[edit]
groups { # You can create special configuration groups in a routing matrix.
  re0 { # This group corresponds to the master Routing Engine.
    system { # on the TX Matrix router.
      host-name scc;
      backup-router 192.168.17.254;
    }
    interfaces {
      fxp0 {
        unit 0 {
          family inet {
            address 192.168.77.158/21;
          }
        }
      }
    }
  }
  re1 { # This group corresponds to the backup Routing Engine
    system { # on the TX Matrix router.
      host-name scc1;
      backup-router 192.168.17.254;
    }
    interfaces {
      fxp0 {
        unit 0 {
          family inet {
            address 192.168.77.168/21;
          }
        }
      }
    }
  }
  lcc0-re0 { # This group corresponds to the master Routing Engine
    system { # on the T640 router LCC0.
      host-name lcc0;
      backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
    }
    interfaces {
      fxp0 {
        unit 0 {
          family inet {
            address 192.168.77.157/21;
          }
        }
      }
    }
  }
}
```

```
    }
  }
}
lcc2-re0 { # This group corresponds to the master Routing Engine
  system { # on the T640 router LCC2.
    host-name lcc2;
    backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
  }
  interfaces {
    fxp0 {
      unit 0 {
        family inet {
          address 192.168.77.159/21;
        }
      }
    }
  }
}
lcc0-re1 { # This group corresponds to the backup Routing Engine
  system { # on the T640 router LCC0.
    host-name lcc0-1;
    backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
  }
  interfaces {
    fxp0 {
      unit 0 {
        family inet {
          address 192.168.77.169/21;
        }
      }
    }
  }
}
lcc2-re1 { # This group corresponds to the backup Routing Engine
  system { # on the T640 routing node LCC2.
    host-name lcc2-1;
    backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
  }
  interfaces {
    fxp0 {
      unit 0 {
        family inet {
          address 192.168.77.192/21;
        }
      }
    }
  }
}
}
apply-groups [ re0 re1 lcc0-re1 lcc2-re1 lcc0-re0 lcc2-re0 ];
system {
  syslog {
    file messages {
      any any;
    }
  }
}
```



```

    }
  }
chassis { # You must apply chassis commands to a specific T640 router.
  lcc 2 { # Specify the T640 router and the FPC hardware slot of the node.
    fpc 1 { # This FPC is equivalent to slot 17 in the routing matrix.
      pic 1 {
        atm-l2circuit-mode {
          trunk nni;
        }
      }
    }
  }
}
interfaces {
  so-1/1/0 { # This is a SONET interface at FPC 1, PIC 1, port 0
    mtu 9192; # on the T640 router LCC0.
    unit 0 {
      family inet {
        address 10.15.1.1/30 {
          destination 10.15.1.2;
        }
      }
      family iso;
      family mpls {
        filter {
          input filter_1;
        }
      }
    }
  }
  at-17/1/0 { # This is an ATM2 IQ interface at FPC 1, PIC 1, port 0
    encapsulation atm-ccc-cell-relay; # on the T640 router LCC2.
    atm-options {
      pic-type atm2;
      scheduler-maps { # CoS on an ATM2 IQ PIC works the same in a routing matrix.
        cos1 { # as it does in a standalone T640 router.
          forwarding-class ubr {
            priority low;
            transmit-weight percent 25;
          }
          forwarding-class nrtvbr {
            priority low;
            transmit-weight percent 25;
          }
          forwarding-class rtvbr {
            priority low;
            transmit-weight percent 25;
          }
          forwarding-class cbr {
            priority high;
            transmit-weight percent 25;
          }
        }
        cos2 {
          forwarding-class ubr {
            priority low;

```

```
        transmit-weight percent 10;
    }
    forwarding-class nrtvbr {
        priority low;
        transmit-weight percent 20;
    }
    forwarding-class rtvbr {
        priority low;
        transmit-weight percent 30;
    }
    forwarding-class cbr {
        priority high;
        transmit-weight percent 40;
    }
}
cos3 {
    forwarding-class ubr {
        priority low;
        transmit-weight percent 40;
    }
    forwarding-class nrtvbr {
        priority low;
        transmit-weight percent 30;
    }
    forwarding-class rtvbr {
        priority low;
        transmit-weight percent 20;
    }
    forwarding-class cbr {
        priority high;
        transmit-weight percent 10;
    }
}
}
}
unit 0 {
    trunk-id 0;
    trunk-bandwidth 10m;
    cell-bundle-size 2;
}
unit 1 {
    trunk-id 1;
    trunk-bandwidth 10m;
    cell-bundle-size 1;
    atm-scheduler-map cos1;
}
unit 2 {
    trunk-id 2;
    trunk-bandwidth 10m;
    cell-bundle-size 2;
    atm-scheduler-map cos2;
}
unit 3 {
    trunk-id 3;
    trunk-bandwidth 10m;
    cell-bundle-size 3;
```

```

        atm-scheduler-map cos3;
    }
}
lo0 {
    unit 0 {
        family inet {
            address 127.0.0.1/32;
            address 10.255.77.158/32 {
                primary;
            }
        }
        family iso {
            address 47.0005.80ff.f800.0000.0108.0001.0102.5507.0158.00;
        }
        family inet6 {
            address 2001:db8::10:255:77:158/32 {
                primary;
            }
        }
    }
}
}
}
protocols { # You can configure protocols in the routing matrix as usual.
    mpls {
        interface so-1/1/0.0;
    }
    isis {
        interface so-1/1/0.0;
        interface lo0.0;
    }
    ldp {
        interface so-1/1/0.0;
        interface lo0.0;
    }
    l2circuit {
        neighbor 10.255.71.97 {
            interface at-17/1/0.0 {
                virtual-circuit-id 100;
            }
            interface at-17/1/0.1 {
                virtual-circuit-id 101;
            }
            interface at-17/1/0.2 {
                virtual-circuit-id 102;
            }
            interface at-17/1/0.3 {
                virtual-circuit-id 103;
            }
        }
    }
}
}
class-of-service { # You can configure CoS in the routing matrix as usual.
    forwarding-classes {
        queue 0ubr;
        queue 1nrtvbr;
        queue 2rtvbr;
    }
}

```

```
        queue 3 cbr;
    }
    traceoptions {
        flag all;
    }
}
firewall { # You can configure firewalls in the routing matrix as usual.
    family mpls {
        filter filter_1 {
            term plp0 {
                from {
                    exp [ 0 2 4 6 ];
                }
                then {
                    count LOW;
                    loss-priority low;
                }
            }
            term plp1 {
                from {
                    exp [ 1 3 5 7 ];
                }
                then {
                    count HIGH;
                    loss-priority high;
                }
            }
        }
    }
}
```

## Verifying Your Work on the Routing Matrix with a TX Matrix Router

To verify proper operation of the routing matrix with a TX Matrix router, use the following commands on the TX Matrix router:

- **show chassis alarms** <lcc *lcc-number* | scc>
- **show chassis craft-interface** <lcc *lcc-number* | scc>
- **show chassis ethernet-switch** <lcc *lcc-number* | scc>
- **show chassis hardware** <lcc *lcc-number* | scc>
- **show chassis fpc** <lcc *lcc-number*>
- **show chassis lccs**
- **show chassis location** <fpc | interface | lcc *lcc-number* | scc>
- **show chassis routing-engine** <lcc *lcc-number* | scc>
- **show chassis sibs** <lcc *lcc-number* | scc>
- **show interfaces terse**
- **show route summary**

- **show system uptime** <all-lcc | lcc *lcc-number* | scc>
- **show version** <all-lcc | lcc *lcc-number* | scc>

In general, when you issue standard operational commands on a TX Matrix router, you receive output from the primary Routing Engines of all components in the routing matrix. To limit the output of information for a specific T640 router within the routing matrix, include the **lcc *lcc-number*** option. To display information for the TX Matrix router only, include the **scc** option. To display information for all T640 routers within the routing matrix (selected commands only), include the **all-lcc** option. Any exceptions to this general rule are mentioned next to the appropriate commands.

The following sections show the output of select operational commands used with the configuration example:

- [Displaying the Software Version on A Routing Matrix with a TX Matrix Router on page 37](#)
- [Displaying Interfaces on page 39](#)
- [Displaying Routes on page 40](#)
- [Displaying Alarms and System Uptime on page 41](#)
- [Displaying Chassis Hardware and Status for a Routing Matrix with a TX Matrix Router on page 43](#)

### Displaying the Software Version on A Routing Matrix with a TX Matrix Router

The **show version** command provides an excellent example of how you can select output for various components of the routing matrix with a TX Matrix router. If the TX Matrix router (SCC) or a T640 router (LCC) is not specified in the command, then the command displays output for all components.

```
user@router> show version ?
```

Possible completions:

<[Enter]>	Execute this command
all-lcc	Show software version on all LCC chassis
brief	Display brief output
detail	Display detailed output
lcc	Show software version on specific LCC (0..3)
scc	Show software version on the SCC
	Pipe through a command

To display the software version for all routing matrix components, issue the **show version** command on the TX Matrix router:

```
user@router> show version
```

```
scc-re0:
```

```
-----
Hostname: scc
Model: TX Matrix
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
```

```
JUNOS Crypto Software Suite [7.0-20040630.0]
lcc0-re0:
-----
Hostname: lcc0
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
lcc2-re0:
-----
Hostname: lcc2
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
```

To display the software version for the TX Matrix router only, include the **scc** option:

```
user@router> show version scc
Hostname: scc
Model: TX Matrix
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
```

To display the software version for a specific T640 router, include the **lcc** option:

```
user@router> show version lcc 0
lcc0-re0:
-----
Hostname: lcc0
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
```

To display the output for all T640 routers, include the **all-lcc** option:

```
user@router> show version all-lcc
lcc0-re0:
-----
```

```

Hostname: tcc0
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
tcc2-re0:
-----

```

```

Hostname: tcc2
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]

```

### Displaying Interfaces

Although individual FPCs are installed in each of the T640 routers, the routing matrix is designed to collect interface information centrally at the TX Matrix router. To display available interfaces in the routing matrix, issue a **show interfaces** command on the TX Matrix router:

```

user@router> show interfaces terse

```

Interface	Admin	Link	Proto	Local	Remote
so-1/0/0	up	up			
so-1/1/0	up	up			
so-1/1/0.0	up	up	inet	10.15.1.1	--> 10.15.1.2
			iso		
			mpls		
so-1/3/0	up	down			
at-2/1/0	up	up			
ge-2/2/0	up	up			
so-3/3/0	up	up			
so-3/3/1	up	up			
so-3/3/2	up	down			
so-3/3/3	up	down			
so-16/0/0	up	down			
so-16/0/1	up	down			
so-16/0/2	up	down			
so-16/0/3	up	up			
ge-16/1/0	up	down			
so-17/0/0	up	down			
at-17/1/0	up	up			
at-17/1/0.0	up	up	ccc		
at-17/1/0.1	up	up	ccc		
at-17/1/0.2	up	up	ccc		
at-17/1/0.3	up	up	ccc		
at-17/1/1	up	up			
ge-17/2/0	up	up			
ge-17/2/1	up	up			
so-17/3/0	up	down			
so-19/0/0	up	down			

```

so-19/1/0          up    down
so-19/2/0          up    down
so-19/3/0          up    down
bcm0               up    up
bcm0.0             up    up    tnp    4
dsc                up    up
em0                up    up
em0.0              up    up    tnp    4
fxp0               up    up
fxp0.0             up    up    inet   192.168.77.158/21
gre                up    up
ipip               up    up
lo0                up    up
lo0.0              up    up    inet   10.255.70.158      --> 0/0
                                   127.0.0.1        --> 0/0
                                   iso
47.0005.80ff.f800.0000.0108.0001.0102.5507.0158.00
                                   inet6 2001:db8::10:255:70:158
                                   fe80::280:42ff:fe13:269d
lo0.16385          up    up    inet
                                   inet6 fe80::280:42ff:fe13:269d
lsi                up    up
mtun               up    up
pimd               up    up
pime               up    up
tap                up    up

```

### Displaying Routes

When you need to verify route information for a routing matrix, you must issue operational commands on the TX Matrix router. To display available routes for the routing matrix, issue a **show route** command:

```

user@router> show route summary
Router ID: 10.255.77.158
inet.0: 13 destinations, 14 routes (12 active, 0 holddown, 1 hidden)
    Direct:    4 routes,    3 active
    Local:     2 routes,    2 active
    Static:    6 routes,    6 active
    IS-IS:     2 routes,    1 active
inet.3: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
    LDP:       1 routes,    1 active
iso.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
    Direct:    1 routes,    1 active
mpls.0: 7 destinations, 7 routes (7 active, 0 holddown, 0 hidden)
    MPLS:      3 routes,    3 active
    LDP:       2 routes,    2 active
    L2CKT:     2 routes,    2 active
inet6.0: 2 destinations, 2 routes (2 active, 0 holddown, 0 hidden)
    Direct:    2 routes,    2 active
__juniper_private1__.inet6.0: 1 destinations, 1 routes (1 active, 0 holddown, 0
hidden)
    Direct:    1 routes,    1 active
l2circuit.0: 5 destinations, 5 routes (5 active, 0 holddown, 0 hidden)
    LDP:       1 routes,    1 active
    L2CKT:     4 routes,    4 active

```



## Displaying Alarms and System Uptime

To display alarms for all routing matrix components, issue the **show chassis alarms** command:

```
user@router> show chassis alarms
scc-re0:
-----
2 alarms currently active
Alarm time           Class  Description
2004-09-27 08:50:57 PDT Major  LCC 2 Major Errors
2004-09-27 08:50:42 PDT Minor  LCC 0 Minor Errors
lcc0-re0:
```

```
-----
1 alarms currently active
Alarm time           Class  Description
2004-09-27 08:50:42 PDT Minor  PEM 1 Absent
lcc2-re0:
```

```
-----
1 alarms currently active
Alarm time           Class  Description
2004-09-27 08:50:57 PDT Major  PEM 1 Not OK
```

To display the craft interface display for all routing matrix components, issue the **show chassis craft-interface** command:

```
user@router> show chassis craft-interface
scc-re0:
```

```
-----
FPM Display contents:
+-----+
|scc      |
|2 Alarms active    |
|R: LCC 2 Major Error|
|Y: LCC 0 Minor Error|
+-----+
Front Panel System LEDs:
Routing Engine    0    1
-----
OK                *    *
Fail              .    .
Master            *    .
Front Panel Alarm Indicators:
-----
Red LED          *
Yellow LED       *
Major relay      *
Minor relay      *
CB LEDs:
  CB    0    1
-----
Amber   .    .
Green  *    *
Blue   *    .
SIB LEDs:
  SIB   0    1    2    3    4
-----
Fail   .    .    .    .    .
OK     *    *    *    *    *
Active .    *    *    *    *
```

lcc0-re0:

FPM Display contents:

```

+-----+
|lcc0      |
|1 Alarm active  |
|Y: PEM 1 Absent  |
|              |
+-----+

```

Front Panel System LEDs:

Routing Engine	0	1
OK	*	*
Fail	.	.
Master	*	.

OK	*	*
Fail	.	.
Master	*	.

OK	*	*
Fail	.	.
Master	*	.

OK	*	*
Fail	.	.
Master	*	.

Front Panel Alarm Indicators:

Red LED .

Yellow LED \*

Major relay .

Minor relay \*

Front Panel FPC LEDs:

FPC	0	1	2	3	4	5	6	7
Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

Red	.	.	.	.	.	.	.	.
Green	.	*	*	*	.	.	.	.

```

Red LED      *
Yellow LED   .
Major relay  *
Minor relay   .
Front Panel FPC LEDs:
FPC    0    1    2    3    4    5    6    7
-----
Red     .     .     .     .     .     .     .     .
Green   *     *     .     *     .     .     .     .
CB LEDs:
  CB    0     1
-----
Amber   .     .
Green   *     *
Blue    *     .
SCG LEDs:
  SCG   0     1
-----
Amber   .     .
Green   *     .
Blue    *     .
SIB LEDs:
  SIB   0     1    2    3    4
-----
Red     .     .     .     .     .
Green   *     *     *     *     *

```

To display the amount of time the routing matrix components have been in operation, issue the **show system uptime** command on the TX Matrix router:

```

user@router> show system uptime
scc-re0:
-----
Current time: 2004-09-27 09:44:55 PDT
System booted: 2004-09-27 08:49:31 PDT (00:55:24 ago)
Protocols started: 2004-09-27 08:50:27 PDT (00:54:28 ago)
Last configured: 2004-09-27 09:16:08 PDT (00:28:47 ago) by user
9:44AM PDT up 55 mins, 1 user, load averages: 0.00, 0.05, 0.06
lcc0-re0:
-----
Current time: 2004-09-27 09:44:55 PDT
System booted: 2004-09-27 08:49:24 PDT (00:55:31 ago)
Last configured: 2004-09-27 09:16:06 PDT (00:28:49 ago) by user
9:44AM PDT up 56 mins, 0 users, load averages: 0.00, 0.02, 0.00
lcc2-re0:
-----
Current time: 2004-09-27 09:44:55 PDT
System booted: 2004-09-27 08:49:26 PDT (00:55:29 ago)
Last configured: 2004-09-27 09:16:06 PDT (00:28:49 ago) by user
9:44AM PDT up 55 mins, 0 users, load averages: 0.02, 0.01, 0.00

```

### Displaying Chassis Hardware and Status for a Routing Matrix with a TX Matrix Router

To display the hardware inventory for a routing matrix with a TX Matrix router, you can select output for the TX Matrix router only, a specific T640 router, or all components. If a specific component (**lcc** or **scc**) is not specified as an option in the command, the default output displays information for the entire routing matrix.

```

user@router> show chassis hardware ?

```

## Possible completions:

```

<[Enter]>      Execute this command
detail         Include RAM and disk information in output
extensive      Display ID EEPROM information
frus           Display assembly IDs and extra PIC information
lcc            Display chassis-specific information (0..3)
scc            Display chassis-specific information
|              Pipe through a command

```

To display all hardware components in a routing matrix, issue the **show chassis hardware** command on the TX Matrix router:

```

user@router> show chassis hardware
scc-re0:

```

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis				TX Matrix
Midplane	REV 04	710-004396	RB0013	SCC Midplane
FPM GBUS				
FPM Display	REV 04	710-004619	HS5953	SCC FPM
CIP 0	REV 01	710-010218	HS5726	SCC CIP
CIP 1	REV 01	710-010218	HV9163	SCC CIP
PEM 0	Rev 11	740-002595	pm18529	Power Entry Module
Routing Engine 0	REV 02	740-008883	212058900121	RE-4.0
Routing Engine 1	REV 03	740-008883	211123900258	RE-4.0
CB 0	REV 01	710-011709	HS5911	Control Board (CB-TX)
CB 1	REV 01	710-011709	HZ2163	Control Board (CB-TX)
SPMB 0	REV 09	710-003229	HT4129	T-series Switch CPU
SPMB 1	REV 09	710-003229	HT4174	T-series Switch CPU
SIB 0	REV 01	710-011223	HS0663	SIB-S8-F16 1/2
B Board	REV 05	710-011225	HW1210	SIB-S8-F16 1/2 (B)
SIB 1	REV 01	710-005839	HW1160	SIB-S8-F16
B Board	REV 01	710-005840	HW1213	SIB-S8-F16 (B)
SIB 2	REV 05	710-011223	HW1146	SIB-S8-F16 1/2
B Board	REV 05	710-011225	JB8148	SIB-S8-F16 1/2 (B)
SIB 3	REV 05	710-011223	HW1218	SIB-S8-F16 1/2
B Board	REV 05	710-011225	HW1214	SIB-S8-F16 1/2 (B)
SIB 4	REV 05	710-011223	HW1162	SIB-S8-F16 1/2
B Board	REV 05	710-011225	HW1182	SIB-S8-F16 1/2 (B)

lcc0-re0:

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			65409	T640
Midplane	REV 03	710-005608	RA1395	T640 Backplane
FPM GBUS	REV 09	710-002901	RA2649	T640 FPM Board
FPM Display	REV 05	710-002897	RA2608	FPM Display
CIP	REV 06	710-002895	HS0753	T-series CIP
PEM 0	Rev 01	740-002595	MF16629	Power Entry Module
SCG 0	REV 11	710-003423	HS4313	T640 Sonet Clock Gen.
SCG 1	REV 11	710-003423	HR9161	T640 Sonet Clock Gen.
Routing Engine 0	REV 03	740-008883	211123900199	RE-4.0
Routing Engine 1	REV 03	740-008883	211123900248	RE-4.0
CB 0	REV 02	710-007655	HS5909	Control Board (CB-T)
CB 1	REV 02	710-007655	HS5910	Control Board (CB-T)
FPC 1	REV 07	710-007527	HR0716	FPC Type 2
CPU	REV 15	710-001726	HS6048	FPC CPU
PIC 0	REV 07	750-001900	AR3722	1x OC-48 SONET, SMSR
PIC 1	REV 05	750-001900	AD3644	1x OC-48 SONET, SMSR
PIC 3	REV 06	750-001900	HD7603	1x OC-48 SONET, SMSR

MMB 1	REV 03	710-005555	HT5273	MMB-288mbit
PPB 0	REV 04	710-003758	HR4249	PPB Type 2
PPB 1	REV 04	710-003758	HR4257	PPB Type 2
FPC 2	REV 01	710-010233	HM4189	E-FPC Type 1
CPU	REV 01	710-010169	HS9936	FPC CPU-Enhanced
PIC 1	REV 03	750-005719	HL8326	1x OC-12 ATM-II IQ, MM
PIC 2	REV 01	750-003141	AD9051	1x G/E, 1000 BASE-SX
MMB 1	REV 01	710-008923	HR0848	MMB 3M 288-bit
FPC 3	REV 01	710-010154	HR0863	E-FPC Type 3
CPU	REV 01	710-010169	HN3422	FPC CPU-Enhanced
PIC 3	REV 01	750-009553	HP3576	4x OC-48 SONET
SFP 0	REV 01	740-009030	P11H5N1	SFP-LR
SFP 1	REV 01	740-009029	35D464P00060	SFP-IR
SFP 3	REV 01	740-009030	P11H5LM	SFP-LR
MMB 0	REV 01	710-010171	HR0821	MMB-288mbit
MMB 1	REV 01	710-010171	HR0818	MMB-288mbit
SPMB 0	REV 09	710-003229	HT4177	T-series Switch CPU
SPMB 1	REV 09	710-003229	HT4176	T-series Switch CPU
SIB 0	REV 07	710-005781	HR5939	SIB-L8-F16
B Board	REV 06	710-005782	HR5944	SIB-L8-F16 (B)
SIB 1	REV 02	710-005781	HZ2146	SIB-L8-F16
B Board	REV 03	710-005782	HY4160	SIB-L8-F16 (B)
SIB 2	REV 07	710-005781	HR5925	SIB-L8-F16
B Board	REV 03	710-005782	HY4161	SIB-L8-F16 (B)
SIB 3	REV 07	710-005781	HR5918	SIB-L8-F16
B Board	REV 06	710-005782	HR5972	SIB-L8-F16 (B)
SIB 4	REV 07	710-005781	HR5935	SIB-L8-F16
B Board	REV 06	710-005782	HR5969	SIB-L8-F16 (B)
lcc2-re0:				

-----  
Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			55609	T640
Midplane	REV 03	710-005608	RA1444	T640 Backplane
FPM GBUS	REV 09	710-002901	RA3309	T640 FPM Board
FPM Display	REV 05	710-002897	RA3273	FPM Display
CIP	REV 06	710-002895	HS0735	T-series CIP
PEM 0	Rev 11	740-002595	PM18568	Power Entry Module
PEM 1	Rev 11	740-002595	PM18572	Power Entry Module
SCG 0	REV 11	710-003423	HS9991	T640 Sonet Clock Gen.
Routing Engine 0	REV 03	740-008883	211123900183	RE-4.0
Routing Engine 1	REV 02	740-008883	212058900178	RE-4.0
CB 0	REV 02	710-007655	HS5913	Control Board (CB-T)
CB 1	REV 02	710-007655	HS5944	Control Board (CB-T)
FPC 0	REV 05	710-001721	HD5965	FPC Type 3
CPU	REV 09	710-001726	AY4909	FPC CPU
PIC 0	REV 04	750-009553	HV3648	4x OC-48 SONET
SFP 0	REV 01	740-009029	P11JXWP	SFP-IR
SFP 1	REV 01	740-008169	36D525P00154	UNKNOWN
SFP 2	REV 01	740-009028	2353110	SFP-SR
SFP 3	REV 01	740-008169	36D525P00159	UNKNOWN
PIC 1	REV 02	750-009567	HX2875	1x 10GE(LAN),XENPAK
SFP 0	REV 01	740-009898	USC202YW25	XENPAK-LR
MMB 0	REV 03	710-004047	HE3427	MMB-288mbit
MMB 1	REV 03	710-004047	HD5812	MMB-288mbit
ICBM	REV 04	710-003384	HB1884	FPC ICBM
PPB 0	REV 02	710-002845	HC0964	PPB Type 3
PPB 1	REV 02	710-002845	HC0987	PPB Type 3
FPC 1	REV 02	710-002385	HC0618	FPC Type 2
CPU	REV 06	710-001726	HA4724	FPC CPU
PIC 0	REV 02	750-009066	HL9900	1x OC-48 SONET SFP

SFP 0		NON-JNPR	P11QS8W	SFP-LR
PIC 1	REV 02	750-007219	AZ1339	2x OC-12 ATM-II IQ, MM
PIC 2	REV 02	750-002510	AP7476	2x G/E, 1000 BASE-SX
PIC 3	REV 05	750-001900	AD5738	1x OC-48 SONET, SMSR
MMB 1	REV 03	710-004047	HD5829	MMB-288mbit
ICBM	REV 04	710-003384	HC0386	FPC ICBM
PPB 0	REV 02	710-003758	HC0904	PPB Type 2
PPB 1	REV 02	710-003758	HC0898	PPB Type 2
FPC 3	REV 07	710-007529	HR3311	FPC Type 3
CPU	REV 15	710-001726	HR2788	FPC CPU
PIC 0	REV 10	750-004535	HT0545	1x OC-192 SM SR2
PIC 1	REV 12	750-004535	HX2065	1x OC-192 SM SR2
PIC 2	REV 01	750-004535	HC0241	1x OC-192 SM SR1
PIC 3	REV 01	750-004535	HF6583	1x OC-192 SM SR1
MMB 0	REV 03	710-005555	HR5642	MMB-288mbit
MMB 1	REV 03	710-005555	HR5586	MMB-288mbit
PPB 0	REV 04	710-002845	HT6719	PPB Type 3
PPB 1	REV 04	710-002845	HM0206	PPB Type 3
SPMB 0	REV 09	710-003229	HR8685	T-series Switch CPU
SPMB 1	REV 09	710-003229	HR3730	T-series Switch CPU
SIB 0	REV 07	710-005781	HR5937	SIB-L8-F16
B Board	REV 06	710-005782	HZ5288	SIB-L8-F16 (B)
SIB 1	REV 07	710-005781	HZ5279	SIB-L8-F16
B Board	REV 06	710-005782	HR5951	SIB-L8-F16 (B)
SIB 2	REV 07	710-005781	HZ5276	SIB-L8-F16
B Board	REV 06	710-005782	HR5950	SIB-L8-F16 (B)
SIB 3	REV 07	710-005781	HR5915	SIB-L8-F16
B Board	REV 06	710-005782	HZ5285	SIB-L8-F16 (B)
SIB 4	REV 07	710-005781	HR5934	SIB-L8-F16
B Board	REV 06	710-005782	HR5952	SIB-L8-F16 (B)

You can also display individual hardware components in the TX Matrix router, a specific T640 router, or the entire routing matrix. To display all the SIBs in the entire routing matrix, issue the **show chassis sibs** command on the TX Matrix router.

```
user@router> show chassis sibs
scc-re0:
```

```
-----
Slot  State          Uptime
0      Spare
1      Online          53 minutes, 38 seconds
2      Online          53 minutes, 36 seconds
3      Online          53 minutes, 33 seconds
4      Online          53 minutes, 30 seconds
```

```
lcc0-re0:
```

```
-----
Slot  State          Uptime
0      Spare
1      Online          53 minutes, 18 seconds
2      Online          53 minutes, 17 seconds
3      Online          53 minutes, 16 seconds
4      Online          53 minutes, 15 seconds
```

```
lcc2-re0:
```

```
-----
Slot  State          Uptime
0      Spare
1      Online          53 minutes, 18 seconds
2      Online          53 minutes, 17 seconds
```

```

3   Online           53 minutes, 16 seconds
4   Online           53 minutes, 15 seconds

```

To display information about all master Routing Engines in the routing matrix, issue the **show chassis routing-engine** command on the TX Matrix router:

```

user@router> show chassis routing-engine
scc-re0:

```

```

-----
Routing Engine status:

```

```

Slot 0:

```

```

Current state           Master
Election priority       Master (default)
Temperature             34 degrees C / 93 degrees F
CPU temperature         35 degrees C / 95 degrees F
DRAM                   2048 MB
Memory utilization      12 percent
CPU utilization:
  User                  0 percent
  Background            0 percent
  Kernel                5 percent
  Interrupt             0 percent
  Idle                  95 percent
Model                  RE-4.0
Serial ID               212058900121
Start time              2004-09-27 08:49:31 PDT
Uptime                  1 hour, 4 seconds
Load averages:         1 minute   5 minute   15 minute
                       0.06       0.04       0.05

```

```

Routing Engine status:

```

```

Slot 1:

```

```

Current state           Backup
Election priority       Backup (default)
Temperature             33 degrees C / 91 degrees F
CPU temperature         34 degrees C / 93 degrees F
DRAM                   2048 MB
Memory utilization      10 percent
CPU utilization:
  User                  0 percent
  Background            0 percent
  Kernel                0 percent
  Interrupt             1 percent
  Idle                  99 percent
Model                  RE-4.0
Serial ID               211123900258
Start time              2004-09-26 13:09:13 PDT
Uptime                  20 hours, 40 minutes, 4 seconds

```

```

lcc0-re0:

```

```

-----
Routing Engine status:

```

```

Slot 0:

```

```

Current state           Master
Election priority       Master (default)
Temperature             37 degrees C / 98 degrees F
CPU temperature         38 degrees C / 100 degrees F
DRAM                   2048 MB
Memory utilization      11 percent
CPU utilization:
  User                  0 percent
  Background            0 percent
  Kernel                3 percent

```

```

        Interrupt          1 percent
        Idle              97 percent
        Model             RE-4.0
        Serial ID         211123900199
        Start time        2004-09-27 08:49:24 PDT
        Uptime            1 hour, 11 seconds
        Load averages:    1 minute   5 minute   15 minute
                        0.02         0.02         0.00

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  Temperature            35 degrees C / 95 degrees F
  CPU temperature        35 degrees C / 95 degrees F
  DRAM                   2048 MB
  Memory utilization     10 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               0 percent
    Interrupt            0 percent
    Idle                 99 percent
  Model                  RE-4.0
  Serial ID              211123900248
  Start time             2004-09-26 13:09:07 PDT
  Uptime                 20 hours, 40 minutes, 12 seconds
lcc2-re0:

```

```

-----
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            33 degrees C / 91 degrees F
  CPU temperature        35 degrees C / 95 degrees F
  DRAM                   2048 MB
  Memory utilization     11 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               4 percent
    Interrupt            0 percent
    Idle                 96 percent
  Model                  RE-4.0
  Serial ID              211123900183
  Start time             2004-09-27 08:49:26 PDT
  Uptime                 1 hour, 9 seconds
  Load averages:        1 minute   5 minute   15 minute
                        0.15         0.05         0.01

```

```

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  Temperature            32 degrees C / 89 degrees F
  CPU temperature        34 degrees C / 93 degrees F
  DRAM                   2048 MB
  Memory utilization     10 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               0 percent
    Interrupt            1 percent

```



```

Idle                               99 percent
Model                             RE-4.0
Serial ID                         212058900178
Start time                        2004-09-26 13:09:10 PDT
Uptime                            20 hours, 40 minutes, 8 seconds

```

To display information about FPCs in a routing matrix, issue the **show chassis fpc** command. Because there are no FPCs in a TX Matrix router, there is no **scc** option available for this command.

```

user@router> show chassis fpc
1cc0-re0:

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Buffer
0	Empty						
1	Online	31	1	0	256	7	44
2	Online	28	1	0	256	7	44
3	Online	31	3	0	256	14	44
4	Empty						
5	Empty						
6	Empty						
7	Empty						

```

1cc2-re0:

```

Slot	State	Temp (C)	CPU Total	Utilization (%) Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Buffer
0	Online	31	3	0	256	14	44
1	Online	30	2	0	256	7	44
2	Empty						
3	Online	31	3	0	256	14	44
4	Empty						
5	Empty						
6	Empty						
7	Empty						

You can also check to see if the TX Matrix router and T640 routers are communicating correctly within the routing matrix. To verify that the T640 routers have proper connectivity to the routing matrix, issue the **show chassis lccs** command. In this example, there are two T640 routers in the routing matrix.

```

user@router> show chassis lccs
Slot  State      Uptime
0     Online      52 minutes, 5 seconds
1     Empty
2     Online      52 minutes, 6 seconds
3     Empty

```

#### Related Documentation

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [System Requirements for the Routing Matrix with a TX Matrix Router on page 19](#)



## CHAPTER 4

# Administering a Routing Matrix with a TX Matrix Router

- [Managing System Processes in the Routing Matrix with a TX Matrix Router on page 51](#)
- [Managing Files on Routing Engines in a Routing Matrix with a TX Matrix Router on page 52](#)
- [Rebooting and Halting Routing Matrix with a TX Matrix Router Components on page 53](#)
- [Enabling and Disabling Specific Routing Matrix with a TX Matrix Router Hardware Components on page 54](#)
- [Monitoring a Routing Matrix with a TX Matrix Router on page 57](#)

## Managing System Processes in the Routing Matrix with a TX Matrix Router

---

Some system processes in a routing matrix with a TX Matrix router run on the TX Matrix router and some run on the T640 routers. For example, the routing protocol process (rpd) runs exclusively on the TX Matrix router. To restart the routing protocol process for the entire routing matrix, issue the **restart routing** command on the TX Matrix router.

```
user@router> restart routing ?
Possible completions:
<[Enter]>      Execute this command
gracefully     Gracefully restart the process
immediately    Immediately restart (SIGKILL) the process
logical-system Name of logical system
soft           Soft reset (SIGHUP) the process
|             Pipe through a command
```

Other processes run on both the TX Matrix router and the T640 routers. To restart the chassis process that manages PICs, FPCs, and other hardware components, issue the **restart chassis-control** command on the TX Matrix router and select the **all**, **all-lcc**, or **lcc lcc-number** option.

```
user@router> restart chassis-control ?
Possible completions:
<[Enter]>      Execute this command
all            Restart software process on all chassis
all-lcc        Restart software process on all LCC chassis
gracefully     Gracefully restart the process
immediately    Immediately restart (SIGKILL) the process
lcc            Restart software process on specific chassis (0..3)
```

```
soft          Soft reset (SIGHUP) the process
|             Pipe through a command
```

To restart the Simple Network Management Protocol (SNMP) process, issue the **restart snmp** command on the TX Matrix router and select the **all**, **all-lcc**, or **lcc lcc-number** option.

```
user@router> restart snmp ?
```

Possible completions:

```
<[Enter]>      Execute this command
all            Restart software process on all chassis
all-lcc        Restart software process on all LCC chassis
gracefully      Gracefully restart the process
immediately     Immediately restart (SIGKILL) the process
lcc            Restart software process on specific chassis (0..3)
soft           Soft reset (SIGHUP) the process
|             Pipe through a command
```

#### Related Documentation

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

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## Managing Files on Routing Engines in a Routing Matrix with a TX Matrix Router

You can manage files on all Routing Engines in a routing matrix with a TX Matrix router. For example, you can copy a file from the master Routing Engine in the TX Matrix router to the master Routing Engine on a T640 router.

```
user@router> file list lcc0-re0:
/var/home/user/lcc0-re0: No such file or directory
```

```
user@router> file list
/var/home/user/:
.ssh/
fred.txt
```

```
user@host> file copy fred.txt lcc0-re0:fred.txt
```

```
user@host> file list lcc0-re0:
lcc0-re0:
```

```
-----
/var/home/user/:
.ssh/
fred.txt
```

#### Related Documentation

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Rebooting and Halting Routing Matrix with a TX Matrix Router Components

You can control which component in a routing matrix with a TX Matrix router is rebooted or halted. If you reboot or halt the TX Matrix router, by default you also reboot or halt the master Routing Engines on all T640 routers. To reboot a specific component, issue the **request system reboot** command with the **all-lcc**, **lcc**, or **scc** option.

```
user@router> request system reboot ?
Possible completions:
  <[Enter]>      Execute this command
  all-lcc       Reboot all LCC chassis
  at            Time at which to perform the operation
  in            Number of minutes to delay before operation
  lcc           Reboot LCC (0..3)
  media         Boot media for next boot
  message       Message to display to all users
  scc           Reboot SCC chassis
  |             Pipe through a command
user@router> request system reboot
Reboot the system ? [yes,no] (no) yes
Rebooting lcc0-re0
Rebooting lcc1-re0
```

Similarly, to halt a specific component in a routing matrix, issue the **request system halt** command with the **all-lcc**, **lcc**, or **scc** option.



**CAUTION:** Before entering this command, you must have access to the TX Matrix router console port and the console ports of all of the LCCs in order to bring up the TX Matrix Routing Engines.

```
user@router> request system halt ?
Possible completions:
  <[Enter]>      Execute this command
  all-lcc       Halt all LCC chassis
  at            Time at which to perform the operation
  both-routing-engines Halt both Routing Engines
  in            Number of minutes to delay before operation
  lcc           Halt LCC (0..3)
  media         Boot media for next boot
  message       Message to display to all users
  scc           Halt SCC
  |             Pipe through a command
```

Issuing the **request system halt both-routing-engines** command on a TX Matrix router halts both Routing Engines in the TX Matrix router and both Routing Engines in all T640 routers in the routing matrix. To reboot a Routing Engine that has been halted, you must connect through the console. For more information about system commands, see the [CLI Explorer](#).

- Related Documentation**
- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
  - [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)

- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Enabling and Disabling Specific Routing Matrix with a TX Matrix Router Hardware Components

You can temporarily disable certain hardware components (such as FPCs, PICs, and SIBs) that belong to the TX Matrix router and T640 routers in the routing matrix. To do so, issue the appropriate **request chassis** command and include the **lcc** or **scc** option as needed.



**NOTE:** If you issue a chassis-related command that references FPCs, we recommend that you use the FPC hardware slot number (0 through 7) of the specific T640 router and specify its corresponding LCC number.

```
user@router> request chassis ?
```

Possible completions:

cb	Change Control Board status
fpc	Change Flexible PIC Concentrator status
fpm	Change craft interface status
lcc	Change LCC status
pic	Change Physical Interface Card status
routing-engine	Change Routing Engine status
scg	Change SONET Clock Generator status
sib	Change Switch Interface Board status
spmb	Change Switch Processor Mezzanine Board status

```
user@router> request chassis fpc ?
```

Possible completions:

lcc	Slot number of LCC that houses FPC (0..3)
offline	Take FPC offline
online	Bring FPC online
restart	Restart FPC
slot	FPC slot number (0..31)

```
user@router> request chassis pic ?
```

Possible completions:

fpc-slot	Slot number of FPC that houses PIC (0..31)
lcc	Slot number of LCC that houses FPC (0..3)
offline	Take PIC offline
online	Bring PIC online
pic-slot	PIC slot number (0..3)

```
user@router> request chassis sib ?
```

Possible completions:

lcc	Change Switch Interface Board status (0..3)
offline	Take SIB offline
online	Bring SIB online
scc	Change Switch Interface Board status
slot	SIB slot number (0..4)
start-receiver	Start SIB optical receiver (0..3)
stop-receiver	Stop SIB optical receiver (0..3)

The routing matrix extends the concept of taking specific hardware components offline or online to include an entire T640 router in a routing matrix. To enable or disable a T640 router in a routing matrix, issue the **request chassis lcc slot lcc-number (offline | online)** command.

```
user@router> request chassis lcc ?
Possible completions:
  offline      Take LCC offline
  online       Bring LCC online
  slot         LCC Slot (0..3)
```

Although you can enter the routing matrix-based slot number when you issue the **request chassis fpc** command, output from **show chassis** commands always references the FPC hardware slot number (0 through 7) of the specific T640 router and its corresponding LCC number. As a result, we recommend that you include the FPC hardware slot number when you issue **request chassis** or **show chassis** commands, as shown in the following example:

First, issue the **request chassis fpc** command with the routing matrix-based FPC slot number of 19:

```
user@router> request chassis fpc offline slot 19
lcc2-re0:
-----
Offline initiated, use "show chassis fpc" to verify
```

However, when you issue the **show chassis fpc** command to check the result, the output displays the change using node-centric terminology: FPC slot number 3 on T640 router **LCC2** (the equivalent of routing matrix slot 19).

```
user@router> show chassis fpc
lcc0-re0:
-----
Slot State      Temp  CPU Utilization (%)  Memory  Utilization (%)
              (C)   Total  Interrupt          DRAM (MB) Heap      Buffer
0 Empty
1 Online         31     2         0        256         7        44
2 Online         28     1         0        256         7        44
3 Online         31     2         0        256        14        44
4 Empty
5 Empty
6 Empty
7 Empty
```

```
lcc2-re0:
-----
Slot State      Temp  CPU Utilization (%)  Memory  Utilization (%)
              (C)   Total  Interrupt          DRAM (MB) Heap      Buffer
0 Online         31     2         0        256        14        44
1 Online         30     2         0        256         7        44
2 Empty
3 Offline      --- Offlined by cli command ---
4 Empty
5 Empty
6 Empty
7 Empty
```

To bring the same FPC back online, use the slot number and LCC number from the previous command output:

```
user@router> request chassis fpc online lcc 2 slot 3
lcc2-re0:
```

-----  
Online initiated, use "show chassis fpc" to verify

Once you bring the FPC back online, reissue the **show chassis fpc** command to see that the FPC slot and LCC number you used in the last command now matches the command output:

```
user@router> show chassis fpc
lcc0-re0:
```

```
-----
Slot State      Temp  CPU Utilization (%)  Memory  Utilization (%)
              (C)  Total  Interrupt          DRAM (MB)  Heap      Buffer
0 Empty
1 Online        31    1      0      256        7      44
2 Online        28    1      0      256        7      44
3 Online        31    3      0      256       14      44
4 Empty
5 Empty
6 Empty
7 Empty
```

lcc2-re0:

```
-----
Slot State      Temp  CPU Utilization (%)  Memory  Utilization (%)
              (C)  Total  Interrupt          DRAM (MB)  Heap      Buffer
0 Online        31    3      0      256       14      44
1 Online        30    1      0      256        7      44
2 Empty
3 Present      0 0 0 0 0 0
4 Empty
5 Empty
6 Empty
7 Empty
```

For more information about converting FPC hardware slot numbers on a T640 router to routing matrix FPC slot numbers, see [“Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router”](#) on page 27.

#### Related Documentation

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)



## Monitoring a Routing Matrix with a TX Matrix Router

There are a variety of other useful commands you can use to monitor a routing matrix with a TX Matrix router.

- To display the location of routing matrix components and convert FPCs from T640 router local numbering to routing matrix global numbering, issue the **show chassis location fpc** command on the TX Matrix router:

```
user@router> show chassis location fpc
Global FPC    LCC    Local FPC
    1         0         1
    2         0         2
    3         0         3
   16         2         0
   17         2         1
   19         2         3
```

- To check the status of the SIB connection between the TX Matrix router and T640 routers, issue the **show chassis fabric topology** command on the TX Matrix router. All values for each available T640 router (LCC) should be in the **UP** state. In the following excerpt of output for this command, a routing matrix that contains only LCCs 0 and 2 shows only these two T640 routers as being **UP**:

```
LCC0_SIB-L0_F0,03->SIB-S0_F0,00 UP
LCC1_SIB-L0_F0,03->SIB-S0_F0,01 RESET
LCC2_SIB-L0_F0,03->SIB-S0_F0,02 UP
LCC3_SIB-L0_F0,03->SIB-S0_F0,03 RESET
```

- To verify that the Ethernet links between the TX Matrix router and the T640 router control boards are operational, issue the **show chassis ethernet-switch** command on the TX Matrix router:

```
user@router> show chassis ethernet-switch
scc-re0:
-----
Link is good on FE port 4 connected to device: LCC0
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 6 connected to device: LCC2
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 8 connected to device: SPMB
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on GE port 13 connected to device: Other RE
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
lcc0-re0:
-----
Link is good on FE port 1 connected to device: FPC1
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
```

```
Link is good on FE port 2 connected to device: FPC2
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on FE port 3 connected to device: FPC3
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on FE port 8 connected to device: SPMB
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on FE port 10 connected to device: SCC
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on GE port 13 connected to device: Other RE
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
lcc2-re0:
```

```
-----
Link is good on FE port 0 connected to device: FPC0
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on FE port 1 connected to device: FPC1
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on FE port 3 connected to device: FPC3
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on FE port 8 connected to device: SPMB
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on FE port 10 connected to device: SCC
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
Link is good on GE port 13 connected to device: Other RE
Speed is 100Mb
Duplex is full
Autonegotiate is Enabled
```

**Related  
Documentation**

- [Routing Matrix with a TX Matrix Router Deployment Guide](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## CHAPTER 5

# Upgrading Software on a Routing Matrix with a TX Matrix Router

- Upgrading the Software for a Routing Matrix with a TX Matrix Router on page 59
- Troubleshooting Insufficient Space or DRAM Errors During Software Upgrade of a Routing Matrix with a TX Matrix Router on page 77
- Troubleshooting a Software Upgrade Failure Due to Mixed Software Versions on a Routing Matrix with a TX Matrix Router on page 82

### Upgrading the Software for a Routing Matrix with a TX Matrix Router

---

Before you begin upgrading the software on a TX Matrix Router and to avoid unnecessary network disruption during the upgrade, ensure the following conditions are met.



**NOTE:** By default, when you upgrade software on the TX Matrix router (**scc**), the new image is loaded onto the TX Matrix router (**scc**) and distributed to all T640 routers (**lcc**) in the routing matrix.

Throughout this document, we use the term TX Matrix router to refer to the switch-card chassis (**SCC**) and T640 router to refer to the line-card chassis (**LCC**).

- A minimum of free disk space and DRAM on each Routing Engine. The software upgrade will fail on any Routing Engine without the required amount of free disk space and DRAM. To determine the amount of disk space currently available on all Routing Engines of the routing matrix, use the CLI **show system storage** command. To determine the amount of DRAM currently available on all the Routing Engines in the routing matrix, use the CLI **show chassis routing-engine** command.
- The master Routing Engines of the TX Matrix router (**scc**) and T640 routers (**lcc**) are all on **re0** or are all on **re1**.
- The backup Routing Engines of the TX Matrix router (**scc**) and T640 routers (**lcc**) are all on **re1** or are all on **re0**.
- All master Routing Engines in all routers run the same version of software. This is necessary for the routing matrix to operate.

- All master and backup Routing Engines run the same version of software before beginning the upgrade procedure. Different versions of the Junos OS can have incompatible message formats especially if you turn on GRES. Because the steps in the process include changing mastership, running the same version of software is recommended.
- The same Routing Engine model is used within a TX Matrix router (**scc**) and within a T640 router (**lcc**) of a routing matrix. For example, a routing matrix with an **scc** using two RE-A-2000s and an **lcc** using two RE-1600s is supported. However, an **scc** or an **lcc** with two different Routing Engine models is *not* supported. We suggest that all Routing Engines are the same model throughout all routers in the routing matrix. To determine the Routing Engine type, use the CLI **show chassis hardware | match routing** command.



**NOTE:** It is considered best practice to make sure that all master Routing Engines are **re0** and all backup Routing Engines are **re1** (or vice versa). For the purposes of this document, the master Routing Engine is **re0** and the backup Routing Engine is **re1**.

On the TX Matrix router, perform a Junos OS upgrade on each Routing Engine separately to avoid unnecessary disruption to network operation. Install the new Junos OS Release on the backup Routing Engine (**re1**) while keeping the currently running software version on the master Routing Engine (**re0**).

After making sure that the new software version is running correctly on the backup Routing Engine (**re1**), switch mastership over to **re1**, install the new software on the new backup Routing Engine (**re0**) and then revert mastership from **re1** back to **re0**. These changes are propagated to all of the T640 routers in the routing matrix.

To upgrade the Junos OS for a routing matrix, perform the following tasks:

- [Disabling GRES on the Routing Matrix with a TX Matrix Router on page 60](#)
- [Installing Software on All Backup Routing Engines of a Routing Matrix with a TX Matrix Router on page 62](#)
- [Loading the New Junos OS Version on the Backup Routing Engines of the Routing Matrix with a TX Matrix Router on page 68](#)
- [Installing Software on the Master Routing Engines of a Routing Matrix with a TX Matrix Router on page 71](#)
- [Finalizing the Installation for a Routing Engine with a TX Matrix Router on page 75](#)

## Disabling GRES on the Routing Matrix with a TX Matrix Router

Before upgrading the software on the routing matrix with a TX Matrix router, you must disable graceful Routing Engine switchover (GRES) on all the routers in the routing matrix. To disable GRES, perform the following steps on the TX Matrix router:

1. Log in to the master Routing Engine's (**scc-re0**) console.

```
login: root
Password: xxx

--- Junos 9.5R2.1 built 2009-06-05 08:52:23 UTC
%
```

2. Enter the Junos OS CLI configuration mode:

- a. Start the CLI from the shell prompt using the **cli** command:

```
% cli
{master}
user@host-scc-re0>
```

- b. Launch configuration mode:

```
{master}
user@host-scc-re0> configure
Entering configuration mode

{master} [edit]
user@host-scc-re0 #
```

3. Disable Routing Engine redundancy and verify that the configuration is removed:

```
{master}[edit]
user@host-scc-re0# show chassis
redundancy {
    graceful-switchover;
}

{master}[edit]
user@host-scc-re0# delete chassis redundancy
{master}[edit]
user@host-scc-re0# show chassis
```

4. Save the configuration change on all Routing Engines in the routing matrix and exit the CLI configuration mode:

```
{master}[edit]
user@host-scc-re0# commit synchronize and-quit
scc-re0:
configuration check succeeds
lcc0-re1:
commit complete
lcc0-re0:
commit complete
lcc2-re1:
commit complete
lcc2-re0:
commit complete
scc-re1:
commit complete
scc-re0:
commit complete

user@host-scc-re0>
```

## Installing Software on All Backup Routing Engines of a Routing Matrix with a TX Matrix Router

Install the new Junos OS Release on all backup Routing Engines (**re1**) of the TX Matrix router while keeping the currently running software version on the master Routing Engines (**re0**). This enables the master Routing Engines (**re0**) to continue operations, minimizing the disruption to the routing matrix with a TX Matrix router and your network.

To install the software on all of the backup Routing Engines (**re1**), perform the following steps:

1. Log in to the backup TX Matrix router (**re1**) Routing Engine's console.

For more information on logging in to the Routing Engine through the console port, see the administration manual for your particular router.

2. To upgrade software for all the backup Routing Engines (**re1**) in the routing matrix, issue the **request system software add** command. Below is an example of the **request system software add** command and the output as the software is being added.

```
user@host-scc-re1> request system software add
/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Pushing bundle to lcc0-re1
Pushing bundle to lcc2-re1

Validating on lcc0-re1
Checking compatibility with configuration
Initializing...
Using jbase-9.6B1.8
Verified manifest signed by PackageProduction_9_6_0
Using /var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Using jinstall-9.6B2.7-domestic.tgz
Using jbundle-9.6B2.7-domestic.tgz
Checking jbundle requirements on /
Using jbase-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using /var/validate/chroot/tmp/jbundle/jboot-9.6B2.7.tgz
Using jkernel-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jcrypto-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jpfe-9.6B2.7.tgz
Using jdocs-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jroute-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jservices-9.6B2.7.tgz
Auto-deleting old jservices-voice ...
Removing /opt/sdk/jservices-voice ...
Removing jservices-voice-bsg-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-voice ...
Verified jservices-voice-bsg-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /var/sw/pkg ...
Creating /opt/sdk/jservices-voice ...
Storing jservices-voice-bsg-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-voice/jservices-voice-bsg ->
/var/sw/pkg/jservices-voice-bsg-9.6B2.7.tgz...
```

```
Auto-deleting old jservices-bgf ...
Removing /opt/sdk/jservices-bgf ...
Removing jservices-bgf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-bgf ...
Verified jservices-bgf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-bgf ...
Storing jservices-bgf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-bgf/jservices-bgf-pic ->
/var/sw/pkg/jservices-bgf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-aacl ...
Removing /opt/sdk/jservices-aacl ...
Removing jservices-aacl-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-aacl ...
Verified jservices-aacl-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-aacl ...
Storing jservices-aacl-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-aacl/jservices-aacl-pic ->
/var/sw/pkg/jservices-aacl-pic-9.6B2.7.tgz...
Auto-deleting old jservices-llpdf ...
Removing /opt/sdk/jservices-llpdf ...
Removing jservices-llpdf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-llpdf ...
Verified jservices-llpdf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-llpdf ...
Storing jservices-llpdf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-llpdf/jservices-llpdf-pic ->
/var/sw/pkg/jservices-llpdf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-sfw ...
Removing /opt/sdk/jservices-sfw ...
Removing jservices-sfw-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-sfw ...
Verified jservices-sfw-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-sfw ...
Storing jservices-sfw-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-sfw/jservices-sfw-pic ->
/var/sw/pkg/jservices-sfw-pic-9.6B2.7.tgz...
Auto-deleting old jservices-appid ...
Removing /opt/sdk/jservices-appid ...
Removing jservices-appid-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-appid ...
Verified jservices-appid-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-appid ...
Storing jservices-appid-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-appid/jservices-appid-pic ->
/var/sw/pkg/jservices-appid-pic-9.6B2.7.tgz...
Auto-deleting old jservices-idp ...
Removing /opt/sdk/jservices-idp ...
Removing jservices-idp-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-idp ...
Verified jservices-idp-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-idp ...
Storing jservices-idp-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-idp/jservices-idp-pic ->
/var/sw/pkg/jservices-idp-pic-9.6B2.7.tgz...
Hardware Database regeneration succeeded
```

```
Validating against /config/juniper.conf.gz
mgd: commit complete
Validation succeeded

Validating on lcc2-re1
Checking compatibility with configuration
Initializing...
Using jbase-9.6B1.8
Verified manifest signed by PackageProduction_9_6_0
Using /var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Using jinstall-9.6B2.7-domestic.tgz
Using jbundle-9.6B2.7-domestic.tgz
Checking jbundle requirements on /
Using jbase-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using /var/validate/chroot/tmp/jbundle/jboot-9.6B2.7.tgz
Using jkernel-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jcrypto-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jpfe-9.6B2.7.tgz
Using jdocs-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jroute-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jservices-9.6B2.7.tgz
Auto-deleting old jservices-voice ...
Removing /opt/sdk/jservices-voice ...
Removing jservices-voice-bsg-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-voice ...
Verified jservices-voice-bsg-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /var/sw/pkg ...
Creating /opt/sdk/jservices-voice ...
Storing jservices-voice-bsg-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-voice/jservices-voice-bsg ->
/var/sw/pkg/jservices-voice-bsg-9.6B2.7.tgz...
Auto-deleting old jservices-bgf ...
Removing /opt/sdk/jservices-bgf ...
Removing jservices-bgf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-bgf ...
Verified jservices-bgf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-bgf ...
Storing jservices-bgf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-bgf/jservices-bgf-pic ->
/var/sw/pkg/jservices-bgf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-aac1 ...
Removing /opt/sdk/jservices-aac1 ...
Removing jservices-aac1-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-aac1 ...
Verified jservices-aac1-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-aac1 ...
Storing jservices-aac1-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-aac1/jservices-aac1-pic ->
/var/sw/pkg/jservices-aac1-pic-9.6B2.7.tgz...
Auto-deleting old jservices-llpdf ...
Removing /opt/sdk/jservices-llpdf ...
Removing jservices-llpdf-pic-9.6B1.8.tgz from /var/sw/pkg ...
```



```

Notifying mspd ...
Installing new jservices-llpdf ...
Verified jservices-llpdf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-llpdf ...
Storing jservices-llpdf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-llpdf/jservices-llpdf-pic ->
/var/sw/pkg/jservices-llpdf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-sfw ...
Removing /opt/sdk/jservices-sfw ...
Removing jservices-sfw-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-sfw ...
Verified jservices-sfw-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-sfw ...
Storing jservices-sfw-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-sfw/jservices-sfw-pic ->
/var/sw/pkg/jservices-sfw-pic-9.6B2.7.tgz...
Auto-deleting old jservices-appid ...
Removing /opt/sdk/jservices-appid ...
Removing jservices-appid-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-appid ...
Verified jservices-appid-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-appid ...
Storing jservices-appid-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-appid/jservices-appid-pic ->
/var/sw/pkg/jservices-appid-pic-9.6B2.7.tgz...
Auto-deleting old jservices-idp ...
Removing /opt/sdk/jservices-idp ...
Removing jservices-idp-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-idp ...
Verified jservices-idp-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-idp ...
Storing jservices-idp-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-idp/jservices-idp-pic ->
/var/sw/pkg/jservices-idp-pic-9.6B2.7.tgz...
Hardware Database regeneration succeeded
Validating against /config/juniper.conf.gz
mgd: commit complete
Validation succeeded

Validating on scc-rel
Checking compatibility with configuration
Initializing...
Using jbase-9.6B1.8
Verified manifest signed by PackageProduction_9_6_0
Using /var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Using jinstall-9.6B2.7-domestic.tgz
Using jbundle-9.6B2.7-domestic.tgz
Checking jbundle requirements on /
Using jbase-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using /var/validate/chroot/tmp/jbundle/jboot-9.6B2.7.tgz
Using jkernel-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jcrypto-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jpfe-9.6B2.7.tgz
Using jdocs-9.6B2.7.tgz

```

```
Verified manifest signed by PackageProduction_9_6_0
Using jroute-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jservices-9.6B2.7.tgz
Auto-deleting old jservices-voice ...
Removing /opt/sdk/jservices-voice ...
Removing jservices-voice-bsg-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-voice ...
Verified jservices-voice-bsg-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /var/sw/pkg ...
Creating /opt/sdk/jservices-voice ...
Storing jservices-voice-bsg-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-voice/jservices-voice-bsg ->
/var/sw/pkg/jservices-voice-bsg-9.6B2.7.tgz...
Auto-deleting old jservices-bgf ...
Removing /opt/sdk/jservices-bgf ...
Removing jservices-bgf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-bgf ...
Verified jservices-bgf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-bgf ...
Storing jservices-bgf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-bgf/jservices-bgf-pic ->
/var/sw/pkg/jservices-bgf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-aac1 ...
Removing /opt/sdk/jservices-aac1 ...
Removing jservices-aac1-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-aac1 ...
Verified jservices-aac1-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-aac1 ...
Storing jservices-aac1-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-aac1/jservices-aac1-pic ->
/var/sw/pkg/jservices-aac1-pic-9.6B2.7.tgz...
Auto-deleting old jservices-llpdf ...
Removing /opt/sdk/jservices-llpdf ...
Removing jservices-llpdf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-llpdf ...
Verified jservices-llpdf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-llpdf ...
Storing jservices-llpdf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-llpdf/jservices-llpdf-pic ->
/var/sw/pkg/jservices-llpdf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-sfw ...
Removing /opt/sdk/jservices-sfw ...
Removing jservices-sfw-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-sfw ...
Verified jservices-sfw-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-sfw ...
Storing jservices-sfw-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-sfw/jservices-sfw-pic ->
/var/sw/pkg/jservices-sfw-pic-9.6B2.7.tgz...
Auto-deleting old jservices-appid ...
Removing /opt/sdk/jservices-appid ...
Removing jservices-appid-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-appid ...
Verified jservices-appid-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
```

```

Creating /opt/sdk/jservices-appid ...
Storing jservices-appid-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-appid/jservices-appid-pic ->
/var/sw/pkg/jservices-appid-pic-9.6B2.7.tgz...
Auto-deleting old jservices-idp ...
Removing /opt/sdk/jservices-idp ...
Removing jservices-idp-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-idp ...
Verified jservices-idp-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-idp ...
Storing jservices-idp-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-idp/jservices-idp-pic ->
/var/sw/pkg/jservices-idp-pic-9.6B2.7.tgz...
Hardware Database regeneration succeeded
Validating against /config/juniper.conf.gz
mgd: commit complete
Validation succeeded
Done with validate on all chassis

lcc0-re1:
Installing package '/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz' ...
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Adding jinstall...
Verified manifest signed by PackageProduction_9_6_0

WARNING: This package will load JUNOS 9.6B2.7 software.
WARNING: It will save JUNOS configuration files, and SSH keys
WARNING: (if configured), but erase all other files and information
WARNING: stored on this machine. It will attempt to preserve dumps
WARNING: and log files, but this can not be guaranteed. This is the
WARNING: pre-installation stage and all the software is loaded when
WARNING: you reboot the system.

Saving the config files ...
NOTICE: uncommitted changes have been saved in
/var/db/config/juniper.conf.pre-install
Installing the bootstrap installer ...

WARNING: A REBOOT IS REQUIRED TO LOAD THIS SOFTWARE CORRECTLY. Use the
WARNING: 'request system reboot' command when software installation is
WARNING: complete. To abort the installation, do not reboot your system,
WARNING: instead use the 'request system software delete jinstall'
WARNING: command as soon as this operation completes.

Saving package file in /var/sw/pkg/jinstall-9.6B2.7-domestic-signed.tgz ...
Saving state for rollback ...

lcc2-re1:
Installing package '/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz' ...
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Adding jinstall...
Verified manifest signed by PackageProduction_9_6_0

WARNING: This package will load JUNOS 9.6B2.7 software.
WARNING: It will save JUNOS configuration files, and SSH keys
WARNING: (if configured), but erase all other files and information
WARNING: stored on this machine. It will attempt to preserve dumps
WARNING: and log files, but this can not be guaranteed. This is the
WARNING: pre-installation stage and all the software is loaded when
WARNING: you reboot the system.

```

```
Saving the config files ...
NOTICE: uncommitted changes have been saved in
/var/db/config/juniper.conf.pre-install
Installing the bootstrap installer ...

WARNING:    A REBOOT IS REQUIRED TO LOAD THIS SOFTWARE CORRECTLY. Use the
WARNING:    'request system reboot' command when software installation is
WARNING:    complete. To abort the installation, do not reboot your system,
WARNING:    instead use the 'request system software delete jinstall'
WARNING:    command as soon as this operation completes.

Saving package file in /var/sw/pkg/jinstall-9.6B2.7-domestic-signed.tgz ...
Saving state for rollback ...

scc-rel:
Installing package '/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz' ...
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Adding jinstall...
Verified manifest signed by PackageProduction_9_6_0

WARNING:    This package will load JUNOS 9.6B2.7 software.
WARNING:    It will save JUNOS configuration files, and SSH keys
WARNING:    (if configured), but erase all other files and information
WARNING:    stored on this machine. It will attempt to preserve dumps
WARNING:    and log files, but this can not be guaranteed. This is the
WARNING:    pre-installation stage and all the software is loaded when
WARNING:    you reboot the system.

Saving the config files ...
NOTICE: uncommitted changes have been saved in
/var/db/config/juniper.conf.pre-install
Installing the bootstrap installer ...

WARNING:    A REBOOT IS REQUIRED TO LOAD THIS SOFTWARE CORRECTLY. Use the
WARNING:    'request system reboot' command when software installation is
WARNING:    complete. To abort the installation, do not reboot your system,
WARNING:    instead use the 'request system software delete jinstall'
WARNING:    command as soon as this operation completes.

Saving package file in /var/sw/pkg/jinstall-9.6B2.7-domestic-signed.tgz ...
Saving state for rollback ...

user@host-scc-rel>

For more information on the request system software add command, see the Junos
System Basics and Services Command Reference.
```

## Loading the New Junos OS Version on the Backup Routing Engines of the Routing Matrix with a TX Matrix Router

After you have added the new software version to the backup Routing Engines (**re1**), reboot the routing matrix with a TX Matrix router to load the new software and verify the version of the software. To reboot the routing matrix, reboot the TX Matrix router which forces all T640 routers to reboot and loads the new software on all backup Routing Engines (**re1**) in the routing matrix.

1. Reboot the TX Matrix router to start the new software using the **request system reboot** command:

```

user@host-scc-re1> request system reboot
Reboot the system ? [yes,no] (no) yes

rebooting lcc0-re1
Rebooting lcc2-re1
Shutdown NOW!
Reboot consistency check bypassed - jinstall 9.6B2.7 will complete installation
upon reboot
[pid 23517]

user@host-scc-re1>

```

```

*** FINAL System shutdown message from user@host-scc-re1> ***

```

```

System going down IMMEDIATELY

```

```

rlogin: connection closed
user@host-scc-re0>

```



**NOTE:** You must reboot to load the new installation of the Junos OS onto the backup Routing Engine (re1) of the TX Matrix router and to propagate the new image on all backup Routing Engines (re1) of the T640 routers in the routing matrix.

To abort the installation, do not reboot your system; instead, finish the installation and then issue the **request system software delete jinstall** command. This is your last chance to stop the installation.

All the software is loaded on all the backup Routing Engines when you reboot the system. Installation can take about 10 minutes. The backup Routing Engines (re1) then reboot from the boot device on which the software was just installed. When the reboot is complete, the TX Matrix router backup Routing Engine (re1) displays the login prompt.

While the software is being upgraded, the Routing Engine (re1) on which you are performing the installation is not routing traffic.

2. Log in to the TX Matrix router backup Routing Engine (re1) and issue the **show version** command to verify the version of the software installed:

```

user@host-scc-re1>> show version
scc-re1:
-----
Hostname: z8-1
Model: TX Matrix
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]

```

JUNOS Voice Services Container package [9.6B2.7]  
 JUNOS Border Gateway Function package [9.6B2.7]  
 JUNOS Services AACL Container package [9.6B2.7]  
 JUNOS Services LL-PDF Container package [9.6B2.7]  
 JUNOS Services Stateful Firewall [9.6B2.7]  
 JUNOS AppId Services [9.6B2.7]  
 JUNOS IDP Services [9.6B2.7]  
 JUNOS Routing Software Suite [9.6B2.7]

lcc0-re1:

-----  
 Hostname: z8-lcc0-re1  
 Model: t640  
 JUNOS Base OS boot [9.6B2.7]  
 JUNOS Base OS Software Suite [9.6B2.7]  
 JUNOS Kernel Software Suite [9.6B2.7]  
 JUNOS Crypto Software Suite [9.6B2.7]  
 JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]  
 JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]  
 JUNOS Online Documentation [9.6B2.7]  
 JUNOS Voice Services Container package [9.6B2.7]  
 JUNOS Border Gateway Function package [9.6B2.7]  
 JUNOS Services AACL Container package [9.6B2.7]  
 JUNOS Services LL-PDF Container package [9.6B2.7]  
 JUNOS Services Stateful Firewall [9.6B2.7]  
 JUNOS AppId Services [9.6B2.7]  
 JUNOS IDP Services [9.6B2.7]  
 JUNOS Routing Software Suite [9.6B2.7]

lcc2-re1:

-----  
 Hostname: z8-lcc2-re1  
 Model: t640  
 JUNOS Base OS boot [9.6B2.7]  
 JUNOS Base OS Software Suite [9.6B2.7]  
 JUNOS Kernel Software Suite [9.6B2.7]  
 JUNOS Crypto Software Suite [9.6B2.7]  
 JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]  
 JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]  
 JUNOS Online Documentation [9.6B2.7]  
 JUNOS Voice Services Container package [9.6B2.7]  
 JUNOS Border Gateway Function package [9.6B2.7]  
 JUNOS Services AACL Container package [9.6B2.7]  
 JUNOS Services LL-PDF Container package [9.6B2.7]  
 JUNOS Services Stateful Firewall [9.6B2.7]  
 JUNOS AppId Services [9.6B2.7]  
 JUNOS IDP Services [9.6B2.7]  
 JUNOS Routing Software Suite [9.6B2.7]

## Installing Software on the Master Routing Engines of a Routing Matrix with a TX Matrix Router

Before you install the new software on the master Routing Engines (**re0**) of the routing matrix with a TX Matrix router, you need to switch mastership over to the backup Routing Engines (**re1**) to minimize the disruption to network operation.

To change mastership and install the new software version on the new backup Routing Engine (**re0**), perform the following steps:

1. On the TX Matrix router, log in to the original master Routing Engine (**re0**) console port.

For more information on logging in to the Routing Engine through the console port, see the administration guide for your particular router.

2. Transfer mastership to the backup Routing Engine (**re1**) for all routers in the routing matrix using the **request chassis routing-engine master switch all-chassis** command:

```
user@host-scc-re0> request chassis routing-engine master switch all-chassis
warning: Traffic will be interrupted while the PFE is re-initialized
Toggle mastership between routing engines ? [yes,no] (no) yes
```

```
1cc0-re0:
```

```
-----
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The other routing engine becomes the master.
```

```
1cc2-re0:
```

```
-----
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The other routing engine becomes the master.
```

```
scc-re0:
```

```
-----
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The other routing engine becomes the master.
```

3. Verify that the backup Routing Engine (slot 1) is now the master Routing Engine on all routers in the routing matrix using the **show chassis routing-engine** command:

```
user@host-scc-re0> show chassis routing-engine
scc-re0:
```

```
-----
Routing Engine status:
```

```
Slot 0:
```

Current state	Backup
Election priority	Master (default)
[...Output Truncated...]	

```
Routing Engine status:
```

```
Slot 1:
```

Current state	Master
Election priority	Backup (default)
[...Output Truncated...]	

```
1cc0-re0:
```

```
Routing Engine status:
Slot 0:
  Current state          Backup
  Election priority      Master (default)
  [...Output Truncated...]
                        0.02      0.07      0.11
```

```
Routing Engine status:
Slot 1:
  Current state          Master
  Election priority      Backup (default)
  [...Output Truncated...]
```

lcc2-re0:

```
-----
Routing Engine status:
Slot 0:
  Current state          Backup
  Election priority      Master (default)
  [...Output Truncated...]
Routing Engine status:
Slot 1:
  Current state          Master
  Election priority      Backup (default)
  [...Output Truncated...]
```

4. Install the new software package using the **request system software add** command:

```
user@host-scc-re0> request system software add
/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Pushing bundle to lcc0-re0
Pushing bundle to lcc2-re0
[...Output Truncated...]
```

5. Reboot the Routing Engine (re0) using the **request system reboot** command:

```
user@host-scc-re0> request system reboot
Reboot the system ? [yes,no] (no) yes

Rebooting lcc0-re0
Rebooting lcc2-re0
Shutdown NOW!
Reboot consistency check bypassed - jinstall 9.6B2.7 will complete installation
upon reboot
[pid 9071]

user@host-scc-re0>

*** FINAL System shutdown message from user@host-scc-re0> ***

System going down IMMEDIATELY

Connection closed by foreign host.
```





**NOTE:** You must reboot to load the new installation of the Junos OS onto the original master Routing Engine (re0) of the TX Matrix router and to propagate the new image on all original master Routing Engines (re0) of the T640 routers in the routing matrix.

To abort the installation, do not reboot your system; instead, finish the installation and then issue the `request system software delete jinstall` command. This is your last chance to stop the installation.

The software is loaded when you reboot the system. Installation can take about 10 minutes. The routers then reboot from the boot device on which the software was just installed. When the reboot is complete, the TX Matrix Routing Engine (re0) displays the login prompt.

While the software is being upgraded, the Routing Engine (re0) on which you are performing the installation does not route traffic.

6. Log in and issue the **show version** command to verify the version of the software installed:

```
user@host-scc-re0> show version
scc-re0:
```

```
-----
Hostname: z8
Model: TX Matrix
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]
```

```
lcc0-re0:
```

```
-----
Hostname: z8-lcc0-re0
Model: t640
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
```

```
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]
```

```
lcc2-re0:
```

```
-----
Hostname: z8-lcc2-re0
Model: t640
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services ACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]
```

7. (Optional to avoid another traffic disruption) Transfer routing control back to the original master Routing Engine (re0) using the **request chassis routing-engine master switch all-chassis** command:

```
user@host-scc-re0> request chassis routing-engine master switch all-chassis
warning: Traffic will be interrupted while the PFE is re-initialized
Toggle mastership between routing engines ? [yes,no] (no) yes
```

```
lcc0-re0:
```

```
-----
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The local routing engine becomes the master.
```

```
lcc2-re0:
```

```
-----
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The local routing engine becomes the master.
```

```
scc-re0:
```

```
-----
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The local routing engine becomes the master.
```

8. Verify that the master Routing Engine (slot 0) is indeed the master Routing Engine using the **show chassis routing-engine** command:

```
user@host-scc-re0> show chassis routing-engine
scc-re0:
```

```
-----
Routing Engine status:
```

Slot 0:	
Current state	Master
Election priority	Master (default)

```

[...Output Truncated...]

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  [...Output Truncated...]

lcc0-re0:
-----
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  [...Output Truncated...]

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  [...Output Truncated...]

lcc2-re0:
-----
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  [...Output Truncated...]

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  [...Output Truncated...]

```

## Finalizing the Installation for a Routing Engine with a TX Matrix Router

After the software is installed on all Routing Engines, you return the routing matrix with a TX Matrix router back to its original configuration and back up the new installation.

1. Restore the configuration that existed before you deleted it at the start of this procedure using the **configure** and **rollback** commands:

```

user@host-scc-re0> configure
Entering configuration mode

```

```

[edit]
user@host-scc-re0# rollback 1
load complete

```

2. Save the configuration change on all Routing Engines using the **commit synchronize and-quit** command:

```

[edit]
user@host-scc-re0# commit synchronize and-quit
scc-re0:
configuration check succeeds
lcc0-re1:
commit complete

```

```
lcc0-re0:
commit complete
lcc2-re1:
commit complete
lcc2-re0:
commit complete
scc-re1:
commit complete
scc-re0:
commit complete
```

```
user@host-scc-re0>
```

3. After you have installed the new software and are satisfied that it is successfully running, issue the following commands to back up the new software on both the master (re0) and the backup (re1) Routing Engines:

```
user@host-scc-re0> request system snapshot
user@host-scc-re0> request chassis routing-engine master switch all-chassis
user@host-scc-re1> request system snapshot
```

The sample output below shows examples of all the commands above.

```
{master}
user@host-scc-re0> request system snapshot
scc-re0:
-----
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc0-re0:
-----
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc2-re0:
-----
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

{master}
user@host-scc-re0> request chassis routing-engine master switch all-chassis
Toggle mastership between routing engines ? [yes,no] (no) yes

lcc0-re0:
-----
Resolving mastership...
Complete. The other routing engine becomes the master.

lcc2-re0:
```

```

-----
Resolving mastership...
Complete. The other routing engine becomes the master.

scc-re0:
-----
Resolving mastership...
Complete. The other routing engine becomes the master.

{master}
user@host-scc-re1> request system snapshot
scc-re1:
-----
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc0-re1:
-----
Verifying compatibility of destination media partitions...
Running newfs (223MB) on hard-disk media / partition (ad2s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad2s1e)...
Copying '/dev/ad0s1a' to '/dev/ad2s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad2s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc2-re1:
-----
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

The root file system is backed up to /altroot, and /config is backed up to /altconfig.
The root and /config file systems are on the router's CompactFlash card, and the
/altroot and /altconfig file systems are on the router's hard disk.

```



**NOTE:** After you issue the **request system snapshot** command, you cannot return to the previous version of the software because the running copy and backup copy of the software are identical.

## Troubleshooting Insufficient Space or DRAM Errors During Software Upgrade of a Routing Matrix with a TX Matrix Router

Problem	Description:
	<div data-bbox="472 1755 540 1822" data-label="Image"> </div> <div data-bbox="581 1764 1443 1862" data-label="Text"> <p><b>NOTE:</b> Throughout this document, we use the term TX Matrix router to refer to the switch-card chassis (SCC) and T640 router to refer to the line-card chassis (LCC).</p> </div>



A routing matrix with a TX Matrix router (**scc**) and T640 routers (**lcc**) must have sufficient disk space and DRAM on all Routing Engines for an upgrade of the Junos OS to install successfully. If there is insufficient disk space or DRAM, you might receive a warning indicating that the **/var** file system is low on free disk space similar to the following:

```
WARNING: The /var filesystem is low on free disk space.
WARNING: This package requires 1075136k free, but there
WARNING: is only 666502k available.
```

To determine the amount of free disk space on the Routing Engine, use the CLI **show system storage** command. To determine the amount of DRAM available on the Routing Engine, use the CLI **show chassis routing-engine** command.

Below is sample output showing the two commands.

```
{backup}
user@host-re1> show system storage
scc-re1:
-----
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a      217M      176M      24M      88%      /
devfs            1.0K      1.0K      0B      100%     /dev
devfs            1.0K      1.0K      0B      100%     /dev/
/dev/md0          31M       31M       0B      100%     /packages/mnt/jbase
/dev/md1          199M      199M      0B      100%
/packages/mnt/jkernel-9.5R2.1
/dev/md3          4.9M      4.9M      0B      100%
/packages/mnt/jdocs-9.5R2.1
/dev/md4          55M       55M      0B      100%
/packages/mnt/jroute-9.5R2.1
/dev/md5          14M       14M      0B      100%
/packages/mnt/jcrypto-9.5R2.1
/dev/md7          2.0G      40K       1.8G      0%      /tmp
/dev/md8          2.0G      11M       1.8G      1%      /mfs
/dev/ad0s1e       24M       1.5M      21M       7%      /config
procfs           4.0K      4.0K      0B      100%     /proc
/dev/ad1s1f       25G       2.4G      21G      10%      /var
/dev/ad1s1e       24M       1.5M      22M       6%      /tmp/.snp3061/mnt

lcc0-re1:
-----
Filesystem      Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a      220M      186M      16M      92%      /
devfs            1.0K      1.0K      0B      100%     /dev
devfs            1.0K      1.0K      0B      100%     /dev/
/dev/md0          33M       33M       0B      100%     /packages/mnt/jbase
/dev/md1          216M      216M      0B      100%
/packages/mnt/jkernel-9.6B1.8
/dev/md2          66M       66M      0B      100%
/packages/mnt/jpfe-T-9.6B1.8
/dev/md3          4.1M      4.1M      0B      100%
/packages/mnt/jdocs-9.6B1.8
/dev/md4          57M       57M      0B      100%
/packages/mnt/jroute-9.6B1.8
/dev/md5          15M       15M      0B      100%
/packages/mnt/jcrypto-9.6B1.8
/dev/md6          34M       34M      0B      100%
/packages/mnt/jpfe-common-9.6B1.8
/dev/md7          2.0G     10.0K      1.8G      0%      /tmp
/dev/md8          2.0G     532K      1.8G      0%      /mfs
```

```

/dev/ad0s1e          24M      44K      22M      0% /config

procfs              4.0K      4.0K      0B      100% /proc
/dev/ad2s1f          34G      21G      11G      66% /var

lcc2-re1:
-----
Filesystem           Size      Used      Avail  Capacity  Mounted on
/dev/ad0s1a          217M      178M      21M      89% /
devfs                1.0K      1.0K      0B      100% /dev
devfs                1.0K      1.0K      0B      100% /dev/
/dev/md0              33M       33M      0B      100% /packages/mnt/jbase
/dev/md1              216M      216M      0B      100%
/packages/mnt/jkernel-9.6B1.8
/dev/md2              66M       66M      0B      100%
/packages/mnt/jpfe-T-9.6B1.8
/dev/md3              4.1M      4.1M      0B      100%
/packages/mnt/jdocs-9.6B1.8
/dev/md4              57M       57M      0B      100%
/packages/mnt/jroute-9.6B1.8
/dev/md5              15M       15M      0B      100%
/packages/mnt/jcrypto-9.6B1.8
/dev/md6              34M       34M      0B      100%
/packages/mnt/jpfe-common-9.6B1.8
/dev/md7              2.0G      8.0K      1.8G      0% /tmp
/dev/md8              2.0G      538K      1.8G      0% /mfs
/dev/ad0s1e          24M      46K      22M      0% /config
procfs              4.0K      4.0K      0B      100% /proc
/dev/ad1s1f          25G      1.3G      22G      5% /var

```

```

{master}
user@host-re0> show chassis routing-engine
scc-re0:

```

#### Routing Engine status:

##### Slot 0:

```

Current state          Master
Election priority      Master (default)
Temperature            41 degrees C / 105 degrees F
CPU temperature        43 degrees C / 109 degrees F
DRAM                  2048 MB
Memory utilization     21 percent
CPU utilization:
  User                 0 percent
  Background           0 percent
  Kernel               4 percent
  Interrupt            0 percent
  Idle                 96 percent
Model                 RE-4.0
Serial ID              P11123909610
Start time             2009-06-16 13:21:12 PDT
Uptime                21 hours, 19 minutes, 44 seconds
Last reboot reason     Router rebooted after a normal shutdown.
Load averages:         1 minute   5 minute   15 minute
                      0.03       0.06       0.07

```

#### Routing Engine status:

##### Slot 1:

```

Current state          Backup
Election priority      Backup (default)
Temperature            39 degrees C / 102 degrees F
CPU temperature        38 degrees C / 100 degrees F

```

```

DRAM                                2048 MB
Memory utilization                    20 percent
CPU utilization:
  User                               0 percent
  Background                         0 percent
  Kernel                             0 percent
  Interrupt                          0 percent
  Idle                               100 percent
Model                                RE-4.0
Serial ID                            211123900273
Start time                           2009-06-15 13:38:48 PDT
Uptime                               1 day, 21 hours, 2 minutes, 5 seconds
Last reboot reason                    Router rebooted after a normal shutdown.

```

1cc0-re0:

-----

Routing Engine status:

Slot 0:

```

Current state                        Master
Election priority                     Master (default)
Temperature                          46 degrees C / 114 degrees F
CPU temperature                       50 degrees C / 122 degrees F
DRAM                                 2048 MB
Memory utilization                    18 percent
CPU utilization:
  User                               0 percent
  Background                         0 percent
  Kernel                             2 percent
  Interrupt                          0 percent
  Idle                               98 percent
Model                                RE-4.0
Serial ID                            P11123908065
Start time                           2009-06-16 13:20:59 PDT
Uptime                               21 hours, 19 minutes, 56 seconds
Last reboot reason                    Router rebooted after a normal shutdown.
Load averages:                       1 minute   5 minute  15 minute
                                      0.05       0.03     0.00

```

Routing Engine status:

Slot 1:

```

Current state                        Backup
Election priority                     Backup (default)
Temperature                          50 degrees C / 122 degrees F
CPU temperature                       55 degrees C / 131 degrees F
DRAM                                 3584 MB
Memory utilization                    11 percent
CPU utilization:
  User                               0 percent
  Background                         0 percent
  Kernel                             0 percent
  Interrupt                          0 percent
  Idle                               100 percent
Model                                RE-A-2000
Serial ID                            1000673710
Start time                           2009-06-15 13:34:44 PDT
Uptime                               1 day, 21 hours, 6 minutes, 8 seconds
Last reboot reason                    Router rebooted after a normal shutdown.

```

1cc2-re0:

-----

Routing Engine status:

Slot 0:



```

Current state           Master
Election priority       Master (default)
Temperature             41 degrees C / 105 degrees F
CPU temperature         42 degrees C / 107 degrees F
DRAM                   2048 MB
Memory utilization      18 percent
CPU utilization:
  User                  0 percent
  Background            0 percent
  Kernel                2 percent
  Interrupt             0 percent
  Idle                  98 percent
Model                  RE-4.0
Serial ID               P11123908326
Start time              2009-06-16 13:21:10 PDT
Uptime                  21 hours, 19 minutes, 44 seconds
Last reboot reason      Router rebooted after a normal shutdown.
Load averages:          1 minute  5 minute 15 minute
                        0.00      0.00    0.00

Routing Engine status:
Slot 1:
  Current state         Backup
  Election priority     Backup (default)
  Temperature           41 degrees C / 105 degrees F
  CPU temperature       42 degrees C / 107 degrees F
  DRAM                  2048 MB
  Memory utilization    18 percent
  CPU utilization:
    User                0 percent
    Background          0 percent
    Kernel              0 percent
    Interrupt           0 percent
    Idle                100 percent
  Model                 RE-4.0
  Serial ID             212058900119
  Start time            2009-06-15 13:37:41 PDT
  Uptime                1 day, 21 hours, 3 minutes, 8 seconds

```

**Solution** If you find that you need to free up some space, issue the **request system storage cleanup** command and delete everything that appears in the output. then try the upgrade again.

```

{master}
user@host-re0> request system storage cleanup

```

List of files to delete:

```

      Size Date      Name
2B Jun 16 12:46 /var/crash/bounds
80.4M Jun 15 14:56 /var/crash/cores/kernel.0.090615.1455
80.4M Jun 15 15:46 /var/crash/cores/kernel.1.090615.1546
80.4M Jun 15 15:58 /var/crash/cores/kernel.2.090615.1558
80.4M Jun 16 12:47 /var/crash/cores/kernel.3.090616.1246
30.6M Jun 15 15:05 /var/crash/cores/vmcore.0.090615.1455.tgz
33.5M Jun 15 16:33 /var/crash/cores/vmcore.1.090615.1546.tgz
35.9M Jun 15 17:52 /var/crash/cores/vmcore.2.090615.1558.tgz
48.0M Jun 16 13:47 /var/crash/cores/vmcore.3.090616.1246.tgz
504B Jun 15 14:55 /var/crash/info.0
504B Jun 15 15:46 /var/crash/info.1
505B Jun 15 15:58 /var/crash/info.2

```

```

505B Jun 16 12:46 /var/crash/info.3
716B Jun 15 13:43 /var/log/install.0.gz
1669B Jun 13 18:05 /var/log/install.1.gz
[...Output Truncated...]
201.6K Jun 11 02:27 /var/tmp/jnx-routeservice-9.6I20090611_0926_root.tgz
59.7K Jun 10 09:07 /var/tmp/jnx_ifinfo_sanity.pl.base_test_cfg_66245
59.9K Jun 10 15:19 /var/tmp/jnx_ifinfo_sanity.pl.base_test_cfg_74023
59.7K Jun 11 02:57 /var/tmp/jnx_ifinfo_sanity.pl.base_test_cfg_83419
181.0M Jul 23 2008 /var/tmp/mchassis-install.tgz
59.7K Jun 10 09:07 /var/tmp/orig_z8_cfg_66245
59.9K Jun 10 15:19 /var/tmp/orig_z8_cfg_74023
59.7K Jun 11 02:57 /var/tmp/orig_z8_cfg_83419
Delete these files ? [yes,no] (no) yes

```



**NOTE:** For some DRAM issues, remove any superfluous files from the /root and /tmp directories.

#### Related Documentation

- [Upgrading the Software for a Routing Matrix with a TX Matrix Router on page 59](#)
- [Troubleshooting a Software Upgrade Failure Due to Mixed Software Versions on a Routing Matrix with a TX Matrix Router on page 82](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)

## Troubleshooting a Software Upgrade Failure Due to Mixed Software Versions on a Routing Matrix with a TX Matrix Router

### Problem Description:



**NOTE:** Throughout this document, we use the term TX Matrix router to refer to the switch-card chassis (SCC) and T640 router to refer to the line-card chassis (LCC).

A routing matrix with a TX Matrix router (**scc**) and T640 routers (**lcc**) must have all master and backup Routing Engines running the same version of software. This is necessary for the routing matrix to operate and for the Junos OS to install successfully. If the software versions on the Routing Engines are not aligned, the software upgrade will return an error.

The output below from the master (**scc-re0**) Routing Engine shows the Junos OS version on a routing matrix with a TX Matrix router and two T640 routers. The backup Routing Engine (**scc-re1**) has Junos OS Release 9.5R2.1 installed, while all the other Routing Engines have Junos OS Release 9.6B1.8 installed.

[edit]

```
user@host-reo# run show version invoke-on all-routing-engines
```

```
scc-re0:
```

```
-----
Hostname: z8
```

```

Model: TX Matrix
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]

```

```
scc-re1:
```

```

-----
Hostname: z8-1
Model: TX Matrix
JUNOS Base OS boot [9.5R2.1]
JUNOS Base OS Software Suite [9.5R2.1]
JUNOS Kernel Software Suite [9.5R2.1]
JUNOS Crypto Software Suite [9.5R2.1]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.5R2.1]
JUNOS Packet Forwarding Engine Support (T-Series) [9.5R2.1]
JUNOS Online Documentation [9.5R2.1]
JUNOS Voice Services Container package [9.5R2.1]
JUNOS Services AACL Container package [9.5R2.1]
JUNOS Services LL-PDF Container package [9.5R2.1]
JUNOS Services Stateful Firewall [9.5R2.1]
JUNOS AppId Services [9.5R2.1]
JUNOS IDP Services [9.5R2.1]
JUNOS Routing Software Suite [9.5R2.1]
JUNOS Installation Software [9.6B1.8]

```

```
1cc0-re0:
```

```

-----
Hostname: z8-1cc0-re0
Model: t640
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]

```

```
1cc0-re1:
```

```

-----
Hostname: z8-1cc0-re1
Model: t640

```

```
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]
JUNOS Installation Software [9.6B1.8]
```

```
lcc2-re0:
```

```
-----
Hostname: z8-lcc2-re0
Model: t640
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]
```

```
lcc2-re1:
```

```
-----
Hostname: z8-lcc2-re1
Model: t640
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]
```

**Solution** Different versions of the Junos OS can have incompatible message formats especially if you turn on GRES. Because the steps in the upgrade process include changing

mastership, running the same version of software is recommended. For information about upgrading a routing matrix with a TX Matrix router (**scc**) and T640 (**lcc**) routers, see [“Upgrading the Software for a Routing Matrix with a TX Matrix Router” on page 59](#).

Log directly into the Routing Engine with the different Junos version and issue the CLI **request system software add** command with the appropriate Junos version. For example:

```
user@host-re1> request system software add  
/var/tmp/jinstall-9.6B1.8-domestic-signed.tgz
```

When all the Routing Engines are running the same version of the Junos OS, try the upgrade again.

To log in to other Routing Engines, issue the **request routing-engine login** command in the appropriate format for your situation. Below are some examples of the version of the command you might use:

```
user@host-re1> request routing-engine login other-routing-engine  
user@host-re1> request routing-engine login lcc 2 re1
```

#### Related Documentation

- [Upgrading the Software for a Routing Matrix with a TX Matrix Router on page 59](#)
- [Troubleshooting Insufficient Space or DRAM Errors During Software Upgrade of a Routing Matrix with a TX Matrix Router on page 77](#)
- [Overview of the Routing Matrix with a TX Matrix Router on page 15](#)
- [Example: Routing Matrix with a TX Matrix Router Configuration on page 30](#)



## CHAPTER 6

# Operational Commands

- `show chassis alarms`
- `show chassis craft-interface`
- `show chassis hardware`
- `show chassis fpc`
- `show chassis lccs`
- `show chassis location`
- `show chassis routing-engine`
- `show chassis sibs`
- `show route summary`
- `show system uptime`
- `show version`

## show chassis alarms

---

<b>List of Syntax</b>	<a href="#">Syntax on page 88</a> <a href="#">Syntax (TX Matrix Routers) on page 88</a> <a href="#">Syntax (TX Matrix Plus Routers) on page 88</a> <a href="#">Syntax (MX Series Routers) on page 88</a> <a href="#">Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers) on page 88</a> <a href="#">Syntax (QFX Series) on page 88</a> <a href="#">Syntax (OCX Series) on page 88</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 88</a> <a href="#">Syntax (ACX Series Universal Access Routers) on page 88</a>
<b>Syntax</b>	show chassis alarms
<b>Syntax (TX Matrix Routers)</b>	show chassis alarms <lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Routers)</b>	show chassis alarms <lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Routers)</b>	show chassis alarms <all-members> <local> <member <i>member-id</i> >
<b>Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers)</b>	show chassis alarms <satellite [slot-id <i>slot-id</i> ]>
<b>Syntax (QFX Series)</b>	show chassis alarms <interconnect-device <i>name</i> > <node-device <i>name</i> >
<b>Syntax (OCX Series)</b>	show chassis alarms
<b>Syntax (PTX Series Packet Transport Routers)</b>	show chassis alarms
<b>Syntax (ACX Series Universal Access Routers)</b>	show chassis alarms
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. sfc option introduced in Junos OS Release 9.6 for the TX Matrix Plus router. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 12.1 for the PTX Series Packet Transport Routers.



Command introduced in Junos OS Release 12.2 for the ACX Series Universal Access Routers.

Command introduced in Junos OS Release 12.3 for MX 2010 and MX2020 3D Universal Edge Routers.

Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.

Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

**satellite** option introduced in Junos OS Release 14.2R3 for Junos Fusion.

**Description** Display information about the conditions that have been configured to trigger alarms.

**Options** **none**—Display information about the conditions that have been configured to trigger alarms.

**all-members**—(MX Series routers only) (Optional) Display information about alarm conditions for all the member routers of the Virtual Chassis configuration.

**interconnect-device *name***—(QFabric systems only) (Optional) Display information about alarm conditions for the Interconnect device.

**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.

**local**—(MX Series routers only) (Optional) Display information about alarm conditions for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display information about alarm conditions for the specified member of the Virtual Chassis configuration. Replace *member-id* variable with a value of 0 or 1.

**node-device *name***—(QFabric systems only) (Optional) Display information about alarm conditions for the Node device.

**satellite [*slot-id slot-id*]**—(Junos Fusion only) (Optional) Display information about alarm conditions for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix router only) (Optional) Show information about the TX Matrix router (switch-card chassis).

**sfc number**—(TX Matrix Plus router only) (Optional) Show information about the respective TX Matrix Plus router, which is the switch-fabric chassis. Replace *number* variable with 0.

**Additional Information** You cannot clear the alarms for chassis components. Instead, you must remedy the cause of the alarm. When a chassis alarm LED is lit, it indicates that you are running the router or switch in a manner that we do not recommend.

On routers, you can manually silence external devices connected to the alarm relay contacts by pressing the alarm cutoff button, located on the craft interface. Silencing the device does not remove the alarm messages from the display (if present on the router) or extinguish the alarm LEDs. In addition, new alarms that occur after you silence an external device reactivate the external device.

In Junos OS release 11.1 and later, alarms for fans also show the slot number of the fans in the CLI output.

In Junos OS Release 11.2 and later, the command output on EX8200 switches shows the detailed location (**Plane/FPC/PFE**) for link errors in the chassis.

In Junos OS Release 10.2 and later, an alarm is shown on T Series routers for a standby sonic clock generator (SCG) that is offline or absent.

You may often see the following error messages, in which only the error code is shown and no other information is provided:

```
Apr 12 08:04:10 send: red alarm set, device FPC 6, reason FPC 6 Major Errors
- Error code: 257
Apr 12 08:04:19 send: red alarm set, device FPC 1, reason FPC 1 Major Errors
- Error code: 559
```

To understand what CM\_ALARM error codes mean, you need to first identify the structure of the CM Alarm codes. A CM\_ALARM code has the following structure:

Bits:	Error type:
1-31	Major (1)
0	Minor (0)

According to the table above, the LSB (bit 0) identifies the **Error Type** (major alarm, if the bit is set and minor alarm if the bit is unset). The rest of the bits (1 - 31) identify the actual error code.

Take an example of the following error code, which was logged on a T1600:

```
Apr 12 08:04:10 send: red alarm set, device FPC 1, reason FPC 1 Major Errors
- Error code: 559
```

First, you have to convert 559 to binary; that is **100010111**. The LSB in this case is 1, which means that this is a major alarm. After removing the LSB, you are left with **10001011**,

which is equal to 279 in decimal. This is the actual error code, its meaning can be found from the following list:

Chip Type: L Chip	Code
CMALARM_LCHIP_LOUT_DESRD_PARITY_ERR	1
CMALARM_LCHIP_LOUT_DESRD_UNINIT_ERR	2
CMALARM_LCHIP_LOUT_DESRD_ILLEGALLINK_ERR	3
CMALARM_LCHIP_LOUT_DESRD_ILLEGALSIZERR	4
CMALARM_LCHIP_LOUT_HDRF_TOERR_ERR	5
CMALARM_LCHIP_LOUT_HDRF_PARITY_ERR	6
CMALARM_LCHIP_LOUT_HDRF_UCERR_ERR	7
CMALARM_LCHIP_LOUT_NLIF_CRCDROP_ERR	8
CMALARM_LCHIP_LOUT_NLIF_CRCERR_ERR	9
CMALARM_LCHIP_UCODE_TIMEOUT_ERR	10
CMALARM_LCHIP_LIN_SRCTL_ACCT_DROP_ERR	11
CMALARM_LCHIP_LIN_SRCTL_ACCT_ADDR_SIZE_ERR	12
CMALARM_LCHIP_SRAM_PARITY_ERR	13
CMALARM_LCHIP_UCODE_OVFLW_ERR	14
CMALARM_LCHIP_LOUT_HDRF_MTU_ERR	15
Chip Type: M Chip	Code
CMALARM_MCHIP_ECC_UNCORRECT_ERR	128
Chip Type: N Chip	Code
CMALARM_NCHIP_RDDMA_JBUS_TIMEOUT_ERR	256
CMALARM_NCHIP_RDDMA_FIFO_OVFLW_ERR	257
CMALARM_NCHIP_RDDMA_FIFO_UNFLW_ERR	258
CMALARM_NCHIP_RDDMA_SIZE_ERR	259

CMALARM_NCHIP_RDDMA_JBUS_CRC_ERR	260
CMALARM_NCHIP_WRDMA_PKTR_ERR	261
CMALARM_NCHIP_WRDMA_PKT_CRC_ERR	262
CMALARM_NCHIP_WRDMA_JBUS_TIMEOUT_ERR	263
CMALARM_NCHIP_WRDMA_FIFO_OVFLW_ERR	264
CMALARM_NCHIP_WRDMA_FIFO_UNFLW_ERR	265
CMALARM_NCHIP_WRDMA_PKT_LEN_ERR	266
CMALARM_NCHIP_WRDMA_JBUS_CRC_ERR	267
CMALARM_NCHIP_PKTR_DMA_AGE_ERR	268
CMALARM_NCHIP_PKTR_ICELLSIG_ERR	269
CMALARM_NCHIP_PKTR_FTTL_ERR	270
CMALARM_NCHIP_RODR_OFFSET_OVFLW_ERR	271
CMALARM_NCHIP_PKTR_TMO_CELL_ERR	272
CMALARM_NCHIP_PKTR_TMO_OUTRANGE_ERR	273
CMALARM_NCHIP_PKTR_MD_REQUEST_Q_OVFLW_ERR	274
CMALARM_NCHIP_PKTR_DMA_BUFFER_OVFLW_ERR	275
CMALARM_NCHIP_PKTR_GRT_OVFLW_ERR	276
CMALARM_NCHIP_FRQ_ERR	277
CMALARM_NCHIP_RODR_IN_Q_OVFLW_ERR	278
CMALARM_NCHIP_DBUF_CRC_ERR	279
<hr/>	
<b>Chip Type: R Chip</b>	<b>Code</b>
CMALARM_RCHIP_SRAM_PARITY_ERR	512
<hr/>	
<b>Chip Type: R Chip</b>	<b>Code</b>
CMALARM_ICHIP_WO_DESRD_ID_ERR	601
CMALARM_ICHIP_WO_DESRD_DATA_ERR	602

CMALARM_ICHIP_WO_DESRD_OFLOW_ERR	603
CMALARM_ICHIP_WO_HDRF_UCERR_ERR	604
CMALARM_ICHIP_WO_HDRF_MTUERR_ERR	605
CMALARM_ICHIP_WO_HDRF_PARITY_ERR	606
CMALARM_ICHIP_WO_HDRF_TOERR_ERR	607
CMALARM_ICHIP_WO_IP_CRC_ERR	608
CMALARM_ICHIP_WO_IP_INTER_ERR	609
CMALARM_ICHIP_WI_WAN_TIMEOUT_ERR	625
CMALARM_ICHIP_WI_FAB_TIMEOUT_ERR	626
CMALARM_ICHIP_RLDRAM_BIST_ERR	630
CMALARM_ICHIP_SDRAM_BIST_ERR	631
CMALARM_ICHIP_RLDRAM_PARITY_ERR	632
CMALARM_ICHIP_SDRAM_UNCORRECT_ERR	633
CMALARM_ICHIP_SDRAM_CORRECT_ERR	634
CMALARM_ICHIP_FUSE_DONE_ERR	635

According to the table above, the **279** error code corresponds to **CMALARM\_NCHIP\_DBUF\_CRC\_ERR**; this means that new CRC errors were seen on the NCHIP of this particular FPC, which is FPC as per the logs.

If you do not want to convert decimal to binary and vice versa, you may use the following shortcut:

For major alarms, the **Actual Error Code = (Error Code - 1)/2**, where **Error Code** is the code that you get in the log message. For example, if you get the following log:

```
Apr 12 08:04:10 send: red alarm set, device FPC 6, reason FPC 6 Major
Errors - Error code: 257
```

Actual Error Code =  $(257-1)/2 = 128$ . Similarly, for minor alarms, Actual Error Code =  $(\text{Error Code})/2$

**Required Privilege Level** view

- Related Documentation**
- [Configuring an RMON Alarm Entry and Its Attributes](#)
  - [Chassis Conditions That Trigger Alarms](#)

- List of Sample Output**
- [show chassis alarms \(Alarms Active\) on page 95](#)
  - [show chassis alarms \(No Alarms Active\) on page 95](#)
  - [show chassis alarms \(Fan Tray\) on page 95](#)
  - [show chassis alarms \(MX104 Router\) on page 95](#)
  - [show chassis alarms \(MX2010 Router\) on page 95](#)
  - [show chassis alarms \(MX2020 Router\) on page 95](#)
  - [show chassis alarms \(MX960, MX480, and MX240 Routers showing Major CB Failure\) on page 96](#)
  - [show chassis alarms \(T4000 Router\) on page 96](#)
  - [show chassis alarms \(Unreachable Destinations Present on a T Series Router\) on page 96](#)
  - [show chassis alarms \(FPC Offline Due to Unreachable Destinations on a T Series Router\) on page 96](#)
  - [show chassis alarms \(SCG Absent on a T Series Router\) on page 97](#)
  - [show chassis alarms \(Alarms Active on a TX Matrix Router\) on page 97](#)
  - [show chassis alarms \(TX Matrix Plus router with 3D SIBs\) on page 97](#)
  - [show chassis alarms \(Alarms on a T4000 Router After the enhanced-mode Statement is Enabled\) on page 99](#)
  - [show chassis alarms \(Backup Routing Engine\) on page 99](#)
  - [show chassis alarms \(EX Series Switch\) on page 100](#)
  - [show chassis alarms \(Alarms Active on the QFX Series and OCX Series Switches\) on page 100](#)
  - [show chassis alarms node-device \(Alarms Active on the QFabric System\) on page 100](#)
  - [show chassis alarms \(Alarms Active on the QFabric System\) on page 100](#)
  - [show chassis alarms \(Alarms Active on an EX8200 Switch\) on page 100](#)
  - [show chassis alarms \(Alarms Active on a PTX5000 Packet Transport Router\) on page 101](#)
  - [show chassis alarms \(Mix of PDUs Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 101](#)
  - [show chassis alarms \(PDU Converter Failed Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 101](#)
  - [show chassis alarms \(No Power for System Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A\) on page 102](#)
  - [show chassis alarms \(Alarms Active on an ACX2000 Universal Access Router\) on page 102](#)
  - [show chassis alarms \(Active Alarm to Indicate Status of the Bad SCB Clock on MX Series\) on page 102](#)
  - [show chassis alarms \(Alarms active on a PTX1000 Packet Transport Router\) on page 102](#)
- Output Fields** [Table 5 on page 95](#) lists the output fields for the **show chassis alarms** command. Output fields are listed in the approximate order in which they appear.

Table 5: show chassis alarms Output Fields

Field Name	Field Description
Alarm time	Date and time the alarm was first recorded.
Class	Severity class for this alarm: <b>Minor</b> or <b>Major</b> .
Description	Information about the alarm.

## Sample Output

### show chassis alarms (Alarms Active)

```
user@host> show chassis alarms
3 alarms are currently active
Alarm time      Class  Description
2000-02-07 10:12:22 UTC Major fxp0: ethernet link down
2000-02-07 10:11:54 UTC Minor YELLOW ALARM - PEM 1 Removed
2000-02-07 10:11:03 UTC Minor YELLOW ALARM - Lower Fan Tray Removed
```

### show chassis alarms (No Alarms Active)

```
user@host> show chassis alarms
No alarms are currently active
```

### show chassis alarms (Fan Tray)

```
user@host> show chassis alarms
4 alarms currently active
Alarm time      Class  Description
2010-11-11 20:27:38 UTC Major Side Fan Tray 7 Failure
2010-11-11 20:27:13 UTC Minor Side Fan Tray 7 Overspeed
2010-11-11 20:27:13 UTC Major Side Fan Tray 5 Failure
2010-11-11 20:27:13 UTC Major Side Fan Tray 0 Failure
```

### show chassis alarms (MX104 Router)

```
user@host >show chassis alarms
1 alarms currently active
Alarm time      Class  Description
2013-06-05 14:43:31 IST Minor Backup RE Active
```

### show chassis alarms (MX2010 Router)

```
user@host> show chassis alarms
7 alarms currently active
Alarm time      Class  Description
2012-08-07 00:46:06 PDT Major Fan Tray 2 Failure
2012-08-06 18:24:36 PDT Minor Redundant feed missing for PSM 6
2012-08-06 07:41:04 PDT Minor Redundant feed missing for PSM 8
2012-08-04 02:42:06 PDT Minor Redundant feed missing for PSM 5
2012-08-03 21:14:24 PDT Minor Loss of communication with Backup RE
2012-08-03 12:26:03 PDT Minor Redundant feed missing for PSM 4
2012-08-03 10:40:18 PDT Minor Redundant feed missing for PSM 7
```

### show chassis alarms (MX2020 Router)

```
user@host> show chassis alarms
```

```

1 alarms currently active
Alarm time Class Description
2012-10-03 12:14:59 PDT Minor Plane 0 not online

```

#### show chassis alarms (MX960, MX480, and MX240 Routers showing Major CB Failure)

A major CB 0 failure alarm occurs in the event of a bad CB (unknown or mismatched CBs do not trigger this alarm in Junos Release OS 12.3R9 and later). Following GRES or recovery, if the hardware issue persists, the traffic moves to the good CB and continues. If the alarm was triggered by something transient like a power zone budget on GRES, bringing the CB back online can clear the alarm. Otherwise, replace the bad CB. Note that fabric link speed is not impacted by an offline SCB. The alarm might be raised on CB0, CB1, and CB2.

```

user@host> show chassis alarms
6 alarms currently active
Alarm time      Class Description
2014-10-31 16:49:41 EDT Major PEM 3 Not OK
2014-10-31 16:49:41 EDT Major PEM 2 Not OK
2014-10-31 16:49:31 EDT Major CB 0 Failure
2014-10-31 16:49:31 EDT Minor CB 0 Fabric Chip 0 Not Online
2014-10-31 16:49:31 EDT Minor CB 0 Fabric Chip 1 Not Online
2014-10-31 16:49:31 EDT Minor Backup RE Active

```

#### show chassis alarms (T4000 Router)

```

user@host> show chassis alarms
9 alarms currently active
Alarm time      Class Description
2007-06-02 01:41:10 UTC Minor RE 0 Not Supported
2007-06-02 01:41:10 UTC Minor CB 0 Not Supported
2007-06-02 01:41:10 UTC Minor Mixed Master and Backup RE types
2007-05-30 19:37:33 UTC Major SPMB 1 not online
2007-05-30 19:37:29 UTC Minor Front Bottom Fan Tray Absent
2007-05-30 19:37:13 UTC Major PEM 1 Input Failure
2007-05-30 19:37:13 UTC Major PEM 0 Not OK
2007-05-30 19:37:03 UTC Major PEM 0 Improper for Platform
2007-05-30 19:37:03 UTC Minor Backup RE Active

```

#### show chassis alarms (Unreachable Destinations Present on a T Series Router)

```

user@host> show chassis alarms
10 alarms currently active
Alarm time      Class Description
2011-08-30 18:43:53 PDT Major FPC 7 has unreachable destinations
2011-08-30 18:43:53 PDT Major FPC 5 has unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 3 has unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 2 has unreachable destinations
2011-08-30 18:43:52 PDT Minor SIB 0 Not Online
2011-08-30 18:43:33 PDT Minor SIB 4 Not Online
2011-08-30 18:43:28 PDT Minor SIB 3 Not Online
2011-08-30 18:43:05 PDT Minor SIB 2 Not Online
2011-08-30 18:43:28 PDT Minor SIB 1 Not Online
2011-08-30 18:43:05 PDT Major PEM 1 Not Ok

```

#### show chassis alarms (FPC Offline Due to Unreachable Destinations on a T Series Router)

```

user@host> show chassis alarms
10 alarms currently active
Alarm time      Class Description

```



```

2011-08-30 18:43:53 PDT Major FPC 7 offline due to unreachable destinations
2011-08-30 18:43:53 PDT Major FPC 5 offline due to unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 3 offline due to unreachable destinations
2011-08-30 18:43:52 PDT Major FPC 2 offline due to unreachable destinations
2011-08-30 18:43:52 PDT Minor SIB 0 Not Online
2011-08-30 18:43:33 PDT Minor SIB 4 Not Online
2011-08-30 18:43:28 PDT Minor SIB 3 Not Online
2011-08-30 18:43:05 PDT Minor SIB 2 Not Online
2011-08-30 18:43:28 PDT Minor SIB 1 Not Online
2011-08-30 18:43:05 PDT Major PEM 1 Not Ok

```

#### show chassis alarms (SCG Absent on a T Series Router)

```

user@host> show chassis alarms
4 alarms currently active
Alarm time          Class Description
2011-01-23 21:42:46 PST Major SCG 0 NO EXT CLK MEAS-BKUP SCG ABS

```

#### show chassis alarms (Alarms Active on a TX Matrix Router)

```

user@host> show chassis alarms
scc-re0:
-----
8 alarms currently active
Alarm time          Class Description
2004-08-05 18:43:53 PDT Minor LCC 0 Minor Errors
2004-08-05 18:43:53 PDT Minor SIB 3 Not Online
2004-08-05 18:43:52 PDT Major SIB 2 Absent
2004-08-05 18:43:52 PDT Major SIB 1 Absent
2004-08-05 18:43:52 PDT Major SIB 0 Absent
2004-08-05 18:43:33 PDT Major LCC 2 Major Errors
2004-08-05 18:43:28 PDT Major LCC 0 Major Errors
2004-08-05 18:43:05 PDT Minor LCC 2 Minor Errors
lcc0-re0:
-----
5 alarms currently active
Alarm time          Class Description
2004-08-05 18:43:53 PDT Minor SIB 3 Not Online
2004-08-05 18:43:49 PDT Major SIB 2 Absent
2004-08-05 18:43:49 PDT Major SIB 1 Absent
2004-08-05 18:43:49 PDT Major SIB 0 Absent
2004-08-05 18:43:28 PDT Major PEM 0 Not OK
lcc2-re0:
-----
5 alarms currently active
Alarm time          Class Description
2004-08-05 18:43:35 PDT Minor SIB 3 Not Online
2004-08-05 18:43:33 PDT Major SIB 2 Absent
2004-08-05 18:43:33 PDT Major SIB 1 Absent
2004-08-05 18:43:33 PDT Major SIB 0 Absent
2004-08-05 18:43:05 PDT Minor PEM 1 Absent

```

#### show chassis alarms (TX Matrix Plus router with 3D SIBs)

```

user@host> show chassis alarms
sfc0-re0:
-----
Alarm time          Class Description
2014-04-08 14:35:13 IST Minor FPM 0 SFC Config Size Changed
2014-04-08 14:32:58 IST Major Fan Tray Failure
2014-04-08 14:31:53 IST Major SIB F13 6 Fault

```

```

2014-04-08 14:31:43 IST Major SIB F13 11 Fault
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 14 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 8 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 3 Fbr Cbl
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 15 fault
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 14 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 14
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 10 fault
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 8 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 8
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 7 fault
2014-04-08 14:31:08 IST Major SIB F13 12 CXP 4 fault
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 3 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 12 CXP 3
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 14 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 12 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 8 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 6 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 4 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 2 Fbr Cbl
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 0 Fbr Cbl
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 14 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 14
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 12 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 12
2014-04-08 14:31:08 IST Major SIB F13 6 CXP 10 fault
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 8 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 8
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 6 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 6
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 4 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 4
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 2 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 2
2014-04-08 14:31:08 IST Minor SIB F13 6 CXP 0 LOL
2014-04-08 14:31:08 IST Minor Check SIB F13 6 CXP 0
2014-04-08 14:31:08 IST Minor SIB F13 12 CXP 14 XC HSL Link Error
2014-04-08 14:29:27 IST Minor LCC 0 Minor Errors
2014-04-08 14:28:37 IST Major LCC 0 Major Errors
2014-04-08 14:28:37 IST Major LCC 2 Major Errors
2014-04-08 14:28:37 IST Minor LCC 2 Minor Errors
2014-04-08 14:28:24 IST Major SIB F2S 4/6 Absent
2014-04-08 14:28:24 IST Major SIB F2S 4/4 Absent
2014-04-08 14:28:24 IST Major SIB F2S 4/2 Absent
2014-04-08 14:28:24 IST Major SIB F2S 4/0 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/6 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/4 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/2 Absent
2014-04-08 14:28:24 IST Major SIB F2S 3/0 Absent
2014-04-08 14:28:24 IST Major SIB F13 9 Absent
2014-04-08 14:28:24 IST Major SIB F13 8 Absent
2014-04-08 14:28:24 IST Major SIB F13 7 Absent
2014-04-08 14:28:24 IST Major SIB F13 4 Absent
2014-04-08 14:28:24 IST Major SIB F13 1 Absent
2014-04-08 14:28:22 IST Major PEM 0 Input Failure
2014-04-08 14:28:22 IST Major PEM 0 Not OK

```

```
lcc0-re0:
```

```
-----
12 alarms currently active
```

```
Alarm time          Class  Description
```

```

2014-04-08 14:36:08 IST Minor CB 1 M/S Switch Changed
2014-04-08 14:36:08 IST Minor CB 1 CHASSIS ID Changed
2014-04-08 14:35:43 IST Minor CB 0 M/S Switch Changed
2014-04-08 14:35:43 IST Minor CB 0 CHASSIS ID Changed
2014-04-08 14:29:30 IST Minor SIB 4 Not Online
2014-04-08 14:29:30 IST Minor SIB 3 Not Online
2014-04-08 14:29:30 IST Minor SIB 2 Not Online
2014-04-08 14:29:24 IST Major Rear Fan Tray Failure
2014-04-08 14:29:24 IST Major Front Bottom Fan Tray Improper for Platform
2014-04-08 14:29:24 IST Major Front Top Fan Tray Improper for Platform
2014-04-08 14:28:37 IST Major SIB 4 Absent
2014-04-08 14:28:37 IST Major SIB 3 Absent

```

```
lcc2-re0:
```

```
-----
12 alarms currently active
```

Alarm time	Class	Description
2014-04-08 14:36:02 IST	Minor	CB 1 M/S Switch Changed
2014-04-08 14:36:02 IST	Minor	CB 1 CHASSIS ID Changed
2014-04-08 14:35:42 IST	Minor	CB 0 M/S Switch Changed
2014-04-08 14:34:42 IST	Minor	CB 0 CHASSIS ID Changed
2014-04-08 14:29:29 IST	Minor	SIB 0 CXP 7 Unsupported Optics
2014-04-08 14:29:27 IST	Major	Front Bottom Fan Tray Improper for Platform
2014-04-08 14:29:27 IST	Major	Front Top Fan Tray Improper for Platform
2014-04-08 14:29:25 IST	Minor	SIB 4 Not Online
2014-04-08 14:29:25 IST	Minor	SIB 3 Not Online
2014-04-08 14:28:47 IST	Major	PEM 0 Not OK
2014-04-08 14:28:36 IST	Major	SIB 2 Absent
2014-04-08 14:28:36 IST	Minor	Host 0 Boot from alternate media

```
lcc6-re0:
```

```
-----
2 alarms currently active
```

Alarm time	Class	Description
2013-11-06 04:03:56 PST	Minor	SIB 1 CXP 0 XC HSL Link Error
2013-11-06 03:49:32 PST	Major	PEM 1 Not OK

### show chassis alarms (Alarms on a T4000 Router After the enhanced-mode Statement is Enabled)

To enable improved virtual private LAN service (VPLS) MAC address learning on T4000 routers, you must include the **enhanced-mode** statement at the **[edit chassis network-services]** hierarchy level and reboot the router. When router reboots, only the T4000 Type 5 FPCs are required to be present on the router. If there are any other FPCs (apart from T4000 Type 5 FPCs) on the T4000 router, such FPCs become 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 of the alarms.

```
user@host> show chassis alarms
```

```
2 alarms currently active
```

Alarm time	Class	Description
2011-10-22 10:10:47 PDT	Major	FPC 1 misconfig
2011-10-22 10:10:46 PDT	Major	FPC 0 misconfig

### show chassis alarms (Backup Routing Engine)

```
user@host> show chassis alarms
```

```
2 alarms are currently active
```

Alarm time	Class	Description
------------	-------	-------------

```
2005-04-07 10:12:22 PDT Minor Host 1 Boot from alternate media
2005-04-07 10:11:54 PDT Major Host 1 compact-flash missing in Boot List
```

#### show chassis alarms (EX Series Switch)

```
user@switch> show chassis alarms
4 alarms currently active
Alarm time          Class Description
2014-03-12 15:36:09 UTC Minor Require a Fan Tray upgrade
2014-03-12 15:00:02 UTC Major PEM 0 Input Failure
2014-03-12 15:00:02 UTC Major PEM 0 Not OK
2014-03-12 14:59:51 UTC Minor Host 1 Boot from alternate media
```

#### show chassis alarms (Alarms Active on the QFX Series and OCX Series Switches)

```
user@switch> show chassis alarms
1 alarms currently active
Alarm time          Class Description
2012-03-05 2:10:24 UTC Major FPC 0 PEM 0 Airflow not matching Chassis Airflow
```

#### show chassis alarms node-device (Alarms Active on the QFabric System)

```
user@switch> show chassis alarms node-device Test
node-device ED3694
3 alarms currently active
Alarm time          Class Description
2011-08-24 16:04:15 UTC Major Test:fte-0/1/2: Link down
2011-08-24 16:04:14 UTC Major Test:fte-0/1/0: Link down
2011-08-24 14:21:14 UTC Major Test PEM 0 is not supported/powered
```

#### show chassis alarms (Alarms Active on the QFabric System)

```
user@switch> show chassis alarms
IC-1:
-----
1 alarms currently active
Alarm time          Class Description
2011-08-24 16:04:15 UTC Minor Backup RE Active

Test:
-----
3 alarms currently active
Alarm time          Class Description
2011-08-24 16:04:15 UTC Major Test:fte-0/1/2: Link down
2011-08-24 16:04:14 UTC Major Test:fte-0/1/0: Link down
2011-08-24 14:21:14 UTC Major Test PEM 0 is not supported/powered

SNG-0:
-----

NW-NG-0:
-----
1 alarms currently active
Alarm time          Class Description
2011-08-24 15:49:27 UTC Major Test PEM 0 is not supported/powered
```

#### show chassis alarms (Alarms Active on an EX8200 Switch)

```
user@switch> show chassis alarms

6 alarms currently active
```

Alarm time	Class	Description
2010-12-02 19:15:22 UTC	Major	Fan Tray Failure
2010-12-02 19:15:22 UTC	Major	Fan Tray Failure
2010-12-02 19:15:14 UTC	Minor	Check CB 0 Fabric Chip 1 on Plane/FPC/PFE: 1/5/0, 1/5/1, 1/5/2, 1/5/3, 1/7/0, 1/7/1, 1/7/2, 1/7/3, 2/5/0, 2/5/1, ...
2010-12-02 19:15:14 UTC	Minor	Check CB 0 Fabric Chip 0 on Plane/FPC/PFE: 1/5/0, 1/5/1, 1/5/2, 1/5/3, 1/7/0, 1/7/1, 1/7/2, 1/7/3, 2/5/0, 2/5/1, ...
2010-12-02 19:14:18 UTC	Major	PSU 1 Output Failure
2010-12-02 19:14:18 UTC	Minor	Loss of communication with Backup RE

#### show chassis alarms (Alarms Active on a PTX5000 Packet Transport Router)

```
user@host> show chassis alarms
```

```
23 alarms currently active
Alarm time      Class  Description
2011-07-12 16:22:05 PDT  Minor  No Redundant Power for Rear Chassis
2011-07-12 16:22:05 PDT  Major  PDU 0 PSM 1 Not OK
2011-07-12 16:21:57 PDT  Minor  No Redundant Power for Fan 0-2
2011-07-12 16:21:57 PDT  Major  PDU 0 PSM 0 Not OK
2011-07-12 15:56:06 PDT  Major  PDU 1 PSM 2 Not OK
2011-07-12 15:56:06 PDT  Minor  No Redundant Power for FPC 0-7
2011-07-12 15:56:06 PDT  Major  PDU 0 PSM 3 Not OK
2011-07-12 15:28:20 PDT  Major  PDU 0 PSM 2 Not OK
2011-07-12 15:19:14 PDT  Minor  Backup RE Active
```

#### show chassis alarms (Mix of PDUs Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

All PDUs installed on a PTX5000 router must be of the same type. The **Mix of PDUs** or **Power Manager Non Operational** alarm is raised when different types of PDUs are installed on a PTX5000 router.

```
user@host> show chassis alarms
15 alarms currently active
Alarm time      Class  Description
2013-03-19 23:03:53 PDT  Minor  No Redundant Power
2013-03-19 23:03:48 PDT  Minor  Mix of PDUs
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 3 Absent
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 2 Absent
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 1 Absent
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 0 Absent
2013-03-19 23:03:46 PDT  Major  No CG Online
```

#### show chassis alarms (PDU Converter Failed Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

The **PDU Converter Failed** alarm is raised when one or more 36 V booster converter of a DC PDU fails. If two or more 36 V booster converter fails, fan trays fail and the router might get over heated. Therefore, when this alarm is raised, check the PDU and replace it, if required.

```
user@host> show chassis alarms
11 alarms currently active
Alarm time      Class  Description
2013-12-11 22:14:13 PST  Minor  No Redundant Power for System
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 7 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 6 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 5 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 4 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 3 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 2 Not OK
```

```
2013-12-11 22:14:10 PST Major PDU 0 PSM 1 Not OK
2013-12-11 22:14:10 PST Major PDU 0 PSM 0 Not OK
2013-12-11 22:14:10 PST Major PDU 0 Not OK
2013-12-11 22:14:01 PST Major PDU 0 Converter Failed
```

#### show chassis alarms (No Power for System Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis alarms
8 alarms currently active
Alarm time          Class Description
2013-11-19 01:58:41 PST Major No Power for System
2013-11-19 01:58:37 PST Major PDU 0 PSM 1 Not OK
2013-11-19 01:56:46 PST Major PDU 0 PSM 2 Not OK
2013-11-19 01:54:26 PST Major PDU 0 PSM 3 Not OK
2013-11-19 01:53:30 PST Major PDU 1 PSM 3 Not OK
2013-11-19 01:53:29 PST Major PDU 1 PSM 2 Not OK
2013-11-19 01:53:29 PST Major PDU 1 PSM 1 Not OK
2013-11-19 01:53:29 PST Major PDU 1 PSM 0 Not OK
```

#### show chassis alarms (Alarms Active on an ACX2000 Universal Access Router)

```
user@host> show chassis alarms
7 alarms currently active
Alarm time          Class Description
2012-05-22 11:19:09 UTC Major xe-0/3/1: Link down
2012-05-22 11:19:09 UTC Major xe-0/3/0: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/7: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/6: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/3: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/2: Link down
2012-05-22 11:19:09 UTC Major ge-0/1/1: Link down
```

#### show chassis alarms (Active Alarm to Indicate Status of the Bad SCB Clock on MX Series)

```
user@host> show chassis alarms
1 alarm currently active
Alarm time          Class Description
2013-08-06 07:48:35 PDT Major CB 0 19.44 MHz clock failure
```

#### show chassis alarms (Alarms active on a PTX1000 Packet Transport Router)

```
user@host> show chassis alarms
2 alarms currently active
Alarm time          Class Description
2004-08-10 00:55:49 UTC Major PEM 1 Not Present
2004-08-10 00:55:49 UTC Major PEM 0 Not Present
```

## show chassis craft-interface

<b>List of Syntax</b>	<a href="#">Syntax on page 103</a> <a href="#">Syntax (MX Series Routers) on page 103</a> <a href="#">Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers) on page 103</a> <a href="#">Syntax (TX Matrix Routers) on page 103</a> <a href="#">Syntax (TX Matrix Plus Routers) on page 103</a> <a href="#">Syntax (ACX Series Universal Access Routers) on page 103</a>
<b>Syntax</b>	show chassis craft-interface
<b>Syntax (MX Series Routers)</b>	show chassis craft-interface <all-members> <local> <member <i>member-id</i> >
<b>Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers)</b>	show chassis craft-interface
<b>Syntax (TX Matrix Routers)</b>	show chassis craft-interface <lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Routers)</b>	show chassis craft-interface <lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (ACX Series Universal Access Routers)</b>	show chassis craft-interface
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. <b>sfc</b> option for the TX Matrix Plus router introduced in Junos OS Release 9.6. 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.
<b>Description</b>	For routers or switches that have a display on the craft interface, show the messages that are currently displayed. On all routers except for the M20 router, you must enter this command on the master Routing Engine.
<b>Options</b>	<p><b>none</b>—(TX Matrix, TX Matrix Plus routers, MX104, MX2010, and MX2020 routers, and ACX Series routers only) On a TX Matrix router, show messages that are currently displayed on the craft interface on the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, show messages that are currently displayed on the craft interface on the TX Matrix Plus router and its attached routers.</p> <p><b>all-members</b>—(MX Series routers only) (Optional) Display information currently on the craft interface for all members of the Virtual Chassis configuration.</p>

**lcc *number***—(TX Matrix, TX Matrix Plus routers only) (Optional) On a TX Matrix router, show messages that are currently displayed on the craft interface for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, show messages that are currently displayed on the craft interface 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 information currently on the craft interface for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display information currently on the craft interface for the specified member of the Virtual Chassis configuration. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**scc**—(TX Matrix router only) (Optional) Show messages that are currently displayed on the craft interface for the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus router only) (Optional) Show messages that are currently displayed on the craft interface for the respective TX Matrix Plus router (switch-fabric chassis). Replace *number* variable with 0.

**Required Privilege  
Level**

view

**Related  
Documentation**

- [clear chassis display message](#)
- [set chassis display message](#)

**List of Sample Output**

[show chassis craft-interface \(M20 Router\) on page 106](#)  
[show chassis craft-interface \(M40 Router\) on page 106](#)  
[show chassis craft-interface \(M120 Router\) on page 107](#)  
[show chassis craft-interface \(M160 Router\) on page 107](#)  
[show chassis craft-interface \(MX104 Router\) on page 108](#)  
[show chassis craft-interface \(MX2010 Router\) on page 109](#)  
[show chassis craft-interface \(MX2020 Router\) on page 109](#)  
[show chassis craft-interface \(T4000 Router\) on page 110](#)  
[show chassis craft-interface \(TX Matrix Routing Matrix\) on page 111](#)  
[show chassis craft-interface \(TX Matrix Plus Routing Matrix\) on page 113](#)



[show chassis craft-interface \(TX Matrix Plus router with 3D SIBs\) on page 116](#)  
[show chassis craft-interface \(ACX2000 Universal Access Router\) on page 118](#)  
[show chassis craft-interface \(ACX500 Router\) on page 118](#)

**Output Fields** [Table 6 on page 105](#) lists the output fields for the **show chassis craft-interface** command. Output fields are listed in the approximate order in which they appear.

**Table 6: show chassis craft-interface Output Fields**

Field Name	Field Description
LCD screen or FPM Display Contents	Contents of the Front Panel Module display: <ul style="list-style-type: none"> <li>• <b>router-name</b>—Name of the router.</li> <li>• <b>Up</b>—How long the router has been operational, in days, hours, minutes, and seconds.</li> <li>• <b>message</b>—Information about the router traffic load, the power supply status, the fan status, and the temperature status. The display of this information changes every 2 seconds. If a text message has been created with the <b>set chassis display</b> command, this message appears on all four lines of the craft interface display. The display alternates between the text message and the standard system status messages every 2 seconds.</li> </ul>
SFC Front Panel Switch Settings	(TX Matrix Plus Routers)—Display the SFC front panel switch settings: <p><b>SFC Chassis Number</b> and <b>Config Size</b> are settings on physical switches located on the left side of the craft interface of the TX Matrix Plus router.</p> <ul style="list-style-type: none"> <li>• <b>SFC Chassis Number</b>—This field always displays the value <b>00</b>.</li> <li>• <b>Config Size</b>—The value of this field is <b>0</b> for the TX Matrix Plus router. The value of this field is <b>3</b> for TX Matrix Plus router with 3D SIBs.</li> </ul>
Front Panel System LEDs	(MX104, MX2010, and MX2020 Routers) Status of the Front Panel System LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
Front Panel Alarm Indicators	(MX104, MX2010, and MX2020 Routers) Status of the Front Panel Alarm indicators. A dot (.) indicates the relay is off. An asterisk (*) indicates the relay is active.
Input Relay	Status of the configured input relay ports—0 through 3. The mode is normally open or closed. The status is clear or raised.
Output Relay	Status of the configured output ports—0 or 1. The mode is normally open or closed. The status is clear or raised.
Front Panel FPC LEDs	(MX2010 and MX2020 Routers) Status of the Front Panel Flexible PIC Concentrator (FPC) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit. On MX2010 routers, there are 10 (0-9) FPCs LEDs. On MX2020 routers, there are 20 (0-9 and 10-19) FPCs LEDs.
CB LEDs	Status of the Control Board (CB) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
PS LEDs	(MX2010 and MX2020 Routers) Status of the Power Supply (PS) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit. On MX2010 routers, there are 9 (0-8) PS LEDs. On MX2020 routers, there are 18 (0-8 and 9-17) PS LEDs.
PS Status	(MX104 Routers) Status of the Power Supply (PS). Green indicates that the power supply is functioning. Red indicates that the power supply is not functioning. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.

Table 6: show chassis craft-interface Output Fields (*continued*)

Field Name	Field Description
<b>FAN Tray LEDs</b>	(MX2010 and MX2020 Routers) Status of the Fan Tray LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
<b>Front Panel SFB LEDs</b>	(MX2010 and MX2020 Routers) Status of the Front Panel Switch Fabric Boards (SFB) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
<b>Front Panel Chassis Info</b>	(MX2010 and MX2020 Routers) Information about the chassis such as the chassis number and role. User can set the chassis number in multi-chassis configurations.
<b>MCS and SFM LEDs</b>	Status of the Miscellaneous Control Subsystem (MCS) and Switching and Forwarding Module (SFM) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit. When neither a dot nor an asterisk is displayed, there is no board in that slot.
<b>SIB LEDs</b>	Status of the Switch Interface Board (SIB) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
<b>SCG LEDs</b>	Status of the SONET Clock Generator (SCG) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.

## Sample Output

### show chassis craft-interface (M20 Router)

```

user@host> show chassis craft-interface
Red alarm:      LED off, relay off
Yellow alarm:   LED on, relay on
Host OK LED:    On
Host fail LED:  Off
FPCs           0  1  2  3
-----
Green  .  *  *.
Red    ....
LCD screen:
+-----+
|host   |
|1 Alarm active|
|Y: FERF|
|       |
+-----+

```

### show chassis craft-interface (M40 Router)

```

user@host> show chassis craft-interface
Front Panel LCD Display: enabled
Red alarm:      LED off, relay off
Yellow alarm:   LED off, relay off
Host OK LED:    On
Host Fail LED:  Off
NICs           0  1  2  3  4  5  6  7
-----
Green  *.  *.  *.  *.
Red    .....
LCD Screen:

```

```

+-----+
|host    |
|Up: 27+18:52:37|
|        |
|52.649kpps Load|
+-----+

```

### show chassis craft-interface (M120 Router)

```
user@host> show chassis craft-interface
```

```
Front Panel System LEDs:
```

```
Routing Engine    0    1
```

```
-----
OK                *    .
Fail              .    .
Master            *    .

```

```
Front Panel Alarm Indicators:
```

```
-----
Red LED          *
Yellow LED       .
Major relay      *
Minor relay      .

```

```
Front Panel FPC LEDs:
```

```
FPC    0    1    2    3    4    5
```

```
-----
Red    .    .    .    .    .    .
Green  .    *    .    *    *    *

```

```
CB LEDs:
```

```
CB    0    1
```

```
-----
Amber  .    .
Green  *    *

```

```
PS LEDs:
```

```
PS    0    1
```

```
-----
Red    .    .
Green  *    *

```

```
FEB LEDs:
```

```
FEB    0    1    2    3    4    5
```

```
-----
Red    .    .    .    .    .    .
Green  .    .    .    *    *    *
Active .    .    .    *    *    *

```

### show chassis craft-interface (M160 Router)

```
user@host> show chassis craft-interface
```

```
FPM Display contents:
```

```

+-----+
|hosts    |
|Up: 1+16:46|
|        |
|Fans OK  |
+-----+

```

```
Front Panel System LEDs:
```

```

Host      0      1
-----
OK        .      *
Fail      .      .
Master    .      *

Front Panel Alarm Indicators:
-----
Red LED    .
Yellow LED .
Major relay.
Minor relay.

Front Panel FPC LEDs:
FPC      0      1      2      3      4      5      6      7
-----
Red       .      .      .      .      .      .      .      .
Green     *      *      .      .      .      .      .      .

MCS and SFM LEDs:
MCS      0      1      SFM      0      1      2      3
-----
Amber     .              .      .
Green     .              .      .
Blue      .      *              *      *

```

#### show chassis craft-interface (MX104 Router)

```

user@host > show chassis craft-interface
Front Panel System LEDs:
Routing Engine      0      1
-----
OK                  *      .
Fail                .      .
Master              *      .

Front Panel Alarm Indicators:
-----
Red LED            .
Yellow LED         *
Major relay        .
Minor relay        *

Input relay:
-----
Port   Mode   Status
0      Open   Clear
1      Open   Clear
2      Open   Clear
3      Open   Clear

Output relay:
-----
Port   Mode   Status
0      Open   Clear
1      Open   Clear

PS Status:
PS      0      1
-----

```

```

Red      .      .
Green    *      .

```

### show chassis craft-interface (MX2010 Router)

```

user@host > show chassis craft-interface
Front Panel System LEDs:
Routing Engine    0    1
-----
OK                *    .
Fail              .    *
Master            *    .

Front Panel Alarm Indicators:
-----
Red LED           .
Yellow LED        *
Major relay       .
Minor relay       *

Front Panel FPC LEDs:
FPC    0    1    2    3    4    5    6    7    8    9
-----
Red     .    .    .    .    .    .    .    .    .    .
Green   *    *    .    .    .    .    .    .    *    *

CB LEDs:
CB      0    1
-----
Amber   .    .
Green   *    *

PS LEDs:
PS      0    1    2    3    4    5    6    7    8
-----
Red     .    .    .    .    .    .    .    .    .
Green   .    .    .    .    *    *    *    *    *

Fan Tray LEDs:
FT      0    1    2    3
-----
Red     .    .    .    .
Green   *    *    *    *

Front Panel SFB LEDs:
SFB     0    1    2    3    4    5    6    7
-----
Red     .    .    .    .    .    .    .    .
Green   *    *    *    *    *    *    *    *

Front Panel Chassis Info:
Chassis Number    0x0
Chassis Role      S

```

### show chassis craft-interface (MX2020 Router)

```

user@host > show chassis craft-interface
Front Panel System LEDs:
Routing Engine 0 1
-----

```

```

OK * *
Fail . .
Master * .
Front Panel Alarm Indicators:
-----
Red LED .
Yellow LED .
Major relay .
Minor relay .
Front Panel FPC LEDs:
FPC 0 1 2 3 4 5 6 7 8 9
-----
Red . . . . .
Green * * * * *
Front Panel FPC LEDs:
FPC 10 11 12 13 14 15 16 17 18 19
-----
Red . . . . .
Green * * * * *
CB LEDs:
CB 0 1
-----
Amber . .
Green * *
PS LEDs:
PS 0 1 2 3 4 5 6 7 8
-----
Red . . . . .
Green * * * * * . . * *
PS LEDs:
PS 9 10 11 12 13 14 15 16 17
-----
Red . . . . .
Green * * * * *
Fan Tray LEDs:
FT 0 1 2 3
-----
Red . . . .
Green * * * *
Front Panel SFB LEDs:
SFB 0 1 2 3 4 5 6 7
-----
Red . . . . .
Green * * * * *
Front Panel Chassis Info:
Chassis Number 0x57
Chassis Role M

```

#### show chassis craft-interface (T4000 Router)

```

user@host> show chassis craft-interface
FPM Display contents:
+-----+
|stymphalian      |
|2 Alarms active  |
|R: Front Top Fan Tra|
|Y: PEM 1 Absent   |
+-----+

Front Panel System LEDs:
Routing Engine    0    1

```

```

-----
OK                *   *
Fail              .   .
Master            *   .

Front Panel Alarm Indicators:
-----
Red LED          *
Yellow LED       *
Major relay       *
Minor relay       *

Front Panel FPC LEDs:
FPC   0   1   2   3   4   5   6   7
-----
Red    .   .   .   .   .   .   .   .
Green  *   .   .   *   .   *   *   .

CB LEDs:
CB    0   1
-----
Amber  .   .
Green  *   *
Blue   *   .

SCG LEDs:
SCG   0   1
-----
Amber  .   .
Green  *   *
Blue   *   .

SIB LEDs:
SIB   0   1   2   3   4
-----
Red    .   .   .   .   .
Green  *   *   *   *   *

```

### show chassis craft-interface (TX Matrix Routing Matrix)

```

user@host> show chassis craft-interface
scc-re0:

```

```

-----
FPM Display contents:
+-----+
|bradley      |
|8 Alarms active|
|R: SIB 2 Absent|
|R: SIB 1 Absent|
+-----+

```

```

Front Panel System LEDs:
Routing Engine   0   1
-----
OK                *   .
Fail              .   .
Master            *   .

Front Panel Alarm Indicators:
-----
Red LED          *

```

```

Yellow LED  *
Major relay  *
Minor relay  *

CB LEDs:
  CB  0  1
-----
Amber. .
Green * .
Blue  * .

SIB LEDs:
  SIB 0  1  2  3  4
-----
Fail . . . . .
OK   . . . . *
Active . . . . *

lcc0-re0:
-----
FPM Display contents:
+-----+
|hybrid          |
|5 Alarms active  |
|R: SIB 2 Absent  |
|R: SIB 1 Absent  |
+-----+
Front Panel System LEDs:
Routing Engine  0  1
-----
OK              * .
Fail            . .
Master          * .

Front Panel Alarm Indicators:
-----
Red LED        *
Yellow LED     *
Major relay    *
Minor relay    *

Front Panel FPC LEDs:
FPC  0  1  2  3  4  5  6  7
-----
Red   . . . . .
Green *  *  . . . .

CB LEDs:
  CB  0  1
-----
Amber. .
Green * .
Blue  * .

SCG LEDs:
  SCG 0  1
-----
Amber. .
Green * .
Blue  * .

```



```

SIB LEDs:
  SIB  0   1   2   3   4
-----
Red   . . . . .
Green . . . . *

lcc2-re0:
-----
FPM Display contents:
+-----+
| prius          |
| 5 Alarms active |
| R: SIB 2 Absent |
| R: SIB 1 Absent |
+-----+

Front Panel System LEDs:
Routing Engine  0   1
-----
OK              *   .
Fail            .   .
Master          *   .

Front Panel Alarm Indicators:
-----
Red LED        *
Yellow LED     *
Major relay    *
Minor relay    *

Front Panel FPC LEDs:
FPC  0   1   2   3   4   5   6   7
-----
Red   . . . . .
Green *   *   *   . . . . .

CB LEDs:
  CB  0   1
-----
Amber. .
Green * .
Blue  * .

SCG LEDs:
  SCG  0   1
-----
Amber. .
Green * .
Blue  * .

SIB LEDs:
  SIB  0   1   2   3   4
-----
Red   . . . . .
Green . . . . *

```

#### show chassis craft-interface (TX Matrix Plus Routing Matrix)

```

user@host> show chassis craft-interface
sfc0-re0:
-----

```

## FPM Display Contents:

```

+-----+
|noname      |
|12 Alarms active |
|R: SIB F13 12 Absent|
|R: SIB F13 9 Absent|
+-----+

```

## SFC Front Panel Switch Settings:

SFC Chassis Number : 00  
Config Size : 1

## Front Panel System LEDs:

Routing Engine 0 1

```

-----
OK          *   *
Fail        .   .
Master      *   .

```

## Front Panel Alarm Indicators:

```

-----
Red LED     *
Yellow LED  *
Major relay *
Minor relay *

```

## Front Panel F13 SIB LEDs:

SIB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
OK	*	.	.	*	.	.	*	.	*	.	.	*	.	.	.	.
Active	.	.	.	*	.	.	*	.	*	.	.	*	.	.	.	.

## PS LEDs:

PS 0 1

```

-----
Red    .   *
Green  *   .

```

## Fan Tray LEDs:

FT 0 1 2 3 4 5

```

-----
Red    .   .   .   .   *   *
Green  *   *   *   *   .   .

```

## CB LEDs:

CB 0 1

```

-----
Amber  .   .
Green  *   *
Blue   *   .

```

## 1cc0-re0:

## FPM Display contents:

```

+-----+
|noname1      |
|1 Alarm active |
|R: PEM 1 Not OK |
|              |
+-----+

```

## Front Panel System LEDs:

Routing Engine	0	1
----------------	---	---

OK	*	*
Fail	.	.
Master	*	.

## Front Panel Alarm Indicators:

Red LED	*
Yellow LED	.
Major relay	*
Minor relay	.

## Front Panel FPC LEDs:

FPC	0	1	2	3	4	5	6	7
-----	---	---	---	---	---	---	---	---

Red	.	.	.	.	.	.	.	.
Green	.	*	.	*	*	.	.	*

## CB LEDs:

CB	0	1
----	---	---

Amber	.	.
Green	*	*
Blue	*	.

## SCG LEDs:

SCG	0	1
-----	---	---

Amber	.	.
Green	*	*
Blue	*	.

## SIB LEDs:

SIB	0	1	2	3	4
-----	---	---	---	---	---

Red	.	.	.	.	.
Green	*	*	*	*	*

## lcc1-re0:

## FPM Display contents:

```

+-----+
|noname2          |
|2 Alarms active  |
|R: FPC 0 PIC 0 Failu|
|R: PEM 1 Not OK   |
+-----+

```

## Front Panel System LEDs:

Routing Engine	0	1
----------------	---	---

OK	*	*
Fail	.	.
Master	*	.

## Front Panel Alarm Indicators:

Red LED	*
---------	---

```

Yellow LED  .
Major relay  *
Minor relay  .

Front Panel FPC LEDs:
FPC    0    1    2    3    4    5    6    7
-----
Red     .    .    .    .    .    .    .    .
Green   *    *    *    .    .    *    .    .

CB LEDs:
CB     0    1
-----
Amber   .    .
Green   *    *
Blue    *    .

SCG LEDs:
SCG    0    1
-----
Amber   .    .
Green   *    *
Blue    *    .

SIB LEDs:
SIB    0    1    2    3    4
-----
Red     .    .    .    .    .
Green   *    *    *    *    *

```

#### show chassis craft-interface (TX Matrix Plus router with 3D SIBs)

```

user@host> show chassis craft-interface
sfc0-re0:

```

```

-----
FPM Display Contents:
+-----+
|noname      |
|48 Alarms active  |
|R: LCC 2 Major Error|
|R: LCC 0 Major Error|
+-----+

```

```

SFC Front Panel Switch Settings:
SFC Chassis Number : 00
Config Size        : 3

```

```

Front Panel System LEDs:
Routing Engine    0    1
-----
OK                *    *
Fail              .    .
Master            *    .

```

```

Front Panel Alarm Indicators:
-----
Red LED          *
Yellow LED       *
Major relay      *
Minor relay      *

```

## Front Panel F13 SIB LEDs:

SIB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fail	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
OK	*	.	.	*	.	.	*	.	.	.	.	.	.	.	.	.
Active	*	.	.	*	.	.	*	.	.	.	.	.	.	.	.	.

## PS LEDs:

PS	0	1
Red	*	.
Green	.	*

## Fan Tray LEDs:

FT	0	1	2	3	4	5
Red	.	.	.	.	.	*
Green	*	*	*	*	*	.

## CB LEDs:

CB	0	1
Amber	.	.
Green	*	*
Blue	*	.

## lcc0-re0:

## FPM Display contents:

```

+-----+
|noname1      |
|14 Alarms active |
|R: PEM 1 Not OK  |
|R: FPC 7 misconfig |
+-----+

```

## Front Panel System LEDs:

Routing Engine	0	1
OK	.	*
Fail	.	.
Master	*	.

## Front Panel Alarm Indicators:

Red LED	*
Yellow LED	*
Major relay	*
Minor relay	*

## Front Panel FPC LEDs:

FPC	0	1	2	3	4	5	6	7
Red	.	.	.	.	.	.	.	.
Green	.	.	.	.	*	.	.	.

## CB LEDs:

CB	0	1
Amber	.	.
Green	*	*

```

Blue    *    .

SCG LEDs:
  SCG  0    1
-----
Amber   .    .
Green  *    *
Blue   *    .

SIB LEDs:
  SIB  0    1    2    3    4
-----
Red     .    .    .    .    .
Green  *    *    *    .    .

```

### show chassis craft-interface (ACX2000 Universal Access Router)

```

user@host> show chassis craft-interface
Front Panel System LEDs:
Routing Engine
-----
OK                *
Fail              .

Front Panel Alarm Indicators:
-----
Red LED          .
Yellow LED       .
Major relay      .
Minor relay      .

Input relay:
-----
Port  Mode      Status
0     Open      Clear
1     Open      Clear
2     Open      Clear
3     Open      Clear

Output relay:
-----
Port  Mode      Status
0     Open      Clear
1     Open      Clear

PS Status:
  PS   0    1
-----
Red    .    .
Green *    *

```

### show chassis craft-interface (ACX500 Router)

```

user@host> show chassis craft-interface

Front Panel System LEDs:
Routing Engine
-----
OK                *
Fail              .

```

## Front Panel Alarm Indicators:

-----  
Red LED .  
Yellow LED .  
Major relay .  
Minor relay .

## Input relay:

-----  
Port Mode Status  
0 Open Clear  
1 Open Clear  
2 Open Clear  
3 Open Clear

## Output relay:

-----  
Port Mode Status  
0 Open Clear  
1 Open Clear

## PS Status:

PS 0 1  
-----  
Red . .  
Green \* \*

## show chassis hardware

---

<b>List of Syntax</b>	<a href="#">Syntax on page 120</a> <a href="#">Syntax (EX Series) on page 120</a> <a href="#">Syntax (T4000 Router) on page 120</a> <a href="#">Syntax (TX Matrix Router) on page 120</a> <a href="#">Syntax (TX Matrix Plus Router) on page 120</a> <a href="#">Syntax (MX Series Routers) on page 120</a> <a href="#">Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers) on page 121</a> <a href="#">Syntax (QFX Series) on page 121</a> <a href="#">Syntax (OCX Series) on page 121</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 121</a> <a href="#">Syntax (ACX Series Universal Access Routers) on page 121</a> <a href="#">Syntax (ACX5048 and ACX5096 Routers) on page 121</a> <a href="#">Syntax (ACX500 Routers) on page 121</a>
<b>Syntax</b>	<code>show chassis hardware</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;clei-models&gt;</code> <code>&lt;models&gt;</code>
<b>Syntax (EX Series)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code> <code>&lt;satellite [slot-id <i>slot-id</i>   device-alias <i>alias-name</i>]&gt;</code>
<b>Syntax (T4000 Router)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code>
<b>Syntax (TX Matrix Router)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code> <code>&lt;lcc <i>number</i>   scc&gt;</code>
<b>Syntax (TX Matrix Plus Router)</b>	<code>show chassis hardware</code> <code>&lt;clei-models&gt;</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;models&gt;</code> <code>&lt;lcc <i>number</i>   sfc <i>number</i>&gt;</code>
<b>Syntax (MX Series Routers)</b>	<code>show chassis hardware</code> <code>&lt;detail   extensive&gt;</code> <code>&lt;clei-models&gt;</code> <code>&lt;models&gt;</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code>



Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers)	<pre>show chassis hardware &lt;clei-models&gt; &lt;detail   extensive&gt; &lt;models&gt; &lt;satellite [slot-id <i>slot-id</i>   device-alias <i>alias-name</i>]&gt;</pre>
Syntax (QFX Series)	<pre>show chassis hardware &lt;detail   extensive&gt; &lt;clei-models&gt; &lt;interconnect-device <i>name</i>&gt; &lt;node-device <i>name</i>&gt; &lt;models&gt;</pre>
Syntax (OCX Series)	<pre>show chassis hardware &lt;detail   extensive&gt; &lt;clei-models&gt; &lt;models&gt;</pre>
Syntax (PTX Series Packet Transport Routers)	<pre>show chassis hardware &lt;detail   extensive&gt; &lt;clei-models&gt; &lt;models&gt;</pre>
Syntax (ACX Series Universal Access Routers)	<pre>show chassis hardware &lt;detail   extensive&gt; &lt;clei-models&gt; &lt;models&gt;</pre>
Syntax (ACX5048 and ACX5096 Routers)	<pre>show chassis hardware &lt;detail   extensive&gt; &lt;clei-models&gt; &lt;models&gt;</pre>
Syntax (ACX500 Routers)	<pre>show chassis hardware &lt;detail   extensive&gt; &lt;clei-models&gt; &lt;models&gt;</pre>
Release Information	<p>Command introduced before Junos OS Release 7.4.</p> <p><b>models</b> option introduced in Junos OS Release 8.2.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p> <p><b>sfc</b> option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.</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 MX2010 and MX2020 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 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>

In the EX Series switch command output, FPC refers to the following:

- On EX2200 switches, EX3200 switches, EX4200 standalone switches, and EX4500 switches—Refers to the switch; FPC *number* is always 0.
- On EX4200 switches in a Virtual Chassis configuration—Refers to the member of a Virtual Chassis; FPC *number* equals the member ID, from 0 through 9.
- On EX8208 and EX8216 switches—Refers to a line card; FPC *number* equals the slot number for the line card.

On QFX3500, QFX5100, and OCX Series standalone switches, and PTX1000 routers both the FPC and FPC *number* are always 0.

On T4000 Type 5 FPCs, there are no **top temperature sensor** or **bottom temperature sensor** parameters. Instead, **fan intake temperature sensor** and **fan exhaust temperature sensors** parameters are displayed.

Starting from Junos OS Release 11.4, the output of the **show chassis hardware models** operational mode command displays the enhanced midplanes FRU model numbers (CHAS-BP3-MX240-S, CHAS-BP3-MX480-S or CHAS-BP3-MX960-S) based on the router. Prior to release 11.4, the FRU model numbers are left blank when the router has enhanced midplanes. Note that the enhanced midplanes are introduced through the Junos OS Release 13.3, but can be supported on all Junos OS releases.

Starting with Junos OS Release 14.1, the output of the **show chassis hardware detail | extensive | clei-models | models** operational mode command displays the new DC power supply module (PSM) and power distribution unit (PDU) that are added to provide power to the high-density FPC (FPC2-PTX-P1A) and other components in a PTX5000 Packet Transport Router.

**Options** **none**—Display information about hardware. For a TX Matrix router, display information about the TX Matrix router and its attached T640 routers. For a TX Matrix Plus router, display information about the TX Matrix Plus router and its attached routers.

**clei-models**—(Optional) Display Common Language Equipment Identifier (CLEI) barcode and model number for orderable field-replaceable units (FRUs).

**detail**—(Optional) Include RAM and disk information in output.

**extensive**—(Optional) Display ID EEPROM information.

**all-members**—(MX Series routers only) (Optional) Display hardware-specific information for all the members of the Virtual Chassis configuration.

**interconnect-device name**—(QFabric systems only) (Optional) Display hardware-specific information for the Interconnect device.

**lcc number**—(TX Matrix routers and TX Matrix Plus router only) (Optional) On a TX Matrix router, display hardware information for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display hardware information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

**local**—(MX Series routers only) (Optional) Display hardware-specific information for the local Virtual Chassis members.

**member *member-id***—(MX Series routers and EX Series switches) (Optional) Display hardware-specific information for the specified member of the Virtual Chassis configuration. Replace *member-id* variable with a value 0 or 1.

**models**—(Optional) Display model numbers and part numbers for orderable FRUs and, for components that use ID EEPROM format v2, the CLEI code.

**node-device *name***—(QFabric systems only) (Optional) Display hardware-specific information for the Node device.

**satellite [*slot-id slot-id* | *device-alias alias-name*]**—(Junos Fusion only) (Optional) Display hardware information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix router only) (Optional) Display hardware information for the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus router only) (Optional) Display hardware information for the TX Matrix Plus router (switch-fabric chassis). Replace *number* variable with 0.

**Additional Information** The **show chassis hardware detail** command now displays DIMM information for the following Routing Engines, as shown in [Table 7 on page 123](#).

**Table 7: 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	<ul style="list-style-type: none"><li>• <a href="#"><i>show chassis power</i></a></li></ul>
List of Sample Output	<a href="#">show chassis hardware (EX8216 Switch) on page 130</a> <a href="#">show chassis hardware clei-models (EX8216 Switch) on page 131</a> <a href="#">show chassis hardware clei-models (T1600 Router) on page 132</a> <a href="#">show chassis hardware (EX2300-C Switch) on page 133</a> <a href="#">show chassis hardware (EX2300 Switch) on page 133</a> <a href="#">show chassis hardware detail (EX4200 Switch) on page 133</a> <a href="#">show chassis hardware (EX4300 Switch) on page 133</a> <a href="#">show chassis hardware models (EX4500 Switch) on page 134</a> <a href="#">show chassis hardware detail (EX9200 Switch) on page 134</a> <a href="#">show chassis hardware (M7i Router) on page 135</a> <a href="#">show chassis hardware (M10 Router) on page 135</a> <a href="#">show chassis hardware models (M10 Router) on page 136</a> <a href="#">show chassis hardware (M20 Router) on page 136</a> <a href="#">show chassis hardware models (M20 Router) on page 137</a> <a href="#">show chassis hardware (M40 Router) on page 137</a> <a href="#">show chassis hardware (M40e Router) on page 138</a> <a href="#">show chassis hardware (M120 Router) on page 138</a> <a href="#">show chassis hardware detail (M120 Router) on page 139</a> <a href="#">show chassis hardware models (M120 Router) on page 140</a> <a href="#">show chassis hardware (M160 Router) on page 141</a> <a href="#">show chassis hardware models (M160 Router) on page 141</a> <a href="#">show chassis hardware detail (M160 Router) on page 142</a> <a href="#">show chassis hardware (M320 Router) on page 143</a> <a href="#">show chassis hardware models (M320 Router) on page 144</a> <a href="#">show chassis hardware (MX5 Router) on page 145</a> <a href="#">show chassis hardware (MX10 Router) on page 145</a> <a href="#">show chassis hardware (MX40 Router) on page 146</a> <a href="#">show chassis hardware (Fixed MX80 Router) on page 146</a> <a href="#">show chassis hardware (Modular MX80 Router) on page 147</a> <a href="#">show chassis hardware (MX104 Router) on page 147</a> <a href="#">show chassis hardware detail (MX104 Router) on page 148</a> <a href="#">show chassis hardware detail (MX480 Packet Transport Router with details of virtual disk size) on page 148</a> <a href="#">show chassis hardware extensive (MX104 Router) on page 149</a> <a href="#">show chassis hardware models (MX104 Router) on page 152</a> <a href="#">show chassis hardware clei-models (MX104 Router) on page 152</a> <a href="#">show chassis hardware (MX240 Router) on page 153</a> <a href="#">show chassis hardware detail (MX 240 Router with Routing Engine Displaying DIMM Information) on page 153</a> <a href="#">show chassis hardware (MX240 Router with Enhanced MX SCB) on page 154</a>

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[show chassis hardware \(MX480 Router with Enhanced MX SCB\) on page 155](#)  
[show chassis hardware \(MX480 Routers with MPC5E and Built-In OTN PIC\) on page 155](#)  
[show chassis hardware detail \(MX480 Routers with MPC5E and Built-In OTN PIC\) on page 157](#)  
[show chassis hardware extensive \(MX480 Routers with MPC5E and Built-In OTN PIC\) on page 158](#)  
[show chassis hardware \(MX960 Router\) on page 161](#)  
[show chassis hardware \(MX960 Router with Bidirectional Optics\) on page 162](#)  
[show chassis hardware \(MX960 Router with Enhanced MX SCB\) on page 162](#)  
[show chassis hardware models \(MX960 Router with Enhanced MX SCB\) on page 164](#)  
[show chassis hardware \(MX960 Router with MPC5EQ\) on page 165](#)  
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[show chassis hardware clei-models \(MX960 Router with MPC5EQ\) on page 180](#)  
[show chassis hardware \(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC\) on page 181](#)  
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[show chassis hardware \(PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC\) on page 182](#)  
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[show chassis hardware models \(MX2020 Routers with MPC5EQ and MPC6E\) on page 238](#)  
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[show chassis hardware \(MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC\) on page 244](#)  
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[show chassis hardware \(T320 Router\) on page 245](#)  
[show chassis hardware \(T640 Router\) on page 246](#)  
[show chassis hardware models \(T640 Router\) on page 247](#)  
[show chassis hardware extensive \(T640 Router\) on page 248](#)  
[show chassis hardware \(T4000 Router\) on page 248](#)  
[show chassis hardware \(T4000 Router with 16-GB Line Card Chassis \(LCC\) Routing Engine\) on page 250](#)  
[show chassis hardware \(T4000 Router with LSR FPC\) on page 251](#)  
[show chassis hardware clei-models \(T4000 Router\) on page 251](#)  
[show chassis hardware detail \(T4000 Router\) on page 252](#)  
[show chassis hardware models \(T4000 Router\) on page 254](#)  
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**Output Fields** [Table 8 on page 128](#) lists the output fields for the **show chassis hardware** command. Output fields are listed in the approximate order in which they appear.

Table 8: show chassis hardware Output Fields

Field Name	Field Description	Level of Output
<b>Item</b>	<p>Chassis component:</p> <ul style="list-style-type: none"> <li>(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.</li> <li>(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).</li> <li>(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.</li> <li>(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.</li> <li>(QFX Series)—Information about the chassis, Pseudo CB, Routing Engine, power supplies, fan trays, Interconnect devices, and Node devices. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs).</li> <li>(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).</li> <li>(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.</li> </ul>	All levels
<b>Version</b>	Revision level of the chassis component.	All levels
<b>Part number</b>	Part number of the chassis component.	All levels
<b>Serial number</b>	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



Table 8: show chassis hardware Output Fields (*continued*)

Field Name	Field Description	Level of Output
Assb ID or Assembly ID	( <b>extensive</b> keyword only) Identification number that describes the FRU hardware.	<b>extensive</b>
Assembly Version	( <b>extensive</b> keyword only) Version number of the FRU hardware.	<b>extensive</b>
Assembly Flags	( <b>extensive</b> keyword only) Flags.	<b>extensive</b>
FRU model number	( <b>clei-models</b> , <b>extensive</b> , and <b>models</b> keyword only) Model number of the FRU hardware component.	none specified
CLEI code	( <b>clei-models</b> and <b>extensive</b> 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: <b>0x00</b> (version 0), <b>0x01</b> (version 1), or <b>0x02</b> (version 2).	<b>extensive</b>
Description	<p>Brief description of the hardware item:</p> <ul style="list-style-type: none"> <li>Type of power supply.</li> <li>Type of PIC. If the PIC type is not supported on the current software release, the output states <b>Hardware Not Supported</b>.</li> <li>Type of FPC: <b>FPC Type 1</b>, <b>FPC Type 2</b>, <b>FPC Type 3</b>, <b>FPC Type 4</b>, or <b>FPC TypeOC192</b>.</li> </ul> <p>On EX Series switches, a brief description of the FPC.</p> <p>The following list shows the PIM abbreviation in the output and the corresponding PIM name.</p> <ul style="list-style-type: none"> <li><b>2x FE</b>—Either two built-in Fast Ethernet interfaces (fixed PIM) or dual-port Fast Ethernet PIM</li> <li><b>4x FE</b>—4-port Fast Ethernet ePIM</li> <li><b>1x GE Copper</b>—Copper Gigabit Ethernet ePIM (one 10-Mbps, 100-Mbps, or 1000-Mbps port)</li> <li><b>1x GE SFP</b>—SFP Gigabit Ethernet ePIM (one fiber port)</li> <li><b>2x Serial</b>—Dual-port serial PIM</li> <li><b>2x T1</b>—Dual-port T1 PIM</li> <li><b>2x E1</b>—Dual-port E1 PIM</li> <li><b>2x CT1E1</b>—Dual-port channelized T1/E1 PIM</li> <li><b>1x T3</b>—T3 PIM (one port)</li> <li><b>1x E3</b>—E3 PIM (one port)</li> <li><b>4x BRI S/T</b>—4-port ISDN BRI S/T PIM</li> <li><b>4x BRI U</b>—4-port ISDN BRI U PIM</li> <li><b>1x ADSL Annex A</b>—ADSL 2/2+ Annex A PIM (one port, for POTS)</li> <li><b>1x ADSL Annex B</b>—ADSL 2/2+ Annex B PIM (one port, for ISDN)</li> <li><b>2x SHDSL (ATM)</b>—G SHDSL PIM (2-port two-wire module or 1-port four-wire module)</li> </ul>	All levels

Table 8: show chassis hardware Output Fields (*continued*)

Field Name	Field Description	Level of Output
	<ul style="list-style-type: none"> <li>• <b>1x TGM550</b>—TGM550 Telephony Gateway Module (Avaya VoIP gateway module with one console port, two analog <b>LINE</b> ports, and two analog <b>TRUNK</b> ports)</li> <li>• <b>1x DS1 TIM510</b>—TIM510 E1/T1 Telephony Interface Module (Avaya VoIP media module with one E1 or T1 trunk termination port and ISDN PRI backup)</li> <li>• <b>4x FXS, 4x FXO, TIM514</b>—TIM514 Analog Telephony Interface Module (Avaya VoIP media module with four analog <b>LINE</b> ports and four analog <b>TRUNK</b> ports)</li> <li>• <b>4x BRI TIM521</b>—TIM521 BRI Telephony Interface Module (Avaya VoIP media module with four ISDN BRI ports)</li> <li>• <b>Crypto Accelerator Module</b>—For enhanced performance of cryptographic algorithms used in IP Security (IPsec) services</li> <li>• <b>MPC M16x10GE</b>—16-port 10-Gigabit Module Port Concentrator that supports SFP+ optical transceivers. (Not on EX Series switches.)</li> <li>• For hosts, the Routing Engine type.</li> <li>• For small form-factor pluggable transceiver (SFP) modules, the type of fiber: <b>LX, SX, LH, or T</b>.</li> <li>• LCD description for EX Series switches (except EX2200 switches).</li> <li>• <b>MPC2</b>—1-port MPC2 that supports two separate slots for MICs.</li> <li>• <b>MPC3E</b>—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.</li> <li>• 100GBASE-LR4, pluggable CFP optics</li> <li>• Supports the Enhanced MX Switch Control Board with fabric redundancy and existing SCBs without fabric redundancy.</li> <li>• Interoperates with existing MX Series line cards, including Flexible Port Concentrators (FPC), Dense Port Concentrators (DPCs), and Modular Port Concentrators (MPCs).</li> <li>• <b>MPC4E</b>—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.</li> <li>• LCD description for MX Series routers</li> </ul>	

## Sample Output

### show chassis hardware (EX8216 Switch)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis       REV 06   710-016845   CY0109220035   EX8216
Midplane      REV 06   710-016845   BA0909120112   EX8216-MP
CB 0          REV 22   710-020771   AX0109197723   EX8216-RE320
CB 1          REV 22   710-020771   AX0109197726   EX8216-RE320
  Routing Engine 1      BUILTIN      BUILTIN        RE-EX8216
FPC 3         REV 19   710-020683   BC0109083125   EX8200-48F
  CPU         REV 13   710-020598   BF0109144549   EX8200-CPU
FPC 4         REV 17   710-020683   BC0108500127   EX8200-48F
  CPU         REV 10   710-020598   BF0108460510   EX8200-CPU

```

PIC 0			BUILTIN	BUILTIN	48x 100 Base-QFX/1000
Base-X					
Xcvr 1	REV 01	740-011613	PE70V89	SFP-SX	
Xcvr 11	REV 01	740-011613	PE70YCE	SFP-SX	
Xcvr 12	REV 01	740-011613	PE70VSH	SFP-SX	
Xcvr 13	REV 01	740-011613	E08C02063	SFP-SX	
Xcvr 14	REV 01	740-011613	PE70VKU	SFP-SX	
Xcvr 15	REV 01	740-011613	E08E03372	SFP-SX	
Xcvr 21	REV 01	740-011613	PE70VAD	SFP-SX	
Xcvr 22	REV 01	740-011613	E08E01228	SFP-SX	
Xcvr 23	REV 01	740-011613	PE70VSL	SFP-SX	
Xcvr 24	REV 01	740-011613	E08E03409	SFP-SX	
Xcvr 25	REV 01	740-011613	PE70VL4	SFP-SX	
Xcvr 26	REV 01	740-011613	PDQ4L2Z	SFP-SX	
Xcvr 27	REV 01	740-011613	PE70WFK	SFP-SX	
Xcvr 28	REV 01	740-011782	PBD2B5U	SFP-SX	
Xcvr 29	REV 01	740-011613	PE70UQX	SFP-SX	
Xcvr 30	REV 01	740-011613	PE70VL5	SFP-SX	
Xcvr 31	REV 01	740-011613	PE70V0F	SFP-SX	
Xcvr 32	REV 01	740-011613	E08C02052	SFP-SX	
Xcvr 33	REV 01	740-011613	E08C02197	SFP-SX	
Xcvr 34	REV 01	740-011613	PE70V0L	SFP-SX	
Xcvr 35	REV 01	740-011613	E08E03390	SFP-SX	
Xcvr 36	REV 01	740-011613	PDQ4VL9	SFP-SX	
Xcvr 37	REV 01	740-011613	E08E03370	SFP-SX	
Xcvr 38	REV 01	740-011613	E08E03362	SFP-SX	
Xcvr 39	REV 01	740-011613	E08C02065	SFP-SX	
Xcvr 40	REV 01	740-011613	E08E03405	SFP-SX	
Xcvr 41	REV 01	740-011613	E08E03411	SFP-SX	
Xcvr 43	REV 01	740-011613	E08C02171	SFP-SX	
Xcvr 45	REV 01	740-011613	E08E03410	SFP-SX	
FPC 13	REV 16	710-016837	BB0109051344	EX8200-8XS	
CPU					
SIB 0	REV 10	710-021613	AY0109166244	EX8216-SF320	
SIB 1	REV 10	710-021613	AY0109166357	EX8216-SF320	
SIB 2	REV 10	710-021613	AY0109166362	EX8216-SF320	
SIB 3	REV 10	710-021613	AY0109166338	EX8216-SF320	
SIB 4	REV 10	710-021613	AY0109166350	EX8216-SF320	
SIB 5	REV 10	710-021613	AY0109166365	EX8216-SF320	
SIB 6	REV 10	710-021613	AY0109166361	EX8216-SF320	
SIB 7	REV 10	710-021613	AY0109166399	EX8216-SF320	
PSU 0	REV 17	740-021466	BG0709170003	EX8200-AC2K	
PSU 1	REV 17	740-021466	BG0709170004	EX8200-AC2K	
PSU 2	REV 17	740-021466	BG0709170020	EX8200-AC2K	
PSU 3	REV 17	740-021466	BG0709170017	EX8200-AC2K	
PSU 4	REV 17	740-021466	BG0709170008	EX8200-AC2K	
PSU 5	REV 17	740-021466	BG0709170018	EX8200-AC2K	
Top Fan Tray					
FTC 0	REV 4	760-022620	CX1209140212	EX8216-FT	
FTC 1	REV 4	760-022620	CX1209140212	EX8216-FT	
Bottom Fan Tray					
FTC 0	REV 4	760-022620	CX1209140211	EX8216-FT	
FTC 1	REV 4	760-022620	CX1209140211	EX8216-FT	
LCD 0	REV 04	710-025742	CE0109186919	EX8200 LCD	

### show chassis hardware clei-models (EX8216 Switch)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code  FRU model number
Midplane      REV 08   710-016845

```

PSU 0	REV 05	740-023002	COUPAEAEAA	EX8200-PWR-AC3KR
PSU 1	REV 05	740-023002	COUPAEAEAA	EX8200-PWR-AC3KR
PSU 2	REV 05	740-023002	COUPAEAEAA	EX8200-PWR-AC3KR
PSU 3	REV 05	740-023002	COUPAEAEAA	EX8200-PWR-AC3KR
PSU 4	REV 05	740-023002	COUPAEAEAA	EX8200-PWR-AC3KR
PSU 5	REV 05	740-023002	COUPAEAEAA	EX8200-PWR-AC3KR
Top Fan Tray				
Bottom Fan Tray				

### show chassis hardware clei-models (T1600 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 03	710-005608		CHAS-BP-T640-S
FPM Display	REV 05	710-002897		CRAFT-T640-S
CIP	REV 06	710-002895		CIP-L-T640-S
PEM 0	Rev 07	740-017906	IPUPAC7KTA	PWR-T1600-3-80-DC-S
PEM 1	Rev 18	740-002595		PWR-T-DC-S
SCG 0	REV 15	710-003423		SCG-T-S
Routing Engine 0	REV 08	740-014082		RE-A-2000-4096-S
Routing Engine 1	REV 07	740-014082		RE-A-2000-4096-S
CB 0	REV 05	710-007655		CB-T-S
CB 1	REV 03	710-017707		CB-T-S
FPC 0	REV 07	710-013558		T640-FPC2-E2
PIC 0	REV 01	750-010618		PB-4GE-SFP
PIC 1	REV 06	750-001900		PB-10C48-SON-SMSR
PIC 2	REV 14	750-001901		PB-40C12-SON-SMIR
PIC 3	REV 07	750-001900		PB-10C48-SON-SMSR
FPC 1	REV 06	710-013553		T640-FPC1-E2
PIC 0	REV 08	750-001072		P-1GE-SX
PIC 1	REV 10	750-012266		PB-4GE-TYPE1-SFP-IQ2
PIC 2	REV 22	750-005634		PB-1CHOC12SMIR-QPP
FPC 2				
PIC 0	REV 16	750-007141		PC-10GE-SFP
PIC 1	REV 06	750-015217		PC-8GE-TYPE3-SFP-IQ2
PIC 2	REV 05	750-004695		PC-TUNNEL
PIC 3	REV 17	750-009553		PC-40C48-SON-SFP
FPC 3	REV 01	710-010154		T640-FPC3-E
PIC 0	REV 07	750-012793		PC-1XGE-TYPE3-XFP-IQ2
PIC 1	REV 25	750-007141		PC-10GE-SFP
PIC 2	REV 17	750-009553		PC-40C48-SON-SFP
PIC 3	REV 32	750-003700		PC-10C192-SON-VSR
FPC 4	REV 16	710-013037		T1600-FPC4-ES
PIC 1	REV 06	750-034781		PD-1CE-CFP
FPC 5	REV 02	710-013037		T1600-FPC4-ES
PIC 0	REV 16	750-012518		PD-40C192-SON-XFP
PIC 1	REV 01	750-010850		PD-10C768-SON-SR
FPC 6	REV 14	710-013037		T1600-FPC4-ES
PIC 0	REV 11	750-017405		PD-4XGE-XFP
PIC 1	REV 13	750-017405		PD-4XGE-XFP
FPC 7	REV 09	710-007529		T640-FPC3
PIC 0	REV 10	750-012793		PC-1XGE-TYPE3-XFP-IQ2
PIC 1	REV 01	750-015217		PC-8GE-TYPE3-SFP-IQ2
PIC 2	REV 01	750-015217		PC-8GE-TYPE3-SFP-IQ2
PIC 3	REV 15	750-009450		PC-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 (EX2300-C Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0
FPC 0             REV 04    650-059984   HV0215410003   EX2300-C-12P
CPU
PIC 0            REV 04    BUILTIN      BUILTIN        12x10/100/1000 Base-T
PIC 1            REV 04    650-059984   HV0215410003   2x10G SFP/SFP+
Xcvr 0           REV 01    740-021309   T09K00695      SFP+-10G-LR
Xcvr 1           REV 01    740-030658   AD1146A05JT    SFP+-10G-USR
Power Supply 0
JPSU-170W-AC
```

#### show chassis hardware (EX2300 Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0
FPC 0             REV 05    650-059968   JY0215410033   EX2300-24P
CPU
PIC 0            REV 05    BUILTIN      BUILTIN        24x10/100/1000 Base-T
PIC 1            REV 05    650-059968   JY0215410033   4x10G SFP/SFP+
Xcvr 0           REV 01    740-030658   AD1125A03ES    SFP+-10G-USR
Xcvr 1           REV 01    740-021308   AJPOTDZ        SFP+-10G-SR
Xcvr 3           REV 01    740-021309   A9401FL        SFP+-10G-LR
Power Supply 0
JPSU-450W-AC-AFO
Fan Tray 0
(AFO)
Fan Tray 1
(AFO)
Fan Module, Airflow Out
Fan Module, Airflow Out
```

#### show chassis hardware detail (EX4200 Switch)

```
user@host> show chassis hardware detail
Hardware inventory:
Item              Version  Part number  Serial number  Description
Chassis
Routing Engine 0 REV 11    750-021256   BM0208327733   EX4200-24T, 8 POE
Routing Engine 0
FPC 0             REV 11    750-021256   BM0208327733   EX4200-24T, 8 POE
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
```

#### show chassis hardware (EX4300 Switch)

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

Chassis			PD3713160055	EX4300-48P
Routing Engine 0	REV 04	650-044930	PD3713160055	EX4300-48P
FPC 0	REV 04	650-044930	PD3713160055	EX4300-48P
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0	REV 04	BUILTIN	BUILTIN	48x 10/100/1000 Base-T
PIC 1	REV 04	BUILTIN	BUILTIN	4x 40GE
Power Supply 0	REV 01	740-046871	1EDA3090026	JPSU-1100-AC-AF0-A
Fan Tray 0 (AF0)				Fan Module, Airflow Out
Fan Tray 1 (AF0)				Fan Module, Airflow Out

### show chassis hardware models (EX4500 Switch)

user@host> show chassis hardware models

Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Routing Engine 0	REV 01	750-035700	GG0210271867	EX4500-40F-FB-C
FPC 0	REV 01	750-035700	GG0210271867	EX4500-40F-FB-C
PIC 0		BUILTIN	BUILTIN	EX4500-40F-FB-C
Power Supply 1	REV 01	740-029654	H884FS00JC09	EX4500-PWR1-AC-FB

### show chassis hardware detail (EX9200 Switch)

user@switch> show chassis hardware

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN111DA44RFB	EX9208
Midplane	REV 05	710-017414	TS2912	EX9208-BP
FPM Board	REV 02	710-017254	XN1804	Front Panel Display
PEM 0	Rev 01	740-022697	QCS0906C033	PS 1.2-1.7kW; 100-240V
AC in				
PEM 1	Rev 01	740-022697	QCS0906C095	PS 1.2-1.7kW; 100-240V
AC in				
Routing Engine 0	REV 08	740-031116	9009122883	RE-S-EX9200-1800X4
CB 0	REV 16	750-031391	CAAW4391	EX9200-SCBEF
PC 0	REV 07	750-049612	CABJ9312	EX9200 40x1G Copper
CPU	REV 04	711-038484	CABH8268	MPCE PMB 2G
MIC 0	REV 02	750-049607	CABT9623	40x 1GE RJ45
PIC 0		BUILTIN	BUILTIN	10x 1GE RJ45
PIC 1		BUILTIN	BUILTIN	10x 1GE RJ45
PIC 2		BUILTIN	BUILTIN	10x 1GE RJ45
PIC 3		BUILTIN	BUILTIN	10x 1GE RJ45
FPC 1	REV 10	710-013699	CAAN3529	EX9200-40x1G-SFP
CPU	REV 04	711-038484	CAAL7608	MPCE PMB 2G
MIC 0	REV 26	750-028392	CAAS5151	20x 1GE SFP
PIC 0		BUILTIN	BUILTIN	10x 1GE SFP
PIC 1		BUILTIN	BUILTIN	10x 1GE SFP
MIC 1	REV 26	750-028392	CAAC8006	20x 1GE SFP
PIC 2		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 8	REV 01	740-011613	E08L03674	SFP-SX
Xcvr 9	REV 01	740-011613	E08M00243	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE SFP
FPC 3	REV 10	710-013699	CAAR5261	EX9200-40x1G-SFP
CPU	REV 04	711-038484	CAAS2118	MPCE PMB 2G
MIC 0	REV 26	750-028392	CAAS5067	20x 1GE SFP
PIC 0		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 2	REV 01	740-031851	PNA7L8U	SFP-SX
Xcvr 3	REV 02	740-011613	AM0943SEKGZ	SFP-SX
Xcvr 4	REV 02	740-011613	AM0943SEJZ9	SFP-SX

PIC 1		BUILTIN	BUILTIN	10x 1GE SFP
MIC 1	REV 26	750-028392	CAAS5132	20x 1GE SFP
PIC 2		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 4	REV 01	740-011613	E08D02625	SFP-SX
Xcvr 9	REV 02	740-011613	PJH4RD9	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE SFP
Xcvr 0	REV 01	740-011613	AM0813S8YME	SFP-SX
Fan Tray				Left Fan Tray

### show chassis hardware (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  
Fan Tray 1  
Fan Tray 2  
Fan Tray 3

Front Upper Fan Tray  
Front Middle Fan Tray  
Front Bottom Fan Tray  
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)

```
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	MPBBTOX2HS2E3M	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:

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	S00076	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      BUILTIN        Routing Engine
TFEB 0            BUILTIN  BUILTIN      BUILTIN        Forwarding Engine
Processor
  QXM 0           REV 05   711-028408   ZA9136        MPC QXM
  FPC 0            BUILTIN  BUILTIN      BUILTIN        MPC BUILTIN
  MIC 0            BUILTIN  BUILTIN      BUILTIN        4x 10GE XFP
  PIC 0            BUILTIN  BUILTIN      BUILTIN        4x 10GE XFP
  FPC 1            BUILTIN  BUILTIN      BUILTIN        MPC BUILTIN
  MIC 0           REV 24   750-028392   YX9820        3D 20x 1GE(LAN) SFP
  PIC 0            BUILTIN  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      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   P9POXV3       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      BUILTIN        1x 10GE XFP
  PIC 3            BUILTIN  BUILTIN      BUILTIN        1x 10GE XFP
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      BUILTIN        Routing Engine
TFEB 0            BUILTIN  BUILTIN      BUILTIN        Forwarding Engine
Processor
  QXM 0           REV 05   711-028408   ZA9053        MPC QXM
  FPC 0            BUILTIN  BUILTIN      BUILTIN        MPC BUILTIN
  MIC 0            BUILTIN  BUILTIN      BUILTIN        4x 10GE XFP
  PIC 0            BUILTIN  BUILTIN      BUILTIN        4x 10GE XFP
  FPC 1            BUILTIN  BUILTIN      BUILTIN        MPC BUILTIN
  MIC 0           REV 24   750-028392   YX9436        3D 20x 1GE(LAN) SFP
  PIC 0            BUILTIN  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                               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        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        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                               MX80
PEM 0                               AC Power Entry Module
Routing Engine                               Routing Engine
FEB 0                               Forwarding Engine Board

QXM 0          REV 05  711-028408  JR7041  MPC QXM
FPC 0                               MPC BUILTIN
MIC 0                               4x 10GE XFP
PIC 0                               4x 10GE XFP
FPC 1                               MPC BUILTIN
MIC 0          REV 02  750-028380  JR6598  3D 2x 10GE XFP
PIC 0                               1x 10GE XFP
Xcvr 0         REV 01  740-014289  T07M86365 XFP-10G-SR
PIC 1                               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                               1x 10GE XFP
Xcvr 0         REV 02  740-014289  T08L86302 XFP-10G-SR
PIC 3                               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                               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                               Forwarding Engine
Processor
FPC 0                               MPC BUILTIN
FPC 1                               MPC BUILTIN
MIC 0          REV 15  750-036132  CAAF7948  2x0C12/8x0C3 CC-CE
PIC 0                               2x0C12/8x0C3 CC-CE
```

Xcvr 0	REV 01	740-011615	PCQ0U2J	SFP-IR
Xcvr 1	REV 01	740-016068	PJL7A6G	SFP-SR
Xcvr 2	REV 01	740-016068	PJL7A5J	SFP-SR
Xcvr 3	REV 01	740-016065	PJN5HPZ	SFP-SR
Xcvr 4	REV 01	740-029122	PKB38TL	SFP-LR
Xcvr 5	REV 01	740-011787	P6A107G	SFP-LR
Xcvr 6	REV 01	740-029122	PKB38TR	SFP-LR
Xcvr 7	REV 01	740-011787	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   PJL7A6G      SFP-SR
  Xcvr 2      REV 01   740-016068   PJL7A5J      SFP-SR
  Xcvr 3      REV 01   740-016065   PJN5HPZ      SFP-SR
  Xcvr 4      REV 01   740-029122   PKB38TL      SFP-LR
  Xcvr 5      REV 01   740-011787   P6A107G      SFP-LR
  Xcvr 6      REV 01   740-029122   PKB38TR      SFP-LR
  Xcvr 7      REV 01   740-011787   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 (MX480 Packet Transport Router with details of virtual disk size)**

```

user@host> show chassis hardware detail

```

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN122FFD9AFB	MX480
Midplane	REV 05	710-017414	ACRB8882	MX480 Midplane
FPM Board	REV 02	710-017254	CADF7623	Front Panel Display
PEM 0	Rev 07	740-017343	QCS1128A0TY	DC Power Entry Module
PEM 1	Rev 07	740-017343	QCS1128A0JM	DC Power Entry Module
Routing Engine 0	REV 07	750-054758	CADG2028	RE-S-2X00x6
vtbd0	15361 MB			Virtio Block Disk
vtbd1	15360 MB			Virtio Block Disk
ada0	511 MB QEMU HARDDISK		QM00002	Emulated IDE Disk
usb0 (addr 1)	UHCI root HUB 0		Intel	uhub0
Routing Engine 1	REV 00	750-054758		RE-S-2X00x6
vtbd0	15361 MB			Virtio Block Disk
vtbd1	15360 MB			Virtio Block Disk
ada0	511 MB QEMU HARDDISK		QM00002	Emulated IDE Disk
usb0 (addr 1)	UHCI root HUB 0		Intel	uhub0
CB 0	REV 01	750-055976	CACS1837	Enhanced MX SCB 2
CB 1	REV 01	750-055976	CADD9894	Enhanced MX SCB 2
Xcvr 1	REV 01	740-031980	AP41KCL	SFP+-10G-SR
FPC 0	REV 09	750-049040	CACX1759	LOAD MPC Type 2
CPU	REV 10	711-035209	CACP9324	HMPC PMB 2G
FPC 4	REV 28	750-037355	CACY8384	MPC4E 3D 2CGE+8XGE
CPU	REV 10	711-035209	CACX0428	HMPC PMB 2G
Fan Tray				Enhanced Left Fan Tray

## show chassis hardware extensive (MX104 Router)

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

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			G3503	MX104
Jedec Code:	0x7fb0	EEPROM Version:	0x02	
		S/N:	G3503	
Assembly ID:	0x0560	Assembly Version:	00.00	
Date:	00-00-0000	Assembly Flags:	0x00	
ID:	MX104			
Board Information Record:				
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00				
I2C Hex Data:				
Address 0x00: 7f b0 02 ff 05 60 00 00 00 00 00 00 00 00 00 00				
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00				
Address 0x20: 47 33 35 30 33 00 00 00 00 00 00 00 00 00 00 00				
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00				
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00				
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00				
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00				
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00				
Midplane	REV 28	750-044219	CAAX5741	MX104
Jedec Code:	0x7fb0	EEPROM Version:	0x02	
P/N:	750-044219	S/N:	CAAX5741	
Assembly ID:	0x0560	Assembly Version:	01.28	
Date:	03-27-2013	Assembly Flags:	0x00	
Version:	REV 28	CLEI Code:	PROTOXCLEI	
ID:	MX104	FRU Model Number:	PROTO-ASSEMBLY	
Board Information Record:				
Address 0x00: ad 01 08 00 b0 a8 6e a7 f8 00 ff ff ff ff ff ff				
I2C Hex Data:				
Address 0x00: 7f b0 02 ff 05 60 01 1c 52 45 56 20 32 38 00 00				
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 31 39 00 00				
Address 0x20: 53 2f 4e 20 43 41 41 58 35 37 34 31 00 1b 03 07				

```

Address 0x30: dd ff ff ff ad 01 08 00 b0 a8 6e a7 f8 00 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff
Address 0x70: ff ff ff c2 47 33 35 30 33 00 00 00 00 00 00 00
PEM 0          REV 03    740-045933    1H072500016    AC Power Entry Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-045933      S/N:              1H072500016
Assembly ID:   0x0475          Assembly Version:  00.03
Date:          12-14-2012      Assembly Flags:    0x00
Version:       REV 03          CLEI Code:         IPUPAJ9KAA
ID: AC Power Entry Module      FRU Model Number:  PWR-AMX1100-AC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 75 00 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 33 00 00
Address 0x20: 31 48 30 37 32 35 30 30 30 31 36 00 00 0e 0c 07
Address 0x30: dc 30 43 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 39 4b 41 41 50
Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 41 43 2d 53 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 70 ff ff ff ff ff ff ff ff ff ff ff ff
PEM 1          REV 03    740-045932    1H073050017    DC Power Entry Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-045932      S/N:              1H073050017
Assembly ID:   0x0476          Assembly Version:  00.03
Date:          01-30-2013      Assembly Flags:    0x00
Version:       REV 03          CLEI Code:         IPUPAJ8KAA
ID: DC Power Entry Module      FRU Model Number:  PWR-AMX1100-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 76 00 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 32 00 00
Address 0x20: 31 48 30 37 33 30 35 30 30 31 37 00 00 1e 01 07
Address 0x30: dd 30 44 ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 38 4b 41 41 50
Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 44 43 2d 53 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 72 ff ff ff ff ff ff ff ff ff ff ff ff
Routing Engine 0 REV 20    750-044228    CAAY7935          RE-MX-104
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-044228      S/N:              CAAY7935
Assembly ID:   0x0b81          Assembly Version:  01.20
Date:          03-18-2013      Assembly Flags:    0x00
Version:       REV 20          CLEI Code:         PROTOXCLEI
ID: RE-MX-104          FRU Model Number:  PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ad 01 00 08 b0 a8 6e a6 fc 10 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0b 81 01 14 52 45 56 20 32 30 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
Address 0x20: 53 2f 4e 20 43 41 41 59 37 39 33 35 00 12 03 07
Address 0x30: dd ff ff ff ad 01 00 08 b0 a8 6e a6 fc 10 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
da0    7836 MB ATP IG eUSB SSD          Nand Flash 0
usb0 (addr 1) EHCI root hub 0          Freescale          uhub0

```

```

usb0 (addr 2) USB2513Bi 9491          SMC          uhub1
usb0 (addr 3) ATP IG eUSB SSD 44801 ATP Electronics umass0
Routing Engine 1 REV 13 750-044228 CAAM6380 RE-MX-104
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-044228          S/N: CAAM6380
Assembly ID: 0x0b81        Assembly Version: 01.13
Date: 09-17-2012          Assembly Flags: 0x00
Version: REV 13          CLEI Code: PROTOXCLEI
ID: RE-MX-104          FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ad 01 00 08 64 87 88 27 08 18 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0b 81 01 0d 52 45 56 20 31 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
Address 0x20: 53 2f 4e 20 43 41 41 4d 36 33 38 30 00 11 09 07
Address 0x30: dc ff ff ff ad 01 00 08 64 87 88 27 08 18 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
da0 7836 MB ATP IG eUSB SSD Nand Flash 0
AFEB 0 BUILTIN BUILTIN Forwarding Engine
Processor
FPC 0 BUILTIN BUILTIN MPC BUILTIN
FPC 1 BUILTIN BUILTIN MPC BUILTIN
MIC 0 REV 15 750-036132 CAAF7948 2xOC12/8xOC3 CC-CE
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 750-036132          S/N: CAAF7948
Assembly ID: 0x0a1a        Assembly Version: 01.15
Date: 07-03-2012          Assembly Flags: 0x00
Version: REV 15          CLEI Code: IP9IAM2DAA
ID: 2xOC12/8xOC3 CC-CE    FRU Model Number: MIC-3D-8OC3-2OC12-ATM
Board Information Record:
Address 0x00: 12 01 05 03 05 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0a 1a 01 0f 52 45 56 20 31 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 36 31 33 32 00 00
Address 0x20: 53 2f 4e 20 43 41 41 46 37 39 34 38 00 03 07 07
Address 0x30: dc ff ff ff 12 01 05 03 05 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 39 49 41 4d 32 44 41 41 4d
Address 0x50: 49 43 2d 33 44 2d 38 4f 43 33 2d 32 4f 43 31 32
Address 0x60: 2d 41 54 4d 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff e3 c0 02 a3 9c 00 00 00 00 0a 60 00 00
PIC 0 BUILTIN BUILTIN 2xOC12/8xOC3 CC-CE
Xcvr 0 REV 01 740-011615 PCQOU2J SFP-IR
Xcvr 1 REV 01 740-016068 PJL7A6G SFP-SR
Xcvr 2 REV 01 740-016068 PJL7A5J SFP-SR
Xcvr 3 REV 01 740-016065 PJN5HPZ SFP-SR
Xcvr 4 REV 01 740-029122 PKB38TL SFP-LR
Xcvr 5 REV 01 740-011787 P6A107G SFP-LR
Xcvr 6 REV 01 740-029122 PKB38TR SFP-LR
Xcvr 7 REV 01 740-011787 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 ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 82 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 39 35 37 30 00 00
Address 0x20: 53 2f 4e 20 43 41 41 58 36 35 33 38 00 01 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff

```

### show chassis hardware 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
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
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              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          REV 04   710-017414   JN10C7F7FAFB  MX480
Midplane         REV 02   710-017254   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          REV 04   710-017414   JN10C7F7FAFB  MX480
Midplane         REV 02   710-017254   TR2071        MX480 Midplane
FPM Board        REV 02   710-017254   KB8459        Front Panel Display
PEM 0            Rev 02   740-017330   QCS07519029   PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   QCS07519041   PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 02   740-017330   QCS07519097   PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 07   740-013063   1000733381    RE-S-2000
Routing Engine 1 REV 07   740-013063   1000733540    RE-S-2000
CB 0             REV 07   710-013385   KA8022        Enhanced MX SCB
CB 1             REV 07   710-013385   KA8303        Enhanced MX SCB
FPC 0            REV 09   750-020452   KA8660        DPCE 40x 1GE X EQ
CPU              REV 06   710-013713   KA8185        DPC PMB
PIC 0            BUILTIN BUILTIN      10x 1GE(LAN) EQ
PIC 1            BUILTIN BUILTIN      10x 1GE(LAN) EQ
PIC 2            BUILTIN BUILTIN      10x 1GE(LAN) EQ
PIC 3            BUILTIN BUILTIN      10x 1GE(LAN) EQ
Fan Tray
Left Fan Tray

```

**show chassis hardware (MX480 Routers with MPC5E and Built-In OTN PIC)**

```

user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number  Description
Chassis          REV 05   710-017414   JN11C0338AFB  MX480
Midplane         REV 05   710-017414   ABAB8430      MX480 Midplane
FPM Board        REV 02   710-017254   ZS8005        Front Panel Display
PEM 0            Rev 05   740-029970   QCS1024U089   PS 1.4-2.52kW; 90-264V

```

AC in				
PEM 1	Rev 10	740-029970	QCS1314U0FJ	PS 1.4-2.52kW; 90-264V
AC in				
PEM 2	Rev 07	740-029970	QCS1121U076	PS 1.4-2.52kW; 90-264V
AC in				
Routing Engine 0	REV 05	740-031116	9009092471	RE-S-1800x4
Routing Engine 1	REV 05	740-031116	9009097958	RE-S-1800x4
CB 0	REV 16	750-031391	CAAX0789	Enhanced MX SCB
CB 1	REV 16	750-031391	CAAX0856	Enhanced MX SCB
FPC 0	REV 32	750-028467	ABBP1782	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBP5410	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	983152A00038	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11F00211	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AQ72LPB	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AHNOWR5	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11J03627	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11F00300	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ42WSS	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43HGC	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	ANAOND0	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	ANAONGF	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	ANAONG9	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	ANAOMP9	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQA06CG	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	19T511100493	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	APR040J	SFP+-10G-SR
FPC 1	REV 26	750-046005	CACN1894	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACN8698	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	163363A03046	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ40JS8	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	153363A00593	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ40JUJ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQC0B53	CFP2-100G-LR4-D
FPC 2	REV 26	750-046005	CACN1891	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACN8694	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0		NON-JNPR	URA012A	SFP+-10G-LR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	J13F47042	CFP2-100G-LR4-D
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	AJC0BM3	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	11T511100917	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQK07SU	CFP2-100G-LR4-D
FPC 3	REV 03	750-045372	CAAD9425	MPCE Type 3 3D
CPU	REV 08	711-035209	CAAD9094	HMPC PMB 2G
MIC 0	REV 14	750-033196	CAAW9204	1X100GE CXP
PIC 0		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XD16FC034	CFP2-100G-SR10
MIC 1	REV 19	750-033199	CAAJ1814	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 4	REV 21.0.11	750-045715	CAAY3568	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 07	711-045719	CAAW7430	RMPC PMB

PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	AP406NG	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AR41NLP	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11D05630	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 12	750-049136	CACM6678	MPC5E 24XGE OTN Mezz
FPC 5	REV 11	750-045372	CABK7539	MPCE Type 3 3D
CPU	REV 08	711-035209	CABJ2466	HMPC PMB 2G
MIC 0	REV 19	750-033199	CAAJ9719	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	UP1020P	CFP-100G-SR10
MIC 1	REV 07	750-033196	YZ0797	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XC42FC022	CFP2-100G-SR10
Fan Tray				Enhanced Left Fan Tray

### show chassis hardware detail (MX480 Routers with MPC5E and Built-In OTN PIC)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11C0338AFB  MX480
Midplane      REV 05   710-017414  ABAB8430      MX480 Midplane
FPM Board     REV 02   710-017254  ZS8005        Front Panel Display
PEM 0         Rev 05   740-029970  QCS1024U089   PS 1.4-2.52kW; 90-264V
AC in
PEM 1         Rev 10   740-029970  QCS1314U0FJ   PS 1.4-2.52kW; 90-264V
AC in
PEM 2         Rev 07   740-029970  QCS1121U076   PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116  9009092471     RE-S-1800x4
ad0  3896 MB  VRFCF14096DIHK1  VM4096MB 6862  Compact Flash
ad1  30533 MB UGB94ARF32H0S3-KC UNIGEN-478612-001127 Disk 1
usb0 (addr 1)  EHCI root hub 0  Intel      uhub0
usb0 (addr 2)  product 0x0020 32 vendor 0x8087 uhub1
DIMM 0         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 1         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 2         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 3         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 05   740-031116  9009097958     RE-S-1800x4
ad0  3896 MB  VRFCF14096DIHK1  VM4096MB 6145  Compact Flash
ad1  30533 MB UGB94ARF32H0S3-KC UNIGEN-499551-000273 Disk 1
CB 0          REV 16   750-031391  CAAX0789      Enhanced MX SCB
CB 1          REV 16   750-031391  CAAX0856      Enhanced MX SCB
FPC 0         REV 32   750-028467  ABBP1782      MPC 3D 16x 10GE
CPU           REV 10   711-029089  ABBP5410      AMPC PMB
PIC 0          BUILTIN  BUILTIN      4x 10GE(LAN) SFP+
Xcvr 0        REV 01   740-021308  983152A00038  SFP+-10G-SR
Xcvr 1        REV 01   740-031980  B11F00211     SFP+-10G-SR
Xcvr 2        REV 01   740-031980  AQ72LPB       SFP+-10G-SR
Xcvr 3        REV 01   740-031980  AHNOWR5       SFP+-10G-SR
PIC 1          BUILTIN  BUILTIN      4x 10GE(LAN) SFP+
Xcvr 0        REV 01   740-031980  B11J03627     SFP+-10G-SR
Xcvr 1        REV 01   740-031980  B11F00300     SFP+-10G-SR
Xcvr 2        REV 01   740-021308  AQ42WSS       SFP+-10G-SR
Xcvr 3        REV 01   740-021308  AQ43HGC       SFP+-10G-SR
PIC 2          BUILTIN  BUILTIN      4x 10GE(LAN) SFP+
Xcvr 0        REV 01   740-021308  ANAONDO       SFP+-10G-SR
Xcvr 1        REV 01   740-021308  ANAONGF       SFP+-10G-SR

```

Xcvr 2	REV 01	740-021308	ANAONG9	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	ANAOMP9	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQA06CG	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	19T511100493	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	APR040J	SFP+-10G-SR
FPC 1	REV 26	750-046005	CACN1894	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACN8698	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	163363A03046	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ40JS8	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	153363A00593	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ40JUJ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQC0B53	CFP2-100G-LR4-D
FPC 2	REV 26	750-046005	CACN1891	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACN8694	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0		NON-JNPR	URA012A	SFP+-10G-LR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	J13F47042	CFP2-100G-LR4-D
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	AJC0BM3	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	11T511100917	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQK07SU	CFP2-100G-LR4-D
FPC 3	REV 03	750-045372	CAAD9425	MPCE Type 3 3D
CPU	REV 08	711-035209	CAAD9094	HMPC PMB 2G
MIC 0	REV 14	750-033196	CAAW9204	1X100GE CXP
PIC 0		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XD16FC034	CFP2-100G-SR10
MIC 1	REV 19	750-033199	CAAJ1814	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 4	REV 21.0.11	750-045715	CAAY3568	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 07	711-045719	CAAW7430	RMPC PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	AP406NG	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AR41NLP	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11D05630	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 12	750-049136	CACM6678	MPC5E 24XGE OTN Mezz
FPC 5	REV 11	750-045372	CABK7539	MPCE Type 3 3D
CPU	REV 08	711-035209	CABJ2466	HMPC PMB 2G
MIC 0	REV 19	750-033199	CAAJ9719	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	UP1020P	CFP-100G-SR10
MIC 1	REV 07	750-033196	YZ0797	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XC42FC022	CFP2-100G-SR10
Fan Tray				Enhanced Left Fan Tray

## show chassis hardware extensive (MX480 Routers with MPC5E and Built-In OTN PIC)

user@host&gt; show chassis hardware extensive

Hardware inventory:

Item	Version	Part number	Serial number	Description
------	---------	-------------	---------------	-------------

```

Chassis                                JN11C0338AFB      MX480
Jedec Code: 0x7fb0                    EEPROM Version: 0x02
                                           S/N: JN11C0338AFB
Assembly ID: 0x01fe                    Assembly Version: 00.00
Date: 00-00-0000                       Assembly Flags: 0x02
ID: MX480
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 01 fe 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 31 43 30 33 33 38 41 46 42 02 00 00 00
Address 0x30: 00 00 00 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 05 710-017414 ABAB8430 MX480 Midplane
Jedec Code: 0x7fb0                    EEPROM Version: 0x01
P/N: 710-017414                       S/N: ABAB8430
Assembly ID: 0x01fe                    Assembly Version: 01.05
Date: 12-13-2011                       Assembly Flags: 0x00
Version: REV 05
ID: MX480 Midplane                     FRU Model Number: CHAS-BP-MX480-S
Board Information Record:
Address 0x00: ad 01 08 00 00 23 9c fc 98 00 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 01 fe 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 34 31 34 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 38 34 33 30 00 0d 0c 07
Address 0x30: db ff ff ff ad 01 08 00 00 23 9c fc 98 00 ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
Address 0x50: 48 41 53 2d 42 50 2d 4d 58 34 38 30 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board                             REV 02 710-017254 ZS8005 Front Panel Display
Jedec Code: 0x7fb0                    EEPROM Version: 0x01
P/N: 710-017254                       S/N: ZS8005
Assembly ID: 0x01ff                    Assembly Version: 01.02
Date: 11-21-2011                       Assembly Flags: 0x00
Version: REV 02
ID: Front Panel Display                 FRU Model Number: CRAFT-MX480-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 01 ff 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 32 35 34 00 00
Address 0x20: 53 2f 4e 20 5a 53 38 30 30 35 00 00 00 15 0b 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
Address 0x50: 52 41 46 54 2d 4d 58 34 38 30 2d 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PEM 0                                 Rev 05 740-029970 QCS1024U089 PS 1.4-2.52kW; 90-264V
AC in
Jedec Code: 0x7fb0                    EEPROM Version: 0x01
P/N: 740-029970                       S/N: QCS1024U089
Assembly ID: 0x0432                    Assembly Version: 01.05
Date: 06-17-2010                       Assembly Flags: 0x00
Version: Rev 05
ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number: PWR-MX480-2520-AC-S

```

## Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00

## I2C Hex Data:

Address 0x00: 7f b0 01 ff 04 32 01 05 52 65 76 20 30 35 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00

Address 0x20: 51 43 53 31 30 32 34 55 30 38 39 00 00 11 06 07

Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50

Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43

Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

PEM 1 Rev 10 740-029970 QCS1314U0FJ PS 1.4-2.52kW; 90-264V

## AC in

Jedec Code: 0x7fb0 EEPROM Version: 0x01

P/N: 740-029970 S/N: QCS1314U0FJ

Assembly ID: 0x0432 Assembly Version: 01.10

Date: 04-04-2013 Assembly Flags: 0x00

Version: Rev 10

ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number: PWR-MX480-2520-AC-S

## Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00

## I2C Hex Data:

Address 0x00: 7f b0 01 ff 04 32 01 0a 52 65 76 20 31 30 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00

Address 0x20: 51 43 53 31 33 31 34 55 30 46 4a 00 00 04 04 07

Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50

Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43

Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

PEM 2 Rev 07 740-029970 QCS1121U076 PS 1.4-2.52kW; 90-264V

## AC in

Jedec Code: 0x7fb0 EEPROM Version: 0x01

P/N: 740-029970 S/N: QCS1121U076

Assembly ID: 0x0432 Assembly Version: 01.07

Date: 05-23-2011 Assembly Flags: 0x00

Version: Rev 07

ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number: PWR-MX480-2520-AC-S

## Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00

## I2C Hex Data:

Address 0x00: 7f b0 01 ff 04 32 01 07 52 65 76 20 30 37 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00

Address 0x20: 51 43 53 31 31 32 31 55 30 37 36 00 00 17 05 07

Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50

Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43

Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Routing Engine 0 REV 05 740-031116 9009092471 RE-S-1800x4

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: 740-031116 S/N: 9009092471

Assembly ID: 0x09c0 Assembly Version: 01.05

Date: 11-01-2011 Assembly Flags: 0x00

Version: REV 05 CLEI Code: COUCALDBAA

ID: RE-S-1800x4 FRU Model Number: RE-S-1800X4-16G-S

## Board Information Record:

Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00

## I2C Hex Data:

Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00



```

Address 0x20: 39 30 30 39 30 39 32 34 37 31 00 00 00 01 0b 07
Address 0x30: db ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
ad0   3896 MB  VRFCF14096DIHK1      VM4096MB 6862      Compact Flash
ad1   30533 MB UGB94ARF32H0S3-KC    UNIGEN-478612-001127 Disk 1
usb0 (addr 1) EHCI root hub 0      Intel      uhub0
usb0 (addr 2) product 0x0020 32     vendor 0x8087 uhub1
DIMM 0      SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 1      SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 2      SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 3      SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 05 740-031116 9009097958 RE-S-1800x4
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 740-031116      S/N: 9009097958
Assembly ID: 0x09c0     Assembly Version: 01.05
Date: 02-06-2012      Assembly Flags: 0x00
Version: REV 05        CLEI Code: COUCALDBAA
ID: RE-S-1800x4        FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
Address 0x20: 39 30 30 39 30 39 37 39 35 38 00 00 00 06 02 07
Address 0x30: dc ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
ad0   3896 MB  VRFCF14096DIHK1      VM4096MB 6145      Compact Flash
ad1   30533 MB UGB94ARF32H0S3-KC    UNIGEN-499551-000273 Disk 1

```

...

### show chassis hardware (MX960 Router)

```

user@host> show chassis hardware
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis				MX960
Midplane	REV 01	710-013698	AA6082	MX960 Midplane
PIM	Rev 01	740-013110	000008	Power Inlet Module
PEM 2				
PEM 3	Rev 01	740-013682	000038	PS 1.7kW; 200-240VAC in
Routing Engine 0	REV 00	740-015113	1000617944	RE-S-1300
CB 0	REV 05	710-013725	JK6947	MX960 Test SCB
FPC 4	REV 01	710-013305	JM7617	MX960 Test DPC
CPU				
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
PIC 1		BUILTIN	BUILTIN	10x 1GE
FPC 7	REV 01	710-013305	JL9634	MX960 Test DPC
CPU				
PIC 0		BUILTIN	BUILTIN	1x 10GE(LAN/WAN)
Xcvr 0		NON-JNPR	MYBG65I82C	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	10x 1GE
Xcvr 1	REV 01	740-011782	P7N0368	SFP-SX
Xcvr 4	REV 01	740-011782	P8J1W27	SFP-SX
Xcvr 6	REV 01	740-011782	P8J1VSD	SFP-SX

```

Xcvr 9      REV 01  740-011782  P8J1W25      SFP-SX
Fan Tray 0
Fan Tray 1

```

### show chassis hardware (MX960 Router with Bidirectional Optics)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN10BA5B9AFA  MX960
Midplane      REV 03   710-013698  TR0234        MX960 Backplane
FPM Board     REV 03   710-014974  JA0878        Front Panel Display
PDM           Rev 03   740-013110  QCS11135028   Power Distribution Module
PEM 0         Rev 03   740-013682  QCS11154036   PS 1.7kW; 200-240VAC in
PEM 1         Rev 03   740-013682  QCS11154010   PS 1.7kW; 200-240VAC in
PEM 2         Rev 03   740-013682  QCS11154022   PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 06   740-013063  1000691458    RE-S-2000
CB 0          REV 07   710-013385  KA2190        MX SCB
CB 1          REV 07   710-013385  KA0837        MX SCB
FPC 3         REV 02   750-018122  KB3890        DPCE 40x 1GE R
CPU
FPC 4         REV 01   750-018122  KB3889        DPCE 40x 1GE R
CPU           REV 06   710-013713  KB3976        DPC PMB
PIC 0         BUILTIN BUILTIN      10x 1GE(LAN)
Xcvr 1        REV 01   740-020426  4910549       SFP-1000BASE-BX40-D
Xcvr 2        REV 01   740-020426  4910551       SFP-1000BASE-BX40-D
Xcvr 5        REV 01   740-021340  77E245N00006  SFP-1000BASE-BX10-U
Xcvr 6        REV 01   740-020425  4882821       SFP-1000BASE-BX40-U
Xcvr 8        REV 01   740-020425  4882820       SFP-1000BASE-BX40-U
PIC 1         BUILTIN BUILTIN      10x 1GE(LAN)
Xcvr 0        REV 01   740-020465  77E555N00894  SFP-1000BASE-BX10-D
Xcvr 1        REV 01   740-020465  75E467X00818  SFP-1000BASE-BX10-D
Xcvr 2        REV 01   740-020465  75E467X00573  SFP-1000BASE-BX10-D
Xcvr 3        REV 01   740-020465  4888227       SFP-1000BASE-BX10-D
Xcvr 4        REV 01   740-020465  4888241       SFP-1000BASE-BX10-D
Xcvr 5        REV 01   740-021340  77E245N00005  SFP-1000BASE-BX10-U
Xcvr 6        REV 01   740-021340  76E245X00487  SFP-1000BASE-BX10-U
Xcvr 7        REV 01   740-021341  5255889       SFP-1000BASE-BX10-U
Xcvr 8        REV 01   740-021341  5255887       SFP-1000BASE-BX10-U
Xcvr 9        REV 01   740-021340  77E245N00004  SFP-1000BASE-BX10-U
PIC 2         BUILTIN BUILTIN      10x 1GE(LAN)
Xcvr 0        REV 01   740-020424  5007582       SFP-1000BASE-BX10-D
Xcvr 1        REV 01   740-020424  4888187       SFP-1000BASE-BX10-D
Xcvr 2        REV 01   740-020424  4656500       SFP-1000BASE-BX10-D
Xcvr 5        REV 01   740-021341  5255886       SFP-1000BASE-BX10-U
Xcvr 7        REV 01   740-021340  77E245N00003  SFP-1000BASE-BX10-U
Xcvr 8        REV 01   740-021341  5255888       SFP-1000BASE-BX10-U
PIC 3         BUILTIN BUILTIN      10x 1GE(LAN)
Xcvr 0        REV 01   740-017726  74S184H30341  SFP-EX
Xcvr 1        REV 01   740-017726  4814061       SFP-EX
Xcvr 5        REV 01   740-017726  6ZS184H31108  SFP-EX
Xcvr 9        REV 01   740-021340  76E245X00486  SFP-1000BASE-BX10-U
Fan Tray 0
Fan Tray 1    REV 03   740-014971  TP0850        Fan Tray

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### show chassis hardware (MX960 Router with Enhanced MX SCB)

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user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN1096805AFA  MX960

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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)

user@host&gt; show chassis hardware models

Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 03	710-013698	TR0183	CHAS-BP-MX960-S
Fan Extender	REV 02	710-018051	JY5227	ECM-MX960
FPM Board	REV 03	710-014974	JZ6876	CRAFT-MX960-S
Routing Engine 0	REV 06	740-013063	1000687969	RE-S-2000-4096-S
Routing Engine 1	REV 06	740-013063	1000687955	RE-S-2000-4096-S
CB 0	REV 11	750-031391	YZ6072	SCBE-MX-S
CB 1	REV 11	750-031391	YZ6068	SCBE-MX-S
CB 2	REV 11	750-031391	YZ6081	SCBE-MX-S
FPC 0	REV 01	750-018122	KA5576	DPCE-R-40GE-SFP
FPC 1	REV 16	750-031089	YL0719	MX-MPC2-3D
MIC 0	REV 07	750-028387	JR6500	MIC-3D-4XGE-XFP
MIC 1	REV 24	750-028387	YJ3950	MIC-3D-4XGE-XFP

FPC 2	REV 08	710-014219	JY9654	DPC-R-4XGE-XFP
FPC 3	REV 10	750-024199	XJ6692	MX-FPC3
PIC 0	REV 17	750-009553	RJ2945	PC-40C48-SON-SFP
PIC 1	REV 32	750-003700	DP2113	PC-10C192-SON-VSR
FPC 5	REV 25	750-028467	YM8256	MPC-3D-16XGE-SFP
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 (MX960 Router with MPC5EQ)

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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			JN1214852AFA	MX960
Midplane				MX960 Backplane
FPM Board	REV 03	710-014974	CAAZ9326	Front Panel Display
PDM	Rev 03	740-013110	QCS17025017	Power Distribution Module
PEM 0	Rev 10	740-027760	QCS1702N062	PS 4.1kW; 200-240V AC
in				
PEM 1	Rev 04	740-027760	QCS1422N02C	PS 4.1kW; 200-240V AC
in				
PEM 2	Rev 09	740-027760	QCS1614N01X	PS 4.1kW; 200-240V AC
in				
Routing Engine 0	REV 08	740-031116	9009131803	RE-S-1800x4
Routing Engine 1	REV 08	740-031116	9009124913	RE-S-1800x4
CB 0	REV 18	750-031391	CABF0579	Enhanced MX SCB
CB 1	REV 16	750-031391	CAAZ2471	Enhanced MX SCB
CB 2	REV 16	750-031391	CAAW9595	Enhanced MX SCB
FPC 0	REV 18	750-046005	CACE6574	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8908	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA0DYT	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMS7	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03Z	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	ANAONAJ	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMRQ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-049775	J13K72993	CFP2-100G-LR4
FPC 1	REV 11	750-045372	CABK8154	MPCE Type 3 3D
CPU	REV 08	711-035209	CABE7370	HMPC PMB 2G
MIC 0	REV 07	750-033307	CABD5255	10X10GE SFPP
PIC 0		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-021308	AQ50319	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ5035V	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ502XJ	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43HHR	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQ502YA	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQ502EU	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQ502HR	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ502A6	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQ43H8M	SFP+-10G-SR
MIC 1	REV 14	750-033196	CAAP1398	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP

Xcvr 0	REV 01	740-046563	XD16FC064	CFP-100G-SR10
FPC 3	REV 35	750-028467	CAAT9156	MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAV4645	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43HZ1	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ43HZC	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ43HD2	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502HN	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43HGF	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501RZ	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ5029V	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ501X9	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ502ZN	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ43H86	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ502ZY	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502PZ	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ503E6	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ502XN	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11F00213	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ50336	SFP+-10G-SR
FPC 4	REV 18	750-046005	CACE6568	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8900	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA095A	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOM1E	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000F	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOLYC	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLYB	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-048813	XD32FE00Z	CFP2-100G-SR10
FPC 5	REV 18	750-046005	CACE6577	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09	711-045719	CACG8902	RMPC PMB
PIC 0		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOMXE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLVY	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03T	CFP2-100G-SR10
PIC 2		BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQGOLW1	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOLW3	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000J	CFP2-100G-SR10
FPC 7	REV 09	750-037355	CAAF0937	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAD8004	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	ANA0MM3	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X000C163	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	AQGOMS6	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOMRX	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQGOM6Y	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQGOLZM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00499	CFP-100G-SR10
FPC 8	REV 39	750-045715	CACD1903	MPC5E 3D Q 24XGE+6XLGE

CPU	REV 09	711-045719	CACD1815	RMP	CMP
PIC 0		BUILTIN	BUILTIN	12X10GE	SFPP OTN
PIC 1		BUILTIN	BUILTIN	12X10GE	SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE	QSFP
Xcvr 0	REV 01	740-046565	QC480289	QSFP+-40G-SR4	
Xcvr 1	REV 01	740-046565	QC480274	QSFP+-40G-SR4	
Xcvr 2	REV 01	740-046565	QD130190	QSFP+-40G-SR4	
PIC 3		BUILTIN	BUILTIN	3X40GE	QSFP
Xcvr 0	REV 01	740-046565	QD130197	QSFP+-40G-SR4	
Xcvr 1	REV 01	740-046565	QD130180	QSFP+-40G-SR4	
Xcvr 2	REV 01	740-046565	QD130199	QSFP+-40G-SR4	
WAN MEZZ	REV 09	750-049136	CABN0415	MPC5E	24XGE OTN Mezz
FPC 9	REV 05	750-044444	CAAY9801	MPCE	Type 2 3D P
CPU	REV 04	711-038484	CAAW3673	MPCE	PMB 2G
MIC 0	REV 28	750-028387	CAAX1071	3D	4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	2x	10GE XFP
Xcvr 0		NON-JNPR	T12L92342	XFP-10G-SR	
Xcvr 1		NON-JNPR	T12L92303	XFP-10G-SR	
PIC 1		BUILTIN	BUILTIN	2x	10GE XFP
Xcvr 0		NON-JNPR	CC07BK02X	XFP-10G-SR	
QXM 0	REV 06	711-028408	CAAW4883	MPC	QXM
QXM 1	REV 06	711-028408	CAAW4603	MPC	QXM
FPC 10	REV 21.0.11	750-045715	CAAY3541	MPC5E	3D Q 24XGE+6XLGE
CPU	REV 07	711-045719	CAAW7426	RMP	CMP
PIC 0		BUILTIN	BUILTIN	12X10GE	SFPP
Xcvr 0	REV 01	740-031980	AHK01AP	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQ502ZU	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AP41BLS	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AQA08YA	SFP+-10G-SR	
Xcvr 4	REV 01	740-021308	AQA0K26	SFP+-10G-SR	
Xcvr 6	REV 01	740-021308	AQA06S3	SFP+-10G-SR	
Xcvr 7	REV 01	740-021308	AQA06AS	SFP+-10G-SR	
Xcvr 8	REV 01	740-021308	AQA053N	SFP+-10G-SR	
Xcvr 9	REV 01	740-021308	AQA0E97	SFP+-10G-SR	
Xcvr 10	REV 01	740-021308	AQA0GS4	SFP+-10G-SR	
Xcvr 11	REV 01	740-021308	AQA0JVA	SFP+-10G-SR	
PIC 1		BUILTIN	BUILTIN	12X10GE	SFPP
Xcvr 0	REV 01	740-021308	AQA057A	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	ANA0MLS	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AQA093A	SFP+-10G-SR	
Xcvr 3	REV 01	740-021309	943153A00075	SFP+-10G-LR	
Xcvr 4	REV 01	740-021308	AQA077B	SFP+-10G-SR	
Xcvr 5	REV 01	740-021308	AQA0JSC	SFP+-10G-SR	
Xcvr 6	REV 01	740-021308	AQA0735	SFP+-10G-SR	
Xcvr 7	REV 01	740-021308	AQ5028N	SFP+-10G-SR	
Xcvr 8	REV 01	740-031980	AP40VN5	SFP+-10G-SR	
Xcvr 9	REV 01	740-021308	AQA0K0J	SFP+-10G-SR	
Xcvr 10	REV 01	740-021308	AQA07AP	SFP+-10G-SR	
Xcvr 11	REV 01	740-021308	AQA08YB	SFP+-10G-SR	
PIC 2		BUILTIN	BUILTIN	3X40GE	QSFP
PIC 3		BUILTIN	BUILTIN	3X40GE	QSFP
WAN MEZZ	REV 07	750-045717	CAAX3123	MPC5E	24XGE Mezz
FPC 11	REV 17	750-037355	CAAT3986	MPC4E	3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAR3972	HMP	CMP 2G
PIC 0		BUILTIN	BUILTIN	4x10GE	SFPP
Xcvr 0	REV 01	740-021308	AQA0DSE	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQ501Y3	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AQ501XU	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AQ5036Y	SFP+-10G-SR	
PIC 1		BUILTIN	BUILTIN	1X100GE	CFP
Xcvr 0		NON-JNPR	X12J00247	CFP-100G-SR10	

PIC 2			BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	ALQ1DKF		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ403YA		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AP40TY0		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALQ14G0		SFP+-10G-SR
PIC 3			BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00095		CFP-100G-SR10
Fan Tray 0	REV 08	740-031521	ACAF4219		Enhanced Fan Tray
Fan Tray 1	REV 08	740-031521	ACAF4225		Enhanced Fan Tray

### show chassis hardware detail (MX960 Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Midplane      REV 01    710-013698   AA6082         MX960
PIM           Rev 01    740-013110   000008         MX960 Midplane
Power Inlet Module
PEM 2
PEM 3         Rev 01    740-013682   000038         PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 00    740-015113   1000617944     RE-S-1300
ad0          245 MB   SanDisk      SDCFB-256      111419E1805T1141 Compact Flash
ad2          38154 MB FUJITSU      MHT2040BH      NR0WT5925N77    Hard Disk
CB 0         REV 05    710-013725   JK6947         MX960 Test SCB
FPC 4         REV 01    710-013305   JM7617         MX960 Test DPC
CPU
PIC 0
PIC 1
FPC 7         REV 01    710-013305   JL9634         MX960 Test DPC
CPU
PIC 0
Xcvr 0        NON-JNPR   MYBG65I82C     XFP-10G-SR
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

```

### show chassis hardware detail (MX960 Router with MPC5EQ)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Midplane      REV 01    710-030012   ACAX3674       MX960 Backplane
FPM Board     REV 03    710-014974   CAAZ9326       Front Panel Display
PDM           Rev 03    740-013110   QCS17025017    Power Distribution Module
PEM 0         Rev 10    740-027760   QCS1702N062    PS 4.1kW; 200-240V AC
in
PEM 1         Rev 04    740-027760   QCS1422N02C    PS 4.1kW; 200-240V AC
in
PEM 2         Rev 09    740-027760   QCS1614N01X    PS 4.1kW; 200-240V AC
in
Routing Engine 0 REV 08    740-031116   9009131803     RE-S-1800x4
ad0          3831 MB   UGB30SFA4000T1 SFA4000T1 000016CD Compact Flash
ad1          30533 MB UGB94BPH32H0S1-KCI 11000061346    Disk 1
usb0 (addr 1) EHCI root hub 0 Intel      uhub0
usb0 (addr 2) product 0x0020 32 vendor 0x8087 uhub1
DIMM 0        VL31B5263F-F8SD DIE REV-0 PCB REV-0 MFR ID-ce80

```



DIMM 1	VL31B5263F-F8SD DIE	REV-0 PCB REV-0	MFR ID-ce80
DIMM 2	VL31B5263F-F8SD DIE	REV-0 PCB REV-0	MFR ID-ce80
DIMM 3	VL31B5263F-F8SD DIE	REV-0 PCB REV-0	MFR ID-ce80
Routing Engine 1	REV 08 740-031116	9009124913	RE-S-1800x4
ad0 3831 MB	UGB30SFA4000T1	SFA4000T1 0000106D	Compact Flash
ad1 30533 MB	UGB94BPH32H0S1-KCI	11000052402	Disk 1
CB 0	REV 18 750-031391	CABF0579	Enhanced MX SCB
CB 1	REV 16 750-031391	CAAZ2471	Enhanced MX SCB
CB 2	REV 16 750-031391	CAAW9595	Enhanced MX SCB
FPC 0	REV 18 750-046005	CACE6574	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09 711-045719	CACG8908	RMPC PMB
PIC 0	BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01 740-021308	AQAODYT	SFP+-10G-SR
Xcvr 1	REV 01 740-021308	AQGOMS7	SFP+-10G-SR
PIC 1	BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01 740-046563	XD16FC03Z	CFP2-100G-SR10
PIC 2	BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01 740-021308	ANAONAJ	SFP+-10G-SR
Xcvr 1	REV 01 740-021308	AQGOMRQ	SFP+-10G-SR
PIC 3	BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01 740-049775	J13K72993	CFP2-100G-LR4
FPC 1	REV 11 750-045372	CABK8154	MPCE Type 3 3D
CPU	REV 08 711-035209	CABE7370	HMPC PMB 2G
MIC 0	REV 07 750-033307	CABD5255	10X10GE SFPP
PIC 0	BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01 740-021308	AQ50319	SFP+-10G-SR
Xcvr 1	REV 01 740-021308	AQ5035V	SFP+-10G-SR
Xcvr 2	REV 01 740-021308	AQ502XJ	SFP+-10G-SR
Xcvr 3	REV 01 740-021308	AQ43HHR	SFP+-10G-SR
Xcvr 4	REV 01 740-021308	AQ502YA	SFP+-10G-SR
Xcvr 5	REV 01 740-021308	AQ502EU	SFP+-10G-SR
Xcvr 6	REV 01 740-021308	AQ502HR	SFP+-10G-SR
Xcvr 7	REV 01 740-021308	AQ502A6	SFP+-10G-SR
Xcvr 8	REV 01 740-021308	AQ43H8M	SFP+-10G-SR
MIC 1	REV 14 750-033196	CAAP1398	1X100GE CXP
PIC 2	BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01 740-046563	XD16FC064	CFP2-100G-SR10
FPC 3	REV 35 750-028467	CAAT9156	MPC 3D 16x 10GE
CPU	REV 11 711-029089	CAAV4645	AMPC PMB
PIC 0	BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01 740-021308	AQ43HZ1	SFP+-10G-SR
Xcvr 1	REV 01 740-021308	AQ43HZC	SFP+-10G-SR
Xcvr 2	REV 01 740-021308	AQ43HD2	SFP+-10G-SR
Xcvr 3	REV 01 740-021308	AQ502HN	SFP+-10G-SR
PIC 1	BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01 740-021308	AQ43HGF	SFP+-10G-SR
Xcvr 1	REV 01 740-021308	AQ501RZ	SFP+-10G-SR
Xcvr 2	REV 01 740-021308	AQ5029V	SFP+-10G-SR
Xcvr 3	REV 01 740-021308	AQ501X9	SFP+-10G-SR
PIC 2	BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01 740-021308	AQ502ZN	SFP+-10G-SR
Xcvr 1	REV 01 740-021308	AQ43H86	SFP+-10G-SR
Xcvr 2	REV 01 740-021308	AQ502ZY	SFP+-10G-SR
Xcvr 3	REV 01 740-021308	AQ502PZ	SFP+-10G-SR
PIC 3	BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01 740-021308	AQ503E6	SFP+-10G-SR
Xcvr 1	REV 01 740-021308	AQ502XN	SFP+-10G-SR
Xcvr 2	REV 01 740-031980	B11F00213	SFP+-10G-SR
Xcvr 3	REV 01 740-021308	AQ50336	SFP+-10G-SR
FPC 4	REV 18 750-046005	CACE6568	MPC5E 3D Q 2CGE+4XGE
CPU	REV 09 711-045719	CACG8900	RMPC PMB

PIC 0			BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA095A	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQG0M1E	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000F	CFP2-100G-SR10	
PIC 2			BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQG0LYC	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQG0LYB	SFP+-10G-SR	
PIC 3			BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-048813	XD32FE00Z	CFP2-100G-SR10	
FPC 5	REV 18	750-046005	CACE6577	MPC5E 3D Q 2CGE+4XGE	
CPU	REV 09	711-045719	CACG8902	RMPD PMB	
PIC 0			BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQG0MXE	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQG0LVY	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03T	CFP2-100G-SR10	
PIC 2			BUILTIN	BUILTIN	2X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQG0LW1	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQG0LW3	SFP+-10G-SR	
PIC 3			BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0		NON-JNPR	FE13F000J	CFP2-100G-SR10	
FPC 7	REV 09	750-037355	CAAF0937	MPC4E 3D 2CGE+8XGE	
CPU	REV 08	711-035209	CAAD8004	HMPD PMB 2G	
PIC 0			BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	ANA0MM3	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X000C163	CFP-100G-SR10	
PIC 2			BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	AQG0MS6	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQG0MRX	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AQG0M6Y	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AQG0LZM	SFP+-10G-SR	
PIC 3			BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00499	CFP-100G-SR10	
FPC 8	REV 39	750-045715	CACD1903	MPC5E 3D Q 24XGE+6XLGE	
CPU	REV 09	711-045719	CACD1815	RMPD PMB	
PIC 0			BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 1			BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2			BUILTIN	BUILTIN	3X40GE QSFP
Xcvr 0	REV 01	740-046565	QC480289	QSFP+-40G-SR4	
Xcvr 1	REV 01	740-046565	QC480274	QSFP+-40G-SR4	
Xcvr 2	REV 01	740-046565	QD130190	QSFP+-40G-SR4	
PIC 3			BUILTIN	BUILTIN	3X40GE QSFP
Xcvr 0	REV 01	740-046565	QD130197	QSFP+-40G-SR4	
Xcvr 1	REV 01	740-046565	QD130180	QSFP+-40G-SR4	
Xcvr 2	REV 01	740-046565	QD130199	QSFP+-40G-SR4	
WAN MEZZ	REV 09	750-049136	CABN0415	MPC5E 24XGE OTN Mezz	
FPC 9	REV 05	750-044444	CAAY9801	MPCE Type 2 3D P	
CPU	REV 04	711-038484	CAAW3673	MPCE PMB 2G	
MIC 0	REV 28	750-028387	CAAX1071	3D 4x 10GE XFP	
PIC 0			BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	T12L92342	XFP-10G-SR	
Xcvr 1		NON-JNPR	T12L92303	XFP-10G-SR	
PIC 1			BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0		NON-JNPR	CC07BK02X	XFP-10G-SR	
QXM 0	REV 06	711-028408	CAAW4883	MPC QXM	
QXM 1	REV 06	711-028408	CAAW4603	MPC QXM	
FPC 10	REV 21.0.11	750-045715	CAAY3541	MPC5E 3D Q 24XGE+6XLGE	
CPU	REV 07	711-045719	CAAW7426	RMPD PMB	
PIC 0			BUILTIN	BUILTIN	12X10GE SFPP

Xcvr 0	REV 01	740-031980	AHK01AP	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ502ZU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AP41BLS	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQA08YA	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQA0K26	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQA06S3	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQA06AS	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQA053N	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQA0E97	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQA0GS4	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQA0JVA	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP
Xcvr 0	REV 01	740-021308	AQA057A	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	ANA0MLS	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQA093A	SFP+-10G-SR
Xcvr 3	REV 01	740-021309	943153A00075	SFP+-10G-LR
Xcvr 4	REV 01	740-021308	AQA077B	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQA0JSC	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQA0735	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ5028N	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AP40VN5	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQA0K0J	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQA07AP	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQA08YB	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 07	750-045717	CAAX3123	MPC5E 24XGE Mezz
FPC 11	REV 17	750-037355	CAAT3986	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAR3972	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	AQA0DSE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501Y3	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ501XU	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ5036Y	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12J00247	CFP-100G-SR10
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	ALQ1DKF	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ403YA	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AP40TY0	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	ALQ14G0	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00095	CFP-100G-SR10
Fan Tray 0	REV 08	740-031521	ACAF4219	Enhanced Fan Tray
Fan Tray 1	REV 08	740-031521	ACAF4225	Enhanced Fan Tray

### show chassis hardware extensive (MX960 Router with MPC5EQ)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x7fb0          EEPROM Version: 0x02
S/N:          JN1214852AFA
Assembly ID:  0x0512          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: MX960
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 12 00 00 00 00 00 00 00 00 00 00

```

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Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 32 31 34 38 35 32 41 46 41 00 00 00 00
Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane          REV 01    710-030012    ACAX3674          MX960 Backplane
Jedec Code:      0x7fb0          EEPROM Version:    0x02
P/N:             710-030012      S/N:             ACAX3674
Assembly ID:     0x01df          Assembly Version: 01.01
Date:           01-19-2013      Assembly Flags:   0x00
Version:        REV 01          CLEI Code:       COM8T00CRB
ID: MX960 Backplane          FRU Model Number: CHAS-BP-MX960-S
Board Information Record:
Address 0x00: ad 01 08 00 54 e0 32 bc 68 00 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 01 df 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 31 30 2d 30 33 30 30 31 32 00 00
Address 0x20: 53 2f 4e 20 41 43 41 58 33 36 37 34 00 13 01 07
Address 0x30: dd ff ff ff ad 01 08 00 54 e0 32 bc 68 00 ff ff
Address 0x40: ff ff ff ff 01 43 4f 4d 38 54 30 30 43 52 42 43
Address 0x50: 48 41 53 2d 42 50 2d 4d 58 39 36 30 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff aa ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board          REV 03    710-014974    CAAZ9326          Front Panel Display
Jedec Code:      0x7fb0          EEPROM Version:    0x01
P/N:             710-014974      S/N:             CAAZ9326
Assembly ID:     0x01e6          Assembly Version: 01.03
Date:           12-31-2012      Assembly Flags:   0x00
Version:        REV 03
ID: Front Panel Display          FRU Model Number: CRAFT-MX960-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 01 e6 01 03 52 45 56 20 30 33 00 00
Address 0x10: 00 00 00 00 37 31 30 2d 30 31 34 39 37 34 00 00
Address 0x20: 53 2f 4e 20 43 41 41 5a 39 33 32 36 00 1f 0c 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
Address 0x50: 52 41 46 54 2d 4d 58 39 36 30 2d 53 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PDM                Rev 03    740-013110    QCS17025017      Power Distribution Module
Jedec Code:      0x7fb0          EEPROM Version:    0x01
P/N:             740-013110      S/N:             QCS17025017
Assembly ID:     0x0416          Assembly Version: 01.03
Date:           01-10-2013      Assembly Flags:   0x00
Version:        Rev 03
ID: Power Distribution Module
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 16 01 03 52 65 76 20 30 33 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 31 33 31 31 30 00 00
Address 0x20: 51 43 53 31 37 30 32 35 30 31 37 00 00 0a 01 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

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PEM 0          Rev 10   740-027760   QCS1702N062       PS 4.1kW; 200-240V AC
in
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           740-027760      S/N:              QCS1702N062
Assembly ID:   0x0430          Assembly Version: 01.10
Date:          01-15-2013      Assembly Flags:   0x00
Version:       Rev 10
ID: PS 4.1kW; 200-240V AC in   FRU Model Number: PWR-MX960-4100-AC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 0a 52 65 76 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 37 30 32 4e 30 36 32 00 00 0f 01 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

PEM 1          Rev 04   740-027760   QCS1422N02C       PS 4.1kW; 200-240V AC
in
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           740-027760      S/N:              QCS1422N02C
Assembly ID:   0x0430          Assembly Version: 01.04
Date:          06-04-2010      Assembly Flags:   0x00
Version:       Rev 04
ID: PS 4.1kW; 200-240V AC in   FRU Model Number: PWR-MX960-4100-AC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 04 52 65 76 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 34 32 32 4e 30 32 43 00 00 04 06 07
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

PEM 2          Rev 09   740-027760   QCS1614N01X       PS 4.1kW; 200-240V AC
in
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           740-027760      S/N:              QCS1614N01X
Assembly ID:   0x0430          Assembly Version: 01.09
Date:          04-07-2012      Assembly Flags:   0x00
Version:       Rev 09
ID: PS 4.1kW; 200-240V AC in   FRU Model Number: PWR-MX960-4100-AC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 09 52 65 76 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 36 31 34 4e 30 31 58 00 00 07 04 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Routing Engine 0 REV 08   740-031116   9009131803       RE-S-1800x4
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-031116      S/N:              9009131803
Assembly ID:   0x09c0          Assembly Version: 01.08

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Date:          03-04-2013      Assembly Flags:    0x00
Version:       REV 08          CLEI Code:        COUCASKBAA
ID: RE-S-1800x4      FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
Address 0x20: 39 30 30 39 31 33 31 38 30 33 00 00 00 04 03 07
Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
ad0   3831 MB   UGB30SFA4000T1      SFA4000T1 000016CD Compact Flash
ad1   30533 MB  UGB94BPH32H0S1-KCI   11000061346      Disk 1
usb0 (addr 1)  EHCI root hub 0      Intel      uhub0
usb0 (addr 2)  product 0x0020 32     vendor 0x8087    uhub1
DIMM 0         VL31B5263F-F8SD DIE REV-0 PCB REV-0      MFR ID-ce80
DIMM 1         VL31B5263F-F8SD DIE REV-0 PCB REV-0      MFR ID-ce80
DIMM 2         VL31B5263F-F8SD DIE REV-0 PCB REV-0      MFR ID-ce80
DIMM 3         VL31B5263F-F8SD DIE REV-0 PCB REV-0      MFR ID-ce80
Routing Engine 1 REV 08   740-031116   9009124913      RE-S-1800x4
Jedec Code:    0x7fb0          EEPROM Version:   0x02
P/N:           740-031116      S/N:             9009124913
Assembly ID:   0x09c0          Assembly Version: 01.08
Date:          01-09-2013      Assembly Flags:   0x00
Version:       REV 08          CLEI Code:        COUCASKBAA
ID: RE-S-1800x4      FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
Address 0x20: 39 30 30 39 31 32 34 39 31 33 00 00 00 09 01 07
Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
ad0   3831 MB   UGB30SFA4000T1      SFA4000T1 0000106D Compact Flash
ad1   30533 MB  UGB94BPH32H0S1-KCI   11000052402      Disk 1
CB 0         REV 18   750-031391   CABF0579          Enhanced MX SCB
Jedec Code:    0x7fb0          EEPROM Version:   0x02
P/N:           750-031391      S/N:             CABF0579
Assembly ID:   0x09b0          Assembly Version: 01.18
Date:          04-15-2013      Assembly Flags:   0x00
Version:       REV 18          CLEI Code:        COUCASRBAA
ID: Enhanced MX SCB      FRU Model Number: SCBE-MX-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 b0 01 12 52 45 56 20 31 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
Address 0x20: 53 2f 4e 20 43 41 42 46 30 35 37 39 00 0f 04 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 43 41 53 52 42 41 41 53
Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 43 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 7d ff ff ff ff ff ff ff ff ff ff ff ff
CB 1         REV 16   750-031391   CAAZ2471          Enhanced MX SCB

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Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-031391        S/N: CAAZ2471
Assembly ID: 0x09b0     Assembly Version: 01.16
Date: 03-09-2013       Assembly Flags: 0x00
Version: REV 16         CLEI Code: COUCARCBAB
ID: Enhanced MX SCB    FRU Model Number: SCBE-MX-S

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
Address 0x20: 53 2f 4e 20 43 41 41 5a 32 34 37 31 00 09 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff

CB 2      REV 16      750-031391      CAAW9595      Enhanced MX SCB
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-031391        S/N: CAAW9595
Assembly ID: 0x09b0     Assembly Version: 01.16
Date: 02-01-2013       Assembly Flags: 0x00
Version: REV 16         CLEI Code: COUCARCBAB
ID: Enhanced MX SCB    FRU Model Number: SCBE-MX-S

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
Address 0x20: 53 2f 4e 20 43 41 41 57 39 35 39 35 00 01 02 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff

FPC 0      REV 18      750-046005      CACE6574      MPC5E 3D Q 2CGE+4XGE
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 750-046005        S/N: CACE6574
Assembly ID: 0x0b8c     Assembly Version: 01.18
Date: 11-20-2013       Assembly Flags: 0x00
Version: REV 18         CLEI Code: PROTOXCLEI
ID: MPC5E 3D Q 2CGE+4XGE FRU Model Number: PROTO-ASSEMBLY

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 8c 01 12 52 45 56 20 31 38 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 36 30 30 35 00 00
Address 0x20: 53 2f 4e 20 43 41 43 45 36 35 37 34 00 14 0b 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff

CPU      REV 09      711-045719      CACG8908      RMPC PMB
Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N: 711-045719        S/N: CACG8908
Assembly ID: 0x0b85     Assembly Version: 01.09
Date: 11-13-2013       Assembly Flags: 0x00
Version: REV 09
ID: RMPC PMB
Board Information Record:

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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 85 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 35 37 31 39 00 00
Address 0x20: 53 2f 4e 20 43 41 43 47 38 39 30 38 00 0d 0b 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN          BUILTIN          2X10GE SFPP OTN
Jedec Code:    0x0000          EEPROM Version: 0x00
P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID:   0x0a90          Assembly Version: 00.00
Date:          00-00-0000      Assembly Flags: 0x00
ID: 2X10GE SFPP OTN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ae dc 00 00 00 00 0a 6e 00 00
Xcvr 0          REV 01      740-021308      AQA0DYT          SFP+-10G-SR
Xcvr 1          REV 01      740-021308      AQG0MS7          SFP+-10G-SR
PIC 1          BUILTIN          BUILTIN          1X100GE CFP2 OTN
Jedec Code:    0x0000          EEPROM Version: 0x00
P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID:   0x0a6e          Assembly Version: 00.00
Date:          00-00-0000      Assembly Flags: 0x00
ID: 1X100GE CFP2 OTN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 03 f3 8c 31 5c e7 80 00 00 00 02
Xcvr 0          REV 01      740-046563      XD16FC03Z          CFP2-100G-SR10
PIC 2          BUILTIN          BUILTIN          2X10GE SFPP OTN
Jedec Code:    0x0000          EEPROM Version: 0x00
P/N:          BUILTIN          S/N:          BUILTIN
Assembly ID:   0x0a90          Assembly Version: 00.00
Date:          00-00-0000      Assembly Flags: 0x00
ID: 2X10GE SFPP OTN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

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Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 03 f5 6c 31 5c db 40 00 00 00 02
Xcvr 0      REV 01 740-021308 ANA0NAJ SFP+-10G-SR
Xcvr 1      REV 01 740-021308 AQGOMRQ SFP+-10G-SR
PIC 3       BUILTIN BUILTIN 1X100GE CFP2 OTN
Jedec Code: 0x0000 EEPROM Version: 0x00
P/N:        BUILTIN S/N:        BUILTIN
Assembly ID: 0x0a6e Assembly Version: 00.00
Date:       00-00-0000 Assembly Flags: 0x00
ID: 1X100GE CFP2 OTN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 03 ed ec 31 5c e2 e8 00 00 00 02
Xcvr 0      REV 01 740-049775 J13K72993 CFP2-100G-LR4
FPC 1       REV 11 750-045372 CABK8154 MPCE Type 3 3D
Jedec Code: 0x7fb0 EEPROM Version: 0x02
P/N:        750-045372 S/N:        CABK8154
Assembly ID: 0x09db Assembly Version: 04.11
Date:       05-18-2013 Assembly Flags: 0x00
Version:    REV 11 CLEI Code: COUIBBNBA
ID: MPCE Type 3 3D FRU Model Number: MX-MPC3E-3D
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 db 04 0b 52 45 56 20 31 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 35 33 37 32 00 00
Address 0x20: 53 2f 4e 20 43 41 42 4b 38 31 35 34 00 12 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4e 42 41 41 4d
Address 0x50: 58 2d 4d 50 43 33 45 2d 33 44 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 44 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff cf ff ff ff ff ff ff ff ff ff ff ff ff
CPU      REV 08 711-035209 CABE7370 HMPC PMB 2G
Jedec Code: 0x7fb0 EEPROM Version: 0x01
P/N:        711-035209 S/N:        CABE7370
Assembly ID: 0x0b04 Assembly Version: 01.08
Date:       05-08-2013 Assembly Flags: 0x00
Version:    REV 08
ID: HMPC PMB 2G
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
Address 0x20: 53 2f 4e 20 43 41 42 45 37 33 37 30 00 08 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
MIC 0      REV 07 750-033307 CABD5255 10X10GE SFPP
Jedec Code: 0x7fb0 EEPROM Version: 0x02

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P/N:          750-033307      S/N:          CABD5255
Assembly ID:  0x0a2a         Assembly Version: 02.07
Date:         04-25-2013     Assembly Flags:  0x00
Version:      REV 07         CLEI Code:      COUIBBJBAA
ID: 10X10GE SFPP            FRU Model Number: MIC3-3D-10XGE-SFPP

Board Information Record:
Address 0x00: 34 01 03 03 05 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0a 2a 02 07 52 45 56 20 30 37 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 33 30 37 00 00
Address 0x20: 53 2f 4e 20 43 41 42 44 35 32 35 35 00 19 04 07
Address 0x30: dd ff ff ff 34 01 03 03 05 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4a 42 41 41 4d
Address 0x50: 49 43 33 2d 33 44 2d 31 30 58 47 45 2d 53 46 50
Address 0x60: 50 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 82 c0 03 f0 bc 57 79 83 80 00 00 00 02

PIC 0          BUILTIN      BUILTIN      10X10GE SFPP
Xcvr 0         REV 01      740-021308  AQ50319      SFP+-10G-SR
    Xcvr 1      REV 01      740-021308  AQ5035V      SFP+-10G-SR
    Xcvr 2      REV 01      740-021308  AQ502XJ      SFP+-10G-SR
    Xcvr 3      REV 01      740-021308  AQ43HHR      SFP+-10G-SR
    Xcvr 4      REV 01      740-021308  AQ502YA      SFP+-10G-SR
    Xcvr 5      REV 01      740-021308  AQ502EU      SFP+-10G-SR
    Xcvr 6      REV 01      740-021308  AQ502HR      SFP+-10G-SR
    Xcvr 7      REV 01      740-021308  AQ502A6      SFP+-10G-SR
    Xcvr 8      REV 01      740-021308  AQ43H8M      SFP+-10G-SR
MIC 1          REV 14      750-033196  CAAP1398     1X100GE CXP
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          750-033196      S/N:          CAAP1398
Assembly ID:  0x0a29         Assembly Version: 03.14
Date:         10-27-2012     Assembly Flags:  0x00
Version:      REV 14         CLEI Code:      COUIBBKBAA
ID: 1X100GE CXP            FRU Model Number: MIC3-3D-1X100GE-CXP

Board Information Record:
Address 0x00: 34 01 07 07 08 ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 0a 29 03 0e 52 45 56 20 31 34 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 31 39 36 00 00
Address 0x20: 53 2f 4e 20 43 41 41 50 31 33 39 38 00 1b 0a 07
Address 0x30: dc ff ff ff 34 01 07 07 08 ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4b 42 41 41 4d
Address 0x50: 49 43 33 2d 33 44 2d 31 58 31 30 30 47 45 2d 43
Address 0x60: 58 50 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 96 c0 03 ef cc 57 79 85 08 00 00 00 02

PIC 2          BUILTIN      BUILTIN      1X100GE CXP
Xcvr 0         REV 01      740-046563  XD16FC064    CFP2-100G-SR10
FPC 3          REV 35      750-028467  CAAT9156     MPC 3D 16x 10GE
Jedec Code:    0x7fb0      EEPROM Version: 0x01
P/N:          750-028467      S/N:          CAAT9156
Assembly ID:  0x0997         Assembly Version: 01.35
Date:         12-17-2012     Assembly Flags:  0x00
Version:      REV 35
ID: MPC 3D 16x 10GE        FRU Model Number: MPC-3D-16XGE-SFPP

Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 09 97 01 23 52 45 56 20 33 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 32 38 34 36 37 00 00
Address 0x20: 53 2f 4e 20 43 41 41 54 39 31 35 36 00 11 0c 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 4d

```

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Address 0x50: 50 43 2d 33 44 2d 31 36 58 47 45 2d 53 46 50 50
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 11    711-029089    CAAV4645    AMPC PMB
Jedec Code:  0x7fb0    EEPROM Version: 0x01
P/N:         711-029089 S/N:         CAAV4645
Assembly ID: 0x0998    Assembly Version: 01.11
Date:        12-13-2012 Assembly Flags: 0x00
Version:     REV 11
ID: AMPC PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 09 98 01 0b 52 45 56 20 31 31 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 32 39 30 38 39 00 00
Address 0x20: 53 2f 4e 20 43 41 41 56 34 36 34 35 00 0d 0c 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: 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
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    4x 10GE(LAN) SFP+
Jedec Code:  0x0000    EEPROM Version: 0x00
P/N:         BUILTIN    S/N:         BUILTIN
Assembly ID: 0x02fe    Assembly Version: 00.00
Date:        00-00-0000 Assembly Flags: 0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 6b 94 00 00 00 00 02 fe 00 00
Xcvr 0      REV 01    740-021308    AQ43HZ1    SFP+-10G-SR
Xcvr 1      REV 01    740-021308    AQ43HZC    SFP+-10G-SR
Xcvr 2      REV 01    740-021308    AQ43HD2    SFP+-10G-SR
Xcvr 3      REV 01    740-021308    AQ502HN    SFP+-10G-SR
PIC 1          BUILTIN    BUILTIN    4x 10GE(LAN) SFP+
Jedec Code:  0x0000    EEPROM Version: 0x00
P/N:         BUILTIN    S/N:         BUILTIN
Assembly ID: 0x02fe    Assembly Version: 00.00
Date:        00-00-0000 Assembly Flags: 0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ac 0c 00 00 00 00 02 fe 00 00
Xcvr 0      REV 01    740-021308    AQ43HGF    SFP+-10G-SR
Xcvr 1      REV 01    740-021308    AQ501RZ    SFP+-10G-SR

```

```

Xcvr 2      REV 01  740-021308  AQ5029V      SFP+-10G-SR
Xcvr 3      REV 01  740-021308  AQ501X9      SFP+-10G-SR
PIC 2       BUILTIN  BUILTIN      4x 10GE(LAN) SFP+
Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:        BUILTIN      S/N:          BUILTIN
Assembly ID: 0x02fe      Assembly Version: 00.00
Date:       00-00-0000    Assembly Flags: 0x00
.....

```

### show chassis hardware models (MX960 Router with MPC5EQ)

```

user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Midplane      REV 01  710-030012  ACAX3674      CHAS-BP-MX960-S
FPM Board     REV 03  710-014974  CAAZ9326      CRAFT-MX960-S
PEM 0         Rev 10  740-027760  QCS1702N062   PWR-MX960-4100-AC-S
PEM 1         Rev 04  740-027760  QCS1422N02C   PWR-MX960-4100-AC-S
PEM 2         Rev 09  740-027760  QCS1614N01X   PWR-MX960-4100-AC-S
Routing Engine 0 REV 08  740-031116  9009131803    RE-S-1800X4-16G-S
Routing Engine 1 REV 08  740-031116  9009124913    RE-S-1800X4-16G-S
CB 0          REV 18  750-031391  CABF0579      SCBE-MX-S
CB 1          REV 16  750-031391  CAAZ2471      SCBE-MX-S
CB 2          REV 16  750-031391  CAAW9595      SCBE-MX-S
FPC 0         REV 18  750-046005  CACE6574      PROTO-ASSEMBLY
FPC 1         REV 11  750-045372  CABK8154      MX-MPC3E-3D
MIC 0         REV 07  750-033307  CABD5255      MIC3-3D-10XGE-SFPP
MIC 1         REV 14  750-033196  CAAP1398      MIC3-3D-1X100GE-CXP
FPC 3         REV 35  750-028467  CAAT9156      MPC-3D-16XGE-SFPP
FPC 4         REV 18  750-046005  CACE6568      PROTO-ASSEMBLY
FPC 5         REV 18  750-046005  CACE6577      PROTO-ASSEMBLY
FPC 7         REV 09  750-037355  CAAF0937      MPC4E-2CGE-8XGE
FPC 8         REV 39  750-045715  CACD1903      PROTO-ASSEMBLY
FPC 9         REV 05  750-044444  CAAY9801      MX-MPC2E-3D-P
MIC 0         REV 28  750-028387  CAAX1071      MIC-3D-4XGE-XFP
FPC 10        REV 21.0.11 750-045715  CAAY3541      PROTO-ASSEMBLY
FPC 11        REV 17  750-037355  CAAT3986      MPC4E-3D-2CGE-8XGE
Fan Tray 0    REV 08  740-031521  ACAF4219      FFANTRAY-MX960-HC-S
Fan Tray 1    REV 08  740-031521  ACAF4225      FFANTRAY-MX960-HC-S

```

### show chassis hardware clei-models (MX960 Router with MPC5EQ)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Midplane      REV 01  710-030012  COM8T00CRB     CHAS-BP-MX960-S
FPM Board     REV 03  710-014974  CAAZ9326      CRAFT-MX960-S
PEM 0         Rev 10  740-027760  QCS1702N062   PWR-MX960-4100-AC-S
PEM 1         Rev 04  740-027760  QCS1422N02C   PWR-MX960-4100-AC-S
PEM 2         Rev 09  740-027760  QCS1614N01X   PWR-MX960-4100-AC-S
Routing Engine 0 REV 08  740-031116  COUCASKBAA     RE-S-1800X4-16G-S
Routing Engine 1 REV 08  740-031116  COUCASKBAA     RE-S-1800X4-16G-S
CB 0          REV 18  750-031391  COUCASRBAA     SCBE-MX-S
CB 1          REV 16  750-031391  COUCARCBAB     SCBE-MX-S
CB 2          REV 16  750-031391  COUCARCBAB     SCBE-MX-S
FPC 0         REV 18  750-046005  PROTOXCLEI     PROTO-ASSEMBLY
FPC 1         REV 11  750-045372  COUIBBNBAA     MX-MPC3E-3D
MIC 0         REV 07  750-033307  COUIBBJBAA     MIC3-3D-10XGE-SFPP
MIC 1         REV 14  750-033196  COUIBBKBAA     MIC3-3D-1X100GE-CXP
FPC 3         REV 35  750-028467  PROTOXCLEI     MPC-3D-16XGE-SFPP
FPC 4         REV 18  750-046005  PROTOXCLEI     PROTO-ASSEMBLY

```

FPC 5	REV 18	750-046005	PROTOXCLEI	PROTO-ASSEMBLY
FPC 7	REV 09	750-037355	PROTOXCLEI	MPC4E-2CGE-8XGE
FPC 8	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 9	REV 05	750-044444	COUIBBGBAA	MX-MPC2E-3D-P
MIC 0	REV 28	750-028387	COUIA16BAA	MIC-3D-4XGE-XFP
FPC 10	REV 21.0.11	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 11	REV 17	750-037355	IPU3A4DHAA	MPC4E-3D-2CGE-8XGE
Fan Tray 0	REV 08	740-031521		FFANTRAY-MX960-HC-S
Fan Tray 1	REV 08	740-031521		FFANTRAY-MX960-HC-S

### show chassis hardware (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

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

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN123F6D9AFA	MX960
Midplane	REV 04	750-047849	ACRC8764	Enhanced MX960 Backplane
FPM Board	REV 03	710-014974	CACS4395	Front Panel Display
PDM	Rev 03	740-013110	QCS1809500Z	Power Distribution Module
PEM 0	Rev 08	740-029344	QCS1817V0LK	DC 4.1kW Power Entry
Module				
PEM 1	Rev 08	740-029344	QCS1814V01F	DC 4.1kW Power Entry
Module				
PEM 2	Rev 08	740-029344	QCS1810V1EW	DC 4.1kW Power Entry
Module				
PEM 3	Rev 08	740-029344	QCS1810V1K5	DC 4.1kW Power Entry
Module				
Routing Engine 0	REV 11	740-031116	9013103483	RE-S-1800x4
Routing Engine 1	REV 10	740-031116	9009198513	RE-S-1800x4
CB 0	REV 23	750-031391	CADW3218	Enhanced MX SCB
CB 1	REV 14	750-031391	ABBK5220	Enhanced MX SCB
FPC 1	REV 14	750-045372	CADK0464	MPCE Type 3 3D
CPU	REV 10	711-035209	CADM9839	HMPC PMB 2G
MIC 0	REV 19	750-033199	CAAE5870	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	UTHOH0W	CFP-100G-LR4
FPC 2	REV 14	750-045372	CADN3262	MPCE Type 3 3D
CPU	REV 10	711-035209	CADN8129	HMPC PMB 2G
FPC 3	REV 14	750-045372	CADH0146	MPCE Type 3 3D
CPU	REV 10	711-035209	CADT2458	HMPC PMB 2G
MIC 0	REV 03	750-057666	CADP1386	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	SMD5136.1	OTN-100G-LH
FPC 4	REV 18	750-045372	CAEV5668	MPCE Type 3 3D
CPU	REV 10	711-035209	CAET7827	HMPC PMB 2G
FPC 7	REV 14	750-045372	CADJ1947	MPCE Type 3 3D
CPU	REV 10	711-035209	CADJ1561	HMPC PMB 2G
MIC 0	REV 05	750-057666	CAEB5763	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	1DJBZ052002	OTN-100G-LH
FPC 8	REV 14	750-045372	CADK0485	MPCE Type 3 3D
CPU	REV 10	711-035209	CADM9828	HMPC PMB 2G
MIC 0	REV 03	750-057666	CADP1390	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
FPC 9	REV 14	750-045372	CADJ1936	MPCE Type 3 3D
CPU	REV 10	711-035209	CADJ1566	HMPC PMB 2G
MIC 0	REV 14	750-057666	CAFF7544	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	1DJBZ05100K	OTN-100G-LH
FPC 10	REV 14	750-054901	CADJ3846	MPC3E NG HQoS
CPU	REV 11	711-045719	CADN5471	RMPC PMB

MIC 0	REV 05	750-057666	CAEB5760	1X100GE DWDM CFP2-ACO
PIC 0		BUILTIN	BUILTIN	1X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	SMD5091.1	CFP-Loopback
Fan Tray 0	REV 08	740-031521	ACDB4083	Enhanced Fan Tray
Fan Tray 1	REV 08	740-031521	ACDB3995	Enhanced Fan Tray

#### show chassis hardware clei-models(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis hardware clei-models
```

Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 04	750-047849	CMMJA10BRA	CHAS-BP3-MX960-S
FPM Board	REV 03	710-014974		CRAFT-MX960-S
PEM 0	Rev 08	740-029344		PWR-MX960-4100-DC-S
PEM 1	Rev 08	740-029344		PWR-MX960-4100-DC-S
PEM 2	Rev 08	740-029344		PWR-MX960-4100-DC-S
PEM 3	Rev 08	740-029344		PWR-MX960-4100-DC-S
Routing Engine 0	REV 11	740-031116	COUCASYBAB	RE-S-1800X4-16G-S
Routing Engine 1	REV 10	740-031116	COUCASYBAA	RE-S-1800X4-16G-S
CB 0	REV 23	750-031391	COUCATXBAA	SCBE-MX-S
CB 1	REV 14	750-031391	COUCARCBAA	SCBE-MX-S
FPC 1	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 19	750-033199	COUIBA8BAA	MIC3-3D-1X100GE-CFP
FPC 2	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
FPC 3	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 03	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 4	REV 18	750-045372	COUIBBNBAC	MX-MPC3E-3D
FPC 7	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 05	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 8	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 03	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 9	REV 14	750-045372	COUIBBNBAB	MX-MPC3E-3D
MIC 0	REV 14	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
FPC 10	REV 14	750-054901	PROTOXCLEI	PROTO-ASSEMBLY
MIC 0	REV 05	750-057666	PROTOXCLEI	PROTO-ASSEMBLY
Fan Tray 0	REV 08	740-031521		FFANTRAY-MX960-HC-S
Fan Tray 1	REV 08	740-031521		FFANTRAY-MX960-HC-S

#### show chassis hardware (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

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

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN123AC42AJC	PTX3000
Midplane	REV 22	750-044645	ACLP6640	Backplane
FPM	REV 07	760-044663	ACMX2146	Front Panel Display
PSM 1	REV 02	740-044980	1EDD3080169	DC 12V Power Supply
PSM 2	REV 06	740-044981	1EDK5040563	AC 12V Power Supply
PSM 3	REV 06	740-044981	1EDK5040313	AC 12V Power Supply
PSM 4	REV 04	740-044980	1EDJ3330088	DC 12V Power Supply
Routing Engine 0	REV 12	740-026942	P737A-006029	RE-DUO-2600
CB 0	REV 18	750-044656	ACMZ3179	Control Board
FPC 2	REV 06	750-057064	ACAM6098	FPC3-SFF-PTX-1X
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0	REV 17	750-059747	ACNW3510	5X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-062357	1DJBZ040003	OTN-100G-LH
Xcvr 2	REV 01	740-062357	1DJBZ044004	OTN-100G-LH
Xcvr 3	REV 01	740-062357	1DJBZ03500P	OTN-100G-LH
Xcvr 4	REV 01	740-062357	1DJBZ03700C	OTN-100G-LH
FPC 4	REV 12	750-057064	ACAM7153	FPC3-SFF-PTX-1X
CPU		BUILTIN	BUILTIN	SMPC PMB

PIC 0	REV 17	750-059747	ACNW3511	5X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-061663	47	OTN-100G-LH
Xcvr 1	REV 01	740-061663	39	OTN-100G-LH
Xcvr 2	REV 01	740-062357	1DJBZ044002	OTN-100G-LH
Xcvr 3	REV 01	740-062357	1DJBZ03700G	OTN-100G-LH
Xcvr 4	REV 01	740-062357	1DJBZ041001	OTN-100G-LH
FPC 8	REV 11	750-057064	ACAM6808	FPC3-SFF-PTX-1X
CPU		BUILTIN	BUILTIN	SMPC PMB
PIC 0	REV 17	750-059747	ACNW3508	5X100GE DWDM CFP2-ACO
Xcvr 0	REV 01	740-061663	194	OTN-100G-LH
Xcvr 1	REV 01	740-061663	168	OTN-100G-LH
Xcvr 2	REV 01	740-061663	52	OTN-100G-LH
Xcvr 3	REV 01	740-061663	85	OTN-100G-LH
Xcvr 4	REV 01	740-061663	218	OTN-100G-LH
SIB 0	REV 03	750-057067	ACAM8513	SIB3-SFF-PTX
SIB 1	REV 01	750-057067	ACAM5918	SIB3-SFF-PTX
SIB 2	REV 01	711-057066	ACAM4325	SIB3-SFF-PTX
SIB 3	REV 01	711-057066	ACAM4328	SIB3-SFF-PTX
SIB 4	REV 01	711-057066	ACAM4349	SIB3-SFF-PTX
SIB 5	REV 01	711-057066	ACAM4323	SIB3-SFF-PTX
SIB 6	REV 01	711-057066	ACAM4344	SIB3-SFF-PTX
SIB 7	REV 01	750-057067	ACAM4346	SIB3-SFF-PTX
SIB 8	REV 01	750-057067	ACAM5911	SIB3-SFF-PTX
Fan Tray 0	REV 13	760-044659	ACMP6395	Fan Tray (Exhaust)
Fan Tray 1	REV 13	760-044659	ACMZ6957	Fan Tray (Exhaust)

#### show chassis hardware clei-models (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 22	750-044645	IPMVN10FRA	CHAS-MP-PTX3000-S
FPM	REV 07	760-044663	IPUCBE5CAA	FPD-SFF-PTX-S
PSM 1	REV 02	740-044980	PROTOPWRDC	PSM-SFF-PTX-DC-2200-S
PSM 2	REV 06	740-044981	IPUPAKOKAB	PSM-SFF-PTX-AC-S
PSM 3	REV 06	740-044981	IPUPAKOKAB	PSM-SFF-PTX-AC-S
PSM 4	REV 04	740-044980	IPUPAK1KAA	PSM-SFF-PTX-DC-S
Routing Engine 0	REV 12	740-026942		RE-DUO-C2600-16G-S
CB 0	REV 18	750-044656	IPUCBE6CAB	CB-SFF-PTX-S
FPC 2	REV 06	750-057064	PROTOXCLEI	PROTO-ASSEMBLY
PIC 0	REV 17	750-059747	IPU3BC5HAA	PTX-5-100G-WDM
FPC 4	REV 12	750-057064		
PIC 0	REV 17	750-059747	IPU3BC5HAA	PTX-5-100G-WDM
FPC 8	REV 11	750-057064		
PIC 0	REV 17	750-059747	IPU3BC5HAA	PTX-5-100G-WDM
SIB 0	REV 03	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
SIB 1	REV 01	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
SIB 2	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 3	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 4	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 5	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 6	REV 01	711-057066	PROTOXCLEI	PROTO-ASSEMBLY
SIB 7	REV 01	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
SIB 8	REV 01	750-057067	PROTOXCLEI	PROTO-ASSEMBLY
Fan Tray 0	REV 13	760-044659	IPUCBE8CAA	FAN-SFF-PTX-S
Fan Tray 1	REV 13	760-044659	IPUCBE8CAA	FAN-SFF-PTX-S

#### show chassis hardware (MX2010 Router)

```

user@host > show chassis hardware

```

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11E3217AFK	MX2010
Midplane	REV 01	750-044636	ABAB8506	Lower Backplane
Midplane 1	REV 01	711-044557	ZY8296	Upper Backplane
PMP	REV 03	711-032426	ACAJ1388	Power Midplane
FPM Board	REV 06	711-032349	ZX8744	Front Panel Display
PSM 4	REV 0C	740-033727	VK00254	DC 52V Power Supply
Module				
PSM 5	REV 0B	740-033727	VG00015	DC 52V Power Supply
Module				
PSM 6	REV 0B	740-033727	VH00097	DC 52V Power Supply
Module				
PSM 7	REV 0C	740-033727	VJ00151	DC 52V Power Supply
Module				
PSM 8	REV 0C	740-033727	VJ00149	DC 52V Power Supply
Module				
PDM 0	REV 0B	740-038109	WA00008	DC Power Dist Module
PDM 1	REV 0B	740-038109	WA00014	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009094134	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009094141	RE-S-1800x4
CB 0	REV 08	750-040257	CAAB3491	Control Board
CB 1	REV 08	750-040257	CAAB3489	Control Board
SPMB 0	REV 02	711-041855	CAAA6135	PMB Board
SPMB 1	REV 02	711-041855	CAAA6137	PMB Board
SFB 0	REV 06	711-032385	ZV1828	Switch Fabric Board
SFB 1	REV 07	711-032385	ZZ2568	Switch Fabric Board
SFB 2	REV 07	711-032385	ZZ2563	Switch Fabric Board
SFB 3	REV 07	711-032385	ZZ2564	Switch Fabric Board
SFB 4	REV 07	711-032385	ZZ2580	Switch Fabric Board
SFB 5	REV 07	711-032385	ZZ2579	Switch Fabric Board
SFB 6	REV 07	711-032385	CAAB4882	Switch Fabric Board
SFB 7	REV 07	711-032385	CAAB4898	Switch Fabric Board
FPC 0	REV 33	750-028467	CAAB1919	MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAB7174	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH02RE	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMH038C	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH0390	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMG0SUA	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH0579	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMG0SGP	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH04SV	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMH04X3	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH0135	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMH02NC	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH02XB	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMH02PN	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AMH057Y	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AMG0JHE	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AMH02HT	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AMH04V4	SFP+-10G-SR
FPC 1	REV 21	750-033205	ZG5027	MPC Type 3
CPU	REV 04	711-035209	YT4780	HMPC PMB 2G
MIC 0	REV 03	750-033307	ZV6299	10X10GE SFPP
PIC 0		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-031980	083363A00410	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	083363A00334	SFP+-10G-SR



Xcvr 2	REV 01	740-031980	113363A00125	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	083363A00953	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AHR013D	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJ40JUR	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJ40JKL	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJ30ECK	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	19T511100864	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	19T511100868	SFP+-10G-SR
MIC 1	REV 03	750-033307	ZV6268	10X10GE SFPP
PIC 2		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-031980	AJCOJML	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	ALPOTR1	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          REV 01   740-045050   1E02224000P   DC 52V Power Supply
Module
PSM 1          REV 01   740-045050   1E02224000M   DC 52V Power Supply
Module
PSM 2          REV 01   740-045050   1E022240010   DC 52V Power Supply
Module
PSM 3          REV 01   740-045050   1E02224000G   DC 52V Power Supply
Module
PSM 4          REV 01   740-045050   1E022240013   DC 52V Power Supply
Module
PSM 5          REV 01   740-045050   1E022240007   DC 52V Power Supply
Module
PSM 6          REV 01   740-045050   1E02224001C   DC 52V Power Supply
Module
PSM 7          REV 01   740-045050   1E02224001D   DC 52V Power Supply
Module
PSM 8          REV 01   740-045050   1E02224001B   DC 52V Power Supply
Module
PDM 0          REV 01   740-045234   1E262250067   DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009099704    RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1 SFA4000T1 00000651 Compact Flash
  ad1    30533 MB UGB94BPH32H0S1-KCI 11000019592 Disk 1
  usb0 (addr 1) EHCI root hub 0 Intel uhub0
  usb0 (addr 2) product 0x0020 32 vendor 0x8087 uhub1
  DIMM 0    SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1    SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2    SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3    SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009099706    RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 114 Compact Flash
  ad1    30533 MB UGB94ARF32H0S3-KC UNIGEN-499551-000404 Disk 1
  CB 0      REV 13   750-040257   CAAF8436      Control Board
  CB 1      REV 13   750-040257   CAAF8434      Control Board
  SPMB 0    REV 02   711-041855   ABBV3825      PMB Board
  SPMB 1    REV 02   711-041855   ABBV3833      PMB Board

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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	HMPM 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	HMPM PMB 2G
PIC 0		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	AMA062S	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AMA062P	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AMA052R	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AMA0632	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	193363A00564	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	193363A00229	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	193363A00363	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	193363A00278	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	AMA04CC	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AD0927A001W	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AMA04N2	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AMA062U	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	193363A00491	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	183363A01511	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	193363A00565	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	193363A00405	SFP+-10G-SR

PIC 2			BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	AMA07QX		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AMA06MS		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00318		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	193363A00402		SFP+-10G-SR
Xcvr 4	REV 01	740-031980	193363A00174		SFP+-10G-SR
Xcvr 5	REV 01	740-031980	193363A00388		SFP+-10G-SR
Xcvr 6	REV 01	740-031980	193363A00377		SFP+-10G-SR
Xcvr 7	REV 01	740-031980	193363A00234		SFP+-10G-SR
PIC 3			BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	AMA062T		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	193363A00550		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00364		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AMA0630		SFP+-10G-SR
Xcvr 4	REV 01	740-031980	193363A00509		SFP+-10G-SR
Xcvr 5	REV 01	740-031980	193363A00459		SFP+-10G-SR
Xcvr 6	REV 01	740-031980	113363A00191		SFP+-10G-SR
Xcvr 7	REV 01	740-031980	193363A00352		SFP+-10G-SR
FPC 6	REV 33	750-028467	CAAF5552		MPC 3D 16x 10GE
CPU	REV 11	711-029089	CAAH7601		AMPC PMB
PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AD0927A0036		SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AD0927A003M		SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AD0927A003G		SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AD0927A0031		SFP+-10G-SR
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	193363A00331		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	193363A00325		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00417		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A02509		SFP+-10G-SR
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	T09K75140		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11A04356		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01952		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01914		SFP+-10G-SR
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	T09K75157		SFP+-10G-SR
Xcvr 1	REV 01	740-021308	T09K75194		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01926		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01936		SFP+-10G-SR
FPC 7	REV 16	750-037358	CAAL1012		MPC Type 4-1
CPU	REV 08	711-035209	CAAJ3851		HMPC PMB 2G
PIC 0			BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	AMA04NK		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11F00260		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11E02192		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AMA04CP		SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJ40JKK		SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11F00238		SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B10M00275		SFP+-10G-SR
Xcvr 7	REV 01	740-031980	193363A00211		SFP+-10G-SR
PIC 1			BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-031980	B11D05577		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11G00586		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AMA08B7		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AMA04Q0		SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11D05840		SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11E00467		SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11E00029		SFP+-10G-SR
Xcvr 7	REV 01	740-021308	19T511101712		SFP+-10G-SR
PIC 2			BUILTIN	BUILTIN	8X10GE SFPP

Xcvr 0	REV 01	740-031980	193363A00568	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B10M00166	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B10M00212	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11D05823	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	03DZ06A01005	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	03DZ06A01003	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	03DZ06A01009	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	03DZ06A01004	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	8X10GE SFPP
Xcvr 0	REV 01	740-021308	03DZ06A01017	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	03DZ06A01016	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	03DZ06A01024	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	03DZ06A01008	SFP+-10G-SR
Xcvr 4	REV 01	740-030658	AD0946A02UH	SFP+-10G-USR
Xcvr 5	REV 01	740-021308	T09J67913	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AD0837ES09G	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	03DZ06A01015	SFP+-10G-SR
FPC 8	REV 03	750-045372	CAAD3111	MPC Type 3
CPU	REV 08	711-035209	CAAD8033	HMPC PMB 2G
MIC 0	REV 03	750-036233	ZL2032	2X40GE QSFP
PIC 0		BUILTIN	BUILTIN	2X40GE QSFP
Xcvr 0	REV 01	740-032986	QB230273	QSFP+-40G-SR4
Xcvr 1	REV 01	740-032986	QB230254	QSFP+-40G-SR4
MIC 1	REV 03	750-036233	ZL2021	2X40GE QSFP
PIC 2		BUILTIN	BUILTIN	2X40GE QSFP
Xcvr 0	REV 01	740-032986	QB390962	QSFP+-40G-SR4
Xcvr 1	REV 01	740-032986	QB390960	QSFP+-40G-SR4
FPC 9	REV 09	750-037355	CAAF1531	MPC Type 4-2
CPU	REV 08	711-035209	CAAB9927	HMPC PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	193363A00525	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	193363A00504	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	193363A00368	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJ40JSS	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	123363A00042	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B10M00023	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJ802EM	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11E02348	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	1X100GE CFP
ADC 0	REV 13	750-043596	ABBX5532	Adapter Card
ADC 1	REV 13	750-043596	ABBX5550	Adapter Card
ADC 2	REV 13	750-043596	ABBX5571	Adapter Card
ADC 3	REV 13	750-043596	ABBX5568	Adapter Card
ADC 4	REV 13	750-043596	ABBX5556	Adapter Card
ADC 5	REV 13	750-043596	ABBX5553	Adapter Card
ADC 6	REV 13	750-043596	ABBX5541	Adapter Card
ADC 7	REV 13	750-043596	ABBX5578	Adapter Card
ADC 8	REV 13	750-043596	ABBX5560	Adapter Card
ADC 9	REV 07	750-043596	ABBV7188	Adapter Card
Fan Tray 0	REV 03	760-046960	ACAY0127	172mm FanTray - 6 Fans
Fan Tray 1	REV 2A	760-046960	ACAY0068	172mm FanTray - 6 Fans
Fan Tray 2	REV 2A	760-046960	ACAY0072	172mm FanTray - 6 Fans
Fan Tray 3	REV 2A	760-046960	ACAY0070	172mm FanTray - 6 Fans

## show chassis hardware extensive (MX2010 Router)

user@host &gt; show chassis hardware extensive

Hardware inventory:

Item	Version	Part number	Serial number	Description
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Chassis                                JN11E233DAFK    MX2010
Jedec Code: 0x7fb0                    EEPROM Version: 0x02
                                           S/N:          JN11E233DAFK
Assembly ID: 0x0557                    Assembly Version: 00.00
Date: 00-00-0000                       Assembly Flags: 0x00
ID: MX2010
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 45 32 33 33 44 41 46 4b 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane    REV 26    750-044636    ABAB9357    Lower Backplane
Jedec Code: 0x7fb0                    EEPROM Version: 0x02
P/N: 750-044636                       S/N:          ABAB9357
Assembly ID: 0x0b66                    Assembly Version: 01.26
Date: 08-28-2012                       Assembly Flags: 0x00
Version: REV 26                         CLEI Code:     PROTOXCLEI
ID: Lower Backplane                     FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
  Address 0x00: ad 01 08 00 2c 21 72 70 a0 00 ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 66 01 1a 52 45 56 20 32 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 35 37 00 1c 08 07
  Address 0x30: dc ff ff ff ad 01 08 00 2c 21 72 70 a0 00 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1  REV 01    711-044557    ABAB8643    Upper Backplane
Jedec Code: 0x7fb0                    EEPROM Version: 0x01
P/N: 711-044557                       S/N:          ABAB8643
Assembly ID: 0x0b65                    Assembly Version: 01.01
Date: 07-27-2012                       Assembly Flags: 0x00
Version: REV 01
ID: Upper Backplane
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 65 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 38 36 34 33 00 1b 07 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP          REV 04    711-032426    ACAJ1677    Power Midplane
Jedec Code: 0x7fb0                    EEPROM Version: 0x01
P/N: 711-032426                       S/N:          ACAJ1677
Assembly ID: 0x045d                    Assembly Version: 01.04
Date: 07-20-2012                       Assembly Flags: 0x00
Version: REV 04
ID: Power Midplane
Board Information Record:

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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 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
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

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
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
Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff ff

PSM 0              REV 01    740-045050    1E02224000P      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          740-045050          S/N:          1E02224000P
Assembly ID:  0x0478          Assembly Version:  01.01
Date:         12-06-2012        Assembly Flags:    0x00
Version:      REV 01          CLEI Code:        XXXXXXXXXX
ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-HC-DC-S-A
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
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
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
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

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Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 58 58 58 58 58 58 58 58 58 58 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 48 43 2d 44 43 2d
Address 0x60: 53 2d 41 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 4a 00 00 00 00 00 00 00 00 00 00 00 00
...
PDM 0          REV 01  740-045234  1E262250067          DC Power Dist Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-045234      S/N:           1E262250067
Assembly ID:   0x047b          Assembly Version: 01.01
Date:          06-28-2012      Assembly Flags: 0x00
Version:       REV 01          CLEI Code:     IPUPAJSKAA
ID: DC Power Dist Module      FRU Model Number: MX2000-PDM-DC-S-A
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 7b 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
Address 0x20: 31 45 32 36 32 32 35 30 30 36 37 00 00 1c 06 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 2d 41
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 89 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 02  740-041821  9009099704          RE-S-1800x4
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-041821      S/N:           9009099704
Assembly ID:   0x09c0          Assembly Version: 01.02
Date:          03-15-2012      Assembly Flags: 0x00
Version:       REV 02
ID: RE-S-1800x4          FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
Address 0x20: 39 30 30 39 30 39 39 37 30 34 00 00 00 0f 03 07
Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
ad0  3831 MB  UGB30SFA4000T1  SFA4000T1 00000651 Compact Flash
ad1  30533 MB UGB94BPH32H0S1-KCI 11000019592  Disk 1
usb0 (addr 1) EHCI root hub 0 Intel uhub0
usb0 (addr 2) product 0x0020 32 vendor 0x8087 uhub1
DIMM 0  SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 1  SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 2  SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
DIMM 3  SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02  740-041821  9009099706          RE-S-1800x4
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-041821      S/N:           9009099706
Assembly ID:   0x09c0          Assembly Version: 01.02
Date:          02-23-2012      Assembly Flags: 0x00
Version:       REV 02
ID: RE-S-1800x4          FRU Model Number: RE-S-1800X4-16G-S
Board Information Record:
Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00

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Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
Address 0x20: 39 30 30 39 30 39 39 37 30 36 00 00 00 17 02 07
Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 114 Compact Flash
ad1    30533 MB UGB94ARF32H0S3-KC UNIGEN-499551-000404 Disk 1
CB 0          REV 13    750-040257    CAAF8436          Control Board
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:          750-040257      S/N:           CAAF8436
Assembly ID:  0x0b26          Assembly Version: 01.13
Date:         08-29-2012      Assembly Flags:  0x00
Version:      REV 13          CLEI Code:      PROTOXCLEI
ID: Control Board            FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 26 01 0d 52 45 56 20 31 33 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 35 37 00 00
Address 0x20: 53 2f 4e 20 43 41 41 46 38 34 33 36 00 1d 08 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
...
SPMB 0        REV 02    711-041855    ABBV3825          PMB Board
Jedec Code:   0x7fb0          EEPROM Version:   0x01
P/N:          711-041855      S/N:           ABBV3825
Assembly ID:  0x0b29          Assembly Version: 01.02
Date:         08-14-2012      Assembly Flags:  0x00
Version:      REV 02
ID: PMB Board
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b 29 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 31 38 35 35 00 00
Address 0x20: 53 2f 4e 20 41 42 42 56 33 38 32 35 00 0e 08 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
...
SFB 0          REV 05    711-044466    ABBX5682          Switch Fabric Board
Jedec Code:   0x7fb0          EEPROM Version:   0x02
P/N:          711-044466      S/N:           ABBX5682
Assembly ID:  0x0b25          Assembly Version: 01.05
Date:         09-07-2012      Assembly Flags:  0x00
Version:      REV 05          CLEI Code:      PROTOXCLEI
ID: Switch Fabric Board      FRU Model Number: PROTO-ASSEMBLY
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 25 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 34 36 36 00 00
Address 0x20: 53 2f 4e 20 41 42 42 58 35 36 38 32 00 07 09 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

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Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 00 00 00 01 00 00 00 00 00 00 48 00
...
FPC 0          REV 09   750-037355   CAAF0924          MPC Type 4-2
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           750-037355      S/N:              CAAF0924
Assembly ID:   0x0b4e          Assembly Version: 01.09
Date:          05-21-2012      Assembly Flags:   0x00
Version:       REV 09          CLEI Code:        PROTOXCLEI
ID: MPC Type 4-2              FRU Model Number: MPC4E-2CGE-8XGE
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 4e 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 33 35 35 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 46 30 39 32 34 00 15 05 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 4d
  Address 0x50: 50 43 34 45 2d 32 43 47 45 2d 38 58 47 45 00 00
  Address 0x60: 00 00 00 00 00 00 30 39 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c6 ff ff ff ff ff ff ff ff ff ff ff ff
CPU          REV 08   711-035209   CAAB9842          HMPC PMB 2G
Jedec Code:    0x7fb0          EEPROM Version:    0x01
P/N:           711-035209      S/N:              CAAB9842
Assembly ID:   0x0b04          Assembly Version: 01.08
Date:          05-17-2012      Assembly Flags:   0x00
Version:       REV 08
ID: HMPC PMB 2G
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 42 39 38 34 32 00 11 05 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
PIC 0          BUILTIN      BUILTIN          4x10GE SFPP
Jedec Code:    0x0000          EEPROM Version:    0x00
P/N:           BUILTIN          S/N:              BUILTIN
Assembly ID:   0x0a53          Assembly Version: 00.00
Date:          00-00-0000      Assembly Flags:   0x00
ID: 4x10GE SFPP
Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 53 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 4d 58 43 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 4d 58 43 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ae 64 00 00 00 00 0a 52 00 00
  Xcvr 0      REV 01   740-021308   19T511101656      SFP+-10G-SR
  Xcvr 1      REV 01   740-031980   AMA04RU           SFP+-10G-SR
  Xcvr 2      REV 01   740-031980   193363A00558      SFP+-10G-SR

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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 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
...

```

#### show chassis hardware models (MX2010 Router)

```

user@host > show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
FPM Board     REV 06  711-032349  ZX8744        711-032349
PSM 4         REV 0C  740-033727  VK00254      00000000000000000000000000000000
PSM 5         REV 0B  740-033727  VG00015      00000000000000000000000000000000
PSM 6         REV 0B  740-033727  VH00097      00000000000000000000000000000000
PSM 7         REV 0C  740-033727  VJ00151      00000000000000000000000000000000
PSM 8         REV 0C  740-033727  VJ00149      00000000000000000000000000000000
PDM 0         REV 0B  740-038109  WA00008      711-032385
PDM 1         REV 0B  740-038109  WA00014      711-032385
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  ABB51150     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

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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 (MX2010 Routers with MPC6E and OTN MIC)

```

user@host> show chassis hardware
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis             REV 35   750-044636  JN11C9AFEAFK  MX2010
Midplane            REV 02   711-044557  ABAB9188      Lower Backplane
Midplane 1          REV 04   711-032426  ACAJ2432      Upper Backplane
PMP                 REV 09   760-044634  ABCA4314      Power Midplane
FPM Board           REV 01   740-050037  1EDB321015C   Front Panel Display
PSM 0               REV 01   740-050037  1EDB321015C   DC 52V Power Supply
Module
PSM 1               REV 01   740-050037  1EDB321015J   DC 52V Power Supply
Module
PSM 2               REV 01   740-050037  1EDB32000K8   DC 52V Power Supply
Module

```

PSM 3 Module	REV 01	740-050037	1EDB32101JW	DC 52V Power Supply
PSM 4 Module	REV 01	740-050037	1EDB321015G	DC 52V Power Supply
PSM 5 Module	REV 01	740-050037	1EDB32101HH	DC 52V Power Supply
PSM 6 Module	REV 01	740-050037	1EDB32101HD	DC 52V Power Supply
PSM 7 Module	REV 01	740-050037	1EDB321015F	DC 52V Power Supply
PSM 8 Module	REV 01	740-050037	1EDB321015B	DC 52V Power Supply
PDM 0	REV 03	740-045234	1EFA3220433	DC Power Dist Module
PDM 1	REV 03	740-045234	1EFA3220425	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009115685	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009099711	RE-S-1800x4
CB 0	REV 23	750-040257	CABE8395	Control Board
CB 1	REV 12	750-040257	CAAD9499	Control Board
SPMB 0	REV 02	711-041855	ABCG8426	PMB Board
SPMB 1	REV 02	711-041855	ABBS1481	PMB Board
SFB 0	REV 06	711-044466	ABCD5013	Switch Fabric Board
SFB 1	REV 06	711-044466	ABCD5160	Switch Fabric Board
SFB 2	REV 06	711-044466	ABCD5175	Switch Fabric Board
SFB 3	REV 06	711-044466	ABCD4938	Switch Fabric Board
SFB 4	REV 06	711-044466	ABCD4944	Switch Fabric Board
SFB 5	REV 06	711-044466	ABCD4968	Switch Fabric Board
SFB 6	REV 06	711-044466	ABCD5267	Switch Fabric Board
SFB 7	REV 06	711-044466	ABCD4997	Switch Fabric Board
FPC 0	REV 59	750-044130	ABCT7676	MPC6E 3D
CPU	REV 10	711-045719	ABCK8527	RMPK PMB
XLM 0	REV 13	711-046638	ABCT7810	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7811	MPC6E XL
FPC 2	REV 27	750-033205	ZL6014	MPCE Type 3 3D
CPU	REV 07	711-035209	ZK9068	HMPK PMB 2G
MIC 0	REV 14	750-033196	CAAW9214	1X100GE CXP
PIC 0		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XC49FC030	CFP2-100G-SR10
MIC 1	REV 18	750-033199	CAAC3231	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 3	REV 59	750-044130	ABCT7682	MPC6E 3D
CPU	REV 10	711-045719	ABCK8531	RMPK PMB
XLM 0	REV 13	711-046638	ABCT7818	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7819	MPC6E XL
FPC 4	REV 33	750-044130	ABBY9278	MPC6E 3D
CPU	REV 09	711-045719	ABBY8677	RMPK PMB
XLM 0	REV 06.2.00	711-046638	ABBY8844	MPC6E XL
XLM 1	REV 06.2.00	711-046638	ABBY8830	MPC6E XL
FPC 5	REV 59	750-044130	ABCT7675	MPC6E 3D
CPU	REV 10	711-045719	ABCK8526	RMPK PMB
XLM 0	REV 13	711-046638	ABCT7808	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7809	MPC6E XL
FPC 6	REV 30	750-028467	ZM4986	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6541	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43GAC	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	ALMOA6D	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AQFORB3	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	153363A00333	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AN10KYE	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+

Xcvr 0	REV 01	740-021308	APK04YM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AQFOH44	SFP+-10G-SR
FPC 8	REV 38	750-031090	CABF7313	MPC Type 2 3D EQ
CPU	REV 08	711-030884	CABE6727	MPC PMB 2G
MIC 0	REV 18	750-028380	YK8253	3D 2x 10GE XFP
PIC 0		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 03	740-014289	AD1148M00TP	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	1x 10GE XFP
QXM 0	REV 06	711-028408	CABC5614	MPC QXM
QXM 1	REV 06	711-028408	CABC5550	MPC QXM
FPC 9	REV 39	750-044130	ABCK1652	MPC6E 3D
CPU	REV 09	711-045719	ABCK1655	RMPC PMB
MIC 0	REV 09	750-049457	ABCP1230	2X100GE CFP2 OTN
PIC 0		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0		NON-JNPR	37300222WP0002	CFP2-100G-LR4-D
Xcvr 1		NON-JNPR	FD46F001Y	CFP2-100G-SR10
MIC 1	REV 07	750-049457	ABCV6662	2X100GE CFP2 OTN
PIC 1		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQD0014	CFP2-100G-LR4-D
Xcvr 1		NON-JNPR	J13J68335	CFP2-100G-LR4-D
XLM 0	REV 07.2.00	711-046638	ABCK5491	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK5475	MPC6E XL
ADC 1	REV 17	750-043596	ABCG9023	Adapter Card
ADC 2	REV 01	750-043596	ZV4079	Adapter Card
ADC 6	REV 17	750-043596	ABCG8866	Adapter Card
ADC 8	REV 17	750-043596	ABCA8993	Adapter Card
Fan Tray 0	REV 06	760-046960	ACAY0354	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY0831	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0892	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0839	172mm FanTray - 6 Fans

#### show chassis hardware detail (MX2010 Routers with MPC6E and OTN MIC)

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

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis			JN11C9AFEAFK	MX2010
Midplane	REV 35	750-044636	ABAB9188	Lower Backplane
Midplane 1	REV 02	711-044557	ABAB8729	Upper Backplane
PMP	REV 04	711-032426	ACAJ2432	Power Midplane
FRM Board	REV 09	760-044634	ABCA4314	Front Panel Display
PSM 0	REV 01	740-050037	1EDB321015C	DC 52V Power Supply
Module				
PSM 1	REV 01	740-050037	1EDB321015J	DC 52V Power Supply
Module				
PSM 2	REV 01	740-050037	1EDB32000K8	DC 52V Power Supply
Module				
PSM 3	REV 01	740-050037	1EDB32101JW	DC 52V Power Supply
Module				
PSM 4	REV 01	740-050037	1EDB321015G	DC 52V Power Supply
Module				
PSM 5	REV 01	740-050037	1EDB32101HH	DC 52V Power Supply
Module				
PSM 6	REV 01	740-050037	1EDB32101HD	DC 52V Power Supply
Module				
PSM 7	REV 01	740-050037	1EDB321015F	DC 52V Power Supply
Module				
PSM 8	REV 01	740-050037	1EDB321015B	DC 52V Power Supply
Module				
PDM 0	REV 03	740-045234	1EFA3220433	DC Power Dist Module

PDM 1	REV 03	740-045234	1EFA3220425	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009115685	RE-S-1800x4
ad0 3998 MB	Virtium - TuffDrive	VCF P1T0200274310822	191 Compact Flash	
ad1 30533 MB	UGB94BPH32H0S1-KCI	11000043190	Disk 1	
usb0 (addr 1)	EHCI root hub 0	Intel	uhub0	
usb0 (addr 2)	product 0x0020 32	vendor 0x8087	uhub1	
DIMM 0	VL31B5263F-F8SD DIE	REV-0 PCB REV-0	MFR ID-ce80	
DIMM 1	VL31B5263F-F8SD DIE	REV-0 PCB REV-0	MFR ID-ce80	
DIMM 2	VL31B5263F-F8SD DIE	REV-0 PCB REV-0	MFR ID-ce80	
DIMM 3	VL31B5263F-F8SD DIE	REV-0 PCB REV-0	MFR ID-ce80	
Routing Engine 1	REV 02	740-041821	9009099711	RE-S-1800x4
ad0 3998 MB	Virtium - TuffDrive	VCF P1T0200262860208	30 Compact Flash	
ad1 30533 MB	UGB94ARF32H0S3-KC	UNIGEN-499551-000146	Disk 1	
CB 0	REV 23	750-040257	CABE8395	Control Board
CB 1	REV 12	750-040257	CAAD9499	Control Board
SPMB 0	REV 02	711-041855	ABCG8426	PMB Board
SPMB 1	REV 02	711-041855	ABBS1481	PMB Board
SFB 0	REV 06	711-044466	ABCD5013	Switch Fabric Board
SFB 1	REV 06	711-044466	ABCD5160	Switch Fabric Board
SFB 2	REV 06	711-044466	ABCD5175	Switch Fabric Board
SFB 3	REV 06	711-044466	ABCD4938	Switch Fabric Board
SFB 4	REV 06	711-044466	ABCD4944	Switch Fabric Board
SFB 5	REV 06	711-044466	ABCD4968	Switch Fabric Board
SFB 6	REV 06	711-044466	ABCD5267	Switch Fabric Board
SFB 7	REV 06	711-044466	ABCD4997	Switch Fabric Board
FPC 0	REV 59	750-044130	ABCT7676	MPC6E 3D
CPU	REV 10	711-045719	ABCK8527	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7810	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7811	MPC6E XL
FPC 2	REV 27	750-033205	ZL6014	MPCE Type 3 3D
CPU	REV 07	711-035209	ZK9068	HMPD PMB 2G
MIC 0	REV 14	750-033196	CAAW9214	1X100GE CXP
PIC 0		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-046563	XC49FC030	CFP2-100G-SR10
MIC 1	REV 18	750-033199	CAAC3231	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
FPC 3	REV 59	750-044130	ABCT7682	MPC6E 3D
CPU	REV 10	711-045719	ABCK8531	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7818	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7819	MPC6E XL
FPC 4	REV 33	750-044130	ABBY9278	MPC6E 3D
CPU	REV 09	711-045719	ABBY8677	RMPD PMB
XLM 0	REV 06.2.00	711-046638	ABBY8844	MPC6E XL
XLM 1	REV 06.2.00	711-046638	ABBY8830	MPC6E XL
FPC 5	REV 59	750-044130	ABCT7675	MPC6E 3D
CPU	REV 10	711-045719	ABCK8526	RMPD PMB
XLM 0	REV 13	711-046638	ABCT7808	MPC6E XL
XLM 1	REV 13	711-046638	ABCT7809	MPC6E XL
FPC 6	REV 30	750-028467	ZM4986	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6541	AMPD PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ43GAC	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	ALMOA6D	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AQFORB3	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	153363A00333	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AN10KYE	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	APK04YM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AQFOH44	SFP+-10G-SR



FPC 8	REV 38	750-031090	CABF7313	MPC Type 2 3D EQ
CPU	REV 08	711-030884	CABE6727	MPC PMB 2G
MIC 0	REV 18	750-028380	YK8253	3D 2x 10GE XFP
PIC 0		BUILTIN	BUILTIN	1x 10GE XFP
Xcvr 0	REV 03	740-014289	AD1148M00TP	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	1x 10GE XFP
QXM 0	REV 06	711-028408	CABC5614	MPC QXM
QXM 1	REV 06	711-028408	CABC5550	MPC QXM
FPC 9	REV 39	750-044130	ABCK1652	MPC6E 3D
CPU	REV 09	711-045719	ABCK1655	RMPC PMB
MIC 0	REV 09	750-049457	ABCP1230	2X100GE CFP2 OTN
PIC 0		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0		NON-JNPR	37300222WP0002	CFP2-100G-LR4-D
Xcvr 1		NON-JNPR	FD46F001Y	CFP2-100G-SR10
MIC 1	REV 07	750-049457	ABCV6662	2X100GE CFP2 OTN
PIC 1		BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0		NON-JNPR	UQD0014	CFP2-100G-LR4-D
Xcvr 1		NON-JNPR	J13J68335	CFP2-100G-LR4-D
XLM 0	REV 07.2.00	711-046638	ABCK5491	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK5475	MPC6E XL
ADC 1	REV 17	750-043596	ABCG9023	Adapter Card
ADC 2	REV 01	750-043596	ZV4079	Adapter Card
ADC 6	REV 17	750-043596	ABCG8866	Adapter Card
ADC 8	REV 17	750-043596	ABCA8993	Adapter Card
Fan Tray 0	REV 06	760-046960	ACAY0354	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY0831	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0892	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0839	172mm FanTray - 6 Fans

#### show chassis hardware extensive (MX2010 Routers with MPC6E and OTN MIC)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x7fb0          EEPROM Version: 0x02
S/N:          JN11C9AFEAFK
Assembly ID:  0x0557          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: MX2010
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 31 43 39 41 46 45 41 46 4b 00 00 00 00
Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane      REV 35      750-044636  ABAB9188      Lower Backplane
Jedec Code:   0x7fb0          EEPROM Version: 0x02
P/N:          750-044636      S/N:          ABAB9188
Assembly ID:  0x0b66          Assembly Version: 01.35
Date:         06-21-2013      Assembly Flags: 0x00
Version:      REV 35          CLEI Code:    IPMU810ARA
ID: Lower Backplane          FRU Model Number: CHAS-BP-MX2010-S
Board Information Record:
Address 0x00: ad 01 08 00 3c 8a b0 38 68 00 ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 02 ff 0b 66 01 23 52 45 56 20 33 35 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 39 31 38 38 00 15 06 07
Address 0x30: dd ff ff ff ad 01 08 00 3c 8a b0 38 68 00 ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 55 38 31 30 41 52 41 43
Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 31 30 2d 53 00
Address 0x60: 00 00 00 00 00 00 30 36 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff f8 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1      REV 02   711-044557   ABAB8729      Upper Backplane
Jedec Code:    0x7fb0      EEPROM Version:    0x01
P/N:          711-044557   S/N:              ABAB8729
Assembly ID:   0x0b65      Assembly Version:  01.02
Date:         03-21-2013   Assembly Flags:    0x00
Version:      REV 02
ID: Upper Backplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 0b 65 01 02 52 45 56 20 30 32 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 38 37 32 39 00 15 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP          REV 04   711-032426   ACAJ2432      Power Midplane
Jedec Code:    0x7fb0      EEPROM Version:    0x01
P/N:          711-032426   S/N:              ACAJ2432
Assembly ID:   0x045d      Assembly Version:  01.04
Date:         03-28-2013   Assembly Flags:    0x00
Version:      REV 04
ID: Power Midplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
Address 0x20: 53 2f 4e 20 41 43 41 4a 32 34 33 32 00 1c 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board     REV 09   760-044634   ABCA4314      Front Panel Display
Jedec Code:    0x7fb0      EEPROM Version:    0x02
P/N:          760-044634   S/N:              ABCA4314
Assembly ID:   0x0b64      Assembly Version:  01.09
Date:         03-28-2013   Assembly Flags:    0x00
Version:      REV 09      CLEI Code:        IPMYA4EJRA
ID: Front Panel Display   FRU Model Number:  MX2010-CRAFT-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 64 01 09 52 45 56 20 30 39 00 00
Address 0x10: 00 00 00 00 37 36 30 2d 30 34 34 36 33 34 00 00
Address 0x20: 53 2f 4e 20 41 42 43 41 34 33 31 34 00 1c 03 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff

```

```

Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff
PSM 0          REV 01  740-050037  1EDB321015C      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          740-050037      S/N:             1EDB321015C
Assembly ID:   0x0478          Assembly Version: 01.01
Date:         05-28-2013      Assembly Flags:   0x00
Version:      REV 01          CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 35 43 00 00 1c 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 00 00 31 30 31 ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1          REV 01  740-050037  1EDB321015J      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          740-050037      S/N:             1EDB321015J
Assembly ID:   0x0478          Assembly Version: 01.01
Date:         05-28-2013      Assembly Flags:   0x00
Version:      REV 01          CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 31 30 31 35 4a 00 00 1c 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 00 00 31 30 31 ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2          REV 01  740-050037  1EDB32000K8      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:          740-050037      S/N:             1EDB32000K8
Assembly ID:   0x0478          Assembly Version: 01.01
Date:         05-23-2013      Assembly Flags:   0x00
Version:      REV 01          CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 30 30 30 4b 38 00 00 17 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 00 00 31 30 31 ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3          REV 01  740-050037  1EDB32101JW      DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02

```

```

P/N:          740-050037      S/N:          1EDB32101JW
Assembly ID:  0x0478         Assembly Version: 01.01
Date:         05-30-2013     Assembly Flags:  0x00
Version:      REV 01         CLEI Code:       IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 4a 57 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4          REV 01    740-050037    1EDB321015G    DC 52V Power Supply
Module
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          740-050037   S/N:          1EDB321015G
Assembly ID:   0x0478     Assembly Version: 01.01
Date:         05-28-2013  Assembly Flags: 0x00
Version:      REV 01     CLEI Code:    IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 47 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5          REV 01    740-050037    1EDB32101HH    DC 52V Power Supply
Module
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          740-050037   S/N:          1EDB32101HH
Assembly ID:   0x0478     Assembly Version: 01.01
Date:         05-30-2013  Assembly Flags: 0x00
Version:      REV 01     CLEI Code:    IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 48 48 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6          REV 01    740-050037    1EDB32101HD    DC 52V Power Supply
Module
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          740-050037   S/N:          1EDB32101HD
Assembly ID:   0x0478     Assembly Version: 01.01
Date:         05-30-2013  Assembly Flags: 0x00
Version:      REV 01     CLEI Code:    IPUPAKRKAA

```

```

ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 48 44 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7          REV 01   740-050037   1EDB321015F   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:  0x02
P/N:           740-050037      S/N:             1EDB321015F
Assembly ID:   0x0478          Assembly Version: 01.01
Date:          05-28-2013      Assembly Flags:   0x00
Version:       REV 01          CLEI Code:        IPUPAKRKAA
ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 46 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8          REV 01   740-050037   1EDB321015B   DC 52V Power Supply
Module
Jedec Code:    0x7fb0          EEPROM Version:  0x02
P/N:           740-050037      S/N:             1EDB321015B
Assembly ID:   0x0478          Assembly Version: 01.01
Date:          05-28-2013      Assembly Flags:   0x00
Version:       REV 01          CLEI Code:        IPUPAKRKAA
ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 42 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PDM 0          REV 03   740-045234   1EFA3220433   DC Power Dist Module
Jedec Code:    0x7fb0          EEPROM Version:  0x02
P/N:           740-045234      S/N:             1EFA3220433
Assembly ID:   0x047b          Assembly Version: 01.03
Date:          05-30-2013      Assembly Flags:   0x00
Version:       REV 03          CLEI Code:        IPUPAJSKAA
ID: DC Power Dist Module      FRU Model Number:  MX2000-PDM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 7b 01 03 52 45 56 20 30 33 00 00

```

```

Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
Address 0x20: 31 45 46 41 33 32 32 30 34 33 33 00 00 1e 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 33 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 1d 00 00 00 00 00 00 00 00 00 00 00 00
PDM 1          REV 03    740-045234    1EFA3220425    DC Power Dist Module
Jedec Code:    0x7fb0          EEPROM Version:    0x02
P/N:           740-045234      S/N:              1EFA3220425
Assembly ID:   0x047b          Assembly Version:  01.03
Date:          05-30-2013      Assembly Flags:    0x00
Version:       REV 03          CLEI Code:         IPUPAJSKAA
ID: DC Power Dist Module      FRU Model Number:  MX2000-PDM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
..

```

### show chassis hardware (MX2020 Router)

```

user@host > show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11E2227AFJ  MX2020
Midplane      REV 27    750-040240    ABAB9384      Lower Power Midplane
Midplane 1    REV 04    711-032386    ABAB9386      Upper Backplane
PMP 1         REV 05    711-032428    ACAJ1579      Upper Power Midplane
PMP 0         REV 04    711-032426    ACAJ1524      Lower Power Midplane
FPM Board     REV 06    760-040242    ABBT8837      Front Panel Display
PSM 0         REV 01    740-045050    1E022240056   DC 52V Power Supply
Module
PSM 1         REV 01    740-045050    1E022240054   DC 52V Power Supply
Module
PSM 2         REV 01    740-045050    1E02224005H   DC 52V Power Supply
Module
PSM 3         REV 01    740-045050    1E022240053   DC 52V Power Supply
Module
PSM 4         REV 01    740-045050    1E02224004K   DC 52V Power Supply
Module
PSM 7         REV 01    740-045050    1E02224006W   DC 52V Power Supply
Module
PSM 8         REV 01    740-045050    1E022240062   DC 52V Power Supply
Module
PSM 9         REV 01    740-045050    1E02224005B   DC 52V Power Supply
Module
PSM 10        REV 01    740-045050    1E02224005A   DC 52V Power Supply
Module
PSM 11        REV 01    740-045050    1E022240052   DC 52V Power Supply
Module
PSM 12        REV 01    740-045050    1E022240051   DC 52V Power Supply
Module
PSM 13        REV 01    740-045050    1E022240058   DC 52V Power Supply
Module
PSM 14        REV 01    740-045050    1E02224004L   DC 52V Power Supply
Module
PSM 15        REV 01    740-045050    1E02224005M   DC 52V Power Supply
Module
PSM 16        REV 01    740-045050    1E02224006S   DC 52V Power Supply
Module
PSM 17        REV 01    740-045050    1E02224005Z   DC 52V Power Supply
Module

```

PDM 0	REV 01	740-045234	1E012150033	DC Power Dist Module
PDM 1	REV 01	740-045234	1E012150027	DC Power Dist Module
PDM 2	REV 01	740-045234	1E012150028	DC Power Dist Module
PDM 3	REV 01	740-045234	1E012150045	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009089704	RE-S-1800x4
Routing Engine 1	REV 02	740-041821	9009094138	RE-S-1800x4
CB 0	REV 14	750-040257	CAAF8430	Control Board
CB 1	REV 08	750-040257	CAAB3482	Control Board
SPMB 0	REV 01	711-041855	ZS2290	PMB Board
SPMB 1	REV 02	711-041855	CAAA6141	PMB Board
SFB 0	REV 03	711-044466	ABBV6789	Switch Fabric Board
SFB 1	REV 05	711-044466	ABBX5666	Switch Fabric Board
SFB 2	REV 05	711-044466	ABBX5678	Switch Fabric Board
SFB 3	REV 05	711-044466	ABBX5687	Switch Fabric Board
SFB 4	REV 05	711-044466	ABBX5609	Switch Fabric Board
SFB 5	REV 05	711-044466	ABBX5675	Switch Fabric Board
SFB 6	REV 03	711-044466	ABBV6805	Switch Fabric Board
SFB 7	REV 05	711-044466	ABBX5701	Switch Fabric Board
FPC 0	REV 30	750-028467	ABBN0284	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0507	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00990	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E04357	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01327	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04375	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02760	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02904	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E03963	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00756	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04418	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01077	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01128	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01253	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E01140	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01626	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01075	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01177	SFP+-10G-USR
FPC 1	REV 30	750-028467	ABBN0208	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ1084	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04745	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01570	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E04388	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01439	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04739	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01869	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01675	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01901	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01346	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01288	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01824	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04312	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02811	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E03847	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01495	SFP+-10G-USR

Xcvr 3	REV 01	740-030658	B11F01265	SFP+-10G-USR
FPC 2	REV 30	750-028467	ZM5111	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6607	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LJA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MFZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKL	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KF4	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FBJ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MM2	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LJV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NXV	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1H	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLS	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FL5	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL9	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NG2	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KDU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80MG1	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM0	SFP+-10G-SR
FPC 3	REV 30	750-028467	ABBN0302	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0495	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01581	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01176	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01251	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02752	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00786	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01020	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01023	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02819	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02812	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11D04437	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01279	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01333	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00978	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01018	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01784	SFP+-10G-USR
Xcvr 3	REV 01	740-031980	AK80NKP	SFP+-10G-SR
FPC 4	REV 30	750-028467	ABBN0308	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ1095	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04305	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01147	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01195	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01743	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01892	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02880	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00725	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01057	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02816	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11C04501	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E02764	SFP+-10G-USR



Xcvr 3	REV 01	740-030658	B11E00789	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01250	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02847	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00787	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E03803	SFP+-10G-USR
FPC 5	REV 30	750-028467	ABBN0316	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ1082	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00523	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01848	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01865	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00540	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00422	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00428	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K00423	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01855	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01847	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00526	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K00529	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00525	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00425	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00530	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01851	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00528	SFP+-10G-SR
FPC 6	REV 32	750-028467	ABBN6832	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6534	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MB4	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FQ6	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N1F	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLQ	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80KDR	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FGJ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N5G	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KD8	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LET	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80N1X	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRF	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL2	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N3D	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MRB	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LEQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LER	SFP+-10G-SR
FPC 7	REV 32	750-028467	ABBN6811	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7288	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NK8	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80LJG	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LBU	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N21	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEU	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLM	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NL6	SFP+-10G-SR

Xcvr 3	REV 01	740-031980	AK80LES	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEN	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80ME0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LMG	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM1	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MG7	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KF9	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLE	SFP+-10G-SR
FPC 8	REV 23	750-028467	YN2977	MPC 3D 16x 10GE
CPU	REV 10	711-029089	YP1856	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00875	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00851	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00772	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00882	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00735	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00169	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00726	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00077	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00168	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00676	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00732	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00091	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	183363A00725	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00642	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	183363A00871	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	183363A00853	SFP+-10G-SR
FPC 9	REV 32	750-028467	ABBN6798	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6556	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	9ZDZ06A00055	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	183363A00239	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AD0915E003K	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AD0915E003A	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MRC	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NL5	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKN	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N3U	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1T	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJ808DJ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NG4	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80FND	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FKQ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLT	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKR	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LKM	SFP+-10G-SR
FPC 10	REV 32	750-028467	ABBN6813	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6542	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NA3	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLF	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80MRH	SFP+-10G-SR

Xcvr 3	REV 01	740-031980	AK80KE4	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	973152A00030	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80L9H	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80ME8	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLR	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NG1	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MCA	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LFC	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LEM	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N9X	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80LAC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LF2	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N8T	SFP+-10G-SR
FPC 11	REV 30	750-028467	ABBN0281	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0526	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01326	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E03973	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00950	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00674	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00775	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E04461	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01074	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02821	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04501	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00757	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01623	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01022	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04359	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02751	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E02736	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01178	SFP+-10G-USR
FPC 12	REV 32	750-028467	ABBN6796	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7259	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01856	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01853	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01863	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02863	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02668	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02881	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01671	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02627	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02725	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02692	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02730	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03081	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02736	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02568	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02747	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02579	SFP+-10G-SR
FPC 13	REV 30	750-028467	ABBN0270	MPC 3D 16x 10GE

CPU	REV 10	711-029089	ABBJ0966	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NL1	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NXW	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KD2	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80FMD	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NKQ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MGH	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N38	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL7	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEL	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NKD	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCY	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LHK	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80M5J	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MBE	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NLG	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LFH	SFP+-10G-SR
FPC 14	REV 32	750-028467	ABBN6790	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6515	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LZM	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MCC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCM	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KE0	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021310	C10F99155	SFP+-10G-LRM
Xcvr 1	REV 01	740-021310	C10F99049	SFP+-10G-LRM
Xcvr 2	REV 01	740-021310	C10F99128	SFP+-10G-LRM
Xcvr 3	REV 01	740-021310	C10F99169	SFP+-10G-LRM
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LF3	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02597	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A03060	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03057	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEX	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FEU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FNM	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	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

## show chassis hardware detail (MX2020 Router)

user@host&gt; show chassis hardware detail

Hardware inventory:

Item	Version	Part number	Serial number	Description
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Chassis			JN11E2227AFJ	MX2020
Midplane	REV 27	750-040240	ABAB9384	Lower Power Midplane
Midplane 1	REV 04	711-032386	ABAB9386	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ1821	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ1524	Lower Power Midplane
FPM Board	REV 06	760-040242	ABBT8837	Front Panel Display
PSM 0	REV 01	740-045050	1E02224006G	DC 52V Power Supply
Module				
PSM 1	REV 01	740-045050	1E022240053	DC 52V Power Supply
Module				
PSM 2	REV 01	740-045050	1E02224004K	DC 52V Power Supply
Module				
PSM 3	REV 01	740-045050	1E022240056	DC 52V Power Supply
Module				
PSM 4	REV 01	740-045050	1E022240054	DC 52V Power Supply
Module				
PSM 5	REV 01	740-045050	1E02224005H	DC 52V Power Supply
Module				
PSM 6	REV 01	740-045050	1E02224006S	DC 52V Power Supply
Module				
PSM 7	REV 01	740-045050	1E02224005M	DC 52V Power Supply
Module				
PSM 8	REV 01	740-045050	1E022240062	DC 52V Power Supply
Module				
PSM 9	REV 03	740-045050	1EDB2350095	DC 52V Power Supply
Module				
PSM 10	REV 03	740-045050	1EDB235009L	DC 52V Power Supply
Module				
PSM 11	REV 03	740-045050	1EDB2350092	DC 52V Power Supply
Module				
PSM 12	REV 03	740-045050	1EDB23500AT	DC 52V Power Supply
Module				
PSM 13	REV 03	740-045050	1EDB2350094	DC 52V Power Supply
Module				
PSM 15	REV 03	740-045050	1EDB235008X	DC 52V Power Supply
Module				
PDM 0	REV 01	740-045234	1E012150033	DC Power Dist Module
PDM 1	REV 01	740-045234	1E012150027	DC Power Dist Module
PDM 2	REV 01	740-045234	1E262250072	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009094138	RE-S-1800x4
ad0 3998 MB		Virtium - TuffDisk	VCF3 20110825A021D0000064	Compact Flash
ad1 30533 MB		UGB94ARF32H0S3-KC	UNIGEN-499551-000347	Disk 1
usb0 (addr 1)		EHCI root hub 0	Intel	uhub0
usb0 (addr 2)		product 0x0020 32	vendor 0x8087	uhub1
DIMM 0		SGU04G72H1BD2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80
DIMM 1		SGU04G72H1BD2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80
DIMM 2		SGU04G72H1BD2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80
DIMM 3		SGU04G72H1BD2SA-BB	DIE REV-52 PCB REV-54	MFR ID-ce80
Routing Engine 1	REV 02	740-041821	9009089709	RE-S-1800x4
ad0 3831 MB		UGB30SFA4000T1	SFA4000T1 00000113	Compact Flash
ad1 30533 MB		UGB94ARF32H0S3-KC	UNIGEN-478612-001044	Disk 1
CB 0	REV 08	750-040257	CAAB3482	Control Board
CB 1	REV 04	750-040257	ZT2864	Control Board
SPMB 0	REV 02	711-041855	CAAA6141	PMB Board
SPMB 1	REV 01	711-041855	ZS2275	PMB Board
SFB 0	REV 05	711-044466	ABBT2161	Switch Fabric Board
SFB 1	REV 05	711-044466	ABBT2159	Switch Fabric Board
SFB 2	REV 05	711-044466	ABBX3718	Switch Fabric Board
SFB 3	REV 05	711-044466	ABBT2152	Switch Fabric Board
SFB 4	REV 05	711-044466	ABBT2160	Switch Fabric Board
SFB 5	REV 05	711-044466	ABBT2145	Switch Fabric Board

SFB 6	REV 05	711-044466	ABBT2150	Switch Fabric Board
SFB 7	REV 05	711-044466	ABBT2163	Switch Fabric Board
FPC 0	REV 30	750-028467	ABBN0284	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0507	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00990	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E04357	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01327	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04375	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02760	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02904	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E03963	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00756	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04418	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01077	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01128	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01253	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E01140	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11F01626	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01075	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01177	SFP+-10G-USR
FPC 1	REV 30	750-028467	ABBN0308	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ1095	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04305	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01147	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01195	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01743	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01892	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02880	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00725	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01057	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02816	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11C04501	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E02764	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00789	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01250	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02847	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00787	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E03803	SFP+-10G-USR
FPC 2	REV 30	750-028467	ABBN0316	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBJ1082	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00523	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01848	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01865	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00540	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00422	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00428	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K00423	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01855	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01847	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00526	SFP+-10G-SR



Xcvr 2	REV 01	740-031980	B11K00529	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00525	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00425	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00530	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01851	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00528	SFP+-10G-SR
FPC 3	REV 32	750-028467	ABBN6832	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6534	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MB4	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FQ6	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N1F	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLQ	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80KDR	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FGJ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80N5G	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KD8	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LET	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80N1X	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRF	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL2	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N3D	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MRB	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LEQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LER	SFP+-10G-SR
FPC 4	REV 32	750-028467	ABBN6811	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7288	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NK8	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80LJG	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LBU	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80N21	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEU	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLM	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NL6	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LES	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEN	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80ME0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LMG	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM1	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MG7	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KF9	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NRQ	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NLE	SFP+-10G-SR
FPC 5	REV 32	750-028467	ABBN6791	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7289	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00424	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01849	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01862	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K01852	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP
Xcvr 0	REV 01	740-031980	B11K00427	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K00430	SFP+-10G-SR

Xcvr 2	REV 01	740-031980	B11K01854	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00426	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K00429	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01864	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01850	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11K00522	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E01144	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00985	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00796	SFP+-10G-USR
Xcvr 3	REV 01	740-031980	B11K01866	SFP+-10G-SR
FPC 6	REV 30	750-028467	ABBM4592	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0465	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01435	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01052	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01328	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01254	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02738	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02881	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01624	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00889	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02883	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00681	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E04306	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02813	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01801	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02753	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01156	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E04324	SFP+-10G-USR
FPC 7	REV 32	750-028467	ABBN6810	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7237	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A03058	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02082	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01674	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02638	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A03048	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02729	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02566	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02567	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02878	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02739	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01959	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02660	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02731	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02588	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02673	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02654	SFP+-10G-SR
FPC 8	REV 30	750-028467	ABBM4739	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0487	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02569	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02886	SFP+-10G-SR

Xcvr 2	REV 01	740-031980	163363A03082	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	133363A00297	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02726	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A03050	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02884	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03076	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02581	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02873	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02582	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03083	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031981	UL70BU6	SFP+-10G-LR
Xcvr 1	REV 01	740-031981	UL50QC6	SFP+-10G-LR
Xcvr 2	REV 01	740-031981	UL708N6	SFP+-10G-LR
Xcvr 3	REV 01	740-031981	UL603KK	SFP+-10G-LR
FPC 9	REV 32	750-028467	ABBN6827	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6508	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A01688	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A01724	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01773	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02593	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A03061	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A03056	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02669	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03070	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02572	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02697	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02585	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03052	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02591	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02649	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02577	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02698	SFP+-10G-SR
FPC 10	REV 30	750-028467	ABBN0302	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0495	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01581	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01176	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01251	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02752	SFP+-10G-USR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00786	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01020	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01023	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02819	SFP+-10G-USR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E02812	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11D04437	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01279	SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11F01333	SFP+-10G-USR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00978	SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E01018	SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01784	SFP+-10G-USR
Xcvr 3	REV 01	740-031980	AK80NKP	SFP+-10G-SR

FPC 11	REV 32	750-028467	ABBN6790	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBK6515	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LZM	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MCC	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCM	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KE0	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021310	C10F99155	SFP+-10G-LRM
Xcvr 1	REV 01	740-021310	C10F99049	SFP+-10G-LRM
Xcvr 2	REV 01	740-021310	C10F99128	SFP+-10G-LRM
Xcvr 3	REV 01	740-021310	C10F99169	SFP+-10G-LRM
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LF3	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02597	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A03060	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03057	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEX	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80FEU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FNM	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AJQ0Q5G	SFP+-10G-SR
FPC 12	REV 30	750-028467	ZM5111	MPC 3D 16x 10GE
CPU	REV 10	711-029089	ZP6607	AMPC PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LJA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MFZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NKL	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80KF4	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FBJ	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MM2	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80LJV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NXV	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1H	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NLS	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FL5	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80NL9	SFP+-10G-SR
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NG2	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80KDU	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80MG1	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80MM0	SFP+-10G-SR
FPC 13	REV 30	750-028467	ABBN0208	MPC 3D 16x 10GE
CPU	REV 10	711-029089	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	9ZDZ06A00055	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	183363A00239	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AD0915E003K	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AD0915E003A	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80MRC	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	AK80NL5	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AK80NKN	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AK80N3U	SFP+-10G-SR	
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80N1T	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	AJ808DJ	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AK80NG4	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AK80FND	SFP+-10G-SR	
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80FKQ	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	AK80NLT	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AK80NKR	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AK80LKM	SFP+-10G-SR	
FPC 16	REV 30	750-028467	ABBN0270	MPC 3D 16x 10GE	
CPU	REV 10	711-029089	ABBJ0966	AMPC PMB	
PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NL1	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	AK80NXW	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AK80KD2	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AK80FMD	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80NKQ	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	AK80MGH	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AK80N38	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	AK80NL7	SFP+-10G-SR	

PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80M5J		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80NKD		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80KCY		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LHK		SFP+-10G-SR
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LEL		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AK80MBE		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80NLG		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AK80LFH		SFP+-10G-SR
FPC 17	REV 32	750-028467	ABBN6796		MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN7259		AMPC PMB
PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	B11K01856		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11K01853		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11K01863		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02863		SFP+-10G-SR
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02668		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02881		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A01671		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02627		SFP+-10G-SR
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02725		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02692		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02730		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A03081		SFP+-10G-SR
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	163363A02736		SFP+-10G-SR
Xcvr 1	REV 01	740-031980	163363A02568		SFP+-10G-SR
Xcvr 2	REV 01	740-031980	163363A02747		SFP+-10G-SR
Xcvr 3	REV 01	740-031980	163363A02579		SFP+-10G-SR
FPC 18	REV 30	750-028467	ABBN0281		MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN0526		AMPC PMB
PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11F01326		SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E03973		SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E00950		SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E00674		SFP+-10G-USR
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E00775		SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E04461		SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E01074		SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E02821		SFP+-10G-USR
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04501		SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E00757		SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11F01623		SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01022		SFP+-10G-USR
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-030658	B11E04359		SFP+-10G-USR
Xcvr 1	REV 01	740-030658	B11E02751		SFP+-10G-USR
Xcvr 2	REV 01	740-030658	B11E02736		SFP+-10G-USR
Xcvr 3	REV 01	740-030658	B11E01178		SFP+-10G-USR
FPC 19	REV 32	750-028467	ABBN6813		MPC 3D 16x 10GE
CPU	REV 10	711-029089	ABBN6542		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)

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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 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)

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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 27	750-040240	PROTOXCLEI	750-040240
FPM Board	REV 06	760-040242	PROTOXCLEI	760-040242
PSM 0	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 1	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 2	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 3	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 4	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 5	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 6	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 7	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 8	REV 01	740-045050	IPUPAJMKAA	MX2000-PSM-HC-DC-S-A
PSM 9	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 10	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 11	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 12	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 13	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PSM 15	REV 03	740-045050	IPUPAJMKAA	MX2000-PSM-DC-S-A
PDM 0	REV 01	740-045234		
PDM 1	REV 01	740-045234		
PDM 2	REV 01	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S-A
Routing Engine 0	REV 02	740-041821		RE-S-1800X4-16G-S
Routing Engine 1	REV 02	740-041821		RE-S-1800X4-16G-S
CB 0	REV 08	750-040257	PROTOXCLEI	750-040257
CB 1	REV 04	750-040257	PROTOXCLEI	750-040257
SFB 0	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 1	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 2	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 4	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 5	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 7	REV 05	711-044466	IPUCBA6CAA	MX2000-SFB-S
FPC 0	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 1	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 2	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 3	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 4	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 5	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 6	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 7	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 8	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 9	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 10	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 11	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 12	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 13	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 14	REV 23	750-028467		MPC-3D-16XGE-SFPP
FPC 15	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 16	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 17	REV 32	750-028467		MPC-3D-16XGE-SFPP
FPC 18	REV 30	750-028467		MPC-3D-16XGE-SFPP
FPC 19	REV 32	750-028467		MPC-3D-16XGE-SFPP
ADC 0	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 1	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 2	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 3	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 4	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 5	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 6	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 7	REV 07	750-043596	PROTOXCLEI	MX2000-LC-ADAPTER
ADC 8	REV 07	750-043596	PROTOXCLEI	MX2000-LC-ADAPTER

ADC 9	REV 07	750-043596	PROTOXCLEI	MX2000-LC-ADAPTER
ADC 10	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 12	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 13	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 14	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 15	REV 13	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 16	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 17	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 18	REV 13	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
ADC 19	REV 11	750-043596	PROTOXCLEI	PROTO-ASSEMBLY
Fan Tray 0	REV 04	760-046960		
Fan Tray 1	REV 04	760-046960		
Fan Tray 2	REV 04	760-046960		
Fan Tray 3	REV 04	760-046960		

### show chassis hardware (MX2020 Router with MPC5EQ and MPC6E)

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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			JN120BADBAFJ	MX2020
Midplane	REV 51	750-040240	ABAB9243	Lower Backplane
Midplane 1	REV 04	711-032386	ABAB9399	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ2541	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ2194	Lower Power Midplane
FPM Board	REV 13	760-040242	ABCA8835	Front Panel Display
PSM 0	REV 01	740-050037	1EDB32403L5	DC 52V Power Supply
Module				
PSM 1	REV 01	740-050037	1EDB32403L3	DC 52V Power Supply
Module				
PSM 2	REV 01	740-050037	1EDB32403KM	DC 52V Power Supply
Module				
PSM 3	REV 01	740-050037	1EDB3130079	DC 52V Power Supply
Module				
PSM 4	REV 01	740-050037	1EDB3130077	DC 52V Power Supply
Module				
PSM 5	REV 01	740-050037	1EDB3130020	DC 52V Power Supply
Module				
PSM 6	REV 01	740-050037	1EDB313009S	DC 52V Power Supply
Module				
PSM 7	REV 01	740-050037	1EDB313008E	DC 52V Power Supply
Module				
PSM 8	REV 01	740-050037	1EDB3130063	DC 52V Power Supply
Module				
PSM 12	REV 01	740-050037	1EDB3130026	DC 52V Power Supply
Module				
PSM 13	REV 01	740-050037	1EDB3130074	DC 52V Power Supply
Module				
PSM 14	REV 01	740-050037	1EDB313009D	DC 52V Power Supply
Module				
PSM 15	REV 01	740-050037	1EDB3130024	DC 52V Power Supply
Module				
PSM 16	REV 01	740-050037	1EDB3130054	DC 52V Power Supply
Module				
PSM 17	REV 01	740-050037	1EDB3130080	DC 52V Power Supply
Module				
PDM 0	REV 03	740-045234	1EGA3170144	DC Power Dist Module
PDM 1	REV 03	740-045234	1EGA3170158	DC Power Dist Module
PDM 2	REV 03	740-045234	1EGA3170182	DC Power Dist Module
PDM 3	REV 03	740-045234	1EGA3170207	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009112112	RE-S-1800x4

Routing Engine 1	REV 02	740-041821	9009112087	RE-S-1800x4
CB 0	REV 23	750-040257	CABA2295	Control Board
CB 1	REV 23	750-040257	CABE8379	Control Board
SPMB 0	REV 02	711-041855	ABCE8851	PMB Board
SPMB 1	REV 02	711-041855	ABCE8839	PMB Board
SFB 0	REV 06	711-044466	ABCD5001	Switch Fabric Board
SFB 1	REV 06	711-044466	ABCD5034	Switch Fabric Board
SFB 2	REV 06	711-044466	ABCH3899	Switch Fabric Board
SFB 3	REV 06	711-044466	ABCD5020	Switch Fabric Board
SFB 4	REV 06	711-044466	ABCD4975	Switch Fabric Board
SFB 5	REV 06	711-044466	ABCH3881	Switch Fabric Board
SFB 6	REV 06	711-044466	ABCD5026	Switch Fabric Board
SFB 7	REV 06	711-044466	ABCD5032	Switch Fabric Board
FPC 0	REV 39	750-045715	CACD1902	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACB1933	RMPD PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	B11F00361	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	19T511101854	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	19T511100377	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	ANT0878	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	19T511100398	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQ4363J	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	19T511101377	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	ANT072M	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AG90C7N	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AM30M09	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B10E01016	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-031980	B10L04151	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	19T511101379	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ5036J	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AG90C4M	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	19T511101104	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQ502ZM	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AN10KY2	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ43G41	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQ41F04	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AMS16N3	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AMH04Y3	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	ANA093E	SFP+-10G-SR
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
WAN MEZZ	REV 09	750-049136	CABN0410	MPC5E 24XGE OTN Mezz
FPC 1	REV 11	750-045372	CABK8112	MPCE Type 3 3D
CPU	REV 08	711-035209	CABJ6621	HMPD PMB 2G
MIC 0	REV 07	750-033307	CAAZ2897	10X10GE SFPP
PIC 0		BUILTIN	BUILTIN	10X10GE SFPP
Xcvr 0	REV 01	740-021308	AQ501VK	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQ501YC	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQ43HJF	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ43H8D	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	19T511100370	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	153363A00763	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	APH2LXB	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AMCOLVV	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B11F00230	SFP+-10G-SR
MIC 1	REV 14	750-033196	CAAP1390	1X100GE CXP
PIC 2		BUILTIN	BUILTIN	1X100GE CXP
Xcvr 0	REV 01	740-032166	XB11F000M	CFP2-100G-SR10
FPC 2	REV 17	750-037355	CAAS5826	MPC4E 3D 2CGE+8XGE
CPU	REV 08	711-035209	CAAR3986	HMPD PMB 2G

PIC 0			BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	T09F43722	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	ALP0KXF	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AQ502FG	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AQ502T7	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00571	CFP-100G-SR10	
PIC 2			BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-031980	AJ71KEH	SFP+-10G-SR	
Xcvr 1	REV 01	740-031980	B11E01355	SFP+-10G-SR	
Xcvr 3	REV 01	740-031980	B11F00249	SFP+-10G-SR	
PIC 3			BUILTIN	BUILTIN	1X100GE CFP
FPC 3	REV 05	750-044444	CAAY9920	MPCE Type 2 3D P	
CPU	REV 04	711-038484	CAAW3639	MPCE PMB 2G	
MIC 0	REV 28	750-028387	CAAX1083	3D 4x 10GE XFP	
PIC 0			BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0			NON-JNPR	CC07BK05B	XFP-10G-SR
Xcvr 1	REV 01	740-011571	C728XJ00U	XFP-10G-SR	
PIC 1			BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0			NON-JNPR	T12L92339	XFP-10G-SR
QXM 0	REV 06	711-028408	CAAW4915	MPC QXM	
QXM 1	REV 06	711-028408	CAAW4894	MPC QXM	
FPC 4	REV 18	750-046005	CACH5661	MPC5E 3D Q 2CGE+4XGE	
CPU	REV 09	711-045719	CACF2880	RMPC PMB	
PIC 0			BUILTIN	BUILTIN	2X10GE SFPP OTN
PIC 1			BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-046563	XD16FC03Y	CFP2-100G-SR10	
PIC 2			BUILTIN	BUILTIN	2X10GE SFPP OTN
PIC 3			BUILTIN	BUILTIN	1X100GE CFP2 OTN
Xcvr 0	REV 01	740-049775	J13K72997	CFP2-100G-LR4-D	
FPC 5	REV 35	750-028467	CAAR2623	MPC 3D 16x 10GE	
CPU	REV 11	711-029089	CAAR0491	AMPC PMB	
PIC 0			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ5027T	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQ502J0	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AQ5027S	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AQ501Y7	SFP+-10G-SR	
PIC 1			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ501YB	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQ503EB	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AQ43HJH	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AQ43J0Y	SFP+-10G-SR	
PIC 2			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ50352	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQ501X6	SFP+-10G-SR	
Xcvr 2	REV 01	740-021308	AQ502NV	SFP+-10G-SR	
Xcvr 3	REV 01	740-021308	AQ502ZJ	SFP+-10G-SR	
PIC 3			BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-021308	AQ502H4	SFP+-10G-SR	
Xcvr 1	REV 01	740-021308	AQ43HJK	SFP+-10G-SR	
Xcvr 2	REV 01	740-031980	AJ30CU7	SFP+-10G-SR	
FPC 9	REV 30	750-044130	ABCF5773	MPC6E 3D	
CPU	REV 09	711-045719	ABCF1270	RMPC PMB	
MIC 0	REV 05	750-049457	ABCD7829	2X100GE CFP2 OTN	
PIC 0			BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0			NON-JNPR	FE13F000K	CFP2-100G-SR10
Xcvr 1	REV 01	740-048813	XD32FE017	CFP2-100G-LR-D	
MIC 1	REV 07	750-049457	ABCK2812	2X100GE CFP2 OTN	
PIC 1			BUILTIN	BUILTIN	2X100GE CFP2 OTN
Xcvr 0	REV 01	740-048813	XD32FE018	CFP2-100G-SR10	
Xcvr 1			NON-JNPR	FE13F000E	CFP2-100G-LR4-D

XLM 0	REV 05.2.00	711-046638	ABCF5915	MPC6E XL
XLM 1	REV 05.2.00	711-046638	ABCF5916	MPC6E XL
FPC 10	REV 36	750-044130	ABCS8602	MPC6E 3D
CPU	REV 09	711-045719	ABCS8779	RMPD PMB
MIC 0	REV 06	750-049979	ABCK2656	24X10GE SFPP OTN
PIC 0		BUILTIN	BUILTIN	24X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQ43J08	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQE1Y2E	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQE1UW4	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQE1MQF	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQGOMN1	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQE1L9M	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQGOMPD	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQE1Y2B	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQGOLT5	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQD2ET4	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQGOMPC	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQGOM63	SFP+-10G-SR
Xcvr 12	REV 01	740-021308	AQGOLT1	SFP+-10G-SR
Xcvr 13	REV 01	740-021308	AQGOM4L	SFP+-10G-SR
Xcvr 14	REV 01	740-021308	AQGOLS7	SFP+-10G-SR
Xcvr 15	REV 01	740-021308	AQE1MQB	SFP+-10G-SR
Xcvr 16	REV 01	740-021308	AQGOLZP	SFP+-10G-SR
Xcvr 17	REV 01	740-021308	AQE1LU9	SFP+-10G-SR
Xcvr 18	REV 01	740-021308	AQGOMRZ	SFP+-10G-SR
Xcvr 19	REV 01	740-021308	AQE1MQ9	SFP+-10G-SR
Xcvr 20	REV 01	740-021308	AQGOLRX	SFP+-10G-SR
Xcvr 21	REV 01	740-021308	AQE1UWD	SFP+-10G-SR
Xcvr 22	REV 01	740-021308	AQGOLT4	SFP+-10G-SR
Xcvr 23	REV 01	740-021308	AQE1MQL	SFP+-10G-SR
MIC 1	REV 12	750-050008	ABCK5372	4X100GE CXP
PIC 1		BUILTIN	BUILTIN	4X100GE CXP
Xcvr 3	REV 01	740-046563	XD16FC02Z	CFP2-100G-SR10
XLM 0	REV 07.2.00	711-046638	ABCK3481	MPC6E XL
XLM 1	REV 07.2.00	711-046638	ABCK4725	MPC6E XL
FPC 17	REV 28	750-044130	ABBZ3873	MPC6E 3D
CPU	REV 08	711-045719	ABBZ3770	RMPD PMB
MIC 0	REV 11	750-046535	ABCC7731	24X10GE SFPP
PIC 0		BUILTIN	BUILTIN	24X10GE SFPP
Xcvr 1	REV 01	740-021308	APK0543	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B10G01119	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQ502SX	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQ43H84	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQ501TB	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQ502JZ	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQ502SC	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQ502JW	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQ502RM	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AHK013B	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQGOMRT	SFP+-10G-SR
Xcvr 13	REV 01	740-031980	AMC0JTC	SFP+-10G-SR
Xcvr 14	REV 01	740-021308	ANAOMQ0	SFP+-10G-SR
Xcvr 15	REV 01	740-021308	AQ502GS	SFP+-10G-SR
Xcvr 16	REV 01	740-021308	AQGOM0J	SFP+-10G-SR
Xcvr 17	REV 01	740-021308	AQGOMUR	SFP+-10G-SR
Xcvr 18	REV 01	740-021308	AQGOMRR	SFP+-10G-SR
Xcvr 19	REV 01	740-021308	AQGOM0F	SFP+-10G-SR
Xcvr 20	REV 01	740-021308	AQ50312	SFP+-10G-SR
Xcvr 21	REV 01	740-021308	AQ5032U	SFP+-10G-SR
Xcvr 22	REV 01	740-021308	APE17B5	SFP+-10G-SR
Xcvr 23	REV 01	740-021309	91D104A00011	SFP+-10G-LR

MIC 1	REV 03	750-050008	ABCC4522	4X100GE CXP
PIC 1		BUILTIN	BUILTIN	4X100GE CXP
Xcvr 0	REV 01	740-046563	XD16FC02U	CFP2-100G-SR10
Xcvr 1	REV 01	740-046563	XC42FC03K	CFP2-100G-SR10
Xcvr 2	REV 01	740-046563	XC42FC01Z	CFP2-100G-SR10
Xcvr 3	REV 01	740-046563	XC42FC02U	CFP2-100G-SR10
XLM 0	REV 04.2.00	711-046638	ABBZ3779	MPC6E XL
XLM 1	REV 04.2.00	711-046638	ABBZ3780	MPC6E XL
FPC 18	REV 39	750-045715	CACD1910	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACD1817	RMP C PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130194	QSFP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130193	QSFP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130196	QSFP+-40G-SR4
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130191	QSFP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130198	QSFP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130192	QSFP+-40G-SR4
WAN MEZZ	REV 09	750-049136	CABN0411	MPC5E 24XGE OTN Mezz
FPC 19	REV 39	750-045715	CACD1908	MPC5E 3D Q 24XGE+6XLGE
CPU	REV 09	711-045719	CACD1820	RMP C PMB
PIC 0		BUILTIN	BUILTIN	12X10GE SFPP OTN
Xcvr 0	REV 01	740-021308	AQA0EXJ	SFP+-10G-SR
Xcvr 1	REV 01	740-021308	AQGOM6D	SFP+-10G-SR
Xcvr 2	REV 01	740-021308	AQGOLW7	SFP+-10G-SR
Xcvr 3	REV 01	740-021308	AQA0JKB	SFP+-10G-SR
Xcvr 4	REV 01	740-021308	AQGOMTM	SFP+-10G-SR
Xcvr 5	REV 01	740-021308	AQA07NE	SFP+-10G-SR
Xcvr 6	REV 01	740-021308	AQGOM41	SFP+-10G-SR
Xcvr 7	REV 01	740-021308	AQGOMU7	SFP+-10G-SR
Xcvr 8	REV 01	740-021308	AQGOMUG	SFP+-10G-SR
Xcvr 9	REV 01	740-021308	AQGOMMX	SFP+-10G-SR
Xcvr 10	REV 01	740-021308	AQGOM5K	SFP+-10G-SR
Xcvr 11	REV 01	740-021308	AQGOLVZ	SFP+-10G-SR
PIC 1		BUILTIN	BUILTIN	12X10GE SFPP OTN
PIC 2		BUILTIN	BUILTIN	3X40GE QSFPP
PIC 3		BUILTIN	BUILTIN	3X40GE QSFPP
Xcvr 0	REV 01	740-046565	QD130242	QSFP+-40G-SR4
Xcvr 1	REV 01	740-046565	QD130245	QSFP+-40G-SR4
Xcvr 2	REV 01	740-046565	QD130613	QSFP+-40G-SR4
WAN MEZZ	REV 09	750-049136	CABN0418	MPC5E 24XGE OTN Mezz
ADC 0	REV 17	750-043596	ABCD5378	Adapter Card
ADC 1	REV 17	750-043596	ABCD5465	Adapter Card
ADC 2	REV 17	750-043596	ABCD5431	Adapter Card
ADC 3	REV 17	750-043596	ABCD5356	Adapter Card
ADC 4	REV 02	750-043596	ZW1545	Adapter Card
ADC 5	REV 17	750-043596	ABCD5517	Adapter Card
ADC 18	REV 17	750-043596	ABCD5535	Adapter Card
ADC 19	REV 01	750-043596	ZV4127	Adapter Card
Fan Tray 0	REV 06	760-046960	ACAY0791	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY0788	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0755	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0441	172mm FanTray - 6 Fans

## show chassis hardware detail (MX2020 Router with MPC5EQ and MPC6E)

user@host&gt;show chassis hardware detail

Hardware inventory:

Item	Version	Part number	Serial number	Description
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Chassis			JN120BADBAFJ	MX2020
Midplane	REV 51	750-040240	ABAB9243	Lower Backplane
Midplane 1	REV 04	711-032386	ABAB9399	Upper Backplane
PMP 1	REV 05	711-032428	ACAJ2541	Upper Power Midplane
PMP 0	REV 04	711-032426	ACAJ2194	Lower Power Midplane
FPM Board	REV 13	760-040242	ABCA8835	Front Panel Display
PSM 0	REV 01	740-050037	1EDB32403L5	DC 52V Power Supply
Module				
PSM 1	REV 01	740-050037	1EDB32403L3	DC 52V Power Supply
Module				
PSM 2	REV 01	740-050037	1EDB32403KM	DC 52V Power Supply
Module				
PSM 3	REV 01	740-050037	1EDB3130079	DC 52V Power Supply
Module				
PSM 4	REV 01	740-050037	1EDB3130077	DC 52V Power Supply
Module				
PSM 5	REV 01	740-050037	1EDB3130020	DC 52V Power Supply
Module				
PSM 6	REV 01	740-050037	1EDB313009S	DC 52V Power Supply
Module				
PSM 7	REV 01	740-050037	1EDB313008E	DC 52V Power Supply
Module				
PSM 8	REV 01	740-050037	1EDB3130063	DC 52V Power Supply
Module				
PSM 12	REV 01	740-050037	1EDB3130026	DC 52V Power Supply
Module				
PSM 13	REV 01	740-050037	1EDB3130074	DC 52V Power Supply
Module				
PSM 14	REV 01	740-050037	1EDB313009D	DC 52V Power Supply
Module				
PSM 15	REV 01	740-050037	1EDB3130024	DC 52V Power Supply
Module				
PSM 16	REV 01	740-050037	1EDB3130054	DC 52V Power Supply
Module				
PSM 17	REV 01	740-050037	1EDB3130080	DC 52V Power Supply
Module				
PDM 0	REV 03	740-045234	1EGA3170144	DC Power Dist Module
PDM 1	REV 03	740-045234	1EGA3170158	DC Power Dist Module
PDM 2	REV 03	740-045234	1EGA3170182	DC Power Dist Module
PDM 3	REV 03	740-045234	1EGA3170207	DC Power Dist Module
Routing Engine 0	REV 02	740-041821	9009112112	RE-S-1800x4
ad0 3998 MB		Virtium - TuffDrive	VCF P1T0200274310822	113 Compact Flash
ad1 30533 MB		UGB94BPH32H0S1-KCI	11000031656	Disk 1
usb0 (addr 1)		EHCI root hub 0	Intel	uhub0
usb0 (addr 2)		product 0x0020 32	vendor 0x8087	uhub1
DIMM 0		SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54	MFR ID-ce80	
DIMM 1		SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54	MFR ID-ce80	
DIMM 2		SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54	MFR ID-ce80	
DIMM 3		SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54	MFR ID-ce80	
Routing Engine 1	REV 02	740-041821	9009112087	RE-S-1800x4
ad0 3998 MB		Virtium - TuffDrive	VCF P1T0200274310822	366 Compact Flash
ad1 30533 MB		UGB94BPH32H0S1-KCI	11000039979	Disk 1
CB 0	REV 23	750-040257	CABA2295	Control Board
CB 1	REV 23	750-040257	CABE8379	Control Board
SPMB 0				
SPMB 1				
FPC 0	REV 39	750-045715	CACD1902	MPC5E 3D Q 24XGE+6XLGE
CPU				
FPC 1	REV 11	750-045372	CABK8112	MPCE Type 3 3D
CPU				
FPC 2	REV 17	750-037355	CAAS5826	MPC4E 3D 2CGE+8XGE

CPU				
FPC 3	REV 05	750-044444	CAAY9920	MPCE Type 2 3D P
CPU				
FPC 4	REV 18	750-046005	CACH5661	MPC5E 3D Q 2CGE+4XGE
CPU				
FPC 5	REV 35	750-028467	CAAR2623	MPC 3D 16x 10GE
CPU				
FPC 9	REV 30	750-044130	ABCF5773	MPC6E 3D
CPU				
FPC 10	REV 36	750-044130	ABCS8602	MPC6E 3D
CPU				
FPC 17	REV 28	750-044130	ABBZ3873	MPC6E 3D
CPU				
FPC 18	REV 39	750-045715	CACD1910	MPC5E 3D Q 24XGE+6XLGE
CPU				
FPC 19	REV 39	750-045715	CACD1908	MPC5E 3D Q 24XGE+6XLGE
CPU				
Fan Tray 0	REV 06	760-046960	ACAY0791	172mm FanTray - 6 Fans
Fan Tray 1	REV 06	760-046960	ACAY0788	172mm FanTray - 6 Fans
Fan Tray 2	REV 06	760-046960	ACAY0755	172mm FanTray - 6 Fans
Fan Tray 3	REV 06	760-046960	ACAY0441	172mm FanTray - 6 Fans

#### show chassis hardware extensive (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Jedec Code:   0x7fb0          EEPROM Version: 0x02
S/N:          JN120BADBAFJ
Assembly ID:  0x0557          Assembly Version: 00.00
Date:         00-00-0000      Assembly Flags:  0x00
ID: MX2020
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 4a 4e 31 32 30 42 41 44 42 41 46 4a 00 00 00 00
Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane
Jedec Code:   0x7fb0          EEPROM Version: 0x02
P/N:         750-040240      S/N:          ABAB9243
Assembly ID:  0x0b22          Assembly Version: 01.51
Date:         05-30-2013      Assembly Flags: 0x00
Version:      REV 51          CLEI Code:    IPMU710ARA
ID: Lower Backplane          FRU Model Number: CHAS-BP-MX2020-S
Board Information Record:
Address 0x00: ad 01 10 00 4c 96 14 72 30 08 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 22 01 33 52 45 56 20 35 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 34 30 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 39 32 34 33 00 1e 05 07
Address 0x30: dd ff ff ff ad 01 10 00 4c 96 14 72 30 08 ff ff
Address 0x40: ff ff ff ff 01 49 50 4d 55 37 31 30 41 52 41 43
Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 32 30 2d 53 00
Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff

```



```

Address 0x70: ff ff ff d3 ff ff ff ff ff ff ff ff ff ff ff
Midplane 1      REV 04    711-032386    ABAB9399      Upper Backplane
Jedec Code:    0x7fb0      EEPROM Version: 0x01
P/N:          711-032386    S/N:          ABAB9399
Assembly ID:   0x0b23      Assembly Version: 01.04
Date:         10-22-2012    Assembly Flags: 0x00
Version:      REV 04
ID: Upper Backplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 fe 0b 23 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 33 38 36 00 00
Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 39 39 00 16 0a 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff
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
PMP 1          REV 05    711-032428    ACAJ2541      Upper Power Midplane
Jedec Code:    0x7fb0      EEPROM Version: 0x01
P/N:          711-032428    S/N:          ACAJ2541
Assembly ID:   0x045c      Assembly Version: 01.05
Date:         04-26-2013    Assembly Flags: 0x00
Version:      REV 05
ID: Upper Power Midplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 5c 01 05 52 45 56 20 30 35 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 38 00 00
Address 0x20: 53 2f 4e 20 41 43 41 4a 32 35 34 31 00 1a 04 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
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
PMP 0          REV 04    711-032426    ACAJ2194      Lower Power Midplane
Jedec Code:    0x7fb0      EEPROM Version: 0x01
P/N:          711-032426    S/N:          ACAJ2194
Assembly ID:   0x045d      Assembly Version: 01.04
Date:         01-29-2013    Assembly Flags: 0x00
Version:      REV 04
ID: Lower Power Midplane
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
Address 0x20: 53 2f 4e 20 41 43 41 4a 32 31 39 34 00 1d 01 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
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
FPM Board      REV 13    760-040242    ABCA8835      Front Panel Display
Jedec Code:    0x7fb0      EEPROM Version: 0x02
P/N:          760-040242    S/N:          ABCA8835
Assembly ID:   0x0b24      Assembly Version: 01.13
Date:         04-13-2013    Assembly Flags: 0x00
Version:      REV 13      CLEI Code:    IPMYAESJRA

```

ID: Front Panel Display FRU Model Number: MX2020-CRAFT-S

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 0b 24 01 0d 52 45 56 20 31 33 00 00

Address 0x10: 00 00 00 00 37 36 30 2d 30 34 30 32 34 32 00 00

Address 0x20: 53 2f 4e 20 41 42 43 41 38 38 33 35 00 0d 04 07

Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 49 50 4d 59 41 45 35 4a 52 41 4d

Address 0x50: 58 32 30 32 30 2d 43 52 41 46 54 2d 53 00 00 00

Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff

Address 0x70: ff ff ff 95 ff ff ff ff ff ff ff ff ff ff ff ff

PSM 0 REV 01 740-050037 1EDB32403L5 DC 52V Power Supply Module

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: 740-050037 S/N: 1EDB32403L5

Assembly ID: 0x0478 Assembly Version: 01.01

Date: 06-21-2013 Assembly Flags: 0x00

Version: REV 01 CLEI Code: IPUPAKRKAA

ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00

Address 0x20: 31 45 44 42 33 32 34 30 33 4c 35 00 00 15 06 07

Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d

Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00

Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff

Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

PSM 1 REV 01 740-050037 1EDB32403L3 DC 52V Power Supply Module

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: 740-050037 S/N: 1EDB32403L3

Assembly ID: 0x0478 Assembly Version: 01.01

Date: 06-21-2013 Assembly Flags: 0x00

Version: REV 01 CLEI Code: IPUPAKRKAA

ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00

Address 0x20: 31 45 44 42 33 32 34 30 33 4c 33 00 00 15 06 07

Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d

Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00

Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff

Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

PSM 2 REV 01 740-050037 1EDB32403KM DC 52V Power Supply Module

Jedec Code: 0x7fb0 EEPROM Version: 0x02

P/N: 740-050037 S/N: 1EDB32403KM

Assembly ID: 0x0478 Assembly Version: 01.01

Date: 06-21-2013 Assembly Flags: 0x00

Version: REV 01 CLEI Code: IPUPAKRKAA

ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

```

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 32 34 30 33 4b 4d 00 00 15 06 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3          REV 01   740-050037   1EDB3130079   DC 52V Power Supply
Module

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:        740-050037  S/N:        1EDB3130079
Assembly ID: 0x0478     Assembly Version: 01.01
Date:       05-16-2013  Assembly Flags: 0x00
Version:    REV 01      CLEI Code:    IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S

```

## Board Information Record:

```

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 37 39 00 00 10 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

```

```

PSM 4          REV 01   740-050037   1EDB3130077   DC 52V Power Supply
Module

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:        740-050037  S/N:        1EDB3130077
Assembly ID: 0x0478     Assembly Version: 01.01
Date:       05-17-2013  Assembly Flags: 0x00
Version:    REV 01      CLEI Code:    IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S

```

## Board Information Record:

```

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 37 37 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

```

```

PSM 5          REV 01   740-050037   1EDB3130020   DC 52V Power Supply
Module

```

```

Jedec Code: 0x7fb0      EEPROM Version: 0x02
P/N:        740-050037  S/N:        1EDB3130020
Assembly ID: 0x0478     Assembly Version: 01.01
Date:       05-16-2013  Assembly Flags: 0x00
Version:    REV 01      CLEI Code:    IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S

```

## Board Information Record:

```

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:

```

```

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 32 30 00 00 10 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```

```

Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6          REV 01  740-050037  1EDB313009S      DC 52V Power Supply
Module
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 740-050037          S/N: 1EDB313009S
Assembly ID: 0x0478        Assembly Version: 01.01
Date: 05-17-2013          Assembly Flags: 0x00
Version: REV 01           CLEI Code: IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 39 53 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7          REV 01  740-050037  1EDB313008E      DC 52V Power Supply
Module
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 740-050037          S/N: 1EDB313008E
Assembly ID: 0x0478        Assembly Version: 01.01
Date: 05-17-2013          Assembly Flags: 0x00
Version: REV 01           CLEI Code: IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 38 45 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8          REV 01  740-050037  1EDB3130063      DC 52V Power Supply
Module
Jedec Code: 0x7fb0          EEPROM Version: 0x02
P/N: 740-050037          S/N: 1EDB3130063
Assembly ID: 0x0478        Assembly Version: 01.01
Date: 05-17-2013          Assembly Flags: 0x00
Version: REV 01           CLEI Code: IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
Address 0x20: 31 45 44 42 33 31 33 30 30 36 33 00 00 11 05 07
Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

```

PSM 12                    REV 01    740-050037    1EDB3130026            DC 52V Power Supply  
Module

Jedec Code:    0x7fb0                    EEPROM Version:    0x02  
P/N:            740-050037                    S/N:                1EDB3130026  
Assembly ID:   0x0478                    Assembly Version:   01.01  
Date:           05-16-2013                    Assembly Flags:     0x00  
Version:        REV 01                    CLEI Code:          IPUPAKRKAA  
ID: DC 52V Power Supply Module    FRU Model Number:   MX2000-PSM-DC-S

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00

Address 0x20: 31 45 44 42 33 31 33 30 30 32 36 00 00 10 05 07

Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d

Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00

Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff ff

Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

PSM 13                    REV 01    740-050037    1EDB3130074            DC 52V Power Supply  
Module

Jedec Code:    0x7fb0                    EEPROM Version:    0x02  
P/N:            740-050037                    S/N:                1EDB3130074  
Assembly ID:   0x0478                    Assembly Version:   01.01  
Date:           05-17-2013                    Assembly Flags:     0x00  
Version:        REV 01                    CLEI Code:          IPUPAKRKAA  
ID: DC 52V Power Supply Module    FRU Model Number:   MX2000-PSM-DC-S

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00

Address 0x20: 31 45 44 42 33 31 33 30 30 37 34 00 00 11 05 07

Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d

Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00

Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff ff

Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

PSM 14                    REV 01    740-050037    1EDB313009D            DC 52V Power Supply  
Module

Jedec Code:    0x7fb0                    EEPROM Version:    0x02  
P/N:            740-050037                    S/N:                1EDB313009D  
Assembly ID:   0x0478                    Assembly Version:   01.01  
Date:           05-17-2013                    Assembly Flags:     0x00  
Version:        REV 01                    CLEI Code:          IPUPAKRKAA  
ID: DC 52V Power Supply Module    FRU Model Number:   MX2000-PSM-DC-S

Board Information Record:

Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

I2C Hex Data:

Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00

Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00

Address 0x20: 31 45 44 42 33 31 33 30 30 39 44 00 00 11 05 07

Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d

Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00

Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff ff

Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00

PSM 15                    REV 01    740-050037    1EDB3130024            DC 52V Power Supply  
Module

Jedec Code:    0x7fb0                    EEPROM Version:    0x02  
P/N:            740-050037                    S/N:                1EDB3130024

```

Assembly ID: 0x0478          Assembly Version: 01.01
Date:          05-16-2013    Assembly Flags: 0x00
Version:       REV 01        CLEI Code:      IPUPAKRKAA
ID: DC 52V Power Supply Module FRU Model Number: MX2000-PSM-DC-S
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
...

```

### show chassis hardware models (MX2020 Routers with MPC5EQ and MPC6E)

```

user@host> show chassis hardware models
Hardware inventory:

```

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 51	750-040240	ABAB9243	CHAS-BP-MX2020-S
FPM Board	REV 13	760-040242	ABCA8835	MX2020-CRAFT-S
PSM 0	REV 01	740-050037	1EDB32403L5	MX2000-PSM-DC-S
PSM 1	REV 01	740-050037	1EDB32403L3	MX2000-PSM-DC-S
PSM 2	REV 01	740-050037	1EDB32403KM	MX2000-PSM-DC-S
PSM 3	REV 01	740-050037	1EDB3130079	MX2000-PSM-DC-S
PSM 4	REV 01	740-050037	1EDB3130077	MX2000-PSM-DC-S
PSM 5	REV 01	740-050037	1EDB3130020	MX2000-PSM-DC-S
PSM 6	REV 01	740-050037	1EDB313009S	MX2000-PSM-DC-S
PSM 7	REV 01	740-050037	1EDB313008E	MX2000-PSM-DC-S
PSM 8	REV 01	740-050037	1EDB3130063	MX2000-PSM-DC-S
PSM 12	REV 01	740-050037	1EDB3130026	MX2000-PSM-DC-S
PSM 13	REV 01	740-050037	1EDB3130074	MX2000-PSM-DC-S
PSM 14	REV 01	740-050037	1EDB313009D	MX2000-PSM-DC-S
PSM 15	REV 01	740-050037	1EDB3130024	MX2000-PSM-DC-S
PSM 16	REV 01	740-050037	1EDB3130054	MX2000-PSM-DC-S
PSM 17	REV 01	740-050037	1EDB3130080	MX2000-PSM-DC-S
PDM 0	REV 03	740-045234	1EGA3170144	MX2000-PDM-DC-S
PDM 1	REV 03	740-045234	1EGA3170158	MX2000-PDM-DC-S
PDM 2	REV 03	740-045234	1EGA3170182	MX2000-PDM-DC-S
PDM 3	REV 03	740-045234	1EGA3170207	MX2000-PDM-DC-S
Routing Engine 0	REV 02	740-041821	9009112112	RE-MX2000-1800X4-S
Routing Engine 1	REV 02	740-041821	9009112087	RE-MX2000-1800X4-S
CB 0	REV 23	750-040257	CABA2295	RE-MX2000-1800X4-S
CB 1	REV 23	750-040257	CABE8379	RE-MX2000-1800X4-S
SFB 0	REV 06	711-044466	ABCD5001	MX2000-SFB-S
SFB 1	REV 06	711-044466	ABCD5034	MX2000-SFB-S
SFB 2	REV 06	711-044466	ABCH3899	MX2000-SFB-S
SFB 3	REV 06	711-044466	ABCD5020	MX2000-SFB-S
SFB 4	REV 06	711-044466	ABCD4975	MX2000-SFB-S
SFB 5	REV 06	711-044466	ABCH3881	MX2000-SFB-S
SFB 6	REV 06	711-044466	ABCD5026	MX2000-SFB-S
SFB 7	REV 06	711-044466	ABCD5032	MX2000-SFB-S
FPC 0	REV 39	750-045715	CACD1902	PROTO-ASSEMBLY
FPC 1	REV 11	750-045372	CABK8112	MX-MPC3E-3D
FPC 2	REV 17	750-037355	CAAS5826	MPC4E-3D-2CGE-8XGE
FPC 3	REV 05	750-044444	CAAY9920	MX-MPC2E-3D-P
FPC 4	REV 18	750-046005	CACH5661	PROTO-ASSEMBLY
FPC 5	REV 35	750-028467	CAAR2623	MPC-3D-16XGE-SFPP
FPC 9	REV 30	750-044130	ABCF5773	PROTO-ASSEMBLY
FPC 10	REV 36	750-044130	ABCS8602	PROTO-ASSEMBLY
FPC 17	REV 28	750-044130	ABBZ3873	PROTO-ASSEMBLY
FPC 18	REV 39	750-045715	CACD1910	PROTO-ASSEMBLY
FPC 19	REV 39	750-045715	CACD1908	PROTO-ASSEMBLY
ADC 0	REV 17	750-043596	ABCD5378	MX2000-LC-ADAPTER
ADC 1	REV 17	750-043596	ABCD5465	MX2000-LC-ADAPTER

ADC 2	REV 17	750-043596	ABCD5431	MX2000-LC-ADAPTER
ADC 3	REV 17	750-043596	ABCD5356	MX2000-LC-ADAPTER
ADC 4	REV 02	750-043596	ZW1545	750-043596
ADC 5	REV 17	750-043596	ABCD5517	MX2000-LC-ADAPTER
ADC 18	REV 17	750-043596	ABCD5535	MX2000-LC-ADAPTER
ADC 19	REV 01	750-043596	ZV4127	750-043596
Fan Tray 0	REV 06	760-046960	ACAY0791	MX2000-FANTRAY-S
Fan Tray 1	REV 06	760-046960	ACAY0788	MX2000-FANTRAY-S
Fan Tray 2	REV 06	760-046960	ACAY0755	MX2000-FANTRAY-S
Fan Tray 3	REV 06	760-046960	ACAY0441	MX2000-FANTRAY-S

### show chassis hardware clei-models (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware clei-models
```

```
Hardware inventory:
```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 51	750-040240	IPMU710ARA	CHAS-BP-MX2020-S
FPM Board	REV 13	760-040242	IPMYAE5JRA	MX2020-CRAFT-S
PSM 0	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 1	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 2	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 3	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 4	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 5	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 6	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 7	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 8	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 12	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 13	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 14	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 15	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 16	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PSM 17	REV 01	740-050037	IPUPAKRKAA	MX2000-PSM-DC-S
PDM 0	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
PDM 1	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
PDM 2	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
PDM 3	REV 03	740-045234	IPUPAJSKAA	MX2000-PDM-DC-S
CB 0	REV 23	750-040257	IPUCBA7CTA	RE-MX2000-1800X4-S
CB 1	REV 23	750-040257	IPUCBA7CTA	RE-MX2000-1800X4-S
SFB 0	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 1	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 2	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 3	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 4	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 5	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 6	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
SFB 7	REV 06	711-044466	IPUCBA6CAA	MX2000-SFB-S
FPC 0	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 1	REV 11	750-045372	COUIBBNBAA	MX-MPC3E-3D
FPC 2	REV 17	750-037355	IPU3A4DHAA	MPC4E-3D-2CGE-8XGE
FPC 3	REV 05	750-044444	COUIBBGBAA	MX-MPC2E-3D-P
MIC 0	REV 28	750-028387	COUIA16BAA	MIC-3D-4XGE-XFP
FPC 4	REV 18	750-046005	PROTOXCLEI	PROTO-ASSEMBLY
FPC 5	REV 35	750-028467		MPC-3D-16XGE-SFPP
FPC 9	REV 30	750-044130	PROTOXCLEI	PROTO-ASSEMBLY
MIC 0	REV 05	750-049457	PROTOXCLEI	PROTO-ASSEMBLY
FPC 10	REV 36	750-044130	PROTOXCLEI	PROTO-ASSEMBLY
MIC 0	REV 06	750-049979	PROTOXCLEI	PROTO-ASSEMBLY
MIC 1	REV 12	750-050008	PROTOXCLEI	PROTO-ASSEMBLY
FPC 17	REV 28	750-044130	PROTOXCLEI	PROTO-ASSEMBLY
MIC 1	REV 03	750-050008	PROTOXCLEI	PROTO-ASSEMBLY

FPC 18	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
FPC 19	REV 39	750-045715	PROTOXCLEI	PROTO-ASSEMBLY
ADC 0	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 1	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 2	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 3	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 4	REV 02	750-043596	PROTOXCLEI	750-043596
ADC 5	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 18	REV 17	750-043596	IPUCBA8CAA	MX2000-LC-ADAPTER
ADC 19	REV 01	750-043596	PROTOXCLEI	750-043596
Fan Tray 0	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S
Fan Tray 1	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S
Fan Tray 2	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S
Fan Tray 3	REV 06	760-046960	IPUCBA5CAA	MX2000-FANTRAY-S

### show chassis hardware (MX Series routers with ATM MIC)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN115736EAFc  MX240
Midplane      REV 07   760-021404   ABAA5038       MX240 Backplane
FPM Board     REV 03   760-021392   ABBA2758       Front Panel Display
PEM 0         Rev 01   740-022697   QCS0937C07K    PS 1.2-1.7kW; 100-240V
AC in
PEM 1         Rev 01   740-022697   QCS0939C04X    PS 1.2-1.7kW; 100-240V
AC in
PEM 2         Rev 01   740-022697   QCS0937C06B    PS 1.2-1.7kW; 100-240V
AC in
PEM 3         Rev 01   740-022697   QCS0937C07U    PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 12   740-013063   9009042291     RE-S-2000
Routing Engine 1 REV 12   740-013063   9009042266     RE-S-2000
CB 0          REV 06   710-021523   ABBC1435       MX SCB
CB 1          REV 06   710-021523   ABBC1497       MX SCB
FPC 2         REV 14   750-031088   YH8446         MPC Type 2 3D Q
CPU           REV 06   711-030884   YH9612         MPC PMB 2G
MIC 0
MIC 1         REV 10   750-036132   ZP7062         2xOC12/8xOC3 CC-CE
PIC 2         BUILTIN  BUILTIN       2xOC12/8xOC3 CC-CE

Xcvr 0        NON-JNPR  23393-00492    UNKNOWN
Xcvr 1        NON-JNPR  23393-00500    UNKNOWN
Xcvr 2        NON-JNPR  23393-00912    UNKNOWN
Xcvr 3        REV 01   740-015638   22216-00575    Load SFP
Xcvr 4        REV 01   740-015638   24145-00110    Load SFP
Xcvr 5        REV 01   740-015638   24145-00016    Load SFP
Xcvr 6        REV 01   740-015638   24145-00175    Load SFP
Xcvr 7        NON-JNPR  23393-00627    UNKNOWN
QXM 0         REV 05   711-028408   YF4681         MPC QXM
QXM 1         REV 05   711-028408   YF4817         MPC QXM
Fan Tray 0    REV 01   710-021113   XL3645         MX240 Fan Tray

```

### show chassis hardware (MX240, MX480, MX960 routers with Application Services Modular Line Card)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN11D969BAFA  MX960
Midplane      REV 03   710-013698   ACAA2362       MX960 Backplane

```



FPM Board	REV 03	710-014974	ZR0639	Front Panel Display
PDM	Rev 03	740-013110	QCS152250SX	Power Distribution Module
PEM 0	Rev 10	740-013683	QCS1512718W	DC Power Entry Module
PEM 1	Rev 10	740-013683	QCS1512702Y	DC Power Entry Module
Routing Engine 0	REV 15	740-013063	9012024667	RE-S-2000
Routing Engine 1	REV 15	740-013063	9012024649	RE-S-2000
CB 0	REV 14	750-031391	ZJ7749	Enhanced MX SCB
CB 1	REV 14	750-031391	ZJ7750	Enhanced MX SCB
CB 2	REV 14	750-031391	ZY9233	Enhanced MX SCB
FPC 0	REV 17	750-031089	YR7434	MPC Type 2 3D
CPU				
FPC 1	REV 11	750-037207	ZW9727	AS-MCC
CPU	REV 04	711-038173	ZW4817	AS-MCC-PMB
MIC 0	REV 01	750-037214	ZH3764	AS-MSC
PIC 0		BUILTIN	BUILTIN	AS-MSC
MIC 1	REV 01	711-028408	JZ9200	AS-MXC
PIC 2		BUILTIN	BUILTIN	AS-MXC
FPC 4	REV 30	750-028467	ABBN0232	MPC 3D 16x 10GE
CPU				
FPC 5	REV 04	750-037207	ZK9074	AS-MCC
CPU				
Fan Tray 0	REV 05	740-014971	VT5683	Fan Tray
Fan Tray 1	REV 05	740-014971	VT5684	Fan Tray

### show chassis hardware extensive (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

user@host> show chassis hardware extensive

```
ID: AS-MCC                                FRU Model Number: 750-037207
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
Address 0x20: 53 2f 4e 20 5a 57 39 37 32 37 00 00 00 11 02 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
CPU                                REV 04    711-038173    ZW4817    AS-MCC-PMB
Jedec Code: 0x7fb0                EEPROM Version: 0x02
P/N: 711-038173                  S/N: ZW4817
Assembly ID: 0x0b38              Assembly Version: 01.04
Date: 12-30-2011                 Assembly Flags: 0x00
Version: REV 04
ID: AS-MCC-PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
Address 0x20: 53 2f 4e 20 5a 57 34 38 31 37 00 00 00 1e 0c 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00 00
MIC 0                                REV 01    750-037214    ZH3764    AS-MSC
Jedec Code: 0x7fb0                EEPROM Version: 0x02
P/N: 750-037214                  S/N: ZH3764
```

```

Assembly ID: 0x0a44          Assembly Version: 01.01
Date: 07-04-2011           Assembly Flags: 0x00
Version: REV 01
ID: AS-MSC
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff I2C Hex Data:
Address 0x00: 7f b0 02 ff 0a 44 01 01 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 34 00 00
Address 0x20: 53 2f 4e 20 5a 48 33 37 36 34 00 00 00 04 07 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff
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 00 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         HMPD 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       HMPD 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	HMPD 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	HMPD PMB 2G
PIC 0		BUILTIN	BUILTIN	4x10GE SFPP
Xcvr 0	REV 01	740-021308	21T511100436	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AHPOGPM	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
FPC 0
FPC 1
  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		UNKNOWN
PIC 3	REV 04	750-005100	AY4850	1x 10GE(LAN),DWD
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&gt; 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

```

## show chassis hardware (T4000 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Midplane      REV 01    710-027486  RC8355          T-series Backplane

```



FPM GBUS	REV 13	710-002901	BBAE0927	T640 FPM Board
FPM Display	REV 01	710-021387	EF6764	T1600 FPM Display
CIP	REV 06	710-002895	BBAD9210	T-series CIP
PEM 0	REV 01	740-036442	VA00016	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAD7248	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAE3874	T640 Sonet Clock Gen.
Routing Engine 0	REV 05	740-026941	P737F-002248	RE-DUO-1800
Routing Engine 1	REV 06	740-026941	P737F-002653	RE-DUO-1800
CB 0	REV 09	710-022597	ED0295	LCC Control Board
CB 1	REV 09	710-022597	EA6050	LCC Control Board
FPC 0	REV 26	750-032819	EK1173	FPC Type 5-3D
CPU	REV 12	711-030686	EJ8584	SNG PMB
PIC 0	REV 07	750-034624	EF6837	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	123363A01145	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	123363A01147	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01P3	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B10M03256	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01M2	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	123363A01137	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01PN	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01NW	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	123363A01139	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01KE	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	123363A01336	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B10M01325	SFP+-10G-SR
PIC 1	REV 07	750-034624	EF6800	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJJ01SA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01QZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJH0217	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ01TE	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01KV	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJJ01MU	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01R0	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01TC	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ0364	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJD0GV3	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B10M03343	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AJJ01QJ	SFP+-10G-SR
LMB 0	REV 05	711-034381	EJ8490	Type-0 LMB
LMB 1	REV 04	711-035774	EJ8517	Type-1 LMB
LMB 2	REV 05	711-034381	EJ8489	Type-0 LMB
FPC 3	REV 07	750-032819	EG3637	FPC Type 5-3D
CPU	REV 09	711-030686	EG0150	SNG PMB
PIC 0	REV 08	750-035293	EF3657	1x100GE
Xcvr 0	REV 01	740-032210	C22CQNJ	CFP-100G-LR4
PIC 1	REV 10	750-034624	BBAN4098	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	B11J04902	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04891	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01MX	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04183	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11J04894	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04184	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04897	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04899	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ01TV	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04057	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ01M4	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04905	SFP+-10G-SR
LMB 0	REV 04	711-034381	EG1524	Type-0 LMB
LMB 1	REV 03	711-035774	EG0345	Type-1 LMB
LMB 2	REV 04	711-034381	EG1522	Type-0 LMB

FPC 5	REV 03	710-033871	BBAJ0768	FPC Type 4-ES
CPU	REV 11	710-016744	BBAH9342	ST-PMB2
PIC 0	REV 09	750-029262	EE6789	100GE
PIC 1	REV 03	750-034781	EE6655	100GE CFP
Xcvr 0	REV 01	740-032210	J11A22334	CFP-100G-LR4
BRIDGE 0	REV 03	711-029995	EE6572	100GE Bridge Board
MMB 0	REV 07	710-025563	BBAJ4657	ST-MMB2
MMB 1	REV 07	710-025563	BBAJ3073	ST-MMB2
FPC 6	REV 05	750-010153	EF4936	FPC Type 5-3D
CPU	REV 06	711-030686	EF4189	SNG PMB
PIC 0	REV 10	750-034624	BBAN4109	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	B11J04895	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04898	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11J04021	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04903	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11J04311	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04059	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04016	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04017	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B11J04887	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04297	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B11J04893	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04022	SFP+-10G-SR
PIC 1	REV 02	750-034624	EE3711	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJH033X	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01N0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01SV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ032L	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B10M01593	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJD0FF1	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01NU	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	123363A01305	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B10M00361	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01M7	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ032X	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AJJ01PG	SFP+-10G-SR
LMB 0	REV 04	711-034381	EF3838	Type-0 LMB
LMB 1	REV 03	711-035774	EF3821	Type-1 LMB
LMB 2	REV 04	711-034381	EF3834	Type-0 LMB
SPMB 0	REV 05	710-023321	ED1990	LCC Switch CPU
SPMB 1	REV 05	710-023321	EA2768	LCC Switch CPU
SIB 0	REV 02	711-036340	EF8802	SIB-HC-3D
SIB 1	REV 07	711-036340	EG2286	SIB-HC-3D
SIB 2	REV 07	711-036340	EG2252	SIB-HC-3D
SIB 3	REV 02	711-036340	EF1358	SIB-HC-3D
SIB 4	REV 02	711-036340	EF8806	SIB-HC-3D
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
-- Rev 2				
Fan Tray 2				Rear Fan Tray -- Rev 3

### show chassis hardware (T4000 Router with 16-GB Line Card Chassis (LCC) Routing Engine)

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

```
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN11BDF2CAHA	T1600
Midplane	REV 01	710-027486	ACAJ0774	T640 Backplane
FPM GBUS	REV 13	710-002901	BBAL6812	T640 FPM Board
FPM Display	REV 04	710-021387	BBAP2679	T1600 FPM Display
CIP	REV 06	710-002895	BBAP4758	T-series CIP

PEM 0	Rev 03	740-026384	XF86421	Power Entry Module 3x80
PEM 1	Rev 03	740-026384	XF86429	Power Entry Module 3x80
SCG 0	REV 18	710-003423	BBAP1896	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAN8659	T640 Sonet Clock Gen.
Routing Engine 0	REV 01	740-042243	737F-002238	RE-DUO-1800-16G
Routing Engine 1	REV 01	740-042243	737F-002403	RE-DUO-1800-16G
CB 1	REV 11	710-022597	EK4526	LCC Control Board
CB 1	REV 11	710-022597	EK4527	LCC Control Board
FPC 0	REV 05	710-033871	EK5644	FPC Type 4-ES
CPU	REV 11	710-016744	EK3428	ST-PMB2
PIC 0	REV 20	750-017405	EJ3041	4x 10GE (LAN/WAN) XFP
PIC 1	REV 17	750-026962	EH7536	10x10GE (LAN/WAN) SFPP
MMB 0	REV 07	710-025563	EK6039	ST-MMB2
MMB 1	REV 07	710-025563	EK6086	ST-MMB2
FPC 1	REV 05	710-033871	EK6583	FPC Type 4-ES
CPU	REV 11	710-016744	EK3401	ST-PMB2
PIC 0	REV 17	750-026962	EJ8948	10x10GE (LAN/WAN) SFPP
MMB 0	REV 07	710-025563	EK6202	ST-MMB2
MMB 1	REV 07	710-025563	EK6112	ST-MMB2
SPMB 1	REV 05	710-023321	EK4900	LCC Switch CPU
SIB 0	REV 11	710-013074	EK5958	SIB-I8-SF
SIB 1	REV 11	710-013074	EK4606	SIB-I8-SF
SIB 2	REV 11	710-013074	EK5971	SIB-I8-SF
SIB 3	REV 11	710-013074	EK4609	SIB-I8-SF
SIB 4	REV 11	710-013074	EK4602	SIB-I8-SF
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 2

#### show chassis hardware (T4000 Router with LSR FPC)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN1173A24AHA  T4000
FPC 3         REV     750-048373  AN7797         FPC Type 5-LSR
CPU          REV 10   711-030686  AN6649         SNG PMB
PIC 0         REV 07   750-034624  EF6830         12x10GE (LAN/WAN) SFPP

```

#### show chassis hardware clei-models (T4000 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Midplane      REV 01   710-027486  IPMJ700DRD     CHAS-BP-T1600-S
FPM Display   REV 01   710-021387  CRAFT-T1600-S  CRAFT-T1600-S
CIP           REV 06   710-002895  CIP-L-T640-S   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-T-S
SCG 1         REV 18   710-003423  SCG-T-S        SCG-T-S
Routing Engine 0 REV 05   740-026941  RE-DUO-C1800-8G-S RE-DUO-C1800-8G-S
Routing Engine 1 REV 06   740-026941  RE-DUO-C1800-8G-S RE-DUO-C1800-8G-S
CB 0          REV 09   710-022597  CB-LCC-S       CB-LCC-S
CB 1          REV 09   710-022597  CB-LCC-S       CB-LCC-S
FPC 3
PIC 0         REV 08   750-035293  XXXXXXXXBB     PF-1CGE-CFP
PIC 1         REV 10   750-034624  XXXXXXXXCC     PF-12XGE-SFPP
FPC 5         REV 03   710-033871  IPUCAMBCTD     T1600-FPC4-ES
PIC 1         REV 03   750-034781  IPUIBKLMAA     PD-1CE-CFP-FPC4
FPC 6
PIC 0         REV 10   750-034624  XXXXXXXXCC     PF-12XGE-SFPP

```

Fan Tray 0	FANTRAY-T-S
Fan Tray 1	FANTRAY-T4000-S
Fan Tray 2	FANTRAY-TXP-R-S

**show chassis hardware detail (T4000 Router)**

```

user@host> show chassis hardware detail
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis			JN1172F25AHA	T4000
Midplane	REV 01	710-027486	RC8355	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAE0927	T640 FPM Board
FPM Display	REV 01	710-021387	EF6764	T1600 FPM Display
CIP	REV 06	710-002895	BBAD9210	T-series CIP
PEM 0	REV 01	740-036442	VA00016	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAD7248	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAE3874	T640 Sonet Clock Gen.
Routing Engine 0	REV 05	740-026941	P737F-002248	RE-DUO-1800
ad0 3823 MB	SMART CF		2009121602A661576157	Compact Flash
ad1 59690 MB	STEC MACH-8 SSD		STM000103FDB	Disk 1
Routing Engine 1	REV 06	740-026941	P737F-002653	RE-DUO-1800
ad0 3823 MB	SMART CF		201011150153F52CF52C	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		2010110900150A880A88	Disk 1
CB 0	REV 09	710-022597	ED0295	LCC Control Board
CB 1	REV 09	710-022597	EA6050	LCC Control Board
FPC 0	REV 26	750-032819	EK1173	FPC Type 5-3D
CPU	REV 12	711-030686	EJ8584	SNG PMB
PIC 0	REV 07	750-034624	EF6837	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	123363A01145	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	123363A01147	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01P3	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B10M03256	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01M2	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	123363A01137	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01PN	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01NW	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	123363A01139	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01KE	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	123363A01336	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B10M01325	SFP+-10G-SR
PIC 1	REV 07	750-034624	EF6800	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJJ01SA	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01QZ	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJH0217	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ01TE	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	AJJ01KV	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJJ01MU	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01R0	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	AJJ01TC	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ0364	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJD0GV3	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B10M03343	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AJJ01QJ	SFP+-10G-SR
LMB 0	REV 05	711-034381	EJ8490	Type-0 LMB
LMB 1	REV 04	711-035774	EJ8517	Type-1 LMB
LMB 2	REV 05	711-034381	EJ8489	Type-0 LMB
FPC 3	REV 07	750-032819	EG3637	FPC Type 5-3D
CPU	REV 09	711-030686	EG0150	SNG PMB
PIC 0	REV 08	750-035293	EF3657	1x100GE
Xcvr 0	REV 01	740-032210	C22CQNJ	CFP-100G-LR4
PIC 1	REV 10	750-034624	BBAN4098	12x10GE (LAN/WAN) SFPP

Xcvr 0	REV 01	740-031980	B11J04902	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04891	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01MX	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04183	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11J04894	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04184	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04897	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04899	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	AJJ01TV	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04057	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ01M4	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04905	SFP+-10G-SR
LMB 0	REV 04	711-034381	EG1524	Type-0 LMB
LMB 1	REV 03	711-035774	EG0345	Type-1 LMB
LMB 2	REV 04	711-034381	EG1522	Type-0 LMB
FPC 5	REV 03	710-033871	BBAJ0768	FPC Type 4-ES
CPU	REV 11	710-016744	BBAH9342	ST-PMB2
PIC 0	REV 09	750-029262	EE6789	100GE
PIC 1	REV 03	750-034781	EE6655	100GE CFP
Xcvr 0	REV 01	740-032210	J11A22334	CFP-100G-LR4
BRIDGE 0	REV 03	711-029995	EE6572	100GE Bridge Board
MMB 0	REV 07	710-025563	BBAJ4657	ST-MMB2
MMB 1	REV 07	710-025563	BBAJ3073	ST-MMB2
FPC 6	REV 05	750-010153	EF4936	FPC Type 5-3D
CPU	REV 06	711-030686	EF4189	SNG PMB
PIC 0	REV 10	750-034624	BBAN4109	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	B11J04895	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11J04898	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	B11J04021	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	B11J04903	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B11J04311	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J04059	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	B11J04016	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11J04017	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B11J04887	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	B11J04297	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B11J04893	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	B11J04022	SFP+-10G-SR
PIC 1	REV 02	750-034624	EE3711	12x10GE (LAN/WAN) SFPP
Xcvr 0	REV 01	740-031980	AJH033X	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	AJJ01N0	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AJJ01SV	SFP+-10G-SR
Xcvr 3	REV 01	740-031980	AJJ032L	SFP+-10G-SR
Xcvr 4	REV 01	740-031980	B10M01593	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	AJD0FF1	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	AJJ01NU	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	123363A01305	SFP+-10G-SR
Xcvr 8	REV 01	740-031980	B10M00361	SFP+-10G-SR
Xcvr 9	REV 01	740-031980	AJJ01M7	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	AJJ032X	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AJJ01PG	SFP+-10G-SR
LMB 0	REV 04	711-034381	EF3838	Type-0 LMB
LMB 1	REV 03	711-035774	EF3821	Type-1 LMB
LMB 2	REV 04	711-034381	EF3834	Type-0 LMB
SPMB 0	REV 05	710-023321	ED1990	LCC Switch CPU
SPMB 1	REV 05	710-023321	EA2768	LCC Switch CPU
SIB 0	REV 02	711-036340	EF8802	SIB-HC-3D
SIB 1	REV 07	711-036340	EG2286	SIB-HC-3D
SIB 2	REV 07	711-036340	EG2252	SIB-HC-3D
SIB 3	REV 02	711-036340	EF1358	SIB-HC-3D
SIB 4	REV 02	711-036340	EF8806	SIB-HC-3D

Fan Tray 0  
Fan Tray 1  
-- Rev 2  
Fan Tray 2

Front Top Fan Tray  
Front Bottom Fan Tray  
  
Rear Fan Tray -- Rev 3

### show chassis hardware models (T4000 Router)

user@host> show chassis hardware models

Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 01	710-027486	RC8355	CHAS-BP-T1600-S
FPM Display	REV 01	710-021387	EF6764	CRAFT-T1600-S
CIP	REV 06	710-002895	BBAD9210	CIP-L-T640-S
PEM 0	REV 01	740-036442	VA00016	PWR-T-6-60-DC
SCG 0	REV 18	710-003423	BBAD7248	SCG-T-S
SCG 1	REV 18	710-003423	BBAE3874	SCG-T-S
Routing Engine 0	REV 05	740-026941	P737F-002248	RE-DUO-C1800-8G-S
Routing Engine 1	REV 06	740-026941	P737F-002653	RE-DUO-C1800-8G-S
CB 0	REV 09	710-022597	ED0295	CB-LCC-S
CB 1	REV 09	710-022597	EA6050	CB-LCC-S
FPC 3				
PIC 0	REV 08	750-035293	EF3657	PF-1CGE-CFP
PIC 1	REV 10	750-034624	BBAN4098	PF-12XGE-SFPP
FPC 5	REV 03	710-033871	BBAJ0768	T1600-FPC4-ES
PIC 1	REV 03	750-034781	EE6655	PD-1CE-CFP-FPC4
FPC 6				
PIC 0	REV 10	750-034624	BBAN4109	PF-12XGE-SFPP
Fan Tray 0				FANTRAY-T-S
Fan Tray 1				FANTRAY-T4000-S
Fan Tray 2				FAN-REAR-TXP-LCC

### show chassis hardware lcc (TX Matrix Router)

user@host> show chassis hardware lcc 0

lcc0-re0:

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			65751	T640
Midplane	REV 03	710-005608	RA1408	T640 Backplane
FPM GBUS	REV 09	710-002901	RA2784	T640 FPM Board
FPM Display	REV 05	710-002897	RA2825	FPM Display
CIP	REV 06	710-002895	HT0684	T Series CIP
PEM 0	Rev 11	740-002595	PM18483	Power Entry Module
PEM 1	Rev 11	740-002595	qb13984	Power Entry Module
SCG 0	REV 11	710-003423	HT0022	T640 Sonet Clock Gen.
Routing Engine 0	REV 13	740-005022	210865700363	RE-3.0 (RE-600)
CB 0	REV 03	710-007655	HW1195	Control Board (CB-T)
FPC 1	REV 05	710-007527	HM3245	FPC Type 2
CPU	REV 14	710-001726	HM1084	FPC CPU
PIC 0	REV 02	750-007218	AZ1112	2x OC-12 ATM2 IQ, SMIR
PIC 1	REV 02	750-007745	HG3462	4x OC-3 SONET, SMIR
PIC 2	REV 14	750-001901	BA5390	4x OC-12 SONET, SMIR
PIC 3	REV 09	750-008155	HS3012	2x G/E IQ, 1000 BASE
SFP 0		NON-JNPR	P1186TY	SFP-S
SFP 1	REV 01	740-007326	P11WLTF	SFP-SX
MMB 1	REV 02	710-005555	HL7514	MMB-288mbit
PPB 0	REV 04	710-003758	HM4405	PPB Type 2
PPB 1	REV 04	710-003758	AV1960	PPB Type 2
FPC 2	REV 08	710-010154	HZ3578	E-FPC Type 3

CPU	REV 05	710-010169	HZ3219	FPC CPU-Enhanced
PIC 0	REV 02	750-009567	HX2882	1x 10GE(LAN), XENPAK
SFP 0	REV 01	740-009898	USC202U709	XENPAK-LR
PIC 1	REV 03	750-003336	HJ9954	4x OC-48 SONET, SMSR
PIC 2	REV 01	750-004535	HC0235	1x OC-192 SM SR1
PIC 3	REV 07	750-007141	HX1699	10x 1GE(LAN), 1000 BASE
SFP 0	REV 01	740-007326	2441042	SFP-SX
SFP 1	REV 01	740-007326	2441027	SFP-SX
MMB 0	REV 03	710-010171	HV2365	MMB-5M3-288mbit
MMB 1	REV 03	710-010171	HZ3888	MMB-5M3-288mbit
SPMB 0	REV 09	710-003229	HW5245	T Series Switch CPU
SIB 3	REV 07	710-005781	HR5927	SIB-L8-F16
B Board	REV 06	710-005782	HR5971	SIB-L8-F16 (B)
SIB 4	REV 07	710-005781	HR5903	SIB-L8-F16
B Board	REV 06	710-005782	HZ5275	SIB-L8-F16 (B)

### show chassis hardware scc (TX Matrix Router)

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

#### Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis				TX Matrix
Midplane	REV 04	710-004396	RB0014	SCC Midplane
FPM GBUS	REV 04	710-004617	HW9141	SCC FPM Board
FPM Display	REV 04	710-004619	HS5950	SCC FPM
CIP 0	REV 01	710-010218	HV9151	SCC CIP
CIP 1	REV 01	710-010218	HV9152	SCC CIP
PEM 1	Rev 11	740-002595	QB13977	Power Entry Module
Routing Engine 0	REV 05	740-008883	P11123900153	RE-4.0 (RE-1600)
CB 0	REV 01	710-011709	HR5964	Control Board (CB-TX)
SPMB 0	REV 09	710-003229	HW5293	T Series Switch CPU
SIB 3				
SIB 4	REV 01	710-005839	HW1177	SIB-S8-F16
B Board	REV 01	710-005840	HW1202	SIB-S8-F16 (B)

### show chassis hardware (T1600 Router)

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

#### Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			B2703	T1600
Midplane	REV 03	710-005608	RC4137	T640 Backplane
FPM GBUS	REV 10	710-002901	DT7062	T640 FPM Board
FPM Display	REV 05	710-002897	DS3067	FPM Display
CIP	REV 06	710-002895	DT3386	T-series CIP
PEM 0	Rev 07	740-017906	UA26344	Power Entry Module 3x80
PEM 1	Rev 18	740-002595	UF38441	Power Entry Module
SCG 0	REV 15	710-003423	DV0941	T640 Sonet Clock Gen.
Routing Engine 0	REV 08	740-014082	9009014502	RE-A-2000
Routing Engine 1	REV 07	740-014082	9009009591	RE-A-2000
CB 0	REV 05	710-007655	JA9360	Control Board (CB-T)
CB 1	REV 03	710-017707	DT3251	Control Board (CB-T)
FPC 0	REV 07	710-013558	DR4253	E2-FPC Type 2
CPU	REV 05	710-013563	DS3902	FPC CPU-Enhanced
PIC 0	REV 01	750-010618	CB5446	4x G/E SFP, 1000 BASE
Xcvr 0	REV 01	740-011613	P9F11CW	SFP-SX
Xcvr 1	REV 01	740-011613	P9F15C2	SFP-SX
Xcvr 2	REV 01	740-011782	PB94K0L	SFP-SX

PIC 1	REV 06	750-001900	HB6399	1x OC-48 SONET, SMSR
PIC 2	REV 14	750-001901	AP1092	4x OC-12 SONET, SMIR
PIC 3	REV 07	750-001900	AR8275	1x OC-48 SONET, SMSR
MMB 1	REV 07	710-010171	DS1524	MMB-5M3-288mbit
FPC 1	REV 06	710-013553	DL9067	E2-FPC Type 1
CPU	REV 04	710-013563	DM1685	FPC CPU-Enhanced
PIC 0	REV 08	750-001072	AB1688	1x G/E, 1000 BASE-SX
PIC 1	REV 10	750-012266	JX5519	4x 1GE(LAN), IQ2
Xcvr 0	REV 01	740-011613	AM0812S8UK6	SFP-SX
Xcvr 2	REV 01	740-011613	AM0812S8UK1	SFP-SX
Xcvr 3	REV 01	740-011782	P8N1YHG	SFP-SX
PIC 2	REV 22	750-005634	DP0083	1x CHOC12 IQ SONET, SMIR
MMB 1	REV 07	710-008923	DN1862	MMB 3M 288-bit
FPC 2	REV 01	710-005548	HJ9899	FPC Type 3
CPU	REV 06	710-001726	HC0586	FPC CPU
PIC 0	REV 16	750-007141	NC9660	10x 1GE(LAN), 1000 BASE
Xcvr 0	REV 01	740-011613	AM0812S8XAR	SFP-SX
Xcvr 1	REV 01	740-011782	P920E7B	SFP-SX
Xcvr 2	REV 01	740-011613	AM0812S8XAU	SFP-SX
Xcvr 4	REV 01	740-011613	AM0812S8XAK	SFP-SX
Xcvr 5	REV 01	740-011613	AM0812S8XAA	SFP-SX
Xcvr 6	REV 01	740-011613	PAJ4NKY	SFP-SX
Xcvr 7	REV 01	740-011613	AM0812S8UJW	SFP-SX
Xcvr 8	REV 01	740-011782	PB81X89	SFP-SX
Xcvr 9	REV 01	740-011613	AM0812S8UJX	SFP-SX
PIC 1	REV 06	750-015217	DK3280	8x 1GE(TYPE3), IQ2
Xcvr 0	REV 01	740-011782	P8P0A3T	SFP-SX
Xcvr 1	REV 01	740-013111	5090002	SFP-T
Xcvr 2	REV 01	740-011613	AM0814S93BQ	SFP-SX
Xcvr 4		NON-JNPR	PDE0FAN	SFP-SX
Xcvr 5	REV 01	740-011782	P8Q20XY	SFP-SX
Xcvr 6	REV 01	740-011613	AM0812S8UJV	SFP-SX
Xcvr 7	REV 01	740-011613	AM0812S8UP7	SFP-SX
PIC 2	REV 05	750-004695	HT4383	1x Tunnel
PIC 3	REV 17	750-009553	RL0204	4x OC-48 SONET
Xcvr 0	REV 01	740-011785	PDS3T23	SFP-SR
Xcvr 1	REV 01	740-011785	P6Q0F3E	SFP-SR
MMB 0	REV 03	710-004047	HD5843	MMB-288mbit
MMB 1	REV 03	710-004047	HE3208	MMB-288mbit
PPB 0	REV 02	710-002845	HA4524	PPB Type 3
PPB 1	REV 02	710-002845	HA4766	PPB Type 3
FPC 3	REV 01	710-010154	HR0863	E-FPC Type 3
CPU	REV 01	710-010169	HN3422	FPC CPU-Enhanced
PIC 0	REV 07	750-012793	WF5096	1x 10GE(LAN/WAN) IQ2
Xcvr 0		NON-JNPR	M64294TP	XFP-10G-LR
PIC 1	REV 25	750-007141	DV2127	10x 1GE(LAN), 1000 BASE
Xcvr 0	REV 01	740-011613	PFA6LTJ	SFP-SX
Xcvr 1	REV 01	740-011782	P9P0XV4	SFP-SX
Xcvr 2	REV 01	740-011782	P9M0TNX	SFP-SX
Xcvr 4	REV 01	740-011782	P9B0TTP	SFP-SX
Xcvr 5		NON-JNPR	PBS4LED	SFP-SX
PIC 2	REV 17	750-009553	RL0212	4x OC-48 SONET
Xcvr 0	REV 01	740-011785	PDS3T8G	SFP-SR
PIC 3	REV 32	750-003700	DL1279	1x OC-192 12xMM VSR
MMB 0	REV 01	710-010171	HR0821	MMB-288mbit
MMB 1	REV 01	710-010171	HR0818	MMB-288mbit
FPC 4	REV 16	710-013037	EB4919	FPC Type 4-ES
CPU	REV 09	710-016744	BBAA4382	ST-PMB2



PIC 0	REV 03	711-029996	EB1569	100GE
PIC 1	REV 05	711-029999	EB9983	100GE CFP
Xcvr 0	REV 0	740-032210	J10G80746	CFP-100G-LR4
BRIDGE 0	REV 02	711-029995	EB2235	100GE Bridge Board
MMB 0	REV 04	710-025563	BBA7112	ST-MMB2
MMB 1	REV 04	710-025563	BBA7149	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			JN113186EAHB	TXP
Midplane	REV 05	710-022574	TS3822	SFC Midplane
FPM Display	REV 03	710-024027	DW4701	TXP FPM Display
CIP 0	REV 05	710-023792	DW7998	TXP CIP
CIP 1	REV 05	710-023792	DW7999	TXP CIP
PEM 0	Rev 04	740-027463	UM26367	Power Entry Module
PEM 1	Rev 04	740-027463	UM26346	Power Entry Module
Routing Engine 0	REV 06	740-026942	737A-1081	RE-DUO-2600
Routing Engine 1	REV 06	740-026942	737A-1043	RE-DUO-2600
CB 0	REV 05	710-022606	DW4435	SFC Control Board
CB 1	REV 09	710-022606	DW6100	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 04	750-024564	DW5764	F13 SIB
B Board	REV 03	710-023431	DW9053	F13 SIB Mezz
SIB F13 3	REV 04	750-024564	DW5785	F13 SIB
B Board	REV 03	710-023431	DW9030	F13 SIB Mezz
SIB F13 6				
SIB F13 8	REV 04	750-024564	DW5752	F13 SIB
B Board	REV 03	710-023431	DW9051	F13 SIB Mezz
SIB F13 11	REV 04	750-024564	DW5782	F13 SIB
B Board	REV 03	710-023431	DW9058	F13 SIB Mezz
SIB F13 12	REV 03	750-024564	DT9466	F13 SIB
B Board	REV 02	710-023431	DT6556	F13 SIB Mezz
SIB F2S 0/0	REV 05	710-022603	DW7898	F2S SIB
B Board	REV 05	710-023787	DW7625	F2S SIB Mezz
SIB F2S 0/2	REV 05	710-022603	DW7811	F2S SIB
B Board	REV 05	710-023787	DW7550	F2S SIB Mezz
SIB F2S 0/4	REV 04	710-022603	DW4873	F2S SIB
B Board	REV 05	710-023787	DW8509	F2S SIB Mezz
SIB F2S 0/6	REV 04	710-022603	DW4867	F2S SIB
B Board	REV 05	710-023787	DW8472	F2S SIB Mezz
SIB F2S 1/0	REV 04	710-022603	DW4871	F2S SIB
B Board	REV 05	710-023787	DW8497	F2S SIB Mezz
SIB F2S 1/2	REV 05	710-022603	DW7868	F2S SIB
B Board	REV 05	710-023787	DW7551	F2S SIB Mezz
SIB F2S 1/4	REV 04	710-022603	DW4854	F2S SIB
B Board	REV 05	710-023787	DW8496	F2S SIB Mezz
SIB F2S 1/6	REV 05	710-022603	DW7889	F2S SIB
B Board	REV 05	710-023787	DW7496	F2S SIB Mezz
SIB F2S 2/0	REV 04	710-022603	DW4852	F2S SIB
B Board	REV 05	710-023787	DW8498	F2S SIB Mezz
SIB F2S 2/2	REV 04	710-022603	DW4845	F2S SIB
B Board	REV 05	710-023787	DW8457	F2S SIB Mezz
SIB F2S 2/4	REV 05	710-022603	DW7802	F2S SIB
B Board	REV 05	710-023787	DW7562	F2S SIB Mezz
SIB F2S 2/6	REV 04	710-022603	DW4822	F2S SIB
B Board	REV 05	710-023787	DW8467	F2S SIB Mezz
SIB F2S 3/0	REV 05	710-022603	DW7815	F2S SIB
B Board	REV 05	710-023787	DW7518	F2S SIB Mezz
SIB F2S 3/2	REV 03	710-022603	DV0068	F2S SIB
B Board	REV 03	710-023787	DT9974	F2S SIB Mezz
SIB F2S 3/4	REV 05	710-022603	DW7874	F2S SIB
B Board	REV 05	710-023787	DW7601	F2S SIB Mezz

SIB F2S 3/6	REV 03	710-022603	DV0033	F2S SIB
B Board	REV 03	710-023787	DT9969	F2S SIB Mezz
SIB F2S 4/0	REV 03	710-022603	DV0043	F2S SIB
B Board	REV 03	710-023787	DT9948	F2S SIB Mezz
SIB F2S 4/2	REV 05	710-022603	DW5446	F2S SIB
B Board	REV 05	710-023787	DW7611	F2S SIB Mezz
SIB F2S 4/4	REV 04	710-022603	DW4826	F2S SIB
B Board	REV 05	710-023787	DW8458	F2S SIB Mezz
SIB F2S 4/6	REV 03	710-022603	DV0026	F2S SIB
B Board	REV 03	710-023787	DT9963	F2S SIB Mezz
Fan Tray 0	REV 02	760-024497	DR8290	Front Fan Tray
Fan Tray 1	REV 02	760-024497	DR8293	Front Fan Tray
Fan Tray 2	REV 05	760-024502	DR8280	Rear Fan Tray
Fan Tray 3				
Fan Tray 4	REV 05	760-024502	DR8276	Rear Fan Tray
Fan Tray 5	REV 02	760-024502	DP5643	Rear Fan Tray

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lcc0-re0:
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Hardware inventory:
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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

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lcc1-re0:
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Hardware inventory:
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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	AA0748N1H25	XFP-10G-LR
MMB 0	REV 03	710-010842	HY7601	ST-MMB
FPC 1	REV 16	710-013037	BBAA7398	FPC Type 4-ES
CPU	REV 09	710-016744	BBAA2329	ST-PMB2
PIC 0	REV 03	711-029996	EB1575	100GE
PIC 1	REV 06	750-034781	EB9980	100GE CFP
MMB 0	REV 04	710-025563	BBAA5325	ST-MMB2
MMB 1	REV 04	710-025563	BBAA5444	ST-MMB2
FPC 2	REV 16	710-013037	BBAA7185	FPC Type 4-ES
CPU	REV 09	710-016744	BBAA3522	ST-PMB2
PIC 0	REV 03	711-029996	EB1557	100GE
PIC 1	REV 05	750-034781	EB4660	100GE CFP
Xcvr 0	REV 0	740-032210	J10F73666	CFP-100G-LR4
BRIDGE 0	REV 02	711-029995	EB2237	100GE Bridge Board
MMB 0	REV 04	710-025563	BBAA5347	ST-MMB2
MMB 1	REV 04	710-025563	BBAA5401	ST-MMB2
FPC 3	REV 10	710-021534	DZ0941	FPC Type 1-ES
CPU	REV 09	710-016744	DY6364	ST-PMB2
PIC 0	REV 13	750-012266	DK9192	4x 1GE(LAN), IQ2
Xcvr 0	REV 01	740-011613	AM0812S8WVD	SFP-SX
Xcvr 1		NON-JNPR	PDD63Q4	SFP-SX
Xcvr 2		NON-JNPR	PDE4G54	SFP-SX
Xcvr 3		NON-JNPR	PD40MAG	SFP-SX
PIC 1	REV 01	750-007641	HJ2003	1x G/E IQ, 1000 BASE
Xcvr 0	REV 01	740-011613	AM0812S8WVG	SFP-SX
PIC 3	REV 17	750-007444	JB6873	1x CHSTM1 IQ SDH, SMIR
MMB 0	REV 04	710-025563	DZ0281	ST-MMB2
FPC 4	REV 06	710-013035	DK0614	FPC Type 3-ES
CPU	REV 07	710-016744	DK1616	ST-PMB2
PIC 0	REV 22	750-007141	DM1870	10x 1GE(LAN), 1000 BASE
Xcvr 0	REV 01	740-011782	PCL3UKW	SFP-SX
Xcvr 1	REV 01	740-011782	P7E0T73	SFP-SX
Xcvr 2	REV 01	740-007326	P4T0WLR	SFP-SX
Xcvr 3	REV 01	740-011782	PAR1LRL	SFP-SX
Xcvr 4	REV 01	740-011782	P9M0U3Z	SFP-SX
Xcvr 5	REV 01	740-011782	P9M0U0C	SFP-SX
Xcvr 6	REV 01	740-011782	P9M0TLG	SFP-SX
Xcvr 7	REV 01	740-011782	P9M0U0F	SFP-SX

Xcvr 8	REV 01	740-011613	PFA6LAP	SFP-SX
Xcvr 9	REV 01	740-011782	PCH2POU	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)

```
user@host> show chassis hardware sfc 0
sfc0-re0:
```

```
-----
Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN112F007AHB	TXP
Midplane	REV 05	710-022574	TS4027	SFC Midplane
FPM Display	REV 03	710-024027	DX0282	TXP FPM Display
CIP 0	REV 04	710-023792	DW4889	TXP CIP

CIP 1	REV 04	710-023792	DW4887	TXP CIP
PEM 0	Rev 07	740-027463	UM26368	Power Entry Module
Routing Engine 0	REV 01	740-026942	737A-1064	SFC RE
Routing Engine 1	REV 01	740-026942	737A-1082	SFC RE
CB 0	REV 09	710-022606	DW6099	SFC Control Board
CB 1	REV 09	710-022606	DW6096	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 04	710-022600	DX0841	F13 SIB
B Board	REV 03	710-023431	DX0966	F13 SIB Mezz
SIB F13 1	REV 04	750-024564	DW5776	F13 SIB
B Board	REV 03	710-023431	DW9028	F13 SIB
SIB F13 3	REV 04	750-024564	DW5762	F13 SIB
B Board	REV 03	710-023431	DW9059	F13 SIB
SIB F13 4	REV 04	750-024564	DW5797	F13 SIB
B Board	REV 03	710-023431	DW9041	F13 SIB
SIB F13 6	REV 04	750-024564	DW5770	F13 SIB
B Board	REV 03	710-023431	DW9079	F13 SIB Mezz
SIB F13 7	REV 04	750-024564	DW5758	F13 SIB
B Board	REV 03	710-023431	DW9047	F13 SIB
SIB F13 8	REV 04	750-024564	DW5761	F13 SIB
B Board	REV 03	710-023431	DW9043	F13 SIB Mezz
SIB F13 9	REV 04	750-024564	DW5754	F13 SIB
B Board	REV 03	710-023431	DW9078	F13 SIB Mezz
SIB F13 11	REV 04	710-022600	DX0826	F13 SIB
B Board	REV 03	710-023431	DX0967	F13 SIB Mezz
SIB F13 12	REV 04	750-024564	DW5794	F13 SIB
B Board	REV 03	710-023431	DW9044	F13 SIB Mezz
SIB F2S 0/0	REV 05	710-022603	DW7897	F2S SIB
B Board	REV 05	710-023787	DW7657	NEO PMB
SIB F2S 0/2	REV 05	710-022603	DW7833	F2S SIB
B Board	REV 05	710-023787	DW7526	NEO PMB
SIB F2S 0/4	REV 05	710-022603	DW7875	F2S SIB
B Board	REV 05	710-023787	DW7588	NEO PMB
SIB F2S 0/6	REV 05	710-022603	DW7860	F2S SIB
B Board	REV 05	710-023787	DW7589	NEO PMB
SIB F2S 1/0	REV 04	710-022603	DW4820	F2S SIB
B Board	REV 05	710-023787	DW8510	NEO PMB
SIB F2S 1/2	REV 05	710-022603	DW7849	F2S SIB
B Board	REV 05	710-023787	DW7525	NEO PMB
SIB F2S 1/4	REV 05	710-022603	DW7927	F2S SIB
B Board	REV 05	710-023787	DW7556	F2S SIB Mezz
SIB F2S 1/6	REV 05	710-022603	DW7866	F2S SIB
B Board	REV 05	710-023787	DW7651	NEO PMB
SIB F2S 2/0	REV 05	710-022603	DW7880	F2S SIB
B Board	REV 05	710-023787	DW7523	NEO PMB
SIB F2S 2/2	REV 05	710-022603	DW7895	F2S SIB
B Board	REV 05	710-023787	DW7591	NEO PMB
SIB F2S 2/4	REV 05	710-022603	DW7907	F2S SIB
B Board	REV 05	710-023787	DW7590	NEO PMB
SIB F2S 2/6	REV 05	710-022603	DW7785	F2S SIB
B Board	REV 05	710-023787	DW7524	NEO PMB
SIB F2S 3/0	REV 05	710-022603	DW7782	F2S SIB
B Board	REV 05	710-023787	DW7634	NEO PMB
SIB F2S 3/2	REV 05	710-022603	DW7793	F2S SIB
B Board	REV 05	710-023787	DW7548	NEO PMB
SIB F2S 3/4	REV 05	710-022603	DW7779	F2S SIB
B Board	REV 05	710-023787	DW7587	NEO PMB
SIB F2S 3/6	REV 05	710-022603	DW7930	F2S SIB
B Board	REV 05	710-023787	DW7505	NEO PMB
SIB F2S 4/0	REV 05	710-022603	DW7867	F2S SIB

B Board	REV 05	710-023787	DW7656	NEO PMB
SIB F2S 4/2	REV 05	710-022603	DW7917	F2S SIB
B Board	REV 05	710-023787	DW7640	NEO PMB
SIB F2S 4/4	REV 05	710-022603	DW7929	F2S SIB
B Board	REV 05	710-023787	DW7643	NEO PMB
SIB F2S 4/6	REV 05	710-022603	DW7870	F2S SIB
B Board	REV 05	710-023787	DW7635	NEO PMB
Fan Tray 0	REV 06	760-024497	DV7831	Front Fan Tray
Fan Tray 1	REV 06	760-024497	DV9614	Front Fan Tray
Fan Tray 2	REV 06	760-024502	DV9618	Rear Fan Tray
Fan Tray 3	REV 06	760-024502	DV9616	Rear Fan Tray
Fan Tray 4	REV 06	760-024502	DV7807	Rear Fan Tray
Fan Tray 5	REV 06	760-024502	DV7828	Rear Fan Tray

### show chassis hardware extensive (TX Matrix Plus Router)

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

#### ----- Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN112F007AHB	TXP
Jedec Code:	0x7fb0	EEPROM Version:	0x02	
		S/N:	JN112F007AHB	
Assembly ID:	0x052c	Assembly Version:	00.00	
Date:	00-00-0000	Assembly Flags:	0x00	
ID:	TXP			

#### Board Information Record:

Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

#### I2C Hex Data:

Address 0x00: 7f b0 02 ff 05 2c 00 00 00 00 00 00 00 00 00 00  
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Address 0x20: 4a 4e 31 31 32 46 30 30 37 41 48 42 00 00 00 00  
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Midplane	REV 05	710-022574	TS4027	SFC Midplane
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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

FPM Display	REV 03	710-024027	DX0282	TXP FPM Display
-------------	--------	------------	--------	-----------------

Jedec Code:	0x7fb0	EEPROM Version:	0x01
P/N:	710-024027	S/N:	DX0282
Assembly ID:	0x096c	Assembly Version:	01.03
Date:	02-10-2009	Assembly Flags:	0x00



```

Version:          REV 03
ID: TXP FPM Display          FRU Model Number:  CRAFT-TXP
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 6c 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 32 34 30 32 37 00 00
  Address 0x20: 53 2f 4e 20 44 58 30 32 38 32 00 00 00 0a 02 07
  Address 0x30: d9 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 52 41 46 54 2d 54 58 50 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CIP 0              REV 04      710-023792    DW4889          TXP CIP
Jedec Code:       0x7fb0          EEPROM Version:  0x01
P/N:              710-023792      S/N:             DW4889
Assembly ID:      0x0969          Assembly Version: 01.04
Date:             01-26-2009      Assembly Flags:  0x00
Version:          REV 04
ID: TXP CIP              FRU Model Number:  CIP-TXP
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```

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

```

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

```

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Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 05	710-022574		CHAS-BP-TXP-S
FPM Display	REV 03	710-024027		CRAFT-TXP-S
CIP 0	REV 05	710-023792		CIP-TXP-S
CIP 1	REV 05	710-023792		CIP-TXP-S
PEM 0	Rev 04	740-027463	IPUPAFGKTA	PWR-TXP-7-60-DC
PEM 1	Rev 04	740-027463	IPUPAFGKTA	PWR-TXP-7-60-DC
Routing Engine 0	REV 06	740-026942		RE-DUO-C2600-16G-S
Routing Engine 1	REV 06	740-026942		RE-DUO-C2600-16G-S
CB 0	REV 05	710-022606		CB-TXP-S
CB 1	REV 09	710-022606		CB-TXP-S
SIB F13 0	REV 04	750-024564		SIB-TXP-F13
SIB F13 3	REV 04	750-024564		SIB-TXP-F13
SIB F13 8	REV 04	750-024564		SIB-TXP-F13
SIB F13 11	REV 04	750-024564		SIB-TXP-F13
SIB F13 12	REV 03	750-024564		SIB-TXP-F13
SIB F2S 0/0	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 0/2	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 0/4	REV 04	710-022603		SIB-TXP-F2S-S
SIB F2S 0/6	REV 04	710-022603		SIB-TXP-F2S-S
SIB F2S 1/0	REV 04	710-022603		SIB-TXP-F2S-S
SIB F2S 1/2	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 1/4	REV 04	710-022603		SIB-TXP-F2S-S
SIB F2S 1/6	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 2/0	REV 04	710-022603		SIB-TXP-F2S-S
SIB F2S 2/2	REV 04	710-022603		SIB-TXP-F2S-S
SIB F2S 2/4	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 2/6	REV 04	710-022603		SIB-TXP-F2S-S
SIB F2S 3/0	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 3/2	REV 03	710-022603		SIB-TXP-F2S-S
SIB F2S 3/4	REV 05	710-022603		SIB-TXP-F2S-S
SIB F2S 3/6	REV 03	710-022603		SIB-TXP-F2S-S

SIB F2S 4/0	REV 03	710-022603	SIB-TXP-F2S-S
SIB F2S 4/2	REV 05	710-022603	SIB-TXP-F2S-S
SIB F2S 4/4	REV 04	710-022603	SIB-TXP-F2S-S
SIB F2S 4/6	REV 03	710-022603	SIB-TXP-F2S-S
Fan Tray 0	REV 02	760-024497	FANTRAY-TXP-H-S
Fan Tray 1	REV 02	760-024497	FANTRAY-TXP-H-S
Fan Tray 2	REV 05	760-024502	FANTRAY-TXP-V-S
Fan Tray 3			
Fan Tray 4	REV 05	760-024502	FANTRAY-TXP-V-S
Fan Tray 5	REV 02	760-024502	FANTRAY-TXP-V-S

lcc0-re0:

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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

lcc1-re0:

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Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
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Midplane	REV 04	710-017247	IPUPAC8KTA	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		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)

```
user@host> show chassis hardware detail
sfc0-re0:
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Hardware inventory:
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Item	Version	Part number	Serial number	Description
Chassis			JN111B023AHB	TXP
Midplane	REV 01	710-022574	TR7990	SFC Midplane
FPM Display	REV 03	710-024027	DW4699	TXP FPM Display
CIP 0	REV 01	710-023792	DR1437	TXP CIP
CIP 1	REV 02	710-023792	DS4564	TXP CIP
PEM 0	Rev 07	740-027463	UM26360	Power Entry Module
Routing Engine 0	REV 01	740-026942	737A-1024	SFC RE
ad0	3887 MB	SMART CF	200811050193CEB1CEB1	Compact Flash
ad1	30533 MB	SAMSUNG MCBQE32G8MPP-0V	SY814A0762	Disk 1
Routing Engine 1	REV 01	740-026942	737A-1024	SFC RE

ad0	3887 MB	SMART CF		20081105004C19A019A0	Compact Flash
ad1	30533 MB	SAMSUNG	MCBQE32G8MPP-0V	SY814A0794	Disk 1
CB 0		REV 03	710-022606	DR7134	SFC Control Board
CB 1		REV 01	710-022606	DP8890	SFC Control Board
SPMB 0			BUILTIN		SFC Switch CPU
SPMB 1			BUILTIN		SFC Switch CPU
SIB F13 0		REV 03	750-024564	DT9478	F13 SIB
B Board		REV 02	710-023431	DT6554	F13 SIB
SIB F13 1		REV 03	750-024564	DT9454	F13 SIB
B Board		REV 02	710-023431	DT6551	F13 SIB
SIB F2S 0/0		REV 02	710-022603	DT2838	F2S SIB
B Board		REV 02	710-023787	DT1725	NEO PMB
SIB F2S 0/2		REV 02	710-022603	DT2824	F2S SIB
B Board		REV 02	710-023787	DT1706	NEO PMB
SIB F2S 0/4		REV 02	710-022603	DT2822	F2S SIB
B Board		REV 02	710-023787	DT1696	NEO PMB
SIB F2S 0/6		REV 02	710-022603	DT2823	F2S SIB
B Board		REV 02	710-023787	DT1717	NEO PMB
SIB F2S 1/0		REV 03	710-022603	DV0059	F2S SIB
B Board		REV 03	710-023787	DT9942	NEO PMB
SIB F2S 1/2		REV 02	710-022603	DT2826	F2S SIB
B Board		REV 02	710-023787	DT1713	NEO PMB
SIB F2S 1/4		REV 03	710-022603	DV0092	F2S SIB
B Board		REV 03	710-023787	DV0000	NEO PMB
SIB F2S 1/6		REV 03	710-022603	DV0079	F2S SIB
B Board		REV 03	710-023787	DT9972	NEO PMB
SIB F2S 2/0		REV 03	710-022603	DV0100	F2S SIB
B Board		REV 03	710-023787	DT9925	NEO PMB
SIB F2S 2/2		REV 03	710-022603	DV0050	F2S SIB
B Board		REV 03	710-023787	DV0005	NEO PMB
SIB F2S 2/4		REV 03	710-022603	DV0097	F2S SIB
B Board		REV 03	710-023787	DT9936	NEO PMB
Fan Tray 0		REV 02	760-024497	DR8286	Front Fan Tray
Fan Tray 1		REV 06	760-024497	DV9624	Front Fan Tray
Fan Tray 2		REV 02	760-024502	DR8259	Rear Fan Tray
Fan Tray 3		REV 02	760-024502	DR8270	Rear Fan Tray
Fan Tray 4		REV 02	760-024502	DR8284	Rear Fan Tray
Fan Tray 5		REV 06	760-024502	DV7813	Rear Fan Tray

lcc0-re0:

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Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1101F27AHA	T1600
Midplane	REV 04	710-017247	RC5317	T Series Backplane
FPM GBUS	REV 10	710-002901	DS8197	T640 FPM Board
FPM Display	REV 01	710-021387	DS6433	T1600 FPM Display
CIP	REV 06	710-002895	DS1493	T Series CIP
PEM 0	Rev 08	740-017906	UD26601	Power Entry Module 3x80
SCG 0	REV 15	710-003423	DP5847	T640 Sonet Clock Gen.
SCG 1	REV 15	710-003423	DR0924	T640 Sonet Clock Gen.
Routing Engine 0	REV 01	740-026942	737F-1024	LCC RE
ad0	3887 MB	SMART CF	2008110502B63E513E51	Compact Flash
ad1	30533 MB	SAMSUNG	MCBQE32G8MPP-0V SY814A1208	Disk 1
Routing Engine 1	REV 01	740-026942	737F-1024	LCC RE
ad0	3887 MB	SMART CF	2008110500F9A8A8A8A8	Compact Flash
ad1	30533 MB	SAMSUNG	MCBQE32G8MPP-0V SY814A1076	Disk 1
CB 0	REV 05	710-022597	DV4264	LCC Control Board
CB 1	REV 03	710-022597	DP8558	LCC Control Board
FPC 0	REV 14	710-013037	DS9967	FPC Type 4-ES
CPU	REV 08	710-016744	DS3989	ST-PMB2

PIC 0	REV 12	750-013198	DL7506	1x Tunnel
PIC 1	REV 12	750-013198	DL7505	1x Tunnel
MMB 0	REV 01	710-025563	DS8524	ST-MMB2
MMB 1	REV 01	710-025563	DS8373	ST-MMB2
FPC 1	REV 14	710-013037	DT0027	FPC Type 4-ES
CPU	REV 09	710-016744	DS7684	ST-PMB2
PIC 0	REV 12	750-013198	DL7512	1x Tunnel
PIC 1	REV 12	750-013198	DL7498	1x Tunnel
MMB 0	REV 01	710-025563	DS8494	ST-MMB2
MMB 1	REV 01	710-025563	DS8436	ST-MMB2
SPMB 0	REV 04	710-023321	DV3867	LCC Switch CPU
SPMB 1	REV 02	710-023321	DP0238	LCC Switch CPU
SIB 0	REV 06	710-022594	DT8268	LCC SIB
B Board	REV 06	710-023185	DT5791	LCC SIB Mezz
SIB 1	REV 06	710-022594	DT8261	LCC SIB
B Board	REV 06	710-023185	DT5769	LCC SIB Mezz
SIB 2	REV 04	710-022594	DS2315	LCC SIB
B Board	REV 06	710-023185	DT5788	LCC SIB Mezz
SIB 3	REV 06	710-022594	DT8253	LCC SIB
B Board	REV 06	710-023185	DT5811	LCC SIB Mezz
SIB 4	REV 06	710-022594	DT8248	LCC SIB
B Board	REV 06	710-023185	DT5812	LCC SIB Mezz
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray

#### show chassis hardware models (TX Matrix Plus Router)

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user@host> show chassis hardware models
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	yyyyyyyyyyyyyyyyyyyy
Routing Engine 0	REV 01	740-026942	737A-1064	RE-TXP-SFC-DU0-2600-16G
Routing Engine 1	REV 01	740-026942	737A-1082	RE-TXP-SFC-DU0-2600-16G
CB 0	REV 09	710-022606	DW6099	CB-TXP
CB 1	REV 09	710-022606	DW6096	CB-TXP
SIB F13 1	REV 04	750-024564	DW5776	SIB-TXP-F13
SIB F13 3	REV 04	750-024564	DW5762	SIB-TXP-F13
SIB F13 4	REV 04	750-024564	DW5797	SIB-TXP-F13
SIB F13 6	REV 04	750-024564	DW5770	SIB-TXP-F13
SIB F13 7	REV 04	750-024564	DW5758	SIB-TXP-F13
SIB F13 8	REV 04	750-024564	DW5761	SIB-TXP-F13
SIB F13 9	REV 04	750-024564	DW5754	SIB-TXP-F13
SIB F13 12	REV 04	750-024564	DW5794	SIB-TXP-F13
SIB F2S 0/0	REV 05	710-022603	DW7897	
SIB F2S 0/2	REV 05	710-022603	DW7833	
SIB F2S 0/4	REV 05	710-022603	DW7875	
SIB F2S 0/6	REV 05	710-022603	DW7860	
SIB F2S 1/0	REV 04	710-022603	DW4820	
SIB F2S 1/2	REV 05	710-022603	DW7849	
SIB F2S 1/4	REV 05	710-022603	DW7927	SIB-TXP-F2S
SIB F2S 1/6	REV 05	710-022603	DW7866	
SIB F2S 2/0	REV 05	710-022603	DW7880	
SIB F2S 2/2	REV 05	710-022603	DW7895	
SIB F2S 2/4	REV 05	710-022603	DW7907	
SIB F2S 2/6	REV 05	710-022603	DW7785	

SIB F2S 3/0	REV 05	710-022603	DW7782	
SIB F2S 3/2	REV 05	710-022603	DW7793	
SIB F2S 3/4	REV 05	710-022603	DW7779	
SIB F2S 3/6	REV 05	710-022603	DW7930	
SIB F2S 4/0	REV 05	710-022603	DW7867	
SIB F2S 4/2	REV 05	710-022603	DW7917	
SIB F2S 4/4	REV 05	710-022603	DW7929	
SIB F2S 4/6	REV 05	710-022603	DW7870	
Fan Tray 0	REV 06	760-024497	DV7831	FANTRAY-TXP-F
Fan Tray 1	REV 06	760-024497	DV9614	FANTRAY-TXP-F
Fan Tray 2	REV 06	760-024502	DV9618	FANTRAY-TXP-R
Fan Tray 3	REV 06	760-024502	DV9616	FANTRAY-TXP-R
Fan Tray 4	REV 06	760-024502	DV7807	FANTRAY-TXP-R
Fan Tray 5	REV 06	760-024502	DV7828	FANTRAY-TXP-R

lcc0-re0:

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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:

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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:

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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:

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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)

```
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:

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Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN11B23FEAHA	T1600
Midplane	REV 01	710-027486	RC9787	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAG5132	T640 FPM Board
FPM Display	REV 04	710-021387	BBAL9612	T1600 FPM Display
CIP	REV 06	710-002895	BBAN0605	T-series CIP

PEM 0	REV 05	740-036442	1G022060143	Power Entry Module 6x60
PEM 1	REV 05	740-036442	1G022060011	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAL7318	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAL7255	T640 Sonet Clock Gen.
Routing Engine 0	REV 07	740-026941	P737F-002933	RE-DUO-1800
Routing Engine 1	REV 06	740-026941	P737F-002749	RE-DUO-1800
CB 0	REV 11	710-022597	EH3611	LCC Control Board
CB 1	REV 11	710-022597	EH4798	LCC Control Board
FPC 5	REV 17	710-013037	BBAC5333	FPC Type 4-ES
CPU	REV 10	710-016744	BBAB7619	ST-PMB2
PIC 0	REV 18	750-017405	BBAE3420	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 03	740-014289	T10C90659	XFP-10G-SR
MMB 0	REV 05	710-025563	BBAB9538	ST-MMB2
MMB 1	REV 05	710-025563	BBAB9502	ST-MMB2
FPC 7	REV 01	750-045173	BBAV0032	FPC Type 5-3D
CPU				
SPMB 0	REV 05	710-023321	EG9434	LCC Switch CPU
SPMB 1	REV 05	710-023321	EH3878	LCC Switch CPU
SIB 0	REV 01	750-041657	EH7997	LCC SIB 3D
B Board	REV 01	711-042424	EH7674	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB014	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB05A	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB052	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB01B	CXP Module
SIB 1	REV 01	750-041657	EH8023	LCC SIB 3D
B Board	REV 01	711-042424	EH7659	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05J	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01E	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB01J	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB02S	CXP Module
SIB 2	REV 03	750-041657	EJ6554	LCC SIB 3D
B Board	REV 02	711-042424	EJ5756	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB34FB01Z	CXP Module
Xcvr 2	REV 01	740-047547	XB34FB013	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB04Z	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB05N	CXP Module
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 4

lcc2-re0:

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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		CHAS-BP-TXP-S
FPM Display	REV 09	710-024027		CRAFT-TXP-S
CIP 0	REV 12	710-023792		CIP-TXP-S
CIP 1	REV 12	710-023792		CIP-TXP-S
PEM 0	Rev 06	740-027463	IPUPAFGKTA	PWR-TXP-7-60-DC-S
Routing Engine 0	REV 07	740-026942		RE-DUO-C2600-16G-S
Routing Engine 1	REV 07	740-026942		RE-DUO-C2600-16G-S
CB 0	REV 13	710-022606		CB-TXP-S
CB 1	REV 14	710-022606		CB-TXP-S
SIB F13 0	REV 10	750-035002	PROTOXCLEI	SIB-TXP-3D-F13-S
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 1	REV 10	750-035002	PROTOXCLEI	SIB-TXP-3D-F13-S
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D

Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-048813		
Xcvr 10	REV 01	740-048813		
Xcvr 12	REV 01	740-048813		
Xcvr 14	REV 01	740-048813		
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 6	REV 16	750-035002	PROTOXCLEI	SIB-TXP-3D-F13
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 7	REV 10	750-035002	PROTOXCLEI	SIB-TXP-3D-F13-S
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
Xcvr 0	REV 01	740-048813		

Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 9	REV 16	750-035002	PROTOXCLEI	SIB-TXP-3D-F13
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 11	REV 10	750-035002	PROTOXCLEI	750-035002
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-048813		
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F13 12	REV 16	750-035002	PROTOXCLEI	SIB-TXP-3D-F13
Xcvr 0	REV 01	740-047547		CXP-TXP-3D
Xcvr 1	REV 01	740-047547		CXP-TXP-3D
Xcvr 2	REV 01	740-047547		CXP-TXP-3D
Xcvr 3	REV 01	740-047547		CXP-TXP-3D
Xcvr 4	REV 01	740-047547		CXP-TXP-3D
Xcvr 5	REV 01	740-047547		CXP-TXP-3D
Xcvr 6	REV 01	740-047547		CXP-TXP-3D
Xcvr 7	REV 01	740-047547		CXP-TXP-3D
Xcvr 8	REV 01	740-047547		CXP-TXP-3D
Xcvr 10	REV 01	740-047547		CXP-TXP-3D
Xcvr 12	REV 01	740-047547		CXP-TXP-3D
Xcvr 14	REV 01	740-047547		CXP-TXP-3D
SIB F2S 0/0	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 0/2	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 0/4	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 0/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/0	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/2	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/4	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 1/6	REV 08	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/0	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/2	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/4	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 2/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S

SIB F2S 3/0	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 3/2	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 3/4	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 3/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/0	REV 07	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/2	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/4	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
SIB F2S 4/6	REV 06	750-034978	PROTOXCLEI	SIB-TXP-3D-F2S
Fan Tray 0	REV 10	760-024497		FANTRAY-TXP-H-S
Fan Tray 1	REV 10	760-024497		FANTRAY-TXP-H-S
Fan Tray 2	REV 10	760-024502		FANTRAY-TXP-V-S
Fan Tray 3	REV 10	760-024502		FANTRAY-TXP-V-S
Fan Tray 4	REV 10	760-024502		FANTRAY-TXP-V-S
Fan Tray 5	REV 10	760-024502		FANTRAY-TXP-V-S

lcc0-re0:

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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 04	710-021387		CRAFT-T1600-S
CIP	REV 06	710-002895		CIP-L-T640-S
PEM 0	REV 05	740-036442	IPUPAG6KAA	PWR-T-6-60-DC-S
PEM 1	REV 05	740-036442	IPUPAG6KAA	PWR-T-6-60-DC-S
SCG 0	REV 18	710-003423		SCG-T-S
SCG 1	REV 18	710-003423		SCG-T-S
Routing Engine 0	REV 10	740-026941		RE-DUO-C1800-8G-S
Routing Engine 1	REV 07	740-026941		RE-DUO-C1800-8G-S
CB 0	REV 11	710-022597		CB-LCC-S
CB 1	REV 11	710-022597		CB-LCC-S
FPC 0	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
FPC 3	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 13	750-033423	XXXXXXXXDD	PF-12-24XGE-SFPP
FPC 4	REV 02	750-045173	IP9IAL4DAC	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
FPC 5	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
FPC 6	REV 01	750-045173	IP9IAL4DAB	T4000-FPC5-3D
PIC 0	REV 17	750-034624	IP9IAL2DAA	PF-12XGE-SFPP
PIC 1	REV 10	750-035293	IP9IAL3DAA	PF-1CGE-CFP
SIB 0	REV 06	750-041657	PROTOXCLEI	SIB-TXP-3D-LCC
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		
Xcvr 7	REV 01	740-048813		
SIB 1	REV 06	750-041657	PROTOXCLEI	SIB-TXP-3D-LCC
Xcvr 0	REV 01	740-048813		
Xcvr 1	REV 01	740-048813		
Xcvr 2	REV 01	740-048813		
Xcvr 3	REV 01	740-048813		
Xcvr 4	REV 01	740-048813		
Xcvr 5	REV 01	740-048813		
Xcvr 6	REV 01	740-048813		

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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

```

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

```

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

```

```

-----
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
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
SPMB 1        BUILTIN
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

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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

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lcc0-re0:
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Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN11B23FEAHA	T1600
Midplane	REV 01	710-027486	RC9787	T-series Backplane
FPM GBUS	REV 13	710-002901	BBAG5132	T640 FPM Board
FPM Display	REV 04	710-021387	BBAL9612	T1600 FPM Display
CIP	REV 06	710-002895	BBAN0605	T-series CIP
PEM 0	REV 05	740-036442	1G022060143	Power Entry Module 6x60
PEM 1	REV 05	740-036442	1G022060011	Power Entry Module 6x60
SCG 0	REV 18	710-003423	BBAL7318	T640 Sonet Clock Gen.
SCG 1	REV 18	710-003423	BBAL7255	T640 Sonet Clock Gen.
Routing Engine 0	REV 07	740-026941	P737F-002933	RE-DUO-1800
ad0 3823 MB	SMART CF		201103030490604E604E	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		20110729028B11D411D4	Disk 1
Routing Engine 1	REV 06	740-026941	P737F-002749	RE-DUO-1800
ad0 3823 MB	SMART CF		2011010504EB99649964	Compact Flash
ad1 62720 MB	SMART Lite SATA Drive		201102140058934A934A	Disk 1
CB 0	REV 11	710-022597	EH3611	LCC Control Board
CB 1	REV 11	710-022597	EH4798	LCC Control Board
FPC 5	REV 17	710-013037	BBAC5333	FPC Type 4-ES
CPU	REV 10	710-016744	BBAB7619	ST-PMB2
PIC 0	REV 18	750-017405	BBAE3420	4x 10GE (LAN/WAN) XFP
Xcvr 0	REV 03	740-014289	T10C90659	XFP-10G-SR
MMB 0	REV 05	710-025563	BBAB9538	ST-MMB2
MMB 1	REV 05	710-025563	BBAB9502	ST-MMB2
FPC 7	REV 01	750-045173	BBAV0032	FPC Type 5-3D
CPU				
SPMB 0	REV 05	710-023321	EG9434	LCC Switch CPU
SPMB 1	REV 05	710-023321	EH3878	LCC Switch CPU
SIB 0	REV 01	750-041657	EH7997	LCC SIB 3D
B Board	REV 01	711-042424	EH7674	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB014	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB05A	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB052	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB01B	CXP Module
SIB 1	REV 01	750-041657	EH8023	LCC SIB 3D
B Board	REV 01	711-042424	EH7659	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB48FB05J	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01E	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB01J	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB02S	CXP Module
SIB 2	REV 03	750-041657	EJ6554	LCC SIB 3D
B Board	REV 02	711-042424	EJ5756	LCC SIB 3D Mezz
Xcvr 0	REV 01	740-047547	XB34FB01Z	CXP Module
Xcvr 2	REV 01	740-047547	XB34FB013	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB04Z	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB05N	CXP Module
Fan Tray 0				Front Top Fan Tray
Fan Tray 1				Front Bottom Fan Tray
Fan Tray 2				Rear Fan Tray -- Rev 4

```
lcc2-re0:
```

```
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Hardware inventory:
```

Item	Version	Part number	Serial number	Description
Chassis			JN1B3975AHA	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			JN11CAAAA4HB	TXP
Midplane	REV 05	710-022574	ABAC4696	SFC Midplane
FPM Display	REV 09	710-024027	EH3138	TXP FPM Display
CIP 0	REV 12	710-023792	EF6349	TXP CIP
CIP 1	REV 12	710-023792	EG5294	TXP CIP
PEM 0	Rev 06	740-027463	XH04595	Power Entry Module
PEM 1	Rev 06	740-027463	XH04592	Power Entry Module
Routing Engine 0	REV 07	740-026942	P737A-002541	RE-DUO-2600
Routing Engine 1	REV 07	740-026942	P737A-002602	RE-DUO-2600

CB 0	REV 15	710-022606	EH4376	SFC Control Board
CB 1	REV 15	710-022606	EH4379	SFC Control Board
SPMB 0		BUILTIN		SFC Switch CPU
SPMB 1		BUILTIN		SFC Switch CPU
SIB F13 0	REV 10	750-035002	EM9305	F13 SIB 3D
B Board	REV 06	711-035082	EM9667	F13 SIB 3D Mezz
P Board	REV 05	711-043544	EM9708	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB34FB00S	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB01H	CXP Module
Xcvr 4	REV 01	740-047547	XB34FB02W	CXP Module
Xcvr 6	REV 01	740-047547	XB34FB01T	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB00W	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01S	CXP Module
Xcvr 12	REV 01	740-047547	XB34FB03H	CXP Module
Xcvr 14	REV 01	740-047547	XB34FB023	CXP Module
SIB F13 3	REV 01	710-035001	EJ2612	F13 SIB 3D
B Board	REV 01	711-035082	EJ3815	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2678	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB04C	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB00Z	CXP Module
Xcvr 4	REV 01	740-047547	XB47FB036	CXP Module
Xcvr 6	REV 01	740-047547	XB47FB029	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02N	CXP Module
Xcvr 10	REV 01	740-047547	XB42FB0CS	CXP Module
Xcvr 12	REV 01	740-047547	XB47FB01X	CXP Module
Xcvr 14	REV 01	740-047547	XB48FB02F	CXP Module
SIB F13 6	REV 05	750-035002	EK2675	F13 SIB 3D
B Board	REV 03	711-035082	EK2612	F13 SIB 3D Mezz
P Board	REV 04	711-043544	EK1179	F13 SIB 3D Power
Xcvr 0	REV 01	740-047547	XB48FB01T	CXP Module
Xcvr 2	REV 01	740-047547	XB48FB02M	CXP Module
Xcvr 4	REV 01	740-047547	XB48FB031	CXP Module
Xcvr 6	REV 01	740-047547	XB48FB04P	CXP Module
Xcvr 8	REV 01	740-047547	XB48FB02T	CXP Module
Xcvr 10	REV 01	740-047547	XB34FB01V	CXP Module
Xcvr 12	REV 01	740-047547	XB48FB02C	CXP Module
Xcvr 14		NON-JNPR		No Module
SIB F13 12	REV 01	710-035001	EJ2631	F13 SIB 3D
B Board	REV 01	711-035082	EJ3808	F13 SIB 3D Mezz
P Board	REV 01	711-043544	EJ2676	F13 SIB 3D Power
SIB F2S 0/0	REV 01	711-034977	EH9829	F2S SIB 3D
B Board	REV 01	711-034979	EH9927	F2S SIB 3D Mezz
SIB F2S 0/2	REV 01	711-034977	EH9791	F2S SIB 3D
B Board	REV 01	711-034979	EH9852	F2S SIB 3D Mezz
SIB F2S 0/4	REV 01	711-034977	EH9803	F2S SIB 3D
B Board	REV 01	711-034979	EH9915	F2S SIB 3D Mezz
SIB F2S 0/6	REV 01	711-034977	EH9763	F2S SIB 3D
B Board	REV 01	711-034979	EH9880	F2S SIB 3D Mezz
SIB F2S 1/0	REV 01	711-034977	EH9757	F2S SIB 3D
B Board	REV 01	711-034979	EH9889	F2S SIB 3D Mezz
SIB F2S 1/2	REV 01	711-034977	EH9815	F2S SIB 3D
B Board	REV 01	711-034979	EH9890	F2S SIB 3D Mezz
SIB F2S 1/4	REV 08	750-034978	EN1954	F2S SIB 3D
B Board	REV 02	711-034979	EN1436	F2S SIB 3D Mezz
SIB F2S 1/6	REV 01	711-034977	EJ7054	F2S SIB 3D
B Board	REV 01	711-034979	EJ8238	F2S SIB 3D Mezz
SIB F2S 2/0	REV 01	711-034977	EH9830	F2S SIB 3D
B Board	REV 01	711-034979	EH9844	F2S SIB 3D Mezz
SIB F2S 2/2	REV 01	711-034977	EH9818	F2S SIB 3D
B Board	REV 01	711-034979	EH9888	F2S SIB 3D Mezz
SIB F2S 2/4	REV 01	711-034977	EH9795	F2S SIB 3D

B Board	REV 01	711-034979	EH9869	F2S SIB 3D Mezz
SIB F2S 2/6	REV 01	711-034977	EJ7026	F2S SIB 3D
B Board	REV 01	711-034979	EJ8273	F2S SIB 3D Mezz
SIB F2S 3/0	REV 01	711-034977	EH9811	F2S SIB 3D
B Board	REV 01	711-034979	EH9892	F2S SIB 3D Mezz
SIB F2S 3/2	REV 01	711-034977	EH9812	F2S SIB 3D
B Board	REV 01	711-034979	EH9877	F2S SIB 3D Mezz
SIB F2S 3/4	REV 08	750-034978	EN1947	F2S SIB 3D
B Board	REV 02	711-034979	EN1471	F2S SIB 3D Mezz
Fan Tray 0	REV 10	760-024497	EH3313	Front Fan Tray
Fan Tray 1	REV 10	760-024497	EH3290	Front Fan Tray
Fan Tray 2	REV 10	760-024502	EH3292	Rear Fan Tray
Fan Tray 3	REV 10	760-024502	EH3287	Rear Fan Tray
Fan Tray 4	REV 10	760-024502	EH3286	Rear Fan Tray
Fan Tray 5	REV 10	760-024502	EH3285	Rear Fan Tray

### show chassis hardware (16-Port 10-Gigabit Ethernet MPC with SFP+ Optics [MX Series Routers])

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

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN112D865AFA	MX960
Midplane	REV 03	710-013698	TS3339	MX960 Backplane
FPM Board	REV 03	710-014974	WW6267	Front Panel Display
PDM	Rev 03	740-013110	QCS12485026	Power Distribution
Module				
PEM 0	Rev 04	740-013682	QCS12434086	PS 1.7kW; 200-240VAC
in				
PEM 1	Rev 04	740-013682	QCS1243408Z	PS 1.7kW; 200-240VAC
in				
PEM 2	Rev 04	740-013682	QCS1243407X	PS 1.7kW; 200-240VAC
in				
Routing Engine 0	REV 07	740-015113	9009009677	RE-S-1300
Routing Engine 1	REV 07	740-015113	9009011510	RE-S-1300
CB 0	REV 03	710-021523	XF0394	MX SCB
CB 1	REV 03	710-021523	XF0550	MX SCB
CB 2	REV 03	710-021523	XD7455	MX SCB
FPC 4	REV 02	750-028467	JR6127	MPC M 16x 10GE
CPU	REV 02	711-029089	JX0129	AS PMB
PIC 0		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 1		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 2		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
PIC 3		BUILTIN	BUILTIN	4x 10GE(LAN) SFP+
Fan Tray 0	REV 05	740-014971	TP9990	Fan Tray
Fan Tray 1	REV 05	740-014971	VS1709	Fan Tray

### show chassis hardware (MPC3E [MX Series Routers])

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

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1101AFEAFB	MX480
Midplane	REV 05	710-017414	TR4444	MX480 Midplane
FPM Board	REV 02	710-017254	KG6056	Front Panel Display
PEM 0	Rev 03	740-017330	QCS082090FC	PS 1.2-1.7kW; 100-240V
PEM 1	Rev 03	740-017330	QCS082090FD	PS 1.2-1.7kW; 100-240V
Routing Engine 0	REV 07	740-013063	9009004124	RE-S-2000

Routing Engine 1	REV 07	740-013063	9009005569	RE-S-2000
CB 0	REV 07	710-021523	XZ3587	MX SCB
CB 1	REV 03	710-021523	KH8306	MX SCB
FPC 1	REV 04.1.07	750-033205	P1240	MPC Type 3
CPU	REV 01	711-035209	YL0504	HMPC PMB 2G
MIC 1	REV 10	750-033199	YX4495	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	C22CQNE	CFP-100G-LR4
FPC 2	REV 26	750-016670	KH0045	DPCE 40x 1GE R EQ
CPU	REV 07	710-013713	KF5448	DPC PMB
PIC 0		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 01	740-011613	PF21JHU	SFP-SX
PIC 1		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 9	REV 01	740-011613	AM0813S8ZL6	SFP-SX
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 0	REV 02	740-011613	PGL2KYF	SFP-SX
Xcvr 2	REV 01	740-011613	AM0806S8N4P	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) EQ
Xcvr 5	REV 01	740-011613	AM0815S967N	SFP-SX
Xcvr 7	REV 01	740-011613	AM0806S8N1X	SFP-SX
Xcvr 8	REV 01	740-011613	AM0815S967J	SFP-SX
Xcvr 9	REV 01	740-011613	AM0815S967M	SFP-SX
FPC 3	REV 12.2.09	750-033205	YR9443	MPC Type 3
CPU	REV 03	711-035209	YL6931	HMPC PMB 2G
MIC 0	REV 05	750-033199	YR3269	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	ULH0KG3	CFP-100G-LR4
MIC 1	REV 02	750-033199	YG3245	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-032210	ULH0KGF	CFP-100G-LR4
FPC 4	REV 12.3.09	750-033205	YR9437	MPC Type 3
CPU	REV 03	711-035209	YT5857	HMPC PMB 2G
MIC 0	REV 05	750-033199	YR3295	1X100GE CFP
PIC 0		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0		NON-JNPR	X12000187	CFP-100G-SR10
MIC 1	REV 10	750-033199	YX4518	1X100GE CFP
PIC 2		BUILTIN	BUILTIN	1X100GE CFP
Xcvr 0	REV 01	740-035329	X12J00008	CFP-100G-SR10
FPC 5	REV 06	750-024884	JW9769	MPC Type 2 3D EQ
CPU	REV 02	711-028401	JR6158	MPC PMB 2G Proto
MIC 0	REV 05	750-028387	JR6197	3D 4x 10GE XFP
PIC 0		BUILTIN	BUILTIN	2x 10GE XFP
Xcvr 0	REV 01	740-014289	T07M71112	XFP-10G-SR
Xcvr 1	REV 02	740-014289	T08L85610	XFP-10G-SR
PIC 1		BUILTIN	BUILTIN	2x 10GE XFP
MIC 1	REV 22	750-028392	YM0053	3D 20x 1GE(LAN) SFP
PIC 2		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 0	REV 01	740-011613	AM0703S005B	SFP-SX
Xcvr 1	REV 01	740-011613	E07L01352	SFP-SX
PIC 3		BUILTIN	BUILTIN	10x 1GE(LAN) SFP
Xcvr 5	REV 01	740-013111	6500217	SFP-T
Xcvr 9	REV 02	740-013111	8499527	SFP-T
Fan Tray				Left Fan Tray

The PIC number for MIC 1 always starts from 2 (even if the first MIC is a 1X100GE CFP or a legacy MIC).

#### show chassis hardware (QFX3500 Switches)

```
user@switch> show chassis hardware
```

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis				QFX3500
Routing Engine 0		BUILTIN	BUILTIN	QFX Routing Engine
FPC 0	REV 04	750-044071	BBAR3902	QFX3500-48S4Q-AFI
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	48x 10G-SFP+
PIC 1		BUILTIN	BUILTIN	15x 10G-SFP+
MGMT BRD	REV 02	750-044063	BBAR0398	QFX3500-MGMT-SFP-AFO
Xcvr 0	REV 01	740-011614	AC0946S0BD1	SFP-LX10
Xcvr 1	REV 02	740-013111	A281922	SFP-T
Power Supply 0	Rev 04	740-032091	UI00677	JPSU-650W-AC-AFI
Power Supply 1	REV 00	740-041741	VJ00162	JPSU-650W-AC-AFO
Fan Tray 0				QFX Fan Tray, Back to
Front Airflow				
Fan Tray 1				QFX Fan Tray, Back to
Front Airflow				
Fan Tray 2				QFX Fan Tray, Back to
Front Airflow				

## show chassis hardware detail (QFX3500 Switches)

user@switch&gt; show chassis hardware detail

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN000TEST5	QFX3500
Routing Engine 0		BUILTIN	BUILTIN	QFX Routing Engine
FPC 0	REV 05	750-036931	EE0823	QFX3500-48S4Q-AFI
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	48x 10G-SFP+
Xcvr 0	REV 01	740-030589	S99E270079	SFP+-10G-LPBK
Xcvr 1	REV 01	740-030589	S9AK450099	SFP+-10G-LPBK
Xcvr 2	REV 01	740-030589	S99E270078	SFP+-10G-LPBK
Xcvr 3	REV 01	740-030589	S9AK450098	SFP+-10G-LPBK
Xcvr 4	REV 01	740-030589	S99E270075	SFP+-10G-LPBK
Xcvr 5	REV 01	740-030589	S9AK450093	SFP+-10G-LPBK
Xcvr 6	REV 01	740-030589	S9AK450097	SFP+-10G-LPBK
Xcvr 7	REV 01	740-030589	S9AK450095	SFP+-10G-LPBK
Xcvr 8	REV 01	740-030589	S99E270072	SFP+-10G-LPBK
Xcvr 9	REV 01	740-030589	S99E270073	SFP+-10G-LPBK
Xcvr 10	REV 01	740-030589	S99E270080	SFP+-10G-LPBK
Xcvr 11	REV 01	740-030589	S9AK450169	SFP+-10G-LPBK
Xcvr 12	REV 01	740-030589	S99E270076	SFP+-10G-LPBK
Xcvr 13	REV 01	740-030589	S9AK450167	SFP+-10G-LPBK
Xcvr 14	REV 01	740-030589	S9AK450170	SFP+-10G-LPBK
Xcvr 15	REV 01	740-030589	S9AK450166	SFP+-10G-LPBK
Xcvr 16	REV 01	740-030589	S9AK450092	SFP+-10G-LPBK
Xcvr 17	REV 01	740-030589	S9AK450163	SFP+-10G-LPBK
Xcvr 18	REV 01	740-030589	S9AK450094	SFP+-10G-LPBK
Xcvr 19	REV 01	740-030589	S9AK450100	SFP+-10G-LPBK
Xcvr 20	REV 01	740-030589	S9AK450168	SFP+-10G-LPBK
Xcvr 21	REV 01	740-030589	S9AK450165	SFP+-10G-LPBK
Xcvr 22	REV 01	740-030589	S9AK450073	SFP+-10G-LPBK
Xcvr 23	REV 01	740-030589	S9AK450164	SFP+-10G-LPBK
Xcvr 24	REV 01	740-030589	S9AK450074	SFP+-10G-LPBK
Xcvr 25	REV 01	740-030589	SA62270195	SFP+-10G-LPBK
Xcvr 26	REV 01	740-030589	S9AK450078	SFP+-10G-LPBK
Xcvr 27	REV 01	740-030589	S9AK450024	SFP+-10G-LPBK
Xcvr 28	REV 01	740-030589	S9AK450027	SFP+-10G-LPBK

Xcvr 29	REV 01	740-030589	S9AK450080	SFP+-10G-LPBK
Xcvr 30	REV 01	740-030589	S9AK450030	SFP+-10G-LPBK
Xcvr 31	REV 01	740-030589	S9AK450025	SFP+-10G-LPBK
Xcvr 32	REV 01	740-030589	S9AK450023	SFP+-10G-LPBK
Xcvr 33	REV 01	740-030589	S9AK450075	SFP+-10G-LPBK
Xcvr 34	REV 01	740-030589	S9AK450161	SFP+-10G-LPBK
Xcvr 35	REV 01	740-030589	S9AK450071	SFP+-10G-LPBK
Xcvr 36	REV 01	740-030589	S9AK450072	SFP+-10G-LPBK
Xcvr 37	REV 01	740-030589	S9AK450022	SFP+-10G-LPBK
Xcvr 38	REV 01	740-030589	S9AK450021	SFP+-10G-LPBK
Xcvr 39	REV 01	740-030589	S9AK450175	SFP+-10G-LPBK
Xcvr 40	REV 01	740-030589	S9AK450162	SFP+-10G-LPBK
Xcvr 41	REV 01	740-030589	S99E270074	SFP+-10G-LPBK
Xcvr 42	REV 01	740-030589	S9AK450174	SFP+-10G-LPBK
Xcvr 43	REV 01	740-030589	S9AK450077	SFP+-10G-LPBK
Xcvr 44	REV 01	740-030589	S9AK450076	SFP+-10G-LPBK
Xcvr 45	REV 01	740-030589	S9AK450026	SFP+-10G-LPBK
Xcvr 46	REV 01	740-030589	S9AK450079	SFP+-10G-LPBK
Xcvr 47	REV 01	740-030589	S9AK450029	SFP+-10G-LPBK
PIC 1		BUILTIN	BUILTIN	15x 10G-SFP+
Xcvr 1	REV 01	740-032986	QA170087	QSFP+-40G-SR4
Xcvr 4	REV 01	740-032986	QA360442	QSFP+-40G-SR4
Xcvr 8	REV 01	740-032986	QA170091	QSFP+-40G-SR4
Xcvr 12	REV 01	740-032986	QA170042	QSFP+-40G-SR4
MGMT BRD	REV 08	750-036946	EE0731	QFX3500-MB
Power Supply 0	Rev 04	740-032091	UI00690	QFX PS 650W AC
Power Supply 1	Rev 04	740-032091	UI00679	QFX PS 650W AC
Fan Tray 0				QFX Fan Tray
Fan Tray 1				QFX Fan Tray

### show chassis hardware models (QFX3500 Switches)

```

user@switch> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Routing Engine 0      BUILTIN    BUILTIN
FPC 0          REV 02     711-032234   EC4074
Power Supply 0  PSMI 2C    11-d65800    --

```

### show chassis hardware clei-models (QFX3500 Switches)

```

user@switch> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Routing Engine 0      BUILTIN
FPC 0          REV 02     711-032234
Power Supply 0  PSMI 2C    11-d65800

```

### show chassis hardware clei-models (QFX5100 Switches)

```

user@switch> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Routing Engine 0      BUILTIN    CMMNV10BRA
FPC 0          REV 01     611-053010   CMMNV10BRA
PIC 0          BUILTIN    CMMNV10BRA
Power Supply 0  REV 03     740-053352   MUPABHBAA      JPSU-850W-AC-AFO
Power Supply 1  REV 03     740-053352   MUPABHBAA      JPSU-850W-AC-AFO
Fan Tray 0      QFX5100-96S-FANAFO
Fan Tray 1      QFX5100-96S-FANAFO
Fan Tray 2      QFX5100-96S-FANAFO

```



**show chassis hardware interconnect-device (QFabric Systems)**

```

user@switch> show chassis hardware interconnect-device interconnect1
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis       REV 07                BH0208188289  QFX_o1ive
Midplane      REV 07    750-021261  BH0208188289  QFX Midplane
CB 0          REV 07    750-021261  BH0208188289  QFXIC08-CB4S

```

**show chassis hardware node-device (QFabric Systems)**

```

user@switch> show chassis hardware node-device node1
Routing Engine 0  BUILTIN      BUILTIN      QFX Routing Engine
node1            REV 05    711-032234  ED3694      QFX3500-48S4Q-AFI

CPU              BUILTIN      BUILTIN      FPC CPU
PIC 0            BUILTIN      BUILTIN      48x 10G-SFP+
Xcvr 8          REV 01    740-030658  AD0946A028B  SFP+-10G-USR
...

```

**show chassis hardware (PTX5000 Packet Transport Router)**

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis       REV 03                JN11D1FD7AJA  PTX5000
Midplane      REV 03    711-031896  ABAC5589      Midplane-8S
FPM           REV 08    760-030647  EG1679        Front Panel Display
PDU 0         Rev 05    740-032019  ZE00006       DC Power Dist Unit
PSM 0         Rev 05    740-032022  ZJ00018       DC 12V Power Supply
PSM 1         Rev 04    740-032022  ZC00052       DC 12V Power Supply
PSM 2         Rev 04    740-032022  ZD00051       DC 12V Power Supply
PSM 3         Rev 05    740-032022  ZJ00060       DC 12V Power Supply
CCG 0         REV 04    750-030653  EG3703        Clock Generator
CCG 1         REV 04    750-030653  EG3698        Clock Generator
Routing Engine 0 REV 05    740-026942  P737A-002231  RE-DUO-2600
Routing Engine 1 REV 06    740-026942  P737A-002438  RE-DUO-2600
CB 0          REV 08    750-030625  EG5519        Control Board
CB 1          REV 08    750-030625  EG5516        Control Board
FPC 0         REV 18    750-036844  EJ3080        FPC
CPU           REV 12    711-030686  EJ3260        SNG PMB
FPC 2         REV 13    750-036844  EG5065        FPC
CPU           REV 09    711-030686  EG4082        SNG PMB
PIC 0         REV 14    750-031913  EG5127        24x 10GE(LAN) SFP+
Xcvr 0        REV 01    740-031980  143363A00240  SFP+-10G-SR
Xcvr 1        REV 01    740-031981  UK90PZ1       SFP+-10G-LR
Xcvr 2        REV 01    740-031980  AD1141A04XH   SFP+-10G-SR
Xcvr 3        REV 01    740-031981  UK90Q46       SFP+-10G-LR
Xcvr 4        REV 01    740-031980  AD1141A04X4   SFP+-10G-SR
Xcvr 6        REV 01    740-031980  B11H02560     SFP+-10G-SR
Xcvr 7        REV 01    740-031980  B11C01589     SFP+-10G-SR
Xcvr 8        REV 01    740-031980  AD1141A04XF   SFP+-10G-SR
Xcvr 10       REV 01    740-031980  123363A01094  SFP+-10G-SR
Xcvr 11       REV 01    740-031980  AK80LKF       SFP+-10G-SR
Xcvr 12       REV 01    740-031980  183363A01528  SFP+-10G-SR
Xcvr 14       REV 01    740-031980  193363A01079  SFP+-10G-SR
Xcvr 15       REV 01    740-031980  AK80MC8       SFP+-10G-SR
Xcvr 16       REV 01    740-031980  AJC0BHC       SFP+-10G-SR
Xcvr 19       REV 01    740-021309  J08D26856     SFP+-10G-LR
Xcvr 21       REV 01    740-031980  AK80KCT       SFP+-10G-SR

```

Xcvr 22	REV 01	740-031981	UK90PZL	SFP+-10G-LR
Xcvr 23	REV 01	740-031980	AK80N1V	SFP+-10G-SR
FPC 3	REV 13	750-036844	EG5074	FPC
CPU	REV 09	711-030686	EG4064	SNG PMB
PIC 1	REV 10	750-031903	EG0325	SNG Load
FPC 5	REV 06	750-036844	EH3198	FPC
CPU				
PIC 0	REV 14	750-031913	EG5134	24x 10GE(LAN) SFP+
Xcvr 0	REV 01	740-031980	AK80LBH	SFP+-10G-SR
Xcvr 1	REV 01	740-031980	B11B03724	SFP+-10G-SR
Xcvr 2	REV 01	740-031980	AK80FMH	SFP+-10G-SR
Xcvr 5	REV 01	740-031980	B11J00818	SFP+-10G-SR
Xcvr 6	REV 01	740-031980	193363A00743	SFP+-10G-SR
Xcvr 7	REV 01	740-031980	B11B06125	SFP+-10G-SR
Xcvr 10	REV 01	740-031980	B11H02529	SFP+-10G-SR
Xcvr 11	REV 01	740-031980	AK80LFB	SFP+-10G-SR
Xcvr 12	REV 01	740-031980	193363A01061	SFP+-10G-SR
Xcvr 15	REV 01	740-031980	B11J00687	SFP+-10G-SR
Xcvr 16	REV 01	740-031980	193363A00738	SFP+-10G-SR
Xcvr 18	REV 01	740-031980	AK80MQX	SFP+-10G-SR
Xcvr 19	REV 01	740-021309	J08C17257	SFP+-10G-LR
Xcvr 22	REV 01	740-031980	B11J00730	SFP+-10G-SR
Xcvr 23	REV 01	740-031980	AK80KEE	SFP+-10G-SR
PIC 1	REV 08	750-036710	EG3105	2x 40GE CFP
Xcvr 0	REV 01	740-034554	B260HLT	CFP-40G-LR4
Xcvr 1	REV 01	740-034554	B11C02847	CFP-40G-LR4
FPC 6	REV 18	750-036844	EJ4391	FPC
CPU	REV 12	711-030686	EJ3257	SNG PMB
FPC 7	REV 18	750-036844	EJ4382	FPC
CPU	REV 12	711-030686	EJ3238	SNG PMB
SPMB 0	REV 10	711-030686	EG5418	SNG PMB
SPMB 1	REV 09	711-030686	EG5373	SNG PMB
SIB 0	REV 07	750-030631	EG4858	SIB-I-8S
SIB 1	REV 07	750-030631	EG4872	SIB-I-8S
SIB 2	REV 07	750-030631	EG4866	SIB-I-8S
SIB 3	REV 07	750-030631	EG6011	SIB-I-8S
SIB 4	REV 07	750-030631	EG4907	SIB-I-8S
SIB 5	REV 07	750-030631	EG4879	SIB-I-8S
SIB 6	REV 07	750-030631	EG4864	SIB-I-8S
SIB 7	REV 07	750-030631	EG4899	SIB-I-8S
SIB 8	REV 07	750-030631	EG4880	SIB-I-8S
Fan Tray 0	REV 04	760-032784	EG1496	Vertical Fan Tray
Fan Tray 1	REV 04	760-030642	EG1335	Horizontal Fan Tray
Fan Tray 2	REV 02	760-030642	ED4952	Horizontal Fan Tray

#### show chassis hardware (PTX5000 Packet Transport Router with AC PSM and PDU)

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

Hardware inventory:				
Item	Version	Part number	Serial number	Description
Chassis			JN12223A6AJA	PTX5000
Midplane	REV 16	750-035893	ACRA1350	Midplane-8S
FPM	REV 12	760-030647	BBBD5625	Front Panel Display
PDU 0	Rev 01	740-048338	1GB83360005	High Capacity AC WYE PDU
PSM 0	Rev 01	740-048334	1GB43360074	High Capacity AC PSM
PSM 1	Rev 01	740-048334	1GB43360001	High Capacity AC PSM
PSM 2	Rev 01	740-048334	1GB43360104	High Capacity AC PSM
PSM 3	Rev 01	740-048334	1GB43360042	High Capacity AC PSM
PSM 4	Rev 01	740-048334	1GB43360068	High Capacity AC PSM
PSM 5	Rev 01	740-048334	1GB43360080	High Capacity AC PSM

```

PSM 6      Rev 01  740-048334  1GB43360046  High Capacity AC PSM
PSM 7      Rev 01  740-048334  1GB43360100  High Capacity AC PSM
PDU 1      Rev 01  740-048338  1GB83360006  High Capacity AC WYE PDU

PSM 0      Rev 01  740-048334  1GB43360069  High Capacity AC PSM
PSM 1      Rev 01  740-048334  1GB43360099  High Capacity AC PSM
PSM 2      Rev 01  740-048334  1GB43360050  High Capacity AC PSM
PSM 3      Rev 01  740-048334  1GB43360095  High Capacity AC PSM
PSM 4      Rev 01  740-048334  1GB43360101  High Capacity AC PSM
PSM 5      Rev 01  740-048334  1GB43360075  High Capacity AC PSM
PSM 6      Rev 01  740-048334  1GB43360047  High Capacity AC PSM
PSM 7      Rev 01  740-048334  1GB43360019  High Capacity AC PSM
CCG 0      REV 09  750-030653  BBAZ5345     Clock Generator
...

```

### show chassis hardware (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               JN1204FC0AJA  PTX5000
Midplane      REV 11   750-035893  ACAB8038      Midplane-8S
FPM           REV 12   760-030647  BBBD5619      Front Panel
Display
PDU 0         Rev 04   740-048336  1GB93470043   High Capacity DC PDU
  PSM 0       Rev 04   740-046988  1GB63500184   High Capacity DC PSM
  PSM 2       Rev 04   740-046988  1GB63500169   High Capacity DC PSM
  PSM 4       Rev 04   740-046988  1GB63500306   High Capacity DC PSM
  PSM 6       Rev 04   740-046988  1GB63500074   High Capacity DC PSM
PDU 1         Rev 04   740-048336  1GB93470045   High Capacity DC PDU
  PSM 1       Rev 04   740-046988  1GB63500193   High Capacity DC PSM
  PSM 3       Rev 04   740-046988  1GB63500143   High Capacity DC PSM
  PSM 5       Rev 04   740-046988  1GB63500146   High Capacity DC PSM
  PSM 7       Rev 04   740-046988  1GB63500192   High Capacity DC PSM
CCG 0         REV 09   750-030653  BBBC1909      Clock Generator
CCG 1         REV 09   750-030653  BBBD2970      Clock Generator
...

```

### show chassis hardware clei-models (PTX5000 Packet Transport Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
FPM           REV 08   760-030647  PROTOXCLEI     CRAFT-PTX5000-S
PDU 0         Rev 05   740-032019  IPUPAHLKAA     PWR-SAN-PDU-DC
  PSM 0       Rev 05   740-032022  IPUPAHNKAA     PSM-PTX-DC-120-S
  PSM 1       Rev 04   740-032022  032022XXXX     PWR-SAN-12-DC
  PSM 2       Rev 04   740-032022  032022XXXX     PWR-SAN-12-DC
  PSM 3       Rev 05   740-032022  IPUPAHNKAA     PSM-PTX-DC-120-S
CCG 0         REV 04   750-030653  PROTOXCLEI     CCG-PTX-S
CCG 1         REV 04   750-030653  PROTOXCLEI     CCG-PTX-S
Routing Engine 0 REV 05   740-026942                RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942                RE-DUO-C2600-16G-S
CB 0          REV 08   750-030625  PROTOXCLEI     CB-PTX-S
CB 1          REV 08   750-030625  PROTOXCLEI     CB-PTX-S
FPC 0         REV 18   750-036844  PROTOXCLEI     FPC-PTX-P1-A
FPC 2         REV 13   750-036844  PROTOXCLEI     FPC-PTX-P1-A
  PIC 0       REV 14   750-031913  PROTOXCLEI     P1-PTX-24-10GE-SFPP
FPC 5
  PIC 0       REV 14   750-031913  PROTOXCLEI     P1-PTX-24-10GE-SFPP

```

FPC 6	REV 18	750-036844	PROTOXCLEI	FPC-PTX-P1-A
FPC 7	REV 18	750-036844	PROTOXCLEI	FPC-PTX-P1-A
SIB 0	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 1	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 2	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 3	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 4	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 5	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 6	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 7	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
SIB 8	REV 07	750-030631	PROTOXCLEI	SIB-I-PTX5008
Fan Tray 1	REV 04	760-030642	PROTOXCLEI	FAN-PTX-H-S

### show chassis hardware clei-models (PTX5000 Packet Transport Router with AC PSM and PDU)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 16	750-035893	IPMUN00ARA	CHAS-MP-PTX5000-S
FPM	REV 12	760-030647	IPUCA7SCAA	CRAFT-PTX5000-S
PDU 0	Rev 01	740-048338	PROTOACPDU	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 3	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PDU 1	Rev 01	740-048338	PROTOACPDU	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 3	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	PROTOACPSM	PSM2-PTX-AC
CCG 0	REV 09	750-030653	IPUCA7DCAA	CCG-PTX-S
...				

### show chassis hardware clei-models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Midplane	REV 11	750-035893	IPMUN00ARA	CHAS-MP-PTX5000-S
FPM	REV 12	760-030647	IPUCA7SCAA	CRAFT-PTX5000-S
PDU 0	Rev 04	740-048336	IPUPAL7KAA	PDU2-PTX-DC-S
PSM 0	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 2	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 4	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 6	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PDU 1	Rev 04	740-048336	IPUPAL7KAA	PDU2-PTX-DC-S
PSM 1	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 3	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 5	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
PSM 7	Rev 04	740-046988	IPUPAL8KAA	PSM2-PTX-DC-S
CCG 0	REV 09	750-030653	IPUCA7DCAA	CCG-PTX-S
CCG 1	REV 09	750-030653	IPUCA7DCAA	CCG-PTX-S
...				

## show chassis hardware detail (PTX5000 Packet Transport Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item                Version  Part number  Serial number  Description
Chassis              REV 03   711-031896   JN11D1FD7AJA   PTX5000
Midplane             REV 08   760-030647   EG1679         Front Panel Display
FPM                  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

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Xcvr 15	REV 01	740-031980	B11J00687	SFP+-10G-SR
Xcvr 16	REV 01	740-031980	193363A00738	SFP+-10G-SR
Xcvr 18	REV 01	740-031980	AK80MQX	SFP+-10G-SR
Xcvr 19	REV 01	740-021309	J08C17257	SFP+-10G-LR
Xcvr 22	REV 01	740-031980	B11J00730	SFP+-10G-SR
Xcvr 23	REV 01	740-031980	AK80KEE	SFP+-10G-SR
PIC 1	REV 08	750-036710	EG3105	2x 40GE CFP
Xcvr 0	REV 01	740-034554	B260HLT	CFP-40G-LR4
Xcvr 1	REV 01	740-034554	B11C02847	CFP-40G-LR4
FPC 6	REV 18	750-036844	EJ4391	FPC
CPU	REV 12	711-030686	EJ3257	SNG PMB
FPC 7	REV 18	750-036844	EJ4382	FPC
CPU	REV 12	711-030686	EJ3238	SNG PMB
SPMB 0	REV 10	711-030686	EG5418	SNG PMB
SPMB 1	REV 09	711-030686	EG5373	SNG PMB
SIB 0	REV 07	750-030631	EG4858	SIB-I-8S
SIB 1	REV 07	750-030631	EG4872	SIB-I-8S
SIB 2	REV 07	750-030631	EG4866	SIB-I-8S
SIB 3	REV 07	750-030631	EG6011	SIB-I-8S
SIB 4	REV 07	750-030631	EG4907	SIB-I-8S
SIB 5	REV 07	750-030631	EG4879	SIB-I-8S
SIB 6	REV 07	750-030631	EG4864	SIB-I-8S
SIB 7	REV 07	750-030631	EG4899	SIB-I-8S
SIB 8	REV 07	750-030631	EG4880	SIB-I-8S
Fan Tray 0	REV 04	760-032784	EG1496	Vertical Fan Tray
Fan Tray 1	REV 04	760-030642	EG1335	Horizontal Fan Tray
Fan Tray 2	REV 02	760-030642	ED4952	Horizontal Fan Tray

#### show chassis hardware detail (PTX5000 Packet Transport Router with AC PSM and PDU)

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

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN12223A6AJA	PTX5000
Midplane	REV 16	750-035893	ACRA1350	Midplane-8S
FPM	REV 12	760-030647	BBBD5625	Front Panel Display
PDU 0	Rev 01	740-048338	1GB83360005	High Capacity AC WYE PDU
PSM 0	Rev 01	740-048334	1GB43360074	High Capacity AC PSM
PSM 1	Rev 01	740-048334	1GB43360001	High Capacity AC PSM
PSM 2	Rev 01	740-048334	1GB43360104	High Capacity AC PSM
PSM 3	Rev 01	740-048334	1GB43360042	High Capacity AC PSM
PSM 4	Rev 01	740-048334	1GB43360068	High Capacity AC PSM
PSM 5	Rev 01	740-048334	1GB43360080	High Capacity AC PSM
PSM 6	Rev 01	740-048334	1GB43360046	High Capacity AC PSM
PSM 7	Rev 01	740-048334	1GB43360100	High Capacity AC PSM
PDU 1	Rev 01	740-048338	1GB83360006	High Capacity AC WYE PDU
PSM 0	Rev 01	740-048334	1GB43360069	High Capacity AC PSM
PSM 1	Rev 01	740-048334	1GB43360099	High Capacity AC PSM
PSM 2	Rev 01	740-048334	1GB43360050	High Capacity AC PSM
PSM 3	Rev 01	740-048334	1GB43360095	High Capacity AC PSM
PSM 4	Rev 01	740-048334	1GB43360101	High Capacity AC PSM
PSM 5	Rev 01	740-048334	1GB43360075	High Capacity AC PSM
PSM 6	Rev 01	740-048334	1GB43360047	High Capacity AC PSM
PSM 7	Rev 01	740-048334	1GB43360019	High Capacity AC PSM
CCG 0	REV 09	750-030653	BBAZ5345	Clock Generator

#### show chassis hardware detail (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

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

## Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			JN1204FC0AJA	PTX5000
Midplane	REV 11	750-035893	ACAB8038	Midplane-8S
FPM	REV 12	760-030647	BBBD5619	Front Panel
Display				
PDU 0	Rev 04	740-048336	1GB93470043	High Capacity DC PDU
PSM 0	Rev 04	740-046988	1GB63500184	High Capacity DC PSM
PSM 2	Rev 04	740-046988	1GB63500169	High Capacity DC PSM
PSM 4	Rev 04	740-046988	1GB63500306	High Capacity DC PSM
PSM 6	Rev 04	740-046988	1GB63500074	High Capacity DC PSM
PDU 1	Rev 04	740-048336	1GB93470045	High Capacity DC PDU
PSM 1	Rev 04	740-046988	1GB63500193	High Capacity DC PSM
PSM 3	Rev 04	740-046988	1GB63500143	High Capacity DC PSM
PSM 5	Rev 04	740-046988	1GB63500146	High Capacity DC PSM
PSM 7	Rev 04	740-046988	1GB63500192	High Capacity DC PSM
CCG 0	REV 09	750-030653	BBBC1909	Clock Generator
CCG 1	REV 09	750-030653	BBBD2970	Clock Generator
...				

## show chassis hardware models (PTX5000 Packet Transport Router)

user@host&gt; show chassis hardware models

## Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
FPM	REV 08	760-030647	EG1679	CRAFT-PTX5000-S
PDU 0	Rev 05	740-032019	ZE00006	PWR-SAN-PDU-DC
PSM 0	Rev 05	740-032022	ZJ00018	PSM-PTX-DC-120-S
PSM 1	Rev 04	740-032022	ZC00052	PWR-SAN-12-DC
PSM 2	Rev 04	740-032022	ZD00051	PWR-SAN-12-DC
PSM 3	Rev 05	740-032022	ZJ00060	PSM-PTX-DC-120-S
CCG 0	REV 04	750-030653	EG3703	CCG-PTX-S
CCG 1	REV 04	750-030653	EG3698	CCG-PTX-S
Routing Engine 0	REV 05	740-026942	P737A-002231	RE-DUO-C2600-16G-S
Routing Engine 1	REV 06	740-026942	P737A-002438	RE-DUO-C2600-16G-S
CB 0	REV 08	750-030625	EG5519	CB-PTX-S
CB 1	REV 08	750-030625	EG5516	CB-PTX-S
FPC 0	REV 18	750-036844	EJ3080	FPC-PTX-P1-A
FPC 2	REV 13	750-036844	EG5065	FPC-PTX-P1-A
PIC 0	REV 14	750-031913	EG5127	P1-PTX-24-10GE-SFPP
FPC 3	REV 13	750-036844	EG5074	FPC-PTX-P1-A
FPC 5				
PIC 0	REV 14	750-031913	EG5134	P1-PTX-24-10GE-SFPP
FPC 6	REV 18	750-036844	EJ4391	FPC-PTX-P1-A
FPC 7	REV 18	750-036844	EJ4382	FPC-PTX-P1-A
SIB 0	REV 07	750-030631	EG4858	SIB-I-PTX5008
SIB 1	REV 07	750-030631	EG4872	SIB-I-PTX5008
SIB 2	REV 07	750-030631	EG4866	SIB-I-PTX5008
SIB 3	REV 07	750-030631	EG6011	SIB-I-PTX5008
SIB 4	REV 07	750-030631	EG4907	SIB-I-PTX5008
SIB 5	REV 07	750-030631	EG4879	SIB-I-PTX5008
SIB 6	REV 07	750-030631	EG4864	SIB-I-PTX5008
SIB 7	REV 07	750-030631	EG4899	SIB-I-PTX5008
SIB 8	REV 07	750-030631	EG4880	SIB-I-PTX5008
Fan Tray 1	REV 04	760-030642	EG1335	FAN-PTX-H-S

## show chassis hardware models (PTX5000 Packet Transport Router with AC PSM and PDU)

user@host&gt; show chassis hardware models

## Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
------	---------	-------------	---------------	------------------



Midplane	REV 16	750-035893	ACRA1350	CHAS-MP-PTX5000-S
FPM	REV 12	760-030647	BBBD5625	CRAFT-PTX5000-S
PDU 0	Rev 01	740-048338	1GB83360005	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	1GB43360074	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	1GB43360001	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	1GB43360104	PSM2-PTX-AC
PSM 3	Rev 01	740-048334	1GB43360042	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	1GB43360068	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	1GB43360080	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	1GB43360046	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	1GB43360100	PSM2-PTX-AC
PDU 1	Rev 01	740-048338	1GB83360006	PDU2-PTX-AC-W
PSM 0	Rev 01	740-048334	1GB43360069	PSM2-PTX-AC
PSM 1	Rev 01	740-048334	1GB43360099	PSM2-PTX-AC
PSM 2	Rev 01	740-048334	1GB43360050	PSM2-PTX-AC
PSM 3	Rev 01	740-048334	1GB43360095	PSM2-PTX-AC
PSM 4	Rev 01	740-048334	1GB43360101	PSM2-PTX-AC
PSM 5	Rev 01	740-048334	1GB43360075	PSM2-PTX-AC
PSM 6	Rev 01	740-048334	1GB43360047	PSM2-PTX-AC
PSM 7	Rev 01	740-048334	1GB43360019	PSM2-PTX-AC
CCG 0	REV 09	750-030653	BBAZ5345	CCG-PTX-S
...				

#### show chassis hardware models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

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

Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Midplane	REV 11	750-035893	ACAB8038	CHAS-MP-PTX5000-S
FPM	REV 12	760-030647	BBBD5619	CRAFT-PTX5000-S
PDU 0	Rev 04	740-048336	1GB93470043	PDU2-PTX-DC-S
PSM 0	Rev 04	740-046988	1GB63500184	PSM2-PTX-DC-S
PSM 2	Rev 04	740-046988	1GB63500169	PSM2-PTX-DC-S
PSM 4	Rev 04	740-046988	1GB63500306	PSM2-PTX-DC-S
PSM 6	Rev 04	740-046988	1GB63500074	PSM2-PTX-DC-S
PDU 1	Rev 04	740-048336	1GB93470045	PDU2-PTX-DC-S
PSM 1	Rev 04	740-046988	1GB63500193	PSM2-PTX-DC-S
PSM 3	Rev 04	740-046988	1GB63500143	PSM2-PTX-DC-S
PSM 5	Rev 04	740-046988	1GB63500146	PSM2-PTX-DC-S
PSM 7	Rev 04	740-046988	1GB63500192	PSM2-PTX-DC-S
CCG 0	REV 09	750-030653	BBBC1909	CCG-PTX-S
CCG 1	REV 09	750-030653	BBBD2970	CCG-PTX-S
...				

#### show chassis hardware extensive (PTX5000 Packet Transport Router)

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

Hardware inventory:

Item	Version	Part number	Serial number	Description
PDU 0	Rev 04	740-032019	UE0003	DC Power Dist Unit
Jedec Code:	0x7fb0	EEPROM Version:	0x02	
P/N:	740-032019	S/N:	UE0003	
Assembly ID:	0x043d	Assembly Version:	04.00	
Date:	11-29-2010	Assembly Flags:	0x00	
Version:	Rev 04	CLEI Code:	032022XXXX	
ID: DC Power Dist Unit		FRU Model Number:	PWR-SAN-PDU-DC	
Board Information Record:				
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff				
I2C Hex Data:				
Address 0x00: 7f b0 02 ff 04 3d 04 00 52 65 76 20 30 34 00 00				



```

Address 0x10: 00 00 00 00 37 34 30 2d 30 33 32 30 31 39 00 00
Address 0x20: 53 2f 4e 20 55 45 30 30 30 33 00 00 00 1d 0b 07
Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff
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 extensive (PTX1000 Packet Transport Router)

```

user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               UNDEFINED    PTX1000
Pseudo CB 0
Routing Engine 0
FPC 0          REV 06    750-053330   ACAM4850       PTX1000-FPC-P2-BUILTIN
CPU            BUILTIN   BUILTIN      FPC CPU
PIC 0          BUILTIN   BUILTIN      288X10GE/72X40GE/24X100GE

Xcvr 2         REV 01    740-046565   QE240845       QSFP+-40G-SR4
Xcvr 3         REV 01    740-046565   QE240962       QSFP+-40G-SR4
Xcvr 5         REV 01    740-032986   ES400LZ        QSFP+-40G-SR4
Xcvr 12        REV 01    740-054053   QE419452       QSFP+-4X10G-SR
Xcvr 18        REV 01    740-054053   QE419481       QSFP+-4X10G-SR
Xcvr 30        REV 01    740-046565   QE440485       QSFP+-40G-SR4
Xcvr 48        REV 01    740-032986   ES400K3        QSFP+-40G-SR4
Xcvr 68        REV 01    740-046565   QF2805J3       QSFP+-40G-SR4
Mezz           REV 05    711-053333   ACAM4282       Mezzanine Board
Power Supply 2  REV 01    740-054405   1EDN4470131    AC AFO 1600W PSU
Power Supply 3  REV 01    740-054405   1EDN4470112    AC AFO 1600W PSU
Fan Tray 0                               PTX1000 Fan Tray 0, Front
to Back Airflow - AFO
Fan Tray 1                               PTX1000 Fan Tray 1, Front
to Back Airflow - AFO
Fan Tray 2                               PTX1000 Fan Tray 2, Front
to Back Airflow - AFO

```

#### show chassis hardware extensive (PTX5000 with Control Board 2)

```

user@host> show chassis hardware grep CB

```

CB 0	REV 06	750-055537	ACLZ9541	Control Board 2
CB 1	REV 06	750-055537	ACLY5329	Control Board 2

**show chassis hardware (MX Routers with Media Services Blade [MSB])**

```

user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number  Description
Chassis                               JN1100FB1AFB  MX480
Midplane         REV 05    710-017414   TR3310        MX480 Midplane
FPM Board        REV 02    710-017254   KG1872        Front Panel Display
PEM 2            Rev 02    740-017343   QCS0812A00N   DC Power Entry Module
PEM 3            Rev 02    740-017343   QCS0812A00U   DC Power Entry Module
Routing Engine 0 REV 07    740-015113   1000740938    RE-S-1300
CB 0             REV 03    710-021523   KF4630        MX SCB
FPC 1            REV 11    750-037207   ZW9726        AS-MCC
  CPU            REV 04    711-038173   ZW4819        AS-MCC PMB
    MIC 0         REV 06    750-037214   ZW3574        AS-MSC
      PIC 0                BUILTIN      BUILTIN        AS-MSC
    MIC 1         REV 00    750-037211                AS-MXC
      PIC 2                BUILTIN      BUILTIN        AS-MXC

```

**show chassis hardware extensive (MX Routers with Media Services Blade [MSB])**

```

user@switch> show chassis hardware extensive
FPC 1            REV 11    750-037207   ZW9726        AS-MCC
Jedec Code:      0x7fb0          EEPROM Version: 0x02
P/N:             750-037207      S/N:           ZW9726
Assembly ID:     0x0b37          Assembly Version: 01.11
Date:            02-17-2012      Assembly Flags: 0x00
Version:         REV 11          CLEI Code:     PROTOXCLEI
ID: AS-MCC       FRU Model Number: 750-037207
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
Address 0x20: 53 2f 4e 20 5a 57 39 37 32 36 00 00 00 11 02 07
Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
CPU            REV 04    711-038173   ZW4819        AS-MCC-PMB
Jedec Code:      0x7fb0          EEPROM Version: 0x02
P/N:             711-038173      S/N:           ZW4819
Assembly ID:     0x0b38          Assembly Version: 01.04
Date:            12-30-2011      Assembly Flags: 0x00
Version:         REV 04
ID: AS-MCC PMB
Board Information Record:
Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
Address 0x20: 53 2f 4e 20 5a 57 34 38 31 39 00 00 00 1e 0c 07
Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff

```

```

Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00
MIC 0          REV 06    750-037214    ZW3574          AS-MS
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-MS      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
Address 0x60: 00 00 00 00 00 00 30 36 00 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-MS
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
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 c0 02 e6 6c 7f b0 02 ff 0a 44 01 06
PIC 2          BUILTIN      BUILTIN          AS-MXC

```

### show chassis hardware (ACX5048 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               VF3714170810  ACX5048
Pseudo CB 0
Routing Engine 0
FPC 0          REV 05    650-056267  VF3714170810  ACX5048
CPU            BUILTIN    BUILTIN      FPC CPU
PIC 0          BUILTIN    BUILTIN      48x10G-6x40G
  Xcvr 0        REV 02    740-011613  NR2051S       SFP-SX
  Xcvr 33        REV 01    740-030589  SE5N290041    SFP+-10G-LPBK
  Xcvr 35        REV 01    740-030589  SE5N290926    SFP+-10G-LPBK
  Xcvr 37        REV 01    740-030589  SE5N290049    SFP+-10G-LPBK
  Xcvr 39        REV 01    740-030589  SE5N290046    SFP+-10G-LPBK
  Xcvr 48        NON-JNPR   409310098    UNKNOWN
Power Supply 1 REV 03    740-041741  1GA24081097  JPSU-650W-AC-AFO
Fan Tray 0
to Back Airflow - AFO

```

Fan Tray 1	ACX5K Fan Tray 1, Front
to Back Airflow - AFO	
Fan Tray 2	ACX5K Fan Tray 2, Front
to Back Airflow - AFO	
Fan Tray 3	ACX5K Fan Tray 3, Front
to Back Airflow - AFO	
Fan Tray 4	ACX5K Fan Tray 4, Front
to Back Airflow - AFO	

#### show chassis hardware detail (ACX5048 Router)

```

user@host> show chassis hardware detail
Hardware inventory:

```

Item	Version	Part number	Serial number	Description
Chassis			VF3714170810	ACX5048
Pseudo CB 0				
Routing Engine 0		BUILTIN	BUILTIN	ACX5K Routing Engine
ad0	509 MB	QEMU HARDDISK	QM00001	Hard Disk
ad1	4095 MB	QEMU HARDDISK	QM00002	Hard Disk
ad2	511 MB	QEMU HARDDISK	QM00003	Hard Disk
ad3	1023 MB	QEMU HARDDISK	QM00004	Hard Disk
usb0 (addr 1)	product 0x0000 0		vendor 0x0000	uhub1
usb0 (addr 2)	product 0x0020 32		vendor 0x8087	uhub2
FPC 0	REV 05	650-056267	VF3714170810	ACX5048
CPU		BUILTIN	BUILTIN	FPC CPU
PIC 0		BUILTIN	BUILTIN	48x10G-6x40G
Xcvr 0	REV 02	740-011613	NR2051S	SFP-SX
Xcvr 33	REV 01	740-030589	SE5N290041	SFP+-10G-LPBK
Xcvr 35	REV 01	740-030589	SE5N290926	SFP+-10G-LPBK
Xcvr 37	REV 01	740-030589	SE5N290049	SFP+-10G-LPBK
Xcvr 39	REV 01	740-030589	SE5N290046	SFP+-10G-LPBK
Xcvr 48		NON-JNPR	409310098	UNKNOWN
Power Supply 1	REV 03	740-041741	1GA24081097	JPSU-650W-AC-AFO
Fan Tray 0				ACX5K Fan Tray 0, Front
to Back Airflow - AFO				
Fan Tray 1				ACX5K Fan Tray 1, Front
to Back Airflow - AFO				
Fan Tray 2				ACX5K Fan Tray 2, Front
to Back Airflow - AFO				
Fan Tray 3				ACX5K Fan Tray 3, Front
to Back Airflow - AFO				
Fan Tray 4				ACX5K Fan Tray 4, Front
to Back Airflow - AFO				

#### show chassis hardware clei-models (ACX5048 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:

```

Item	Version	Part number	CLEI code	FRU model number
Routing Engine 0		BUILTIN	CMMRG00BRA	ACX5048
FPC 0	REV 05	650-056267	CMMRG00BRA	ACX5048
PIC 0		BUILTIN	CMMRG00BRA	ACX5048
Power Supply 1	REV 03	740-041741	CMUPABHBAA	JPSU-650W-AC-AFO
Fan Tray 0				ACX5K-FAN
Fan Tray 1				ACX5K-FAN
Fan Tray 2				ACX5K-FAN
Fan Tray 3				ACX5K-FAN
Fan Tray 4				ACX5K-FAN

## show chassis hardware models (ACX5048 Router)

```

user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Routing Engine 0
FPC 0         REV 05    650-056267  VF3714170810  ACX5048
  PIC 0       BUILTIN  BUILTIN    ACX5048
Power Supply 1 REV 03    740-041741  1GA24081097  JPSU-650W-AC-AFO
Fan Tray 0
Fan Tray 1
Fan Tray 2
Fan Tray 3
Fan Tray 4

```

## show chassis hardware (ACX5096 Router)

```

user@host> show chassis hardware
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0
FPC 0         REV 09    650-053391  VB3714510139  ACX5096
  CPU
  PIC 0
    Xcvr 0     REV 01    740-021308  ARS186H       SFP+-10G-SR
    Xcvr 2     REV 01    740-031851  AM1045SUA1G   SFP-SX
    Xcvr 10    REV 02    740-011613  NS11KRP       SFP-SX
    Xcvr 14    REV 01    740-031980  AMCOLKL       SFP+-10G-SR
    Xcvr 20    REV 01    740-021308  ARS18A2       SFP+-10G-SR
    Xcvr 30    REV 02    740-011613  PJ21954       SFP-SX
    Xcvr 35    REV 01    740-031851  PN344LV       SFP-SX
    Xcvr 40    REV 01    740-031851  PLG028R       SFP-SX
    Xcvr 41    REV 01    740-021308  L12D01919     SFP+-10G-SR
    Xcvr 46    REV 01    740-011613  PD91F10       SFP-SX
    Xcvr 64    REV 01    740-031980  AMSOYSS       SFP+-10G-SR
    Xcvr 96    REV 01    740-032986  QE481421      QSFP+-40G-SR4
    Xcvr 99    REV 01    740-032986  QE494942      QSFP+-40G-SR4
    Xcvr 100   REV 01    740-032986  QE494756      QSFP+-40G-SR4
Power Supply 0 REV 01    740-053352  1GD14220106   JPSU-850W-AC-AFO
Power Supply 1 REV 01    740-053352  1GD14220102   JPSU-850W-AC-AFO
Fan Tray 0
  to Back Airflow - AFO
Fan Tray 1
  to Back Airflow - AFO
Fan Tray 2
  to Back Airflow - AFO

```

## show chassis hardware detail (ACX5096 Router)

```

user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis
Pseudo CB 0
Routing Engine 0
  ad0         509 MB  QEMU HARDDISK  QM00001      Hard Disk
  ad1         4095 MB  QEMU HARDDISK  QM00002      Hard Disk
  ad2         511 MB  QEMU HARDDISK  QM00003      Hard Disk
  ad3         1023 MB  QEMU HARDDISK  QM00004      Hard Disk

```

usb0 (addr 1)	product	0x0000 0	vendor	0x0000	uhub1
usb0 (addr 2)	product	0x0020 32	vendor	0x8087	uhub2
FPC 0	REV 09	650-053391	VB3714510139		ACX5096
CPU		BUILTIN	BUILTIN		FPC CPU
PIC 0		BUILTIN	BUILTIN		96x10G-8x40G
Xcvr 0	REV 01	740-021308	ARS186H		SFP+-10G-SR
Xcvr 10	REV 02	740-011613	NS11KRP		SFP-SX
Xcvr 14	REV 01	740-031980	AMCOLKL		SFP+-10G-SR
Xcvr 20	REV 01	740-021308	ARS18A2		SFP+-10G-SR
Xcvr 30	REV 02	740-011613	PJ21954		SFP-SX
Xcvr 41	REV 01	740-021308	L12D01919		SFP+-10G-SR
Xcvr 46	REV 01	740-011613	PD91F10		SFP-SX
Xcvr 64	REV 01	740-031980	AMSOYSS		SFP+-10G-SR
Xcvr 78	REV 01	740-031851	AM1045SUA1G		SFP-SX
Xcvr 96	REV 01	740-032986	QE481421		QSFP+-40G-SR4
Xcvr 99	REV 01	740-032986	QE494942		QSFP+-40G-SR4
Xcvr 100	REV 01	740-032986	QE494756		QSFP+-40G-SR4
Power Supply 0	REV 01	740-053352	1GD14220106		JPSU-850W-AC-AFO
Power Supply 1	REV 01	740-053352	1GD14220102		JPSU-850W-AC-AFO
Fan Tray 0					ACX5K Fan Tray 0, Front
to Back Airflow - AFO					
Fan Tray 1					ACX5K Fan Tray 1, Front
to Back Airflow - AFO					
Fan Tray 2					ACX5K Fan Tray 2, Front
to Back Airflow - AFO					

#### show chassis hardware clei-models (ACX5096 Router)

```
user@host> show chassis hardware clei-models
```

Hardware inventory:

Item	Version	Part number	CLEI code	FRU model number
Routing Engine 0		BUILTIN	CMMNX10BRA	ACX5096
FPC 0	REV 09	650-053391	CMMNX10BRA	ACX5096
PIC 0		BUILTIN	CMMNX10BRA	ACX5096
Power Supply 0	REV 01	740-053352	CMUPACSBAA	JPSU-850W-AC-AFO
Power Supply 1	REV 01	740-053352	CMUPACSBAA	JPSU-850W-AC-AFO
Fan Tray 0				ACX5K-FAN
Fan Tray 1				ACX5K-FAN
Fan Tray 2				ACX5K-FAN

#### show chassis hardware models (ACX5096 Router)

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

Hardware inventory:

Item	Version	Part number	Serial number	FRU model number
Routing Engine 0		BUILTIN	BUILTIN	ACX5096
FPC 0	REV 09	650-053391	VB3714510139	ACX5096
PIC 0		BUILTIN	BUILTIN	ACX5096
Power Supply 0	REV 01	740-053352	1GD14220106	JPSU-850W-AC-AFO
Power Supply 1	REV 01	740-053352	1GD14220102	JPSU-850W-AC-AFO
Fan Tray 0				ACX5K-FAN
Fan Tray 1				ACX5K-FAN
Fan Tray 2				ACX5K-FAN

#### show chassis hardware (ACX500 Router)

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

Hardware inventory:

Item	Version	Part number	Serial number	Description
Chassis			VJ0214510035	ACX500-AC
Midplane	REV 01	650-055932	VJ0214510035	ACX500-AC
Routing Engine		BUILTIN	BUILTIN	Routing Engine

FEB 0		BUILTIN	BUILTIN	Forwarding Engine
Processor				
FPC 0		BUILTIN	BUILTIN	FPC BUILTIN
MIC 0		BUILTIN	BUILTIN	2x 1GE(LAN) SFP
PIC 0		BUILTIN	BUILTIN	2x 1GE(LAN) SFP
Xcvr 0	REV 01	740-031851	PMF2Y3C	SFP-SX
Xcvr 1	REV 01	740-031851	PN342QN	SFP-SX
MIC 1		BUILTIN	BUILTIN	4x 1GE(LAN) SFP, RJ45
PIC 1		BUILTIN	BUILTIN	4x 1GE(LAN) SFP, RJ45
Xcvr 0	REV 01	740-011613	PF30K0L	SFP-SX
MIC 2		BUILTIN	BUILTIN	MS BUILTIN
PIC 2		BUILTIN	BUILTIN	MS BUILTIN

### show chassis hardware detail (ACX500 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               VJ0214510035  ACX500-AC
Midplane      REV 01   650-055932  VJ0214510035  ACX500-AC
Routing Engine                               BUILTIN       BUILTIN       Routing Engine
da0          3820 MB  USB DISK 2.0 Nand Flash 0
FEB 0                               BUILTIN       BUILTIN       Forwarding Engine
Processor
FPC 0                               BUILTIN       BUILTIN       FPC BUILTIN
MIC 0                               BUILTIN       BUILTIN       2x 1GE(LAN) SFP
PIC 0                               BUILTIN       BUILTIN       2x 1GE(LAN) SFP
Xcvr 0        REV 01   740-031851  PMF2Y3C       SFP-SX
Xcvr 1        REV 01   740-031851  PN342QN       SFP-SX
MIC 1                               BUILTIN       BUILTIN       4x 1GE(LAN) SFP, RJ45
PIC 1                               BUILTIN       BUILTIN       4x 1GE(LAN) SFP, RJ45
Xcvr 0        REV 01   740-011613  PF30K0L       SFP-SX
MIC 2                               BUILTIN       BUILTIN       MS BUILTIN
PIC 2                               BUILTIN       BUILTIN       MS BUILTIN
```

### show chassis hardware extensive (ACX500 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item          Version  Part number  Serial number  Description
Chassis                               VJ0214510035  ACX500-AC
Jedec Code:   0x7fb0                EEPROM Version: 0x02
S/N:          VJ0214510035
Assembly ID:  0x057c                Assembly Version: 00.00
Date:         00-00-0000            Assembly Flags:  0x00
ID: ACX500-AC
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 7f b0 02 ff 05 7c 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane      REV 01   650-055932  VJ0214510035  ACX500-AC
Jedec Code:   0x7fb0                EEPROM Version: 0x02
P/N:         650-055932            S/N:          VJ0214510035
Assembly ID:  0x057c                Assembly Version: 01.00
```

```

Date:          12-23-2014      Assembly Flags:    0x00
Version:       REV 01         CLEI Code:       PROTOXCLEI
ID: ACX500-AC   FRU Model Number: ACX500-AC
Board Information Record:
Address 0x00: ad 01 00 80 f0 1c 2d 1b 60 80 ff ff ff ff ff ff
I2C Hex Data:
Address 0x00: 7f b0 02 fe 05 7c 01 00 52 45 56 20 30 31 00 00
Address 0x10: 00 00 00 00 36 35 30 2d 30 35 35 39 33 32 00 00
Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 17 0c 07
Address 0x30: de ff ff ff ad 01 00 80 f0 1c 2d 1b 60 80 ff ff
Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 41
Address 0x50: 43 58 35 30 30 2d 41 43 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 30 41 00 ff ff ff ff ff ff ff
Address 0x70: ff ff ff 93 56 4a 30 32 31 34 35 31 30 30 33 35
Routing Engine      BUILTIN      BUILTIN      Routing Engine
da0      3820 MB  USB DISK 2.0      Nand Flash 0
FEB 0      BUILTIN      BUILTIN      Forwarding Engine
Processor
FPC 0      BUILTIN      BUILTIN      FPC BUILTIN
MIC 0      BUILTIN      BUILTIN      2x 1GE(LAN) SFP
Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN
Assembly ID: 0x0a40      Assembly Version: 00.00
Date:      00-00-0000      Assembly Flags: 0x00
ID: 2x 1GE(LAN) SFP
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a 40 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 de ad be ef 64 20 22 a8 60 af 21 38
PIC 0      BUILTIN      BUILTIN      2x 1GE(LAN) SFP
Xcvr 0      REV 01      740-031851      PMF2Y3C      SFP-SX
Xcvr 1      REV 01      740-031851      PN342QN      SFP-SX
MIC 1      BUILTIN      BUILTIN      4x 1GE(LAN) SFP, RJ45
Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN
Assembly ID: 0x0aac      Assembly Version: 00.00
Date:      00-00-0000      Assembly Flags: 0x00
ID: 4x 1GE(LAN) SFP, RJ45
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a ac 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 00 00 00 00 64 20 b5 c0 60 af 21 38
PIC 1      BUILTIN      BUILTIN      4x 1GE(LAN) SFP, RJ45
Xcvr 0      REV 01      740-011613      PF30K0L      SFP-SX
MIC 2      BUILTIN      BUILTIN      MS BUILTIN
Jedec Code: 0x0000      EEPROM Version: 0x00
P/N:      BUILTIN      S/N:      BUILTIN

```



```

Assembly ID: 0x0aaf          Assembly Version: 00.00
Date: 00-00-0000          Assembly Flags: 0x00
ID: MS BUILTIN
Board Information Record:
Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
Address 0x00: 00 00 00 00 0a af 00 00 00 00 00 00 00 00 00 00
Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 de ad be ef 64 22 cd 48 60 af 21 38
PIC 2          BUILTIN          BUILTIN          MS BUILTIN

```

#### show chassis hardware clei-models (ACX500 Router)

```

user@host> show chassis hardware clei-models
Hardware inventory:
Item          Version  Part number  CLEI code      FRU model number
Midplane      REV 01    650-055932  PROTOXCLEI     ACX500-AC
Routing Engine          BUILTIN
FEB 0          BUILTIN
FPC 0          BUILTIN

```

#### show chassis hardware models (ACX500 Router)

```

user@host> show chassis hardware models
Hardware inventory:
Item          Version  Part number  Serial number  FRU model number
Midplane      REV 01    650-055932  VJ0214510035  ACX500-AC
Routing Engine          BUILTIN      BUILTIN
FEB 0          BUILTIN      BUILTIN
FPC 0          BUILTIN      BUILTIN

```

## show chassis fpc

---

<b>List of Syntax</b>	<a href="#">Syntax on page 306</a> <a href="#">Syntax (EX Series Switches) on page 306</a> <a href="#">Syntax (T4000 Routers) on page 306</a> <a href="#">Syntax (TX Matrix and TX Matrix Plus Routers) on page 306</a> <a href="#">Syntax (MX Series Routers and EX Series switches) on page 306</a> <a href="#">Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers) on page 306</a> <a href="#">Syntax (QFX Series) on page 306</a> <a href="#">Syntax (OCX Series) on page 306</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 306</a> <a href="#">Syntax (ACX Series Universal Access Routers) on page 307</a> <a href="#">Syntax (ACX500 Routers) on page 307</a>
<b>Syntax</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;slot&gt;&gt;   &lt;pic-status &lt;slot&gt;&gt;</code>
<b>Syntax (EX Series Switches)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;fpc-slot&gt;&gt;   &lt;pic-status &lt;fpc-slot&gt;&gt;</code> <code>&lt;fpc-slot&gt;</code>
<b>Syntax (T4000 Routers)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;fpc-slot&gt;&gt;</code> <code>&lt;pic-status &lt;fpc-slot&gt;&gt;</code>
<b>Syntax (TX Matrix and TX Matrix Plus Routers)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;fpc-slot&gt;&gt;   &lt;pic-status &lt;fpc-slot&gt;&gt;</code> <code>&lt;slot&gt;</code>
<b>Syntax (MX Series Routers and EX Series switches)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;slot&gt;&gt;   &lt;pic-status &lt;slot&gt;&gt;</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code>
<b>Syntax (MX104, MX2010, and MX2020 3D Universal Edge Routers)</b>	<code>show chassis fpc</code> <code>&lt;slot&gt; detail   &lt;detail &lt;slot&gt;&gt;   &lt;pic-status &lt;slot&gt;&gt;</code> <code>&lt;fpc-slot&gt;</code>
<b>Syntax (QFX Series)</b>	<code>show chassis fpc</code> <code>&lt;detail&gt;</code> <code>&lt;interconnect-device <i>name</i> &lt;fpc-slot fpc-slot&gt;&gt;</code> <code>&lt;node-device <i>name</i>&gt;</code>
<b>Syntax (OCX Series)</b>	<code>show chassis fpc</code> <code>&lt;detail&gt;</code>
<b>Syntax (PTX Series Packet Transport Routers)</b>	<code>show chassis fpc</code> <code>&lt;detail &lt;fpc-slot&gt;&gt;   &lt;pic-status &lt;fpc-slot&gt;&gt;</code> <code>&lt;fpc-slot&gt;</code>

<b>Syntax (ACX Series Universal Access Routers)</b>	<pre>show chassis fpc &lt;detail &lt;fpc-slot&gt;&gt;   &lt;pic-status &lt;fpc-slot&gt;&gt; &lt;fpc-slot&gt;</pre>
<b>Syntax (ACX500 Routers)</b>	<pre>show chassis fpc &lt;fpc-slot&gt; detail &lt;fpc-slot&gt; pic-status &lt;fpc-slot&gt;</pre>
<b>Release Information</b>	<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 12.1x48 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> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p>Command introduced in Junos OS Release 15.1 for MX104-40G 3D Universal Edge Routers.</p>
<b>Description</b>	Display status information about the installed Flexible PIC Concentrators (FPCs) and PICs.
<b>Options</b>	<p><b>none</b>—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.</p>



**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				
6 Empty				
7 Online	26	4	0	1024 0
32				

---Hard FPC error---

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
Buffer			DRAM (MB) Heap
0 offline	---	FPC misconfiguration---	
1 offline	---	FPC misconfiguration---	
2 offline	---	FPC misconfiguration---	
3 Empty			
4 Empty			
5 Online	66	50	0
27			2816 29

The following sample output shows FPC misconfiguration alarms:

```
user@host> show chassis alarms
```

3 alarms currently active

Alarm time	Class	Description
2011-03-24 00:52:51 PST	Major	FPC 1 misconfig
2011-03-24 00:52:31 PST	Major	FPC 2 misconfig
2011-03-24 00:52:31 PST	Major	FPC 3 misconfig

**detail**—(Optional) Display detailed status information for all FPCs or for the FPC in the specified slot (see *fpc-slot* or *slot*).

**all-members**—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on all members of the Virtual Chassis configuration.

**interconnect-device *name***—(QFabric systems only) (Optional) Display status information for all FPCs on the Interconnect device.

***fpc-slot***—(Optional) FPC slot number:

- (TX Matrix and TX Matrix Plus routers only)—On a TX Matrix router, if you specify the number of the T640 router (line-card chassis) by using the **lcc number** option (the recommended method), replace ***fpc-slot*** with a value from 0 through 7. Otherwise, replace ***fpc-slot*** with a value from 0 through 31. Likewise, on a TX Matrix Plus router, if you specify the number of the specified router (line-card chassis) by using the **lcc number** option (the recommended method), replace ***fpc-slot*** with

a value from 0 through 7. Otherwise, replace *fpc-slot* with a value from 0 through 31. For example, the following commands have the same result:

```
user@host> show chassis fpc detail 1 lcc 1
user@host> show chassis fpc detail 9
```

- M120 router—Replace *fpc-slot* with a value from 0 through 5.
- MX80 router—Replace *fpc-slot* with a value from 0 through 1.
- MX104 and MX104-40G routers—Replace *fpc-slot* with a value from 0 through 2.
- MX240 router—Replace *fpc-slot* with a value from 0 through 2.
- MX480 router—Replace *fpc-slot* with a value from 0 through 5.
- MX-960 router—Replace *fpc-slot* with a value from 0 through 11.
- MX2010 router—Replace *fpc-slot-number* with a value from 0 through 9.
- MX2020 router—Replace *fpc-slot-number* with a value from 0 through 19.
- Other routers—Replace *fpc-slot* with a value from 0 through 7.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—Replace *fpc-slot* with 0.
  - EX4200 switches in a Virtual Chassis configuration—Replace *fpc-slot* with a value from 0 through 9.
  - EX6210 switches—Replace *fpc-slot* with a value from 0 through 9.
  - EX8208 switches—Replace *fpc-slot* with a value from 0 through 7.
  - EX8216 switches—Replace *fpc-slot* with a value from 0 through 15.
  - EX9204 switches—Replace *fpc-slot* with a value from 0 through 2.
  - EX9208 switches—Replace *fpc-slot* with a value from 0 through 5.
  - EX9214 switches—Replace *fpc-slot* with a value from 0 through 11.
- QFX Series:
  - QFXSeries and OCX Series switches—Replace *fpc-slot* with 0.
  - QFabric systems—Replace *fpc-slot* with 0 through 31 on the Interconnect device.
- PTX Series Packet Transport Routers:
  - PTX5000 Packet Transport Router—Replace *fpc-slot* with a value from 0 through 7.
- ACX Series Universal Access Routers:
  - ACX1000 and ACX2000 Universal Access Routers—Replace *fpc-slot* with 0.

**local**—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the local Virtual Chassis member.

**member *member-id***—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the specified member of the Virtual Chassis configuration. Replace *member-id* with a value of 0 or 1.

**node-device *name***—(QFabric systems only) (Optional) Display status information for each Node device. Each Node device is equivalent to an FPC.

**pic-status**—(Optional) Display status information for all PICs or for the PIC in the specified slot (see *fpc-slot*).



**NOTE:** On T1600 routers, Type 4 FPCs with ASICs based on the SL2.0 chipset do not support the 10-Gigabit Ethernet LAN/WAN PIC with SFP+ (10x10GE [LAN/WAN] SFPP). If you issue the `show chassis fpc` command with the `pic-status` option, the CLI displays the string “Not Supported” for 10x10GE (LAN/WAN) SFPP PICs installed on such FPCs. The following is a sample output:

```
user@host> show chassis fpc pic-status
Slot 0  Online      E2-FPC Type 1
  PIC 0  Online      1x G/E SFP, 1000 BASE
  PIC 1  Online      Adaptive Services-II
  PIC 2  Online      1x G/E IQ, 1000 BASE
  PIC 3  Online      1x G/E IQ, 1000 BASE
Slot 1  Online      FPC Type 3-ES
  PIC 0  Present     UNUSED- Not Supported
Slot 2  Online      FPC Type 4-ES
  PIC 0  Offline     4x OC-192 SONET XFP
  PIC 1  Present     10x10GE (LAN/WAN) SFPP- Not Supported
<<<<<<
Slot 4  Offline     FPC Type 1-ES
Slot 5  Offline     FPC Type 2-ES
Slot 6  Online      E2-FPC Type 3
  PIC 0  Online      1x OC-192 SONET XFP
  PIC 1  Online      4x OC-48 SONET
  PIC 2  Online      4x OC-48 SONET
  PIC 3  Online      MultiServices 500
Slot 7  Online      FPC Type 4-ES
  PIC 0  Online      4x 10GE (LAN/WAN) XFP
  PIC 1  Online      4x 10GE (LAN/WAN) XFP
```

In addition, an entry is logged in the system log messages (`/var/log/messages`) that the PIC is not supported. The following is a sample message logged in the system log:

```
Apr  5 08:47:36  router1 chassisd[2770]: CHASSISD_UNSUPPORTED_PIC:
PIC 1 in FPC 2 (type 763, version 257) is not supported
```

If you see this issue, contact Juniper Networks Technical Assistance Center (JTAC) for a possible fix. For more information about this issue and a possible solution, see [PSN-2010-03-696](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*
  - *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 317](#)
  - [show chassis fpc \(M10 Router\) on page 317](#)
  - [show chassis fpc \(M20 Router\) on page 317](#)
  - [show chassis fpc detail \(M Series Routers\) on page 317](#)
  - [show chassis fpc detail \(MX80 Router\) on page 318](#)
  - [show chassis fpc \(MX104 Router\) on page 318](#)
  - [show chassis fpc detail \(MX104 Router\) on page 318](#)
  - [show chassis fpc pic-status \(MX104 Router\) on page 319](#)



[show chassis fpc \(MX104-40G Router\) on page 319](#)  
[show chassis fpc detail \(MX104-40G Router\) on page 319](#)  
[show chassis fpc pic-status \(MX104-40G Router\) on page 319](#)  
[show chassis fpc pic-status \(MX104-40G Router with Upgrade License\) on page 320](#)  
[show chassis fpc \(MX240 Router\) on page 320](#)  
[show chassis fpc \(MX480 Router\) on page 320](#)  
[show chassis fpc detail \(EX9200 Switch\) on page 320](#)  
[show chassis fpc \(MX480 Router\) on page 321](#)  
[show chassis fpc \(MX480 Router with 100-Gigabit Ethernet CFP\) on page 321](#)  
[show chassis fpc pic-status \(MX480 Router with 100-Gigabit Ethernet CFP\) on page 321](#)  
[show chassis fpc pic-status \(EX Series Switch\) on page 321](#)  
[show chassis fpc \(MX480 Router with MPC4E\) on page 322](#)  
[show chassis fpc detail \(MX480 Router with MPC4E\) on page 322](#)  
[show chassis fpc \(MX480 Router with MPC4E\) on page 322](#)  
[show chassis fpc detail \(MX480 Router with MPC4E\) on page 323](#)  
[show chassis fpc \(MX960 Router\) on page 323](#)  
[show chassis fpc \(MX960 Router with MPC5EQ\) on page 323](#)  
[show chassis fpc detail \(MX960 Router with MPC5EQ\) on page 324](#)  
[show chassis fpc pic-status \(MX960 Router with MPC5EQ\) on page 325](#)  
[show chassis fpc \(MX240, MX480, MX960 Routers with Application Services Modular Line Card\) on page 326](#)  
[show chassis fpc \(MX240, MX480, MX960 with Application Services Modular Line Card\) on page 326](#)  
[show chassis fpc \(MX240, MX480, MX960, MX2010, and MX2020 3D Universal Edge Routers with Dynamic Power Management\) on page 326](#)  
[show chassis fpc \(MX2010 Routers\) on page 327](#)  
[show chassis fpc \(MX2010 Router with Fabric Grant Bypass Enabled\) on page 327](#)  
[show chassis fpc \(MX2010 Router with Fabric Grant Bypass Disabled\) on page 327](#)  
[show chassis fpc pic-status \(MX2010 Router with Fabric Grant Bypass Enabled\) on page 328](#)  
[show chassis fpc pic-status \(MX2010 Router with Fabric Grant Bypass Disabled\) on page 328](#)  
[show chassis fpc \(MX2020 Routers\) on page 328](#)  
[show chassis fpc \(MX2020 Router with MPC4E\) on page 329](#)  
[show chassis fpc detail \(MX2020 Router with MPC4E\) on page 329](#)  
[show chassis fpc \(MX2020 Router with MPC5EQ and MPC6E\) on page 330](#)  
[show chassis fpc detail \(MX2020 Router with MPC5EQ and MPC6E\) on page 330](#)  
[show chassis fpc pic-status \(MX2020 Router with MPC5EQ and MPC6E\) on page 332](#)  
[show chassis fpc detail \(MX Series Routers\) on page 333](#)  
[show chassis fpc detail \(EX Series Switches\) on page 333](#)  
[show chassis fpc \(Hardware Not Supported\) on page 333](#)  
[show chassis fpc detail \(Hardware Not Supported\) on page 334](#)  
[show chassis fpc pic-status on page 334](#)  
[show chassis fpc pic-status \(M Series Routers\) on page 334](#)  
[show chassis fpc pic-status \(M120 Router\) on page 335](#)  
[show chassis fpc pic-status \(MX240, MX480, and MX960 Routers with Application Services Modular Line Card\) on page 335](#)  
[show chassis fpc lcc \(TX Matrix Router\) on page 335](#)  
[show chassis fpc pic-status \(TX Matrix Router\) on page 335](#)

[show chassis fpc pic-status lcc \(TX Matrix Router\) on page 336](#)  
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[show chassis fpc lcc \(TX Matrix Plus Router\) on page 337](#)  
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**Output Fields** [Table 9 on page 315](#) lists the output fields for the **show chassis fpc** command. Output fields are listed in the approximate order in which they appear.

Table 9: show chassis fpc Output Fields

Field Name	Field Description	Level of Output
<b>Slot or Slot State</b>	Slot number and state. The state can be one of the following conditions: <ul style="list-style-type: none"> <li>• <b>Dead</b>—Held in reset because of errors.</li> <li>• <b>Diag</b>—Slot is being ignored while the FPC is running diagnostics.</li> <li>• <b>Dormant</b>—Held in reset.</li> <li>• <b>Empty</b>—No FPC is present.</li> <li>• <b>Offline</b>—(PTX Series Packet Transport Routers only) One of the following two states is displayed: <ul style="list-style-type: none"> <li>• <b>FPC offlined due to unreachable destinations</b></li> <li>• <b>FPC Offlined due to degraded FPC action</b></li> </ul> </li> <li>• <b>Online</b>—FPC is online and running.</li> <li>• <b>Present</b>—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 <b>Hardware Not Supported</b> or <b>Hardware Not In Right Slot</b>. The FPC is coming up but not yet online.</li> <li>• <b>Probed</b>—Probe is complete; awaiting restart of the Packet Forwarding Engine.</li> <li>• <b>Probe-wait</b>—Waiting to be probed.</li> </ul>	all levels
<b>Logical slot</b>	Slot number.	all levels
<b>Temp (C) or Temperature</b>	Temperature of the air passing by the FPC, in degrees Celsius or in both Celsius and Fahrenheit.	all levels all levels
<b>Temperature (PTX Series)</b>	On PTX Series Packet Transport Routers, temperature details are provided in degrees Celsius and Fahrenheit. Output includes: <ul style="list-style-type: none"> <li>• Temperature (PMB)—Temperature of the air passing by the Processor Mezzanine Board (PMB) at the bottom of the FPC.</li> <li>• Temperature (Intake)—Temperature of the air flowing into the chassis.</li> <li>• Temperature (Exhaust)—Exhaust temperatures for multiple zones (Exhaust A and Exhaust B).</li> <li>• Temperature (TLn)—Temperature of the specified Lookup ASIC (TL) of the packet forwarding engine on the FPC.</li> <li>• Temperature (TQn)—Temperature of the specified Queuing and Memory Interface ASIC (TQ) of the packet forwarding engine on the FPC.</li> </ul>	detail
<b>Total CPU Utilization (%)</b>	Total percentage of CPU being used by the FPC's processor.	all levels
<b>Interrupt CPU Utilization (%)</b>	Of the total CPU being used by the FPC's processor, the percentage being used for interrupts.	none specified

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

Field Name	Field Description	Level of Output
<b>1 min CPU utilization (%)</b>  <i>NOTE:</i> Supported only on MX240, MX480, MX960, MX2010, and MX2020.	Information about the Routing Engine's CPU utilization in the past 1 minute.	none specified
<b>5 min CPU utilization (%)</b>  <i>NOTE:</i> Supported only on MX240, MX480, MX960, MX2010, and MX2020.	Information about the Routing Engine's CPU utilization in the past 5 minutes.	none specified
<b>15 min CPU utilization (%)</b>  <i>NOTE:</i> Supported only on MX240, MX480, MX960, MX2010, and MX2020.	Information about the Routing Engine's CPU utilization in the past 15 minutes.	none specified
<b>Memory DRAM (MB)</b>	Total DRAM, in megabytes, available to the FPC's processor.	none specified
<b>Heap Utilization (%)</b>	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).  <i>NOTE:</i> 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
<b>Buffer Utilization (%)</b>	Percentage of buffer space being used by the FPC's processor for buffering internal messages.	none specified
<b>Total CPU DRAM</b>	Amount of DRAM available to the FPC's CPU.	detail
<b>Total RLDRAM</b>	Amount of reduced latency dynamic random access memory (RLDRAM) available to the FPC CPU.	detail
<b>Total DDR DRAM</b>	Amount of double data rate dynamic random access memory (DDR DRAM) available to the FPC CPU.	detail
<b>Total SRAM</b>	Amount of static RAM (SRAM) used by the FPC's CPU.	detail
<b>Total SDRAM</b>	Total amount of memory used for storing packets and notifications.	detail

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

Field Name	Field Description	Level of Output
I/O Manager ASICs information	I/O Manager version number, manufacturer, and part number.	detail
Start time	Time when the Routing Engine detected that the FPC was running.	detail
Uptime	How long the Routing Engine has been connected to the FPC and, therefore, how long the FPC has been up and running.	detail
PIC type	(pic-status output only) Type of PIC.	none specified

## 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 (MX104-40G Router)

```

user@host> show chassis fpc
Temp CPU Utilization (%) CPU Utilization (%) Memory Utilization (%)
Slot State (C) Total Interrupt 1min 5min 15min DRAM (MB)
Heap Buffer
0 Online 48 18 6 2048
9 13
1 Online 48 18 6 2048
9 13
2 Online 48 18 6 2048
9 13

```

#### show chassis fpc detail (MX104-40G Router)

```

user@host> show chassis fpc detail
Slot 0 information:
  State Online
  Temperature 48 (C)
  Total CPU DRAM 2048 MB
  Total SRAM 403 MB
  Total SDRAM 1316 MB
  Start time 2015-02-27 03:05:54 PST
  Uptime 2 hours, 38 minutes, 27 seconds
Slot 1 information:
  State Online
  Temperature 48 (C)
  Total CPU DRAM 2048 MB
  Total SRAM 403 MB
  Total SDRAM 1316 MB
  Start time 2015-02-27 03:05:55 PST
  Uptime 2 hours, 38 minutes, 26 seconds
Slot 2 information:
  State Online
  Temperature 48 (C)
  Total CPU DRAM 2048 MB
  Total SRAM 403 MB
  Total SDRAM 1316 MB
  Start time 2015-02-27 03:05:55 PST
  Uptime 2 hours, 38 minutes, 26 seconds

```

#### show chassis fpc pic-status (MX104-40G Router)

MIC slots 1/0 and 1/1 have been disabled by default on the MX104-40G routers. If you install MICs on those slots, the MIC details are displayed when you run the **show chassis fpc pic-status** command. However, the status of the MIC is displayed as offline.

```

user@host> show chassis fpc pic-status

```

```

Slot 0  Online
  PIC 0  Online      MS-MIC-16G
  PIC 2  Online      10x 1GE(LAN) SFP
  PIC 3  Online      10x 1GE(LAN) SFP
Slot 1  Online
  PIC 0  Offline     10x 1GE(LAN) SFP
  PIC 1  Offline     10x 1GE(LAN) SFP
Slot 2  Online
  PIC 0  Online      4x 10GE(LAN) SFP+

```

### show chassis fpc pic-status (MX104-40G Router with Upgrade License)

When you install the upgrade license on MX104-40G, MIC slots 1/0 and 1/1 are enabled. If you install MICs on those slots, the MIC details are displayed and the status of the MIC is displayed as online when you run the **show chassis fpc pic-status** command.

```

user@host> show chassis fpc pic-status
Slot 0  Online
  PIC 0  Online      MS-MIC-16G
  PIC 2  Online      10x 1GE(LAN) SFP
  PIC 3  Online      10x 1GE(LAN) SFP
Slot 1  Online
  PIC 0  Online      10x 1GE(LAN) SFP
  PIC 1  Online      10x 1GE(LAN) 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 (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 detail (EX9200 Switch)

```

user@switch> show chassis fpc detail
Slot 2 information:
  State                               Online
  Temperature                         37
  Total CPU DRAM                      2048 MB
  Total RLD RAM                       331 MB
  Total DDR DRAM                      1536 MB
  Start time:                         2014-03-12 15:35:28 UTC
  Uptime:                             1 hour, 4 minutes, 29 seconds
  Max Power Consumption               239 Watts
Slot 3 information:

```



```

State                               Online
Temperature                         39
Total CPU DRAM                     2048 MB
Total RLDRAM                       1036 MB
Total DDR DRAM                     6656 MB
Start time:                        2014-03-12 15:00:18 UTC
Uptime:                            1 hour, 39 minutes, 39 seconds
Max Power Consumption               520 Watts

```

#### show chassis fpc (MX480 Router)

```

user@host> show chassis fpc
Temp CPU Utilization (%) CPU Utilization (%) Memory
Utilization (%)
Slot State (C) Total Interrupt 1min 5min 15min DRAM (MB)
Heap Buffer
0 Online 1 0 1 2 3 1024
4 56
1 Online 1 0 2 2 3 1024
4 56

```

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

```

user@host> show chassis fpc
Temp CPU Utilization (%) Memory Utilization (%)
Slot State (C) Total Interrupt DRAM (MB) Heap Buffer
0 Online 33 4 0 2048 10 13
1 Online 36 7 0 2048 16 13
2 Online 29 6 0 1024 27 29
3 Online 33 0 0 0 0 0
4 Online 36 7 0 2048 19 13
5 Online 34 31 11 2048 14 13

```

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

```

user@host> show chassis fpc pic-status
Slot 1 Online MPC Type 3
PIC 2 Online 1X100GE CFP
Slot 2 Online DPCE 40x 1GE R EQ
PIC 0 Online 10x 1GE(LAN) EQ
PIC 1 Online 10x 1GE(LAN) EQ
PIC 2 Online 10x 1GE(LAN) EQ
PIC 3 Online 10x 1GE(LAN) EQ
Slot 3 Online MPC Type 3
PIC 0 Online 1X100GE CFP
PIC 2 Online 1X100GE CFP
Slot 4 Online MPC Type 3
PIC 0 Online 1X100GE CFP
PIC 2 Online 1X100GE CFP
Slot 5 Online MPC Type 2 3D EQ
PIC 0 Online 2x 10GE XFP
PIC 1 Online 2x 10GE XFP
PIC 2 Online 10x 1GE(LAN) SFP
PIC 3 Online 10x 1GE(LAN) SFP

```

#### show chassis fpc pic-status (EX Series Switch)

```

user@host> show chassis fpc pic-status
Slot 1 Online EX9200 32x10G SFP
PIC 0 Online 8X10GE SFPP
PIC 1 Online 8X10GE SFPP
PIC 2 Online 8X10GE SFPP

```

```

PIC 3 Online      8X10GE SFPP
Slot 2 Online     EX9200 32x10G SFP
PIC 0 Online      8X10GE SFPP
PIC 1 Online      8X10GE SFPP
PIC 2 Online      8X10GE SFPP
PIC 3 Online      8X10GE SFPP

```

#### show chassis fpc (MX480 Router with MPC4E)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total	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 RLD RAM 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 RLD RAM 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 (MX480 Router with MPC4E)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%) Total	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 RLD RAM         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 RLD RAM         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 (MX960 Router with MPC5EQ)**

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	Total	CPU Utilization (%) Interrupt	Memory DRAM (MB)	Heap	Utilization (%) Buffer
0	Online	38	16	0	3584	7	13
1	Online	31	15	0	2048	17	13
2	Empty						
3	Online	31	14	0	2048	20	13
4	Online	34	16	0	3584	7	13
5	Online	34	16	0	3584	7	13
6	Empty						
7	Online	32	9	0	2048	18	14
8	Online	36	19	0	3584	7	13

9	Online	31	9	0	2048	13	13
10	Online	35	14	0	3584	7	13
11	Online	33	11	0	2048	18	14

**show chassis fpc detail (MX960 Router with MPC5EQ)**

```

user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                         38
  Total CPU DRAM                      3584 MB
  Total XR2                           291 MB
  Total DDR DRAM                      24960 MB
  Start time:                        2014-04-22 10:01:46 PDT
  Uptime:                             1 hour, 23 minutes, 40 seconds
  Max Power Consumption               607 Watts
Slot 1 information:
  State                               Online
  Temperature                         31
  Total CPU DRAM                      2048 MB
  Total RLD RAM                       1036 MB
  Total DDR DRAM                      6656 MB
  Start time:                        2014-04-22 10:01:50 PDT
  Uptime:                             1 hour, 23 minutes, 36 seconds
  Max Power Consumption               520 Watts
Slot 3 information:
  State                               Online
  Temperature                         31
  Total CPU DRAM                      2048 MB
  Total RLD RAM                       1324 MB
  Total DDR DRAM                      5120 MB
  Start time:                        2014-04-22 10:01:50 PDT
  Uptime:                             1 hour, 23 minutes, 36 seconds
  Max Power Consumption               440 Watts
Slot 4 information:
  State                               Online
  Temperature                         34
  Total CPU DRAM                      3584 MB
  Total XR2                           291 MB
  Total DDR DRAM                      24960 MB
  Start time:                        2014-04-22 10:01:54 PDT
  Uptime:                             1 hour, 23 minutes, 32 seconds
  Max Power Consumption               607 Watts
Slot 5 information:
  State                               Online
  Temperature                         34
  Total CPU DRAM                      3584 MB
  Total XR2                           291 MB
  Total DDR DRAM                      24960 MB
  Start time:                        2014-04-22 10:01:56 PDT
  Uptime:                             1 hour, 23 minutes, 30 seconds
  Max Power Consumption               607 Watts
Slot 7 information:
  State                               Online
  Temperature                         32
  Total CPU DRAM                      2048 MB
  Total RLD RAM                       1036 MB
  Total DDR DRAM                      11264 MB
  Start time:                        2014-04-22 10:02:02 PDT
  Uptime:                             1 hour, 23 minutes, 24 seconds
  Max Power Consumption               608 Watts

```

```

Slot 8 information:
  State                Online
  Temperature           36
  Total CPU DRAM        3584 MB
  Total XR2             291 MB
  Total DDR DRAM        24960 MB
  Start time:           2014-04-22 10:02:07 PDT
  Uptime:               1 hour, 23 minutes, 19 seconds
  Max Power Consumption 607 Watts
Slot 9 information:
  State                Online
  Temperature           31
  Total CPU DRAM        2048 MB
  Total RLDRAM          734 MB
  Total DDR DRAM        3108 MB
  Start time:           2014-04-22 10:02:05 PDT
  Uptime:               1 hour, 23 minutes, 21 seconds
  Max Power Consumption 368 Watts
Slot 10 information:
  State                Online
  Temperature           35
  Total CPU DRAM        3584 MB
  Total XR2             291 MB
  Total DDR DRAM        24960 MB
  Start time:           2014-04-22 10:02:11 PDT
  Uptime:               1 hour, 23 minutes, 15 seconds
  Max Power Consumption 607 Watts
Slot 11 information:
  State                Online
  Temperature           33
  Total CPU DRAM        2048 MB
  Total RLDRAM          1036 MB
  Total DDR DRAM        11264 MB
  Start time:           2014-04-22 10:02:16 PDT
  Uptime:               1 hour, 23 minutes, 10 seconds
  Max Power Consumption 608 Watts

```

#### show chassis fpc pic-status(MX960 Router with MPC5EQ)

```

user@host> show chassis fpc pic-status
Slot 0  Online      MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online      2X10GE SFPP OTN
  PIC 1  Online      1X100GE CFP2 OTN
  PIC 2  Online      2X10GE SFPP OTN
  PIC 3  Online      1X100GE CFP2 OTN
Slot 1  Online      MPCE Type 3 3D
  PIC 0  Online      10X10GE SFPP
  PIC 2  Online      1X100GE CXP
Slot 3  Online      MPC 3D 16x 10GE
  PIC 0  Online      4x 10GE(LAN) SFP+
  PIC 1  Online      4x 10GE(LAN) SFP+
  PIC 2  Online      4x 10GE(LAN) SFP+
  PIC 3  Online      4x 10GE(LAN) SFP+
Slot 4  Online      MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online      2X10GE SFPP OTN
  PIC 1  Online      1X100GE CFP2 OTN
  PIC 2  Online      2X10GE SFPP OTN
  PIC 3  Online      1X100GE CFP2 OTN
Slot 5  Online      MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online      2X10GE SFPP OTN

```

```

PIC 1 Online 1X100GE CFP2 OTN
PIC 2 Online 2X10GE SFPP OTN
PIC 3 Online 1X100GE CFP2 OTN
Slot 7 Online MPC4E 3D 2CGE+8XGE
PIC 0 Online 4x10GE SFPP
PIC 1 Online 1X100GE CFP
PIC 2 Online 4x10GE SFPP
PIC 3 Online 1X100GE CFP
Slot 8 Online MPC5E 3D Q 24XGE+6XLGE
PIC 0 Offline 12X10GE SFPP OTN
PIC 1 Offline 12X10GE SFPP OTN
PIC 2 Online 3X40GE QSFPP
PIC 3 Online 3X40GE QSFPP
Slot 9 Online MPCE Type 2 3D P
PIC 0 Online 2x 10GE XFP
PIC 1 Online 2x 10GE XFP
Slot 10 Online MPC5E 3D Q 24XGE+6XLGE
PIC 0 Online 12X10GE SFPP
PIC 1 Online 12X10GE SFPP
PIC 2 Offline 3X40GE QSFPP
PIC 3 Offline 3X40GE QSFPP
Slot 11 Online MPC4E 3D 2CGE+8XGE
PIC 0 Online 4x10GE SFPP
PIC 1 Online 1X100GE CFP
PIC 2 Online 4x10GE SFPP
PIC 3 Online 1X100GE CFP

```

#### show chassis fpc (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```

user@host> show chassis fpc 1
    Temp CPU Utilization (%) Memory Utilization (%)
Slot State (C) Total Interrupt DRAM (MB) Heap Buffer
  1 Online 34 5 0 3072 5 13

```

#### show chassis fpc (MX240, MX480, MX960 with Application Services Modular Line Card)

```

user@host> show chassis fpc 1 detail
Slot 1 information:
State Online
Temperature 34
Total CPU DRAM 3072 MB
Total RLDRAM 259 MB
Total DDR DRAM 4864 MB
Start time: 2012-06-19 10:51:43 PDT
Uptime: 16 minutes, 48 seconds
Max Power Consumption 550 Watts

```

#### show chassis fpc (MX240, MX480, MX960, MX2010, and MX2020 3D Universal Edge Routers with Dynamic Power Management)

```

user@host> show chassis fpc 2 detail
Slot 2 information:
State Online
Temperature 37
Total CPU DRAM 3584 MB
Total XR2 275 MB
Total DDR DRAM 20352 MB
Start time: 2014-07-18 02:51:23 PDT
Uptime: 5 minutes, 19 seconds
Max MPC Base Power Consumption 485 Watts

```

```

Max MICO Power Consumption      50 Watts
Max MIC1 Power Consumption      50 Watts
Max MPC Total Power Consumption 585 Watts

```

### show chassis fpc (MX2010 Routers)

```

user@host> show chassis fpc
      Temp CPU Utilization (%)  Memory      Utilization (%)
Slot State      (C)  Total  Interrupt      DRAM (MB) Heap      Buffer
0  Online        34    9        0        2048    18        13
1  Online        32    9        0        2048    15        13
2  Empty
3  Empty
4  Empty
5  Empty
6  Empty
7  Empty
8  Online        31   13        0        2048    11        13
9  Online        33   10        0        2048    18        13

```

### show chassis fpc (MX2010 Router with Fabric Grant Bypass Enabled)

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass is enabled by default. All MPCs power on.

```

user@host> show chassis fpc
      Temp CPU Utilization (%)  Memory      Utilization (%)
Slot State      (C)  Total  Interrupt      DRAM (MB) Heap      Buffer
0  Online        34   20        0        2048     9        14
1  Offline       33   22        0        2048     9        14
2  Online        33   17        0        2048     9        14
3  Offline       34   25        0        2048     9        14
4  Online        32   27        0        2048     9        14
5  Offline       32   26        0        2048     9        14
6  Empty
7  Empty
8  Empty
9  Empty

```

### show chassis fpc (MX2010 Router with Fabric Grant Bypass Disabled)

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass and reboot the router. Also, FPC misconfiguration alarms are generated.

```

user@host> show chassis fpc
      Temp CPU Utilization (%)  Memory      Utilization (%)
Slot State      (C)  Total  Interrupt      DRAM (MB) Heap      Buffer
0  Online        34   20        0        2048     9        14
1  Offline      ---FPC misconfiguration---
2  Online        33   17        0        2048     9        14
3  Offline      ---FPC misconfiguration---
4  Online        32   27        0        2048     9        14
5  Offline      ---FPC misconfiguration---
6  Empty
7  Empty

```

```

8 Empty
9 Empty

```

### show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Enabled)

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been enabled by default. All MPCs power on.

```

user@host> show chassis fpc pic-status
Slot 0   Present      MPCE Type 3 3D
Slot 1   Present      MPC Type 2 3D EQ
Slot 2   Present      MPCE Type 3 3D
Slot 3   Present      MPC 3D 16x 10GE
Slot 4   Present      MPCE Type 3 3D
Slot 5   Present      MPCE Type 1 3D Q

```

### show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Disabled)

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass mode and reboot the router.

```

user@host> show chassis fpc pic-status
Slot 0   Present      MPCE Type 3 3D
Slot 1   Offline      MPC Type 2 3D EQ
Slot 2   Present      MPCE Type 3 3D
Slot 3   Offline      MPC 3D 16x 10GE
Slot 4   Present      MPCE Type 3 3D
Slot 5   Offline      MPCE Type 1 3D Q

```

### show chassis fpc (MX2020 Routers)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)		Memory DRAM (MB)	Utilization (%)	
			Total	Interrupt		Heap	Buffer
0	Online	10	12	0	2048	18	13
1	Online	8	9	0	2048	18	13
2	Online	7	9	0	2048	18	13
3	Online	8	10	0	2048	18	13
4	Online	9	10	0	2048	18	13
5	Online	8	9	0	2048	18	13
6	Online	8	10	0	2048	18	13
7	Online	9	9	0	2048	18	13
8	Online	9	10	0	2048	18	13
9	Online	10	9	0	2048	18	13
10	Online	16	8	0	2048	18	13
11	Online	11	10	0	2048	18	13
12	Online	10	10	0	2048	18	13
13	Online	11	9	0	2048	18	13
14	Online	12	10	0	2048	18	13
15	Online	13	9	0	2048	18	13
16	Online	13	9	0	2048	18	13
17	Online	12	9	0	2048	18	13
18	Online	12	8	0	2048	18	13
19	Online	14	10	0	2048	18	13



## show chassis fpc (MX2020 Router with MPC4E)

```

user@host> show chassis fpc
      Temp CPU Utilization (%) Memory      Utilization (%)
Slot State      (C) Total Interrupt      DRAM (MB) Heap      Buffer
  0 Online        33    12         2      2048      11      13
  1 Empty
  2 Empty
  3 Empty
  4 Empty
  5 Empty
  6 Empty
  7 Empty
  8 Empty
  9 Online        31    10         0      2048      11      13
10 Online        32     7         0      2048      14      13
11 Empty
12 Empty
13 Empty
14 Online        28    12         0      2048      15      14
15 Empty
16 Empty
17 Empty
18 Empty
19 Online        38     8         0      2048      18      13

```

## show chassis fpc detail (MX2020 Router with MPC4E)

```

user@host> show chassis fpc detail
Slot 0 information:
  State Online
  Temperature 34
  Total CPU DRAM 2048 MB
  Total RLDRAM 806 MB
  Total DDR DRAM 2632 MB
  Start time: 2013-02-17 08:17:35 PST
  Uptime: 1 day, 14 hours, 50 minutes, 39 seconds
  Max Power Consumption 368 Watts
Slot 9 information:
  State Online
  Temperature 32
  Total CPU DRAM 2048 MB
  Total RLDRAM 806 MB
  Total DDR DRAM 2632 MB
  Start time: 2013-02-17 08:17:43 PST
  Uptime: 1 day, 14 hours, 50 minutes, 31 seconds
  Max Power Consumption 368 Watts
Slot 10 information:
  State Online
  Temperature 37
  Total CPU DRAM 2048 MB
  Total RLDRAM 1036 MB
  Total DDR DRAM 6656 MB
  Start time: 2013-02-17 08:17:54 PST
  Uptime: 1 day, 14 hours, 50 minutes, 20 seconds
  Max Power Consumption 520 Watts
Slot 14 information:
  State Online
  Temperature 32
  Total CPU DRAM 2048 MB
  Total RLDRAM 1036 MB

```

```

Total DDR DRAM          11264 MB
Start time:              2013-02-17 08:18:01 PST
Uptime:                  1 day, 14 hours, 50 minutes, 13 seconds
Max Power Consumption    610 Watts
Slot 19 information:
State                    Online
Temperature              38
Total CPU DRAM           2048 MB
Total 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 (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory	Utilization (%)
			Total Interrupt	DRAM (MB) Heap	Buffer
0	Online	31	20 0	3584 7	13
1	Online	28	19 0	2048 17	13
2	Online	27	10 0	2048 18	14
3	Online	26	10 0	2048 13	13
4	Online	29	19 0	3584 7	13
5	Online	28	68 0	2048 20	13
6	Empty				
7	Empty				
8	Empty				
9	Online	36	19 0	3584 10	13
10	Online	37	26 0	3584 10	13
11	Empty				
12	Empty				
13	Empty				
14	Empty				
15	Empty				
16	Empty				
17	Online	28	43 0	3584 10	13
18	Online	29	19 0	3584 7	13
19	Online	31	19 0	3584 7	13

#### show chassis fpc detail (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis fpc detail
Slot 0 information:
State                    Online
Temperature              31
Total CPU DRAM           3584 MB
Total XR2                291 MB
Total DDR DRAM           24960 MB
Start time:              2014-04-22 23:33:19 PDT
Uptime:                  6 minutes, 24 seconds
Max Power Consumption    607 Watts
Slot 1 information:
State                    Online
Temperature              28
Total CPU DRAM           2048 MB
Total RLD RAM            1036 MB
Total DDR DRAM           6656 MB
Start time:              2014-04-22 23:33:24 PDT
Uptime:                  6 minutes, 19 seconds

```

```

Max Power Consumption          520 Watts
Slot 2 information:
State                          Online
Temperature                     27
Total CPU DRAM                 2048 MB
Total RLD RAM                 1036 MB
Total DDR DRAM                11264 MB
Start time:                    2014-04-22 23:33:34 PDT
Uptime:                        6 minutes, 9 seconds
Max Power Consumption          608 Watts
Slot 3 information:
State                          Online
Temperature                     26
Total CPU DRAM                 2048 MB
Total RLD RAM                 734 MB
Total DDR DRAM                3108 MB
Start time:                    2014-04-22 23:33:39 PDT
Uptime:                        6 minutes, 4 seconds
Max Power Consumption          368 Watts
Slot 4 information:
State                          Online
Temperature                     29
Total CPU DRAM                 3584 MB
Total XR2                     291 MB
Total DDR DRAM                24960 MB
Start time:                    2014-04-22 23:33:51 PDT
Uptime:                        5 minutes, 52 seconds
Max Power Consumption          607 Watts
Slot 5 information:
State                          Online
Temperature                     28
Total CPU DRAM                 2048 MB
Total RLD RAM                 1324 MB
Total DDR DRAM                5120 MB
Start time:                    2014-04-22 23:33:57 PDT
Uptime:                        5 minutes, 46 seconds
Max Power Consumption          440 Watts
Slot 9 information:
State                          Online
Temperature                     25
Total CPU DRAM                 3584 MB
Total XR2                     518 MB
Total DDR DRAM                49920 MB
Start time:                    2014-04-22 23:31:20 PDT
Uptime:                        8 minutes, 23 seconds
Max Power Consumption          1130 Watts
Slot 10 information:
State                          Online
Temperature                     32
Total CPU DRAM                 3584 MB
Total XR2                     518 MB
Total DDR DRAM                49920 MB
Start time:                    2014-04-22 23:31:25 PDT
Uptime:                        8 minutes, 18 seconds
Max Power Consumption          1130 Watts
Slot 17 information:
State                          Online
Temperature                     25
Total CPU DRAM                 3584 MB
Total XR2                     518 MB
Total DDR DRAM                49920 MB

```

```

Start time:                2014-04-22 23:31:29 PDT
Uptime:                    8 minutes, 14 seconds
Max Power Consumption      1130 Watts
Slot 18 information:
State                      Online
Temperature                29
Total CPU DRAM             3584 MB
Total XR2                  291 MB
Total DDR DRAM             24960 MB
Start time:                2014-04-22 23:34:11 PDT
Uptime:                    5 minutes, 32 seconds
Max Power Consumption      607 Watts
Slot 19 information:
State                      Online
Temperature                32
Total CPU DRAM             3584 MB
Total XR2                  291 MB
Total DDR DRAM             24960 MB
Start time:                2014-04-22 23:34:20 PDT
Uptime:                    5 minutes, 23 seconds
Max Power Consumption      607 Watts

```

#### show chassis fpc pic-status (MX2020 Router with MPC5EQ and MPC6E)

```

user@host> show chassis fpc pic-status
Slot 0  Online      MPC5E 3D Q 24XGE+6XLGE
PIC 0   Online      12X10GE SFPP OTN
PIC 1   Online      12X10GE SFPP OTN
PIC 2   Offline     3X40GE QSFPP
PIC 3   Offline     3X40GE QSFPP
Slot 1  Online      MPCE Type 3 3D
PIC 0   Online      10X10GE SFPP
PIC 2   Online      1X100GE CXP
Slot 2  Online      MPC4E 3D 2CGE+8XGE
PIC 0   Online      4x10GE SFPP
PIC 1   Online      1X100GE CFP
PIC 2   Online      4x10GE SFPP
PIC 3   Online      1X100GE CFP
Slot 3  Online      MPCE Type 2 3D P
PIC 0   Online      2x 10GE XFP
PIC 1   Online      2x 10GE XFP
Slot 4  Online      MPC5E 3D Q 2CGE+4XGE
PIC 0   Online      2X10GE SFPP OTN
PIC 1   Online      1X100GE CFP2 OTN
PIC 2   Online      2X10GE SFPP OTN
PIC 3   Online      1X100GE CFP2 OTN
Slot 5  Online      MPC 3D 16x 10GE
PIC 0   Online      4x 10GE(LAN) SFP+
PIC 1   Online      4x 10GE(LAN) SFP+
PIC 2   Online      4x 10GE(LAN) SFP+
PIC 3   Online      4x 10GE(LAN) SFP+
Slot 9  Online      MPC6E 3D
PIC 0   Online      2X100GE CFP2 OTN
PIC 1   Online      2X100GE CFP2 OTN
Slot 10 Online      MPC6E 3D
PIC 0   Online      24X10GE SFPP OTN
PIC 1   Online      4X100GE CXP
Slot 17 Online      MPC6E 3D
PIC 0   Online      24X10GE SFPP
PIC 1   Online      4X100GE CXP
Slot 18 Online      MPC5E 3D Q 24XGE+6XLGE

```

```

PIC 0 Offline      12X10GE SFPP OTN
PIC 1 Offline      12X10GE SFPP OTN
PIC 2 Online       3X40GE QSFPP
PIC 3 Online       3X40GE QSFPP
Slot 19 Online     MPC5E 3D Q 24XGE+6XLGE
PIC 0 Online       12X10GE SFPP OTN
PIC 1 Offline      12X10GE SFPP OTN
PIC 2 Offline      3X40GE QSFPP
PIC 3 Online       3X40GE QSFPP

```

#### show chassis fpc detail (MX Series Routers)

```

user@host> show chassis fpc detail 2
Slot 0 information:
  State                Online
  Temperature          36 degrees C / 96 degrees F
  Total CPU DRAM       1024 MB
  Total 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 (%)	DRAM (MB)	Heap	Buffer
0	Online	-----	CPU less FPC	-----			
1	Present	-----	Hardware Not In Right Slot	-----			
2	Online	0	0	0	0	0	0
3	Present	-----	Hardware Not Supported	-----			
4	Empty						
5	Empty						
6	Online	0	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 (C)	CPU Total	Utilization (%) Interrupt	Utilization (%) DRAM (MB)	Memory Heap	Utilization (%) 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:
```

Slot	State	Temp (C)	CPU Utilization (%) Total 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	13 0	2048	6 24
7	Online	45	7 0	2048	3 24

```
lcc2-re0:
```

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

```

```
1cc3-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 (TI600 Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
0	Empty				
1	Empty				
2	Online	49	3	0	24
3	Online	46	6	0	24
4	Empty				
5	Online	46	5	0	24
6	Empty				
7	Online	44	8	0	49

### show chassis fpc detail (TI600 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
```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	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 DRAM (MB)	Utilization (%)
			Total Interrupt	Heap	Buffer
2	Online	49	3 0	2048 3	24

#### show chassis fpc pic-status (T1600 Router)

```
user@host> show chassis fpc pic-status
```

```

Slot 2  Online      FPC Type 1-ES
PIC 0   Online      Load Type 1
PIC 1   Online      4x 1GE(LAN), IQ2E
PIC 3   Online      1x OC-12-3 SFP
Slot 3  Online      FPC Type 4-ES
PIC 0   Online      4x 10GE (LAN/WAN) XFP
PIC 1   Online      4x OC-192 SONET XFP
Slot 5  Online      FPC Type 2-ES
PIC 0   Online      Load Type 2
PIC 1   Online      8x 1GE(LAN), IQ2E

```

```

PIC 2 Online      8x 1GE(LAN), IQ2E
PIC 3 Online      1x OC-48-12-3 SFP
Slot 7 Online     FPC Type 4
PIC 0 Online      4x 10GE (LAN/WAN) XFP

```

### show chassis fpc (T4000 Router)

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

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

### show chassis fpc detail (T4000 Router)

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

Slot 0 information:

```

State Online
Temperature 48 degrees C / 118 degrees F
Total CPU DRAM 2816 MB
Total SRAM 1554 MB
Total SDRAM 10752 MB
Start time 2012-02-09 22:56:25 PST
Uptime 2 hours, 40 minutes, 52 seconds

```

Slot 3 information:

```

State Online
Temperature 51 degrees C / 123 degrees F
Total CPU DRAM 2816 MB
Total SRAM 1554 MB
Total SDRAM 10752 MB
Start time 2012-02-09 22:56:22 PST
Uptime 2 hours, 40 minutes, 55 seconds

```

Slot 5 information:

```

State Online
Temperature 39 degrees C / 102 degrees F
Total CPU DRAM 2048 MB
Total SRAM 128 MB
Total SDRAM 2560 MB
Start time 2012-02-09 22:51:27 PST
Uptime 2 hours, 45 minutes, 50 seconds

```

Slot 6 information:

```

State Online
Temperature 49 degrees C / 120 degrees F
Total CPU DRAM 2816 MB
Total SRAM 1554 MB
Total SDRAM 10752 MB
Start time 2012-02-09 22:56:29 PST
Uptime 2 hours, 40 minutes, 48 seconds

```

### show chassis fpc pic-status (T4000 Router)

```
user@host> show chassis fpc pic-status
```

```

Slot 0 Online FPC Type 5-3D
PIC 0 Online 12x10GE (LAN/WAN) SFPP
PIC 1 Online 12x10GE (LAN/WAN) SFPP

```

```

Slot 3  Online      FPC Type 5-3D
      PIC 0  Online      1x100GE
      PIC 1  Online      12x10GE (LAN/WAN) SFPP
Slot 5  Online      FPC Type 4-ES
      PIC 0  Online      100GE
      PIC 1  Online      100GE CFP
Slot 6  Online      FPC Type 5-3D
      PIC 0  Online      12x10GE (LAN/WAN) SFPP
      PIC 1  Online      12x10GE (LAN/WAN) SFPP

```

#### show chassis fpc (QFX Series and OCX Series)

```

user@switch> show chassis fpc
Temp CPU Utilization (%) Memory      Utilization (%)
Slot State      (C) Total Interrupt  DRAM (MB) Heap      Buffer
0 Online        26      2          0      2820      0        49

```

#### show chassis fpc detail (QFX3500 Switches)

```

user@switch> show chassis fpc detail
Slot 0 information:
  State      Online
  Temperature      28 degrees C / 82 degrees F
  Total CPU DRAM    2820 MB
  Total SRAM        0 MB
  Total SDRAM       0 MB
  Start time      2010-09-20 01:34:13 PDT
  Uptime          3 days, 3 hours, 31 minutes, 48 seconds

```

#### show chassis fpc pic-status (QFX3500 Switches)

```

user@switch> show chassis fpc pic-status
Slot 0  Online      QFX 48x10G 4x40G Switch
      PIC 0  Online      48x 10G-SFP+
      PIC 1  Online      15x 10G-SFP+

```

#### show chassis fpc interconnect-device (QFabric System)

```

user@switch> show chassis fpc interconnect-device interconnect1
FPC status:
      Temp
Slot State      (C)
0 Online        0
1 Online        0
2 Online        0
3 Online        0
4 Online        0
5 Online        0
6 Online        0
7 Online        0
8 Online        0
9 Online        0
10 Online       0
11 Online       0
12 Online       0
13 Online       0
14 Online       0
15 Online       0

```

#### show chassis fpc interconnect-device (QFabric System)

```

user@switch> show chassis fpc interconnect-device interconnect1 3

```

```

FPC status:
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 Utilization (%) Total	Interrupt	Memory DRAM (MB)	Utilization (%) Heap	Buffer
0	Empty						
1	Empty						
2	Online	50	6	0	2816	5	27
3	Empty						
4	Empty						
5	Online	48	9	0	2816	5	27
6	Empty						
7	Online	49	8	0	2816	5	27

### show chassis fpc detail (PTX5000 Packet Transport Router)

```

user@host> show chassis fpc detail

```

Slot 2 information:

State	Online
Temperature	35 degrees C / 95 degrees F (PMB)
Temperature	35 degrees C / 95 degrees F (Intake)
Temperature	50 degrees C / 122 degrees F (Exhaust A)
Temperature	54 degrees C / 129 degrees F (Exhaust B)
Temperature	54 degrees C / 129 degrees F (TL0)
Temperature	52 degrees C / 125 degrees F (TQ0)
Temperature	61 degrees C / 141 degrees F (TL1)
Temperature	58 degrees C / 136 degrees F (TQ1)
Temperature	57 degrees C / 134 degrees F (TL2)
Temperature	58 degrees C / 136 degrees F (TQ2)
Temperature	62 degrees C / 143 degrees F (TL3)
Temperature	61 degrees C / 141 degrees F (TQ3)
Total CPU DRAM	2816 MB
Total SRAM	0 MB
Total SDRAM	0 MB
Start time	2012-01-12 12:05:42 PST
Uptime	3 hours, 14 minutes, 7 seconds

Slot 5 information:

State	Online
Temperature	35 degrees C / 95 degrees F (PMB)
Temperature	34 degrees C / 93 degrees F (Intake)
Temperature	48 degrees C / 118 degrees F (Exhaust A)
Temperature	53 degrees C / 127 degrees F (Exhaust B)
Temperature	54 degrees C / 129 degrees F (TL0)
Temperature	52 degrees C / 125 degrees F (TQ0)
Temperature	69 degrees C / 156 degrees F (TL1)
Temperature	56 degrees C / 132 degrees F (TQ1)
Temperature	54 degrees C / 129 degrees F (TL2)
Temperature	56 degrees C / 132 degrees F (TQ2)
Temperature	59 degrees C / 138 degrees F (TL3)
Temperature	60 degrees C / 140 degrees F (TQ3)
Total CPU DRAM	2816 MB
Total SRAM	0 MB
Total SDRAM	0 MB
Start time	2012-01-12 12:05:43 PST
Uptime	3 hours, 14 minutes, 6 seconds

Slot 7 information:

```

State                               Online
Temperature                         35 degrees C / 95 degrees F (PMB)
Temperature                         33 degrees C / 91 degrees F (Intake)
Temperature                         50 degrees C / 122 degrees F (Exhaust A)
Temperature                         55 degrees C / 131 degrees F (Exhaust B)
Temperature                         56 degrees C / 132 degrees F (TL0)
Temperature                         56 degrees C / 132 degrees F (TQ0)
Temperature                         61 degrees C / 141 degrees F (TL1)
Temperature                         57 degrees C / 134 degrees F (TQ1)
Temperature                         55 degrees C / 131 degrees F (TL2)
Temperature                         59 degrees C / 138 degrees F (TQ2)
Temperature                         62 degrees C / 143 degrees F (TL3)
Temperature                         62 degrees C / 143 degrees F (TQ3)
Total CPU DRAM                      2816 MB
Total SRAM                          0 MB
Total SDRAM                         0 MB
Start time                          2012-01-12 12:05:44 PST
Uptime                              3 hours, 14 minutes, 5 seconds

```

#### show chassis fpc pic-status (PTX5000 Packet Transport Router)

```

user@host> show chassis fpc pic-status
Slot 2  Online      FPC
PIC 0   Online      24x 10GE(LAN) SFP+
PIC 1   Online      24x 10GE(LAN) SFP+
Slot 5  Online      FPC
PIC 0   Online      24x 10GE(LAN) SFP+
PIC 1   Online      2x 40GE CFP
Slot 7  Online      FPC
PIC 0   Online      24x 10GE(LAN) SFP+
PIC 1   Online      2x 40GE CFP

```

#### show chassis fpc (ACX2000 Universal Access Router)

```

user@host> show chassis fpc

```

Slot	State	Temp (C)	CPU Utilization (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	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 (%)	Memory DRAM (MB)	Utilization (%)
			Total Interrupt	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 (%)	Memory Utilization (%)
			Total Interrupt	DRAM (MB) Heap Buffer
1	Online	34	5 0	3072 5 13

#### show chassis FPC 1 detail (MX Routers with Media Services Blade [MSB])

```

user@switch> show chassis fpc 1 detail
Slot 1 information:
State                               Online
Temperature                         34
Total CPU DRAM                      3072 MB
Total RLDRAM                        259 MB
Total DDR DRAM                      4864 MB
Start time:                         2012-06-19 10:51:43 PDT
Uptime:                             16 minutes, 48 seconds
Max Power Consumption               550 Watts

```

## show chassis lccs

<b>Syntax</b>	show chassis lccs
<b>Release Information</b>	Command introduced before Junos OS Release 7.4.
<b>Description</b>	(TX Matrix and TX Matrix Plus routers only ) On a TX Matrix router, display the status of all T640 LCC connected to the TX Matrix router. On a TX Matrix Plus router, display the status of all LCC connected to the TX Matrix Plus router.
<b>Options</b>	This command has no options.
<b>Required Privilege Level</b>	view
<b>Related Documentation</b>	<ul style="list-style-type: none"> <li>• <i>request chassis lcc</i></li> <li>• <i>Configuring Line-Card Upgrade Groups for Nonstop Software Upgrade (CLI Procedure)</i></li> <li>• <i>fpc</i></li> </ul>
<b>List of Sample Output</b>	<a href="#">show chassis lccs on page 348</a> <a href="#">show chassis lccs (TX Matrix Plus router with 3D SIBs) on page 349</a>
<b>Output Fields</b>	<a href="#">Table 10 on page 348</a> lists the output fields for the <b>show chassis lccs</b> command. Output fields are listed in the approximate order in which they appear.

**Table 10: show chassis lccs Output Fields**

Field Name	Field Description
<b>Slot</b>	LCC slot number.
<b>State</b>	LCC status: <ul style="list-style-type: none"> <li>• <b>Online</b>—LCC is online and running.</li> <li>• <b>Offline</b>—LCC is powered down.</li> <li>• <b>Empty</b>—No LCC is present.</li> </ul>
<b>Uptime</b>	How long the LCC has been up and running.

## Sample Output

### show chassis lccs

```

user@host> show chassis lccs
Slot  State                Uptime
0      Online                 3 minutes, 17 seconds
1      Empty
2      Online                 3 minutes, 23 seconds
3      Empty

```

**show chassis lccs (TX Matrix Plus router with 3D SIBs)**

```
user@host> show chassis lccs
```

Slot	State	Uptime
0	Offline	
1	Empty	
2	Online	1 day, 4 hours, 57 minutes, 7 seconds
3	Empty	
4	Online	1 day, 4 hours, 56 minutes, 58 seconds
5	Empty	
6	Empty	
7	Online	3 hours, 45 minutes, 41 seconds

## show chassis location

---

<b>List of Syntax</b>	<a href="#">Syntax on page 350</a> <a href="#">Syntax (TX Matrix Router) on page 350</a> <a href="#">Syntax (TX Matrix Plus Router) on page 350</a> <a href="#">Syntax (MX Series Router) on page 350</a> <a href="#">Syntax (QFX Series) on page 350</a> <a href="#">Syntax (OCX Series) on page 350</a>
<b>Syntax</b>	show chassis location
<b>Syntax (TX Matrix Router)</b>	show chassis location <fpc   interface (by-name <i>name</i>   by-slot fpc number lcc number)   lcc number   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show chassis location <fpc   interface (by-name <i>name</i>   by-slot fpc number lcc number)   lcc number   sfc number>
<b>Syntax (MX Series Router)</b>	show chassis location <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show chassis location <interconnect-device <i>name</i> > <node-device <i>name</i> >
<b>Syntax (OCX Series)</b>	show chassis location
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display the physical location of the chassis. This command can only be used on the master Routing Engine.
<b>Options</b>	<b>none</b> —Display all information about the physical location of the chassis. On a TX Matrix router, display all information about the physical location of the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display all information about the physical location of the TX Matrix Plus router and its attached routers.  <b>all-members</b> —(MX Series routers only) (Optional) Display the physical location of the chassis for all the member routers in the Virtual Chassis configuration.  <b>fpc</b> —(TX Matrix router and TX Matrix Plus router only) (Optional) Display the physical location of all Flexible PIC Concentrators (FPCs).  <b>interconnect-device <i>name</i></b> —(QFabric systems only) (Optional) Display the physical location of the Interconnect device.

**interface by-name *name***—(TX Matrix and TX Matrix Plus routers only) (Optional) Display the physical location of a specified interface name. On a TX Matrix router, this option displays the FPC number and T640 router (line-card chassis) number associated with the specified interface. On a TX Matrix Plus router, this option displays the FPC number and router (line-card chassis) number associated with the specified interface.

**interface by-slot *fpc number lcc number***—(TX Matrix and TX Matrix Plus router only) (Optional) On a TX Matrix router, display the global FPC number of an interface by specifying its local FPC number and T640 router (line-card chassis) number. On a TX Matrix Plus router, display the global FPC number of an interface by specifying its local FPC number and router (line-card chassis) number.

- The global FPC number is the FPC slot number when all the FPC slots in the routing matrix are considered: **0** through **31**. On TX Matrix Plus router with 3D SIBs, the value is **0** through **63**. The local FPC number is the FPC slot number on a particular T640 router.
- For **fpc**, replace *number* with a value from **0** through **7**.
- For **lcc**, replace *number* with a value from **0** through **7**.

**lcc *number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display the physical location of a specified T640 router (line-card chassis) that is connected to a TX Matrix router. On a TX Matrix Plus router, display the physical location of a specified router (line-card chassis) that is connected to a 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 the physical location of the chassis for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display the physical location of the chassis 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 the physical location of the Node device.

**scc**—(TX Matrix routers only) (Optional) Display the physical location of the TX Matrix router (switch-card chassis).

**sfc**—(TX Matrix Plus routers only) (Optional) Display the physical location of the TX Matrix Plus router (or switch-fabric chassis).

**Required Privilege Level** view

**Related Documentation** • [Displaying Chassis Physical Locations for a Routing Matrix with a TX Matrix Plus Router](#)

**List of Sample Output** [show chassis location on page 352](#)  
[show chassis location fpc \(TX Matrix Router\) on page 353](#)  
[show chassis location interface by-slot \(TX Matrix Router\) on page 353](#)  
[show chassis location fpc \(TX Matrix Plus Router\) on page 353](#)  
[show chassis location interface by-slot \(TX Matrix Plus Router\) on page 353](#)  
[show chassis location \(QFX Series and OCX Series\) on page 353](#)  
[show chassis location \(QFabric Systems\) on page 353](#)

**Output Fields** [Table 11 on page 352](#) lists the output fields for the **show chassis location** command. Output fields are listed in the approximate order in which they appear.

**Table 11: show chassis location Output Fields**

Field Name	Field Description
country-code	Country code information.
postal-code	Postal code information.
Building	Building information.
Floor	Floor information.
Global FPC	Global FPC number. The FPC slot number, when all FPC slots in the routing matrix are considered. The range of values is 0 through 31. On TX Matrix Plus router with 3D SIBs the value is 0 through 63.
LATA	Local access transport area information.
LCC	Line-card chassis number. On a TX Matrix router, the number of a particular T640 router connected to the TX Matrix router. On a TX Matrix Plus router, the number of a particular router connected to the TX Matrix Plus router.
Local FPC	Local FPC number. On a TX Matrix router, the FPC slot number on a particular T640 router. On a TX Matrix Plus router, the FPC slot number on a particular router.

## Sample Output

**show chassis location**

```
user@host> show chassis location
```



```
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

#### show chassis location fpc (TX Matrix Router)

```
user@host> show chassis location fpc
Global FPC      LCC      Local FPC
      17         2         1
      21         2         5
```

#### show chassis location interface by-slot (TX Matrix Router)

```
user@host> show chassis location interface by-slot fpc 1 lcc 1
Global FPC: 9
```

#### show chassis location fpc (TX Matrix Plus Router)

```
user@host> show chassis location fpc
Global FPC      LCC      Local FPC
      0         0         0
      1         0         1
```

#### show chassis location interface by-slot (TX Matrix Plus Router)

```
user@host> show chassis location interface by-slot fpc 2 lcc 1
Global FPC: 10
```

#### show chassis location (QFX Series and OCX Series)

```
user@switch> show chassis location
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

#### show chassis location (QFabric Systems)

```
user@switch> show chassis location interconnect-device interconnect1
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

## show chassis routing-engine

---

**List of Syntax**    [Syntax on page 354](#)  
[Syntax \(ACX Series Universal Access Routers\) on page 354](#)  
[Syntax \(EX Series Switches\) on page 354](#)  
[Syntax \(QFX Series\) on page 354](#)  
[Syntax \(MX Series Routers\) on page 354](#)  
[Syntax \(MX2010 3D Universal Edge Routers\) on page 354](#)  
[Syntax \(MX2020 3D Universal Edge Routers\) on page 354](#)  
[Syntax \(MX104 3D Universal Edge Routers\) on page 354](#)  
[Syntax \(PTX Series Packet Transport Routers\) on page 354](#)  
[Syntax \(T Series Routers\) on page 355](#)  
[Syntax \(TX Matrix Routers\) on page 355](#)  
[Syntax \(TX Matrix Plus Routers\) on page 355](#)

**Syntax**    **show chassis routing-engine**  
              <bios | *slot*>

**Syntax (ACX Series Universal Access Routers)**    show chassis routing-engine

**Syntax (EX Series Switches)**    show chassis routing-engine  
  <*slot*>  
  <satellite [*slot-id slot-id* | device-alias *alias-name*]>

**Syntax (QFX Series)**    show chassis routing-engine  
                                  <interconnect-device *name*>  
                                  <node-device *name*>

**Syntax (MX Series Routers)**    show chassis routing-engine  
                                  <all-members>  
                                  <bios | *slot*>  
                                  <local>  
                                  <member *member-id*>  
                                  <satellite [*slot-id slot-id* | device-alias *alias-name*]>

**Syntax (MX2010 3D Universal Edge Routers)**    show chassis routing-engine  
                                  <bios | *slot*>

**Syntax (MX2020 3D Universal Edge Routers)**    show chassis routing-engine  
                                  <bios | *slot*>

**Syntax (MX104 3D Universal Edge Routers)**    show chassis routing-engine

**Syntax (PTX Series Packet Transport Routers)**    show chassis routing-engine

<b>Syntax (T Series Routers)</b>	show chassis routing-engine <bios   <i>slot</i> >
<b>Syntax (TX Matrix Routers)</b>	show chassis routing-engine <bios   <i>slot</i> > <lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Routers)</b>	show chassis routing-engine <bios   <i>slot</i> > <lcc <i>number</i>   sfc <i>number</i> >
<b>Release Information</b>	<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><b>sfc</b> option introduced in Junos OS Release in 9.6 for the TX Matrix Plus router.</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 MX2010 and MX2020 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.</p> <p>Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.</p> <p><b>satellite</b> option introduced in Junos OS Release 14.2R3.</p>
<b>Description</b>	Display the status of the Routing Engine.
<b>Options</b>	<p><b>none</b>—Display information about one or more Routing Engines. On a TX Matrix router, display information about all Routing Engines on the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display information about all Routing Engines on the TX Matrix Plus router and its attached routers.</p> <p><b>all-members</b>—(MX Series routers only) (Optional) Display Routing Engine information for all members of the Virtual Chassis configuration.</p> <p><b>bios</b>—(Optional) Display the (BIOS) firmware version.</p> <p><b>interconnect-device <i>number</i></b>—(QFabric systems only) (Optional) Display Routing Engine information for a specified Interconnect device.</p> <p><b>lcc <i>number</i></b>—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display Routing Engine information for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display Routing Engine information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.</p> <p>Replace <i>number</i> with the following values depending on the LCC configuration:</p> <ul style="list-style-type: none"> <li>• 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.</li> <li>• 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.</li> </ul>

- 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 Routing Engine information for the local Virtual Chassis member.

**member *member-id***—(MX Series routers only) (Optional) Display Routing Engine information for the specified member of the Virtual Chassis configuration. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-device *number***—(QFabric systems only) (Optional) Display Routing Engine information for a specified Node device.

**satellite [*slot-id slot-id* [*device-alias alias-name*]**—(Junos Fusion only) (Optional) Display Routing Engine information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

**scc**—(TX Matrix routers only) (Optional) Display Routing Engine information for the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display Routing Engine information for the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**slot**—(Systems with multiple Routing Engines) (Optional) Display information for an individual Routing Engine. Replace *slot* with 0 or 1. For QFX3500 switches, there is only one Routing Engine, so you do not need to specify the slot number.

**Required Privilege Level**

view

**Related Documentation**

- *request chassis routing-engine master*
- *Configuring Routing Engine Redundancy*
- *Switching the Global Master and Backup Roles in a Virtual Chassis Configuration*

**List of Sample Output**

[show chassis routing-engine \(M5 Router\) on page 359](#)  
[show chassis routing-engine \(M10 Router\) on page 360](#)  
[show chassis routing-engine \(M20 Router\) on page 360](#)  
[show chassis routing-engine \(M40 Router\) on page 361](#)  
[show chassis routing-engine \(M120 Router\) on page 361](#)  
[show chassis routing-engine \(M160 Router\) on page 362](#)  
[show chassis routing-engine \(MX104 Router\) on page 363](#)  
[show chassis routing-engine \(MX240 Router\) on page 363](#)  
[show chassis routing-engine \(MX480 Router\) on page 364](#)  
[show chassis routing-engine \(MX960 Router\) on page 365](#)  
[show chassis routing-engine \(MX2010 Router\) on page 367](#)  
[show chassis routing-engine \(MX2020 Router\) on page 367](#)  
[show chassis routing-engine \(T320 Router\) on page 368](#)

[show chassis routing-engine \(T640 Router\) on page 369](#)  
[show chassis routing-engine \(T1600 Router\) on page 370](#)  
[show chassis routing-engine \(T4000 Router\) on page 370](#)  
[show chassis routing-engine \(TX Matrix Router\) on page 371](#)  
[show chassis routing-engine lcc \(TX Matrix Router\) on page 372](#)  
[show chassis routing-engine bios \(TX Matrix Router\) on page 373](#)  
[show chassis routing-engine \(TX Matrix Plus Router\) on page 373](#)  
[show chassis routing-engine lcc \(TX Matrix Plus Router\) on page 374](#)  
[show chassis routing-engine bios \(TX Matrix Plus Router\) on page 375](#)  
[show chassis routing-engine \(QFX Series\) on page 375](#)  
[show chassis routing-engine \(OCX Series\) on page 376](#)  
[show chassis routing engine interconnect-device \(QFabric Systems\) on page 376](#)  
[show chassis routing-engine \(PTX Series Packet Transport Router\) on page 377](#)  
[show chassis routing-engine \(EX9200 Switch\) on page 377](#)  
[show chassis routing-engine \(ACX2000 Universal Access Router\) on page 378](#)  
[show chassis routing-engine \(ACX1000 Universal Access Router\) on page 378](#)  
[show chassis routing-engine \(Displaying the guest reboot reason on PTX5000,MX240, MX480, MX960< MX2010, and MX2020\) on page 379](#)

**Output Fields** Table 12 on page 357 lists the output fields for the **show chassis routing-engine** command. Output fields are listed in the approximate order in which they appear.

**Table 12: show chassis routing-engine Output Fields**

Field Name	Field Description
<b>Slot</b>	(Systems with single and multiple Routing Engines) Slot number.
<b>Current state</b>	(Systems with multiple Routing Engines) Current state of the Routing Engine: <b>Master</b> , <b>Backup</b> , or <b>Disabled</b> .
<b>Election priority</b>	(Systems with multiple Routing Engines) Election priority for the Routing Engine: <b>Master</b> or <b>Backup</b> .
<b>Temperature</b>	Temperature of the air flowing past the Routing Engine.
<b>CPU Temperature</b>	Temperature of the CPU.
<b>DRAM</b>	<p>Total DRAM available to the Routing Engine's processor.</p> <p>Starting with Junos OS Release 12.3R1, the DRAM field displays both available memory and installed memory.</p>
<b>Memory utilization</b>	<p>Percentage of Routing Engine memory being used.</p> <p><b>NOTE:</b> For platforms running Junos OS with upgraded FreeBSD, the way memory utilization is calculated has changed. Starting in Junos OS Release 15.1R1, inactive memory is no longer included in the calculation for memory utilization. Inactive memory is now considered as free. That is, the value for used memory decreases and results in more memory to be available for other processes. For platforms that run Junos OS with upgraded FreeBSD, see <i>Understanding Junos OS with Upgraded FreeBSD</i>.</p>

Table 12: show chassis routing-engine Output Fields (*continued*)

Field Name	Field Description
<b>CPU utilization</b>	Information about the Routing Engine's CPU utilization: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
<b>5 sec CPU Utilization</b>  <b>NOTE:</b> Supported only on MX240, MX480, MX960, MX2010, and MX2020.	Information about the Routing Engine's CPU utilization in the past 5 seconds: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
<b>1 min CPU Utilization</b>  <b>NOTE:</b> Supported only on MX240, MX480, MX960, MX2010, and MX2020.	Information about the Routing Engine's CPU utilization in the past 1 minute: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
<b>5 min CPU Utilization</b>  <b>NOTE:</b> Supported only on MX240, MX480, MX960, MX2010, and MX2020.	Information about the Routing Engine's CPU utilization in the past 5 minutes: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
<b>15 min CPU Utilization</b>  <b>NOTE:</b> Supported only on MX240, MX480, MX960, MX2010, and MX2020.	Information about the Routing Engine's CPU utilization in the past 15 minutes: <ul style="list-style-type: none"> <li>• <b>User</b>—Percentage of CPU time being used by user processes.</li> <li>• <b>Background</b>—Percentage of CPU time being used by background processes.</li> <li>• <b>Kernel</b>—Percentage of CPU time being used by kernel processes.</li> <li>• <b>Interrupt</b>—Percentage of CPU time being used by interrupts.</li> <li>• <b>Idle</b>—Percentage of CPU time that is idle.</li> </ul>
<b>Model</b>	Routing Engine model number.
<b>Serial ID</b>	(Systems with multiple Routing Engines) Identification number of the Routing Engine in this slot.
<b>Start time</b>	Time at which the Routing Engine started running.
<b>Uptime</b>	How long the Routing Engine has been running.

Table 12: show chassis routing-engine Output Fields (*continued*)

Field Name	Field Description
Routing Engine BIOS Version	BIOS version being run by the Routing Engine.
Last reboot reason	Reason for last reboot, including: <ul style="list-style-type: none"> <li>• <b>power cycle/failure</b>—Halt of the Routing Engine using the <b>halt</b> command, powering down using the power button on the chassis or any other method (such as removal of the control board or Routing Engine), and then powering back the Routing Engine. A halt of the operating system also occurs if you enter the <b>request system halt</b> command. You can enter this command to halt the system operations on the chassis or specific Routing Engines. To restart the software, press any key on the keyboard.</li> <li>• <b>watchdog</b>—Reboot due to a hardware watchdog. A watchdog is a hardware monitoring process that examines the health and performance of the router to enable the device to recover from failures. A watchdog checks for problems at certain intervals, and reboots the routing engine if a problem is encountered.</li> <li>• <b>reset-button reset</b>—(Not available on the EX Series switch) Reboot due to pressing of the reset button on the Routing Engine.</li> <li>• <b>power-button hard power off</b>—Reboot due to pressing of the power button on the chassis. A powering down of the software also occurs if you enter the <b>request system power-off</b> command. You can enter this command to power down the chassis or specific Routing Engines; you can then restart the software.</li> <li>• <b>misc hardware reason</b>—Reboot due to miscellaneous hardware reasons.</li> <li>• <b>thermal shutdown</b>—Reboot due to the router or switch reaching a critical temperature at which point it is unsafe to continue operations.</li> <li>• <b>hard disk failure</b>—Reboot due to a hard disk or solid-state drive (SSD) failure.</li> <li>• <b>reset from debugger</b>—Reboot due to reset from the debugger.</li> <li>• <b>chassis control reset</b>—Restart the chassis process that manages PICs, FPCs, and other hardware components. The chassis control module that runs the Routing Engine performs management and monitoring functions, and it provides a single access point for operational and maintenance functions. A reset of the chassis management process occurs when you enter the <b>restart chassis-control</b> command.</li> <li>• <b>bios auto recovery reset</b>—Reboot due to a BIOS auto-recovery reset.</li> <li>• <b>could not be determined</b>—Reboot due to an undetermined reason.</li> <li>• <b>Router rebooted after a normal shutdown</b>—Reboot due to a normal shutdown. This reason is displayed if the Routing Engine is powered down by pushing and holding the online/offline button on the Routing Engine faceplate for 30 seconds, and then powered back. A reboot of the software also occurs if you enter the <b>request system reboot</b> command. You can enter this command to reboot the chassis or specific Routing Engines.</li> </ul>
Load averages	Routing Engine load averages for the last 1, 5, and 15 minutes.

## Sample Output

### show chassis routing-engine (M5 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature                25 degrees C / 77 degrees F
  DRAM                       768 MB
  Memory utilization          21 percent
  CPU utilization:

```

```
User                0 percent
Background          0 percent
Kernel              0 percent
Interrupt            0 percent
Idle                100 percent
Model               RE-2.0
Serial ID            31000007349bf701
Start time           2003-12-04 09:42:17 PST
Uptime               26 days, 1 hour, 12 minutes, 27 seconds
Last reboot reason    Router rebooted after a normal shutdown
Load averages:       1 minute   5 minute   15 minute
                      0.00       0.01      0.00
```

### show chassis routing-engine (M10 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Temperature        25 degrees C / 77 degrees F
  DRAM                768 MB
  Memory utilization  21 percent
  CPU utilization:
    User              0 percent
    Background        0 percent
    Kernel             0 percent
    Interrupt          0 percent
    Idle              100 percent
  Model               RE-2.0
  Serial ID            31000007349bf701
  Start time           2003-12-04 09:42:17 PST
  Uptime               26 days, 1 hour, 12 minutes, 27 seconds
  Last reboot reason    Router rebooted after a normal shutdown
  Load averages:       1 minute   5 minute   15 minute
                        0.00       0.01      0.00
```

### show chassis routing-engine (M20 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state      Master
    Election priority  Master (default)
    Temperature        29 degrees C / 84 degrees F
    DRAM                768 MB
    Memory utilization  20 percent
    CPU utilization:
      User              1 percent
      Background        0 percent
      Kernel             2 percent
      Interrupt          0 percent
      Idle              97 percent
    Model               RE-2.0
    Serial ID            58000007348d9a01
    Start time           2003-12-30 07:05:47 PST
    Uptime               3 hours, 41 minutes, 14 seconds
    Last reboot reason    Router rebooted after a normal shutdown
    Load averages:       1 minute   5 minute   15 minute
                          0.00       0.02      0.00
  Routing Engine status:
    Slot 1:
      Current state      Backup
      Election priority  Backup (default)
```



```

Temperature                29 degrees C / 84 degrees F
DRAM                      768 MB
Memory utilization         0 percent
CPU utilization:
  User                    0 percent
  Background              0 percent
  Kernel                  1 percent
  Interrupt               0 percent
  Idle                    99 percent
Model                     RE-2.0
Serial ID                  d800000734745701
Start time                 2003-06-17 16:37:33 PDT
Uptime                     195 days, 18 hours, 47 minutes, 9 seconds
Last reboot reason        Router rebooted after a normal shutdown

```

### show chassis routing-engine (M40 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature                25 degrees C / 77 degrees F
  DRAM                      768 MB
  Memory utilization         21 percent
  CPU utilization:
    User                    0 percent
    Background              0 percent
    Kernel                  0 percent
    Interrupt               0 percent
    Idle                    100 percent
  Model                     RE-2.0
  Serial ID                  31000007349bf701
  Start time                 2003-12-04 09:42:17 PST
  Uptime                     26 days, 1 hour, 12 minutes, 27 seconds
  Last reboot reason        Router rebooted after a normal shutdown
  Load averages:           1 minute   5 minute   15 minute
                           0.00        0.01        0.00

```

### show chassis routing-engine (M120 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state            Master
    Election priority        Master (default)
    Temperature              46 degrees C / 114 degrees F
    CPU temperature          44 degrees C / 111 degrees F
    DRAM                     2048 MB
    Memory utilization        18 percent
    CPU utilization:
      User                    0 percent
      Background              0 percent
      Kernel                  5 percent
      Interrupt               0 percent
      Idle                    95 percent
    Model                    RE-A-1000
    Serial ID                 1000621154
    Start time                 2006-10-31 17:10:05 PST
    Uptime                     14 minutes, 31 seconds
    Last reboot reason        Router rebooted after a normal shutdown
    Load averages:           1 minute   5 minute   15 minute
                           0.02        0.07        0.07

Routing Engine status:

```

```
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  Temperature            45 degrees C / 113 degrees F
  CPU temperature        42 degrees C / 107 degrees F
  DRAM                   2048 MB
  Memory utilization     15 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               0 percent
    Interrupt            0 percent
    Idle                 100 percent
  Model                  RE-A-1000
  Serial ID              1000621151
  Start time             2006-10-31 17:10:04 PST
  Uptime                 14 minutes, 30 seconds
  Last reboot reason     Router rebooted after a normal shutdown
```

### show chassis routing-engine (M160 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            43 degrees C / 109 degrees F
  DRAM                   2048 MB
  Memory utilization     11 percent
  CPU utilization:
    User                 1 percent
    Background           0 percent
    Kernel               2 percent
    Interrupt            0 percent
    Idle                 97 percent
  Model                  RE-3.0
  Serial ID              210865700403
  Start time             2003-12-23 12:25:55 PST
  Uptime                 6 days, 22 hours, 33 minutes, 24 seconds
  Last reboot reason     Router rebooted after a normal shutdown
  Load averages:        1 minute   5 minute   15 minute
                        0.24        0.13        0.04

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  Temperature            40 degrees C / 104 degrees F
  DRAM                   2048 MB
  Memory utilization     9 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               0 percent
    Interrupt            0 percent
    Idle                 100 percent
  Model                  RE-3.0
  Serial ID              210865700332
  Start time             2003-12-23 12:25:55 PST
  Uptime                 6 days, 22 hours, 33 minutes, 21 seconds
  Last reboot reason     Router rebooted after a normal shutdown
```

**show chassis routing-engine (MX104 Router)**

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             32 degrees C / 89 degrees F
  CPU temperature         42 degrees C / 107 degrees F
  DRAM                   3840 MB (3840 MB installed)
  Memory utilization      18 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                3 percent
    Interrupt             2 percent
    Idle                  94 percent
  Model                   RE-MX-104
  Serial ID               CAAR5925
  Start time              2013-06-05 13:17:08 IST
  Uptime                  1 hour, 15 minutes, 8 seconds
  Last reboot reason      0x200:normal shutdown
  Load averages:         1 minute  5 minute  15 minute
                        0.87      0.90      0.41

Routing Engine status:
Slot 1:
  Current state           Backup
  Election priority       Backup (default)
  Temperature             32 degrees C / 89 degrees F
  CPU temperature         38 degrees C / 100 degrees F
  DRAM                   3840 MB (3840 MB installed)
  Memory utilization      13 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                1 percent
    Interrupt             2 percent
    Idle                  97 percent
  Model                   RE-MX-104
  Serial ID               CAAM6369
  Start time              2013-06-05 13:07:37 IST
  Uptime                  1 hour, 24 minutes, 34 seconds
  Last reboot reason      0x200:normal shutdown
  Load averages:         1 minute  5 minute  15 minute
                        0.19      0.15      0.06

```

**show chassis routing-engine (MX240 Router)**

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             36 degrees C / 96 degrees F
  CPU temperature         35 degrees C / 95 degrees F
  DRAM                   3314 MB (8192 MB installed)
  Memory utilization      37 percent
  5 sec CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                1 percent

```

```

        Interrupt          0 percent
        Idle               99 percent
    1 min CPU utilization:
        User               0 percent
        Background         0 percent
        Kernel             1 percent
        Interrupt          0 percent
        Idle               99 percent
    5 min CPU utilization:
        User               0 percent
        Background         0 percent
        Kernel             1 percent
        Interrupt          0 percent
        Idle               99 percent
    15 min CPU utilization:
        User               0 percent
        Background         0 percent
        Kernel             1 percent
        Interrupt          0 percent
        Idle               99 percent
    Model                  RE-S-1800x4
    Serial ID              9009074155
    Start time             2014-10-13 00:35:41 PDT
    Uptime                 98 days, 2 hours, 6 minutes, 35 seconds
    Last reboot reason     Router rebooted after a normal shutdown.
    Load averages:       1 minute   5 minute   15 minute
                          0.12       0.12       0.13

Routing Engine status:
Slot 1:
    Current state         Present

```

#### show chassis routing-engine (MX480 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
    Current state         Backup
    Election priority     Master (default)
    Temperature           30 degrees C / 86 degrees F
    CPU temperature       32 degrees C / 89 degrees F
    DRAM                  3314 MB (8192 MB installed)
    Memory utilization     51 percent
    5 sec CPU utilization:
        User               0 percent
        Background         0 percent
        Kernel             0 percent
        Interrupt          0 percent
        Idle               100 percent
    1 min CPU utilization:
        User               0 percent
        Background         0 percent
        Kernel             0 percent
        Interrupt          0 percent
        Idle               0 percent
    5 min CPU utilization:
        User               0 percent
        Background         0 percent
        Kernel             0 percent
        Interrupt          0 percent
        Idle               0 percent
    15 min CPU utilization:

```

```

User                                0 percent
Background                          0 percent
Kernel                              0 percent
Interrupt                           0 percent
Idle                                0 percent
Model                                RE-S-1800x4
Serial ID                            9009079817
Start time                           2015-01-19 01:45:58 PST
Uptime                               7 minutes, 23 seconds
Last reboot reason                    Router rebooted after a normal shutdown.
Load averages:                       1 minute   5 minute   15 minute
                                      0.16       0.16       0.09

Routing Engine status:
Slot 1:
  Current state                       Master
  Election priority                    Backup (default)
  Temperature                          31 degrees C / 87 degrees F
  CPU temperature                      32 degrees C / 89 degrees F
  DRAM                                8144 MB (8192 MB installed)
  Memory utilization                   23 percent
  5 sec CPU utilization:
    User                              0 percent
    Background                        0 percent
    Kernel                            1 percent
    Interrupt                         0 percent
    Idle                              99 percent
  1 min CPU utilization:
    User                              0 percent
    Background                        0 percent
    Kernel                            1 percent
    Interrupt                         0 percent
    Idle                              98 percent
  5 min CPU utilization:
    User                              0 percent
    Background                        0 percent
    Kernel                            1 percent
    Interrupt                         0 percent
    Idle                              98 percent
  15 min CPU utilization:
    User                              0 percent
    Background                        0 percent
    Kernel                            1 percent
    Interrupt                         0 percent
    Idle                              98 percent
  Model                                RE-S-1800x4
  Serial ID                            9009079838
  Start time                           2015-01-09 10:52:20 PST
  Uptime                               9 days, 15 hours, 1 minute, 4 seconds
  Last reboot reason                    Router rebooted after a normal shutdown.
  Load averages:                       1 minute   5 minute   15 minute
                                      0.10       0.16       0.16

```

#### show chassis routing-engine (MX960 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state                       Master
  Election priority                    Master (default)
  Temperature                          37 degrees C / 98 degrees F
  CPU temperature                      34 degrees C / 93 degrees F

```

```

DRAM                                     3313 MB (16384 MB installed)
Memory utilization                       31 percent
5 sec CPU utilization:
  User                                  0 percent
  Background                           0 percent
  Kernel                               3 percent
  Interrupt                             1 percent
  Idle                                  96 percent
1 min CPU utilization:
  User                                  0 percent
  Background                           0 percent
  Kernel                               4 percent
  Interrupt                             1 percent
  Idle                                  96 percent
5 min CPU utilization:
  User                                  0 percent
  Background                           0 percent
  Kernel                               4 percent
  Interrupt                             1 percent
  Idle                                  95 percent
15 min CPU utilization:
  User                                  0 percent
  Background                           0 percent
  Kernel                               4 percent
  Interrupt                             1 percent
  Idle                                  95 percent
Model                                    RE-S-1800x4
Serial ID                               9013043785
Start time                              2015-01-12 23:37:53 PST
Uptime                                  6 days, 2 hours, 17 minutes, 3 seconds
Last reboot reason                       Router rebooted after a normal shutdown.
Load averages:                          1 minute   5 minute   15 minute
                                         0.00       0.02       0.00

Routing Engine status:
Slot 1:
  Current state                          Backup
  Election priority                       Backup (default)
  Temperature                            37 degrees C / 98 degrees F
  CPU temperature                         34 degrees C / 93 degrees F
  DRAM                                    3313 MB (16384 MB installed)
  Memory utilization                       26 percent
  5 sec CPU utilization:
    User                                  0 percent
    Background                           0 percent
    Kernel                               0 percent
    Interrupt                             0 percent
    Idle                                  99 percent
  1 min CPU utilization:
    User                                  0 percent
    Background                           0 percent
    Kernel                               0 percent
    Interrupt                             0 percent
    Idle                                  0 percent
  5 min CPU utilization:
    User                                  0 percent
    Background                           0 percent
    Kernel                               0 percent
    Interrupt                             0 percent
    Idle                                  0 percent
  15 min CPU utilization:
    User                                  0 percent

```

```

Background          0 percent
Kernel              0 percent
Interrupt            0 percent
Idle                 0 percent
Model                RE-S-1800x4
Serial ID            9013037303
Start time           2015-01-12 23:25:29 PST
Uptime               6 days, 2 hours, 29 minutes, 21 seconds
Last reboot reason   Router rebooted after a normal shutdown.
Load averages:       1 minute   5 minute   15 minute
                      0.00       0.00       0.00

```

### show chassis routing-engine (MX2010 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            41 degrees C / 105 degrees F
  CPU temperature        38 degrees C / 100 degrees F
  DRAM                   3313 MB (16384 MB installed)
  Memory utilization     37 percent
  5 sec CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                 2 percent
    Interrupt              2 percent
    Idle                   96 percent
  1 min CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                 2 percent
    Interrupt              2 percent
    Idle                   97 percent
  5 min CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                 2 percent
    Interrupt              2 percent
    Idle                   97 percent
  15 min CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                 2 percent
    Interrupt              2 percent
    Idle                   97 percent
  Model                  RE-S-1800x4
  Serial ID              9009146890
  Start time             2015-01-18 21:35:12 PST
  Uptime                 4 hours, 21 minutes, 34 seconds
  Last reboot reason     Router rebooted after a normal shutdown.
  Load averages:         1 minute   5 minute   15 minute
                        0.11       0.14       0.14

```

### show chassis routing-engine (MX2020 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state          Master

```

```

Election priority           Master (default)
Temperature                 2 degrees C / 35 degrees F
CPU temperature             32 degrees C / 89 degrees F
DRAM                       32735 MB (32768 MB installed)
Memory utilization         10 percent
5 sec CPU utilization:
  User                     0 percent
  Background               0 percent
  Kernel                   1 percent
  Interrupt                1 percent
  Idle                     98 percent
1 min CPU utilization:
  User                     0 percent
  Background               0 percent
  Kernel                   1 percent
  Interrupt                1 percent
  Idle                     99 percent
5 min CPU utilization:
  User                     0 percent
  Background               0 percent
  Kernel                   1 percent
  Interrupt                1 percent
  Idle                     99 percent
15 min CPU utilization:
  User                     0 percent
  Background               0 percent
  Kernel                   1 percent
  Interrupt                1 percent
  Idle                     99 percent
Model                       RE-S-2X00x8
Serial ID                   CADN0309
Start time                  2015-01-08 16:31:15 PST
Uptime                      4 days, 22 hours, 59 minutes, 3 seconds
Last reboot reason          Router rebooted after a normal shutdown.
Load averages:              1 minute   5 minute   15 minute
                             0.39      0.41      0.34

```

### show chassis routing-engine (T320 Router)

```

user@host> show chassis routing-engine
Slot 0:
  Current state             Master
  Election priority         Master (default)
  Temperature               51 degrees C / 123 degrees F
  CPU temperature           55 degrees C / 131 degrees F
  DRAM                      3584 MB
  Memory utilization        11 percent
  CPU utilization:
    User                    0 percent
    Background              0 percent
    Kernel                  2 percent
    Interrupt               0 percent
    Idle                    97 percent
  Model                     RE-A-2000
  Serial ID                 9009010618
  Start time                2012-10-10 01:24:05 PDT
  Uptime                    5 days, 10 hours, 49 minutes, 23 seconds
  Last reboot reason         0x1:power cycle/failure
  Load averages:           1 minute   5 minute   15 minute
                             0.00      0.05      0.04

Routing Engine status:

```



```

Slot 1:
  Current state           Backup
  Election priority       Backup (default)
  Temperature             45 degrees C / 113 degrees F
  CPU temperature         48 degrees C / 118 degrees F
  DRAM                    3584 MB
  Memory utilization      9 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                0 percent
    Interrupt             0 percent
    Idle                  100 percent
  Model                   RE-A-2000
  Serial ID               9009003642
  Start time              2012-10-10 01:24:04 PDT
  Uptime                  5 days, 10 hours, 49 minutes, 28 seconds
  Last reboot reason      0x1:power cycle/failure

```

### show chassis routing-engine (T640 Router)

```

user@host> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             50 degrees C / 122 degrees F
  CPU temperature         58 degrees C / 136 degrees F
  DRAM                    3584 MB
  Memory utilization      14 percent
  CPU utilization:
    User                  1 percent
    Background            0 percent
    Kernel                4 percent
    Interrupt             1 percent
    Idle                  95 percent
  Model                   RE-A-2000
  Serial ID               1000686556
  Start time              2012-10-10 01:24:02 PDT
  Uptime                  5 days, 10 hours, 50 minutes, 27 seconds
  Last reboot reason      0x1:power cycle/failure
  Load averages:         1 minute 5 minute 15 minute
                        1.24      0.33      0.12

Routing Engine status:
Slot 1:
  Current state           Backup
  Election priority       Backup (default)
  Temperature             44 degrees C / 111 degrees F
  CPU temperature         49 degrees C / 120 degrees F
  DRAM                    3584 MB
  Memory utilization      12 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                0 percent
    Interrupt             1 percent
    Idle                  99 percent
  Model                   RE-A-2000
  Serial ID               1000702739
  Start time              2012-10-10 01:24:02 PDT

```

Uptime	5 days, 10 hours, 50 minutes, 26 seconds
Last reboot reason	0x1:power cycle/failure

#### show chassis routing-engine (T1600 Router)

```
user@host> show chassis routing-engine
```

```
Routing Engine status:
```

```
Slot 0:
```

Current state	Master
Election priority	Master (default)
Temperature	48 degrees C / 118 degrees F
CPU temperature	58 degrees C / 136 degrees F
DRAM	3584 MB
Memory utilization	13 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	3 percent
Interrupt	1 percent
Idle	96 percent
Model	RE-A-2000
Serial ID	1000704521
Start time	2012-10-10 01:23:41 PDT
Uptime	5 days, 10 hours, 46 minutes, 56 seconds
Last reboot reason	0x1:power cycle/failure
Load averages:	1 minute    5 minute    15 minute
	0.05        0.03        0.01

```
Routing Engine status:
```

```
Slot 1:
```

Current state	Backup
Election priority	Backup (default)
Temperature	44 degrees C / 111 degrees F
CPU temperature	48 degrees C / 118 degrees F
DRAM	3584 MB
Memory utilization	12 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	0 percent
Interrupt	0 percent
Idle	100 percent
Model	RE-A-2000
Serial ID	9009006579
Start time	2012-10-10 01:23:42 PDT
Uptime	5 days, 10 hours, 46 minutes, 54 seconds
Last reboot reason	0x1:power cycle/failure

#### show chassis routing-engine (T4000 Router)

```
user@host> show chassis routing-engine
```

```
Routing Engine status:
```

```
Slot 0:
```

Current state	Master
Election priority	Master (default)
Temperature	33 degrees C / 91 degrees F
CPU temperature	50 degrees C / 122 degrees F
DRAM	8960 MB
Memory utilization	18 percent
CPU utilization:	
User	0 percent
Background	0 percent

```

        Kernel                4 percent
        Interrupt             1 percent
        Idle                  95 percent
        Model                 RE-DUO-1800
        Serial ID             P737F-002248
        Start time            2012-02-09 22:49:53 PST
        Uptime                2 hours, 21 minutes, 35 seconds
        Last reboot reason    Router rebooted after a normal shutdown.
        Load averages:       1 minute   5 minute   15 minute
                               0.00       0.04       0.00

Routing Engine status:
Slot 1:
    Current state            Backup
    Election priority        Backup (default)
    Temperature              32 degrees C / 89 degrees F
    CPU temperature          46 degrees C / 114 degrees F
    DRAM                    8960 MB
    Memory utilization        24 percent
    CPU utilization:
        User                 0 percent
        Background           0 percent
        Kernel               0 percent
        Interrupt            0 percent
        Idle                 99 percent
    Model                   RE-DUO-1800
    Serial ID               P737F-002653
    Start time              2012-02-08 20:12:51 PST
    Uptime                  1 day, 4 hours, 58 minutes, 28 seconds
    Last reboot reason      Router rebooted after a normal shutdown.

```

### show chassis routing-engine (TX Matrix Router)

```

user@host> show chassis routing-engine
scc-re0:
-----
Routing Engine status:
Slot 0:
    Current state            Master
    Election priority        Master (default)
    Temperature              34 degrees C / 93 degrees F
    CPU temperature          33 degrees C / 91 degrees F
    DRAM                    2048 MB
    Memory utilization        12 percent
    CPU utilization:
        User                 0 percent
        Background           0 percent
        Kernel               2 percent
        Interrupt            0 percent
        Idle                 98 percent
    Model                   RE-4.0
    Serial ID               P11123900153
    Start time              2004-08-05 18:42:05 PDT
    Uptime                  9 days, 22 hours, 49 minutes, 50 seconds
    Last reboot reason      Router rebooted after a normal shutdown
    Load averages:       1 minute   5 minute   15 minute
                               0.00       0.08       0.07

lcc0-re0:
-----
Routing Engine status:
Slot 0:

```

```

Current state           Master
Election priority       Master (default)
Temperature             33 degrees C / 91 degrees F
CPU temperature         30 degrees C / 86 degrees F
DRAM                   2048 MB
Memory utilization      12 percent
CPU utilization:
  User                  0 percent
  Background            0 percent
  Kernel                1 percent
  Interrupt             0 percent
  Idle                  98 percent
Model                  RE-3.0
Serial ID               210865700363
Start time              2004-08-05 18:42:05 PDT
Uptime                  9 days, 22 hours, 48 minutes, 20 seconds
Last reboot reason      Router rebooted after a normal shutdown
Load averages:         1 minute  5 minute 15 minute
                       0.00      0.02   0.00

```

```
lcc2-re0:
```

```
-----
Routing Engine status:
```

```
Slot 0:
```

```

Current state           Master
Election priority       Master (default)
Temperature             34 degrees C / 93 degrees F
CPU temperature         35 degrees C / 95 degrees F
DRAM                   2048 MB
Memory utilization      12 percent
CPU utilization:
  User                  0 percent
  Background            0 percent
  Kernel                2 percent
  Interrupt             0 percent
  Idle                  98 percent
Model                  RE-4.0
Serial ID               P11123900126
Start time              2004-08-05 18:42:05 PDT
Uptime                  9 days, 22 hours, 49 minutes, 4 seconds
Last reboot reason      Router rebooted after a normal shutdown
Load averages:         1 minute  5 minute 15 minute
                       0.01      0.01   0.0

```

### show chassis routing-engine lcc (TX Matrix Router)

```
user@host> show chassis routing-engine 0 lcc 0
```

```
lcc0-re0:
```

```
-----
Routing Engine status:
```

```
Slot 0:
```

```

Current state           Master
Election priority       Master (default)
Temperature             33 degrees C / 91 degrees F
CPU temperature         30 degrees C / 86 degrees F
DRAM                   2048 MB
Memory utilization      12 percent
CPU utilization:
  User                  0 percent
  Background            0 percent
  Kernel                1 percent

```

```

        Interrupt          0 percent
        Idle               98 percent
        Model              RE-3.0
        Serial ID          210865700363
        Start time         2004-08-05 18:42:05 PDT
        Uptime             7 days, 22 hours, 49 minutes, 6 seconds
        Last reboot reason  Router rebooted after a normal shutdown
        Load averages:     1 minute   5 minute   15 minute
                           0.00       0.00       0.00

```

#### show chassis routing-engine bios (TX Matrix Router)

```

user@host> show chassis routing-engine bios
scc-re0:

```

```

-----
Routing Engine BIOS Version: V1.0.0
lcc0-re0:

```

```

-----
Routing Engine BIOS Version: V1.0.17
lcc2-re0:

```

```

-----
Routing Engine BIOS Version: V1.0.0

```

#### show chassis routing-engine (TX Matrix Plus Router)

```

user@host> show chassis routing-engine
sfc0-re0:

```

```

-----
Routing Engine status:

```

Slot 0:

```

    Current state          Master
    Election priority      Master (default)
    Temperature            27 degrees C / 80 degrees F
    CPU temperature        42 degrees C / 107 degrees F
    DRAM                   3327 MB
    Memory utilization     12 percent
    CPU utilization:
      User                 0 percent
      Background           0 percent
      Kernel               2 percent
      Interrupt            0 percent
      Idle                 98 percent
    Model                  RE-TXP-SFC
    Serial ID              737A-1024
    Start time             2009-05-11 17:39:49 PDT
    Uptime                 3 hours, 45 minutes, 25 seconds
    Last reboot reason     Router rebooted after a normal shutdown.
    Load averages:       1 minute   5 minute   15 minute
                           0.00       0.00       0.00

```

```

Routing Engine status:

```

Slot 1:

```

    Current state          Backup
    Election priority      Backup (default)
    Temperature            29 degrees C / 84 degrees F
    CPU temperature        43 degrees C / 109 degrees F
    DRAM                   3327 MB
    Memory utilization     11 percent
    CPU utilization:
      User                 0 percent
      Background           0 percent
      Kernel               0 percent

```

```

        Interrupt          0 percent
        Idle              100 percent
        Model             RE-TXP-SFC
        Serial ID         737A-1024
        Start time        2009-05-11 17:08:54 PDT
        Uptime            4 hours, 16 minutes, 52 seconds
        Last reboot reason 0x1:power cycle/failure

lcc0-re0:
-----
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            30 degrees C / 86 degrees F
  CPU temperature        43 degrees C / 109 degrees F
  DRAM                   3327 MB
  Memory utilization     9 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               2 percent
    Interrupt            0 percent
    Idle                 98 percent
  Model                 RE-TXP-LCC
  Serial ID             737F-1024
  Start time            2009-05-11 17:40:32 PDT
  Uptime                3 hours, 44 minutes, 51 seconds
  Last reboot reason     Router rebooted after a normal shutdown.
  Load averages:        1 minute  5 minute 15 minute
                        0.00      0.00   0.00

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  Temperature            30 degrees C / 86 degrees F
  CPU temperature        43 degrees C / 109 degrees F
  DRAM                   3327 MB
  Memory utilization     9 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               0 percent
    Interrupt            0 percent
    Idle                 100 percent
  Model                 RE-TXP-LCC
  Serial ID             737F-1024
  Start time            2009-05-06 17:31:32 PDT
  Uptime                5 days, 3 hours, 54 minutes, 19 seconds
  Last reboot reason     Router rebooted after a normal shutdown.

```

#### show chassis routing-engine lcc (TX Matrix Plus Router)

```

user@host> show chassis routing-engine 0 lcc 0
lcc0-re0:
-----
Routing Engine status:
Slot 0:
  Current state          Master
  Election priority      Master (default)
  Temperature            30 degrees C / 86 degrees F

```

```

CPU temperature          43 degrees C / 109 degrees F
DRAM                    3327 MB
Memory utilization       9 percent
CPU utilization:
  User                   0 percent
  Background             0 percent
  Kernel                 2 percent
  Interrupt              0 percent
  Idle                   98 percent
Model                   RE-TXP-LCC
Serial ID               737F-1024
Start time              2009-05-11 17:40:32 PDT
Uptime                  3 hours, 45 minutes, 26 seconds
Last reboot reason      Router rebooted after a normal shutdown.
Load averages:          1 minute   5 minute  15 minute
                        0.00       0.00    0.00

Routing Engine status:
Slot 1:
  Current state          Backup
  Election priority      Backup (default)
  Temperature            30 degrees C / 86 degrees F
  CPU temperature        43 degrees C / 109 degrees F
  DRAM                   3327 MB
  Memory utilization     9 percent
  CPU utilization:
    User                 0 percent
    Background           0 percent
    Kernel               0 percent
    Interrupt            0 percent
    Idle                 100 percent
  Model                  RE-TXP-LCC
  Serial ID              737F-1024
  Start time             2009-05-06 17:31:32 PDT
  Uptime                 5 days, 3 hours, 54 minutes, 59 seconds
  Last reboot reason     Router rebooted after a normal shutdown.

```

### show chassis routing-engine bios (TX Matrix Plus Router)

```

user@host> show chassis routing-engine bios
sfc0-re0:

```

```

-----
Routing Engine BIOS Version: V0.0.Z

```

```

lcc0-re0:

```

```

-----
Routing Engine BIOS Version: V0.0.N

```

### show chassis routing-engine (QFX Series)

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state Master
  Election priority Master (default)
  DRAM 2820 MB
  Memory utilization 49 percent
  CPU utilization:
    User 1 percent
    Background 0 percent
    Kernel 1 percent
    Interrupt 0 percent

```

```
Idle 97 percent
Model QFX3500-48S4Q
Serial ID S/N ED3709
Uptime 3 days, 4 hours, 29 minutes, 42 seconds
Last reboot reason 0x200:chassis control reset
Load averages: 1 minute 5 minute 15 minute
0.37 0.26 0.19
```

#### show chassis routing-engine (OCX Series)

```
user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
Current state Master
Election priority Master (default)
DRAM 2820 MB
Memory utilization 49 percent
CPU utilization:
User 1 percent
Background 0 percent
Kernel 1 percent
Interrupt 0 percent
Idle 97 percent
Model OCX-1100-48SX-AFI
Serial ID S/N ED3709
Uptime 3 days, 4 hours, 29 minutes, 42 seconds
Last reboot reason 0x200:chassis control reset
Load averages: 1 minute 5 minute 15 minute
0.37 0.26 0.19
```

#### show chassis routing engine interconnect-device (QFabric Systems)

```
user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             48 degrees C / 118 degrees F
  DRAM                   3312 MB
  Memory utilization      63 percent
  CPU utilization:
    User                 14 percent
    Background           0 percent
    Kernel               5 percent
    Interrupt            0 percent
    Idle                 81 percent
  Model                  RE-QFXC08-CB4S
  Serial ID              BUILTIN
  Start time             2011-07-06 13:26:15 UTC
  Uptime                 11 hours, 24 minutes, 57 seconds
  Last reboot reason      0x4:reset-button reset
  Load averages:         1 minute   5 minute  15 minute
                        2.62       2.31     2.28

Routing Engine status:
Slot 1:
  Current state           Backup
  Election priority       Backup (default)
  Temperature             39 degrees C / 102 degrees F
  DRAM                   3312 MB
  Memory utilization      59 percent
  CPU utilization:
```



```

User          9 percent
Background    0 percent
Kernel        1 percent
Interrupt     0 percent
Idle          91 percent
Model         RE-QFXC08-CB4S
Serial ID     BUILTIN
Start time    2011-07-06 13:24:58 UTC
Uptime        11 hours, 26 minutes, 18 seconds
Last reboot reason 0x4:reset-button reset

```

### show chassis routing-engine (PTX Series Packet Transport Router)

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state           Master
  Election priority       Master (default)
  Temperature             60 degrees C / 140 degrees F
  CPU temperature         76 degrees C / 168 degrees F
  DRAM                    17152 MB
  Memory utilization      11 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                4 percent
    Interrupt             0 percent
    Idle                  95 percent
  Model                   RE-DUO-2600
  Serial ID               P737A-002231
  Start time              2011-12-21 16:54:37 PST
  Uptime                  25 minutes, 44 seconds
  Last reboot reason      Router rebooted after a normal shutdown.
  Load averages:         1 minute   5 minute   15 minute
                        0.01         0.02         0.06

Routing Engine status:
Slot 1:
  Current state           Backup
  Election priority       Backup (default)
  Temperature             50 degrees C / 122 degrees F
  CPU temperature         64 degrees C / 147 degrees F
  DRAM                    17152 MB
  Memory utilization      10 percent
  CPU utilization:
    User                  0 percent
    Background            0 percent
    Kernel                0 percent
    Interrupt             0 percent
    Idle                  99 percent
  Model                   RE-DUO-2600
  Serial ID               P737A-002438
  Start time              2011-12-21 16:52:26 PST
  Uptime                  27 minutes, 49 seconds
  Last reboot reason      Router rebooted after a normal shutdown.

```

### show chassis routing-engine (EX9200 Switch)

```

user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:

```

```

Current state           Master
Election priority       Master (default)
Temperature             35 degrees C / 95 degrees F
CPU temperature         33 degrees C / 91 degrees F
DRAM                   8157 MB
Installed Memory        8192 MB
Memory utilization      18 percent
CPU utilization:
  User                  1 percent
  Background            0 percent
  Kernel                4 percent
  Interrupt             1 percent
  Idle                  94 percent
Model                  RE-S-EX9200-1800X4
Serial ID               9009119555
Start time              2014-03-12 14:58:05 UTC
Uptime                  1 hour, 41 minutes, 51 seconds
Last reboot reason      Router rebooted after a normal shutdown.
Load averages:          1 minute   5 minute  15 minute
                       0.02       0.02    0.00

Routing Engine status:
Slot 1:
  Current state         Backup
  Election priority     Backup (default)

[...Output truncated...]

```

#### show chassis routing-engine (ACX2000 Universal Access Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature           53 degrees C / 127 degrees F
  DRAM                  1536 MB
  Memory utilization     25 percent
  CPU utilization:
    User                0 percent
    Background          0 percent
    Kernel              0 percent
    Interrupt           1 percent
    Idle                99 percent
  Model                 RE-ACX-2000
  Start time            2012-05-09 00:57:07 PDT
  Uptime                 5 days, 3 hours, 16 minutes, 15 seconds
  Last reboot reason     Router rebooted after a normal shutdown.
  Load averages:        1 minute   5 minute  15 minute
                       0.00       0.03    0.05

```

#### show chassis routing-engine (ACX1000 Universal Access Router)

```

user@host> show chassis routing-engine
Routing Engine status:
  Temperature           36 degrees C / 96 degrees F
  DRAM                  768 MB
  Memory utilization     50 percent
  CPU utilization:
    User                3 percent
    Background          0 percent
    Kernel              6 percent
    Interrupt           0 percent
    Idle                91 percent
  Model                 RE-ACX-1000

```

Start time	2012-05-10 07:12:23 PDT
Uptime	4 days, 10 hours, 46 minutes, 53 seconds
Last reboot reason	Router rebooted after a normal shutdown.
Load averages:	1 minute    5 minute    15 minute
	0.00            0.00            0.00

show chassis routing-engine (Displaying the guest reboot reason on PTX5000,MX240, MX480, MX960< MX2010, and MX2020)

```
user@host> show chassis routing-engine re0 | match "Last reboot reason"
Last reboot reason 0x4000:VJUNOS reboot
```

## show chassis sibs

---

<b>List of Syntax</b>	<a href="#">Syntax on page 380</a> <a href="#">Syntax (TX Matrix Router) on page 380</a> <a href="#">Syntax (TX Matrix Plus Router) on page 380</a> <a href="#">Syntax (PTX Series Packet Transport Routers) on page 380</a>
<b>Syntax</b>	show chassis sibs
<b>Syntax (TX Matrix Router)</b>	show chassis sibs <lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show chassis sibs <lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (PTX Series Packet Transport Routers)</b>	show chassis sibs <detail> <slot>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 12.1 for the PTX Series Packet Transport Routers. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. <b>detail</b> and <b>sib-slot</b> options introduced for the PTX Packet Transport Router in Junos OS Release 12.1
<b>Description</b>	(M320,T Series routers, TX Matrix routers, TX Matrix Plus routers, and PTX Series routers only) Display Switch Interface Boards (SIBs) status information.
<b>Options</b>	<b>none</b> —(TX Matrix routers and TX Matrix Plus routers only) On a TX Matrix router, display the SIB status for the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display the SIB status for the TX Matrix Plus router and its attached routers.  <b>detail</b> —(PTX Series) (Optional) Display detailed SIB status information.  <b>lcc <i>number</i></b> —(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display SIB status information for a specified T640 router (line-card chassis or LCC) that is connected to the TX Matrix router. On a TX Matrix Plus router, display SIB status information for a specified T1600 or T4000 router (LCC) that is connected to the TX Matrix Plus router. Replace <i>number</i> with the following values depending on the LCC configuration: <ul style="list-style-type: none"><li>• 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.</li><li>• 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.</li></ul>

- 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.

**scc**—(TX Matrix routers only) (Optional) Display SIB status information for the TX Matrix router (switch-card chassis).

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display SIB status information for the TX Matrix Plus router (switch-fabric chassis or SFC). Replace *number* with 0.

**slot**—(PTX Series) (Optional) Display status information about the SIB in the specified slot only. The range of values is 0 through 8.

**Required Privilege Level** view

**Related Documentation**

- [request chassis sib](#)
- [show chassis spmb sibs](#)
- [show chassis environment sib](#)
- [Monitoring the SIBs](#)
- [M320 SIB Description](#)
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

[show chassis sibs \(T640 Router\) on page 384](#)  
[show chassis sibs \(T4000 Router\) on page 384](#)  
[show chassis sibs \(TX Matrix Router\) on page 385](#)  
[show chassis sibs \(T1600 Router\) on page 385](#)  
[show chassis sibs \(TX Matrix Plus Router\) on page 385](#)  
[show chassis sibs \(TX Matrix Plus Router with 3D SIBs\) on page 386](#)  
[show chassis sibs sfc \(TX Matrix Plus Router\) on page 388](#)  
[show chassis sibs lcc \(TX Matrix Plus Router\) on page 389](#)  
[show chassis sibs lcc \(TX Matrix Plus Router with 3D SIBs\) on page 390](#)  
[show chassis sibs \(M320 Router\) on page 390](#)  
[show chassis sibs \(PTX Series\) on page 390](#)  
[show chassis sibs \(PTX Series\) on page 390](#)

**Output Fields** [Table 13 on page 381](#) lists the output fields for the **show chassis sibs** command. Output fields are listed in the approximate order in which they appear.

**Table 13: show chassis sibs Output Fields**

Field Name	Field Description
Slot	SIB slot number.
Type	(TX Matrix Plus router only) SIB type.

Table 13: show chassis sibs Output Fields (*continued*)

Field Name	Field Description
<b>Uptime</b>	How long the SIB has been up and running.
<b>State</b>	<p>SIB status:</p> <ul style="list-style-type: none"> <li>• <b>Activating</b>—SIB is coming online; this is a transitional state.</li> <li>• <b>Deactivating</b>—SIB is going offline; this is a transitional state.</li> <li>• <b>Connected</b>—SIBs on a T1600 router are connected and trained but are either not online or are spare, because the plane on the TX Matrix Plus router (or switch-fabric chassis) is still offline.</li> <li>• <b>Disconnected</b>—SIBs on all T640 routers on the TX Matrix router (switch-card chassis) are in the <b>Disconnected</b> state, because a SIB on the SCC has gone offline. Likewise, SIBs on all T1600 routers on the TX Matrix Plus router (or switch-fabric chassis) are in the <b>Disconnected</b> state, because a SIB on the SFC has gone offline.</li> </ul> <p>On the TX Matrix Plus router with 3D SIBs, the LCC SIB is also disconnected if the F13 SIB is online, but none of the cables are connected or trained.</p> <ul style="list-style-type: none"> <li>• <b>Online</b>—SIB is operational and running.</li> <li>• <b>Offline</b>—SIB is powered down.</li> </ul> <p><b>NOTE:</b> If a SIB transitions to the <b>Offline</b> state, the command displays an appropriate reason in the output. For instance, if the SIB is taken offline using the <b>request chassis sib</b> command, the <b>show chassis sibs</b> command displays <b>--- Offlined by cli command ---</b> in the output.</p> <ul style="list-style-type: none"> <li>• <b>Spare</b>—SIB is redundant and will move to active state if one of the working SIBs fails to pass traffic.</li> </ul> <p><b>NOTE:</b> <b>Spare</b> does not apply to PTX Series Packet Transport Routers, as there are no spare SIBs.</p> <ul style="list-style-type: none"> <li>• <b>Empty</b>—No SIB is present.</li> <li>• <b>Fault</b>—SIB is in an alarmed state in which none of the SIB's planes are operational for one of the following reasons: <ul style="list-style-type: none"> <li>• All onboard fabric ASICs are not operational.</li> <li>• Fiber-optic connector faults.</li> <li>• FPC connector faults.</li> <li>• SIB midplane connector faults.</li> </ul> </li> <li>• <b>Check</b>—SIB is in an alarmed state due to link errors or destination errors. A SIB can transition to the <b>Check</b> state from the online or spare state.</li> </ul> <p>The <b>Check</b> state can be caused by the following reasons:</p> <ul style="list-style-type: none"> <li>• Unsupported FPC installed on a router.</li> <li>• SIB not inserted properly (such as bent pins).</li> <li>• Destination errors are detected on the SIB. In this case, the Packet Forwarding Engine stops using the SIB to send traffic to the affected destination Packet Forwarding Engine. When</li> </ul>

Table 13: show chassis sibs Output Fields (*continued*)

Field Name	Field Description
	<p>a Packet Forwarding Engine cannot be reached on that plane or SIB, a destination error is reported against that SIB.</p> <p><b>NOTE:</b> For SIBs in the <b>Check</b> state, the output displays some additional information:</p> <ul style="list-style-type: none"> <li>In Junos OS Release 9.6 and later, the <b>Check</b> state message shows the number of Packet Forwarding Engines in the plane having destination errors. For example, <b>Check (10 destination errors)</b> indicates 10 Packet Forwarding Engines cannot be reached on that particular SIB. If there are no destination errors, and if the SIB transitions to the <b>Check</b> state because of link errors only, the <b>Check</b> state message shows <b>Check (0 destination errors)</b>.</li> <li>In Junos OS Release 9.5 and earlier, the <b>Check</b> state message shows <b>Check (destination errors)</b> if there are Packet Forwarding Engines with destination errors in this plane. However, it does not show the number of Packet Forwarding Engines having destination errors. If there are no destination errors and if the SIB transitions to the <b>Check</b> state because of link errors only, the <b>Check</b> state message shows <b>Check (no destination errors)</b>.</li> </ul> <p>If the SIB is in a <b>Check</b> state, because of destination errors, the CLI displays an additional line in the output, use "<b>show chassis fabric fpcs</b>" and "<b>show chassis fabric sibs</b>" for more details.</p> <ul style="list-style-type: none"> <li>Link errors are detected on the channel between the SIB and a Packet Forwarding Engine. Link errors can be detected at initialization time or runtime: <ul style="list-style-type: none"> <li>Link errors caused by a link training failure at initialization time—The Packet Forwarding Engine does not use the SIB to send traffic. The <b>show chassis fabric fpcs</b> command shows <b>Plane disabled</b> as status for this link.</li> <li>Link errors caused by CRC errors detected at runtime—The Packet Forwarding Engine continues to use the SIB to send traffic. The <b>show chassis fabric fpcs</b> command shows <b>Link error</b> as the status for this link.</li> </ul> </li> </ul> <p><b>NOTE:</b> The <b>Check</b> state does not apply to PTX Series Packet Transport Routers.</p> <ul style="list-style-type: none"> <li><b>SFC Error</b>—If an F13 SIB on the TX Matrix Plus router (SFC) transitions to the <b>Fault</b> state (for instance, because of link errors), and then if an LCC SIB (connected to the F13 SIB) comes online, the LCC SIB transitions to the <b>SFC Error</b> state. This state indicates that the F13 SIB to which the LCC SIB is connected has errors.</li> </ul> <p><b>NOTE:</b> The <b>Connected</b>, <b>Disconnected</b>, and <b>SFC Error</b> states are only applicable to the SIBs on an LCC.</p> <ul style="list-style-type: none"> <li><b>Invalid</b>—The specific SIB slot is not valid for 4-LCC chassis configuration. See the <i>TX Matrix Plus Hardware Guide</i> for more information about the supported SIB slots.</li> </ul>

Table 13: show chassis sibs Output Fields (*continued*)

Field Name	Field Description
	<b>NOTE:</b> The <b>Invalid</b> state is applicable to TX Matrix Plus routers only.
<b>Fabric links</b>	<p>Indicates status of fabric links on the SIB.</p> <ul style="list-style-type: none"> <li>• <b>Active</b>—All fabric links on SIB are active. Errors detected on the SIB's fabric links, if any, are reported in the Errors column.</li> <li>• <b>Unused</b>—All fabric links on the SIB are not used for fabric traffic.</li> </ul>
<b>Errors</b>	<p>Indicates if there is any error on the SIB.</p> <ul style="list-style-type: none"> <li>• <b>None</b>—No errors</li> <li>• <b>Link Errors</b>—Fabric link errors were found on SIB RX link.</li> <li>• <b>Cell drops</b>—Fabric cell drops were found on the SIB ASIC.</li> <li>• <b>Link Errors, Cell drops</b>—Both link errors and cell drops were detected on at least one of the SIB's fabric links.</li> <li>• <b>Asic Errors</b>—A fault affecting one of the ASICs on the SIB is detected. It can be an IO error or an internal error signaled by the ASIC.</li> </ul>
<b>Link Errors</b>	indicate the number of links which are marked faulty because the errors on them have crossed threshold.
<b>Cable Errors</b>	Indicate the number of mandatory cables that are not connected, or in up state for that plane
<b>Destination Errors</b>	Indicate the number of destinations that are not reachable on this plane.

## Sample Output

### show chassis sibs (T640 Router)

```

user@host> show chassis sibs
Slot  State                      Uptime
0      Empty
1      Offline                    --- Offlined by cli command ---
2      Check (21 destination errors) 1 day, 1 hour, 32 minutes, 55 seconds
3      Check (0 destination errors)  1 day, 1 hour, 32 minutes, 45 seconds
4      Empty

use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details

```

### show chassis sibs (T4000 Router)

```

user@host> show chassis sibs
Slot  State                      Uptime
0      Spare
1      Online                    3 hours, 48 minutes, 38 seconds
2      Online                    3 hours, 48 minutes, 22 seconds
3      Online                    3 hours, 48 minutes, 5 seconds
4      Online                    3 hours, 47 minutes, 49 seconds

```



**show chassis sibs (TX Matrix Router)**

```

user@host> show chassis sibs
scc-re0:
-----
Slot  State                Uptime
0     Empty
1     Empty
2     Offline              --- Offlined by cli command ---
3     Offline
4     Online                7 days, 21 hours, 50 minutes, 4 seconds
lcc0-re0:
-----
Slot  State                Uptime
0     Offline              --- Offlined by cli command ---
1     Empty
2     Check (21 destination errors)  1 day, 1 hour, 32 minutes, 55 seconds
3     Check (0 destination errors)   1 day, 1 hour, 32 minutes, 45 seconds
4     Empty

use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details

```

**show chassis sibs (T1600 Router)**

```

user@host> show chassis sibs
Slot
Slot  State                Uptime
0     Check (destination errors)    2 hours, 23 minutes, 2 seconds
1     Offline                      --- Offlined by cli command ---
2     Check (destination errors)    2 hours, 23 minutes, 3 seconds
3     Check (destination errors)    2 hours, 23 minutes, 3 seconds
4     Check (destination errors)    2 hours, 23 minutes, 3 seconds

use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details

```

**show chassis sibs (TX Matrix Plus Router)**

```

user@host> show chassis sibs
sfc0-re0:
-----
Slot  State                Type      Link errors  Destination errors  Uptime
0     Spare                SIB F13     NONE         NONE
1     Empty
2     Invalid
3     Online                SIB F13     NONE         NONE          1 hour,
53 minutes, 19 seconds
4     Empty
5     Invalid
6     Online                SIB F13     NONE         NONE          1 hour,
53 minutes, 8 seconds
7     Empty
8     Online                SIB F13     NONE         NONE          1 hour,
52 minutes, 57 seconds
9     Empty
10    Invalid
11    Online                SIB F13     NONE         NONE          1 hour,
52 minutes, 46 seconds
12    Empty
13    Invalid
14    Invalid

```

15	Invalid		NONE	NONE	
0/0	Spare	SIB F2S	NONE	NONE	
0/2	Spare	SIB F2S	NONE	NONE	
0/4	Spare	SIB F2S	NONE	NONE	
0/6	Spare	SIB F2S	NONE	NONE	
1/0	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 29 seconds					
1/2	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 28 seconds					
1/4	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 27 seconds					
1/6	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 26 seconds					
2/0	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 18 seconds					
2/2	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 17 seconds					
2/4	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 16 seconds					
2/6	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 14 seconds					
3/0	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 7 seconds					
3/2	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 5 seconds					
3/4	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 4 seconds					
3/6	Online	SIB F2S	NONE	NONE	1 hour,
53 minutes, 3 seconds					
4/0	Online	SIB F2S	NONE	NONE	1 hour,
52 minutes, 56 seconds					
4/2	Online	SIB F2S	NONE	NONE	1 hour,
52 minutes, 54 seconds					
4/4	Online	SIB F2S	NONE	NONE	1 hour,
52 minutes, 53 seconds					
4/6	Online	SIB F2S	NONE	NONE	1 hour,
52 minutes, 52 seconds					

lcc0-re0:

Slot	State	Link errors	Destination errors	Uptime
0	Spare	NONE	NONE	
1	Online	NONE	NONE	1 hour, 53 minutes, 31 seconds
2	Online	NONE	NONE	1 hour, 53 minutes, 27 seconds
3	Online	NONE	NONE	1 hour, 53 minutes, 23 seconds
4	Online	NONE	NONE	1 hour, 53 minutes, 19 seconds

## show chassis sibs (TX Matrix Plus Router with 3D SIBs)

user@host&gt; show chassis sibs

sfc0-re0:

Slot	State	Type	Cable errors	Link errors	Destination errors
errors	Uptime				
0	Online	SIB F13	6	NONE	NONE
	21 hours, 54 minutes, 28 seconds				
1	Online	SIB F13	8	NONE	NONE

	21 hours, 54 minutes, 12 seconds			
2	Invalid	NONE	NONE	NONE
3	Online SIB F13	6	NONE	NONE
	21 hours, 57 minutes, 6 seconds			
4	Online SIB F13	8	1	NONE
	21 hours, 56 minutes, 49 seconds			
5	Invalid	NONE	NONE	NONE
6	Online SIB F13	6	NONE	NONE
	21 hours, 56 minutes, 25 seconds			
7	Online SIB F13	8	NONE	NONE
	21 hours, 56 minutes, 8 seconds			
8	Online SIB F13	6	NONE	NONE
	21 hours, 55 minutes, 43 seconds			
9	Online SIB F13	8	NONE	NONE
	21 hours, 55 minutes, 26 seconds			
10	Invalid	NONE	NONE	NONE
11	Empty	NONE	NONE	NONE
12	Empty	NONE	NONE	NONE
13	Invalid	NONE	NONE	NONE
14	Invalid	NONE	NONE	NONE
15	Invalid	NONE	NONE	NONE
0/0	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 55 minutes, 16 seconds			
0/2	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 54 minutes, 49 seconds			
0/4	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 54 minutes, 47 seconds			
0/6	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 54 minutes, 45 seconds			
1/0	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 57 minutes, 29 seconds			
1/2	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 57 minutes, 27 seconds			
1/4	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 57 minutes, 25 seconds			
1/6	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 57 minutes, 23 seconds			
2/0	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes, 48 seconds			
2/2	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes, 46 seconds			
2/4	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes, 43 seconds			
2/6	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes, 41 seconds			
3/0	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes, 6 seconds			
3/2	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes, 4 seconds			
3/4	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes, 2 seconds			
3/6	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 56 minutes			
4/0	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 55 minutes, 24 seconds			
4/2	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 55 minutes, 22 seconds			
4/4	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 55 minutes, 20 seconds			
4/6	Online SIB F2S	-n/a-	NONE	NONE
	21 hours, 55 minutes, 18 seconds			

```
lcc0-re0:
```

```
-----
Slot  State          Cable errors  Link errors  Destination errors  Uptime
0      Online          6             NONE         NONE                21 hours,
47 minutes, 29 seconds
1      Online          6             NONE         NONE                21 hours,
47 minutes, 50 seconds
2      Online          6             NONE         NONE                21 hours,
47 minutes, 43 seconds
3      Online          6             NONE         NONE                21 hours,
47 minutes, 36 seconds
4      Empty           NONE          NONE         NONE
use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details
```

```
lcc4-re0:
```

```
-----
Slot  State          Cable errors  Link errors  Destination errors  Uptime
0      Online          6             NONE         NONE                21 hours,
57 minutes, 1 second
1      Online          6             NONE         NONE                21 hours,
57 minutes, 21 seconds
2      Online          6             NONE         NONE                21 hours,
57 minutes, 14 seconds
3      Online          6             NONE         NONE                21 hours,
57 minutes, 7 seconds
4      Empty           NONE          NONE         NONE
use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details
```

```
lcc7-re0:
```

```
-----
Slot  State          Cable errors  Link errors  Destination errors  Uptime
0      Online          2             NONE         NONE                21 hours,
56 minutes, 54 seconds
1      Online          2             NONE         NONE                21 hours,
57 minutes, 21 seconds
2      Online          2             NONE         NONE                21 hours,
57 minutes, 12 seconds
3      Online          2             NONE         NONE                21 hours,
57 minutes, 3 seconds
4      Empty           NONE          NONE         NONE
use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details
```

### show chassis sibs sfc (TX Matrix Plus Router)

```
user@host> show chassis sibs sfc 0
```

```
sfc0-re0:
```

```
-----
Slot  State          Type          Link errors  Destination errors  Uptime
0      Spare          SIB F13       NONE         NONE
1      Empty
2      Invalid
3      Online          SIB F13       NONE         NONE                12 hours,
6 minutes, 22 seconds
4      Empty
5      Invalid
6      Online          SIB F13       NONE         NONE                12 hours,
6 minutes, 11 seconds
7      Empty
8      Online          SIB F13       NONE         NONE                12 hours,
6 minutes
```

9	Empty		NONE	NONE	
10	Invalid		NONE	NONE	
11	Online	SIB F13	NONE	NONE	12 hours,
	5 minutes, 49 seconds				
12	Empty		NONE	NONE	
13	Invalid		NONE	NONE	
14	Invalid		NONE	NONE	
15	Invalid		NONE	NONE	
0/0	Spare	SIB F2S	NONE	NONE	
0/2	Spare	SIB F2S	NONE	NONE	
0/4	Spare	SIB F2S	NONE	NONE	
0/6	Spare	SIB F2S	NONE	NONE	
1/0	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 32 seconds				
1/2	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 31 seconds				
1/4	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 30 seconds				
1/6	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 29 seconds				
2/0	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 21 seconds				
2/2	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 20 seconds				
2/4	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 19 seconds				
2/6	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 17 seconds				
3/0	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 10 seconds				
3/2	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 9 seconds				
3/4	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 7 seconds				
3/6	Online	SIB F2S	NONE	NONE	12 hours,
	6 minutes, 6 seconds				
4/0	Online	SIB F2S	NONE	NONE	12 hours,
	5 minutes, 59 seconds				
4/2	Online	SIB F2S	NONE	NONE	12 hours,
	5 minutes, 57 seconds				
4/4	Online	SIB F2S	NONE	NONE	12 hours,
	5 minutes, 56 seconds				
4/6	Online	SIB F2S	NONE	NONE	12 hours,
	5 minutes, 55 seconds				

#### show chassis sibs lcc (TX Matrix Plus Router)

```
user@host> show chassis sibs lcc 0
lcc0-re0:
```

Slot	State	Link errors	Destination errors	Uptime
0	Online	NONE	NONE	20 hours, 14 minutes,
	50 seconds			
1	Fault	NONE	NONE	
2	Online	NONE	NONE	20 hours, 15 minutes,
	2 seconds			
3	Online	NONE	NONE	20 hours, 14 minutes,
	58 seconds			
4	Online	NONE	NONE	20 hours, 14 minutes,
	54 seconds			

**show chassis sibs lcc (TX Matrix Plus Router with 3D SIBs)**

```

user@host> show chassis sibs lcc 0
lcc0-re0:
-----
Slot  State          Cable errors  Link errors  Destination errors  Uptime
0    Disconnected    NONE         NONE         NONE                17 hours,
2 minutes, 37 seconds
1    Online          NONE         NONE         NONE                17 hours,
3 minutes, 6 seconds
2    Online          NONE         NONE         NONE                17 hours,
2 minutes, 59 seconds
3    Online          NONE         NONE         NONE                17 hours,
2 minutes, 52 seconds
4    Online          NONE         NONE         NONE                17 hours,
2 minutes, 44 seconds

```

**show chassis sibs (M320 Router)**

```

user@host> show chassis sibs

0    Online          1 hour, 18 minutes, 3 seconds
1    Offline         --- Offlined by cli command ---
2    Online          1 hour, 18 minutes, 18 seconds
3    Online          1 hour, 18 minutes, 3 seconds

```

**show chassis sibs (PTX Series)**

```

user@host> show chassis sibs
Slot  State          Fabric links  Errors
0    Online          Active        Asic Errors
1    Online          Active        Link Errors
2    Online          Active        None
3    Online          Active        Cell drops
4    Offline         Unused        None
5    Online          Active        None
6    Online          Active        None
7    Online          Active        None
8    Online          Active        None

```

**show chassis sibs (PTX Series)**

```

user@host> show chassis sibs detail
Slot 4 information
State          Offline
Reason         Offlined by cli command
Fabric links    Unused
Errors          None

```

## show route summary

<b>List of Syntax</b>	<a href="#">Syntax on page 391</a> <a href="#">Syntax (EX Series Switches) on page 391</a>
<b>Syntax</b>	<pre>show route summary &lt;logical-system (all   <i>logical-system-name</i>)&gt; &lt;table <i>routing-table-name</i>&gt;</pre>
<b>Syntax (EX Series Switches)</b>	show route summary
<b>Release Information</b>	<p>Command introduced before Junos OS Release 7.4.</p> <p>Command introduced in Junos OS Release 9.0 for EX Series switches.</p>
<b>Description</b>	<p>Display summary statistics about the entries in the routing table.</p> <p>CPU utilization might increase while the device learns routes. We recommend that you use the <b>show route summary</b> command after the device learns and enters the routes into the routing table. Depending on the size of your network, this might take several minutes. If you receive a “timeout communicating with routing daemon” error when using the <b>show route summary</b> command, wait several minutes before attempting to use the command again. This is not a critical system error, but you might experience a delay in using the command-line interface (CLI).</p>
<b>Options</b>	<p><b>none</b>—Display summary statistics about the entries in the routing table.</p> <p><b>logical-system (all   <i>logical-system-name</i>)</b>—(Optional) Perform this operation on all logical systems or on a particular logical system.</p> <p><b>table <i>routing-table-name</i></b>—(Optional) Display summary statistics for all routing tables whose name begins with this string (for example, <b>inet.0</b> and <b>inet6.0</b> are both displayed when you run the <b>show route summary table inet</b> command). If you only want to display statistics for a specific routing table, make sure to enter the exact name of that routing table.</p>
<b>Required Privilege Level</b>	view
<b>List of Sample Output</b>	<a href="#">show route summary on page 393</a> <a href="#">show route summary table on page 393</a> <a href="#">show route summary table (with Route Limits Configured for the Routing Table) on page 394</a>
<b>Output Fields</b>	<p><a href="#">Table 14 on page 391</a> lists the output fields for the <b>show route summary</b> command. Output fields are listed in the approximate order in which they appear.</p>

**Table 14: show route summary Output Fields**

Field Name	Field Description
Router ID	Address of the local routing device.

Table 14: show route summary Output Fields (*continued*)

Field Name	Field Description
<i>routing-table-name</i>	Name of the routing table (for example, <b>inet.0</b> ).
<b>destinations</b>	Number of destinations for which there are routes in the routing table.
<b>routes</b>	<p>Number of routes in the routing table:</p> <ul style="list-style-type: none"> <li>• <b>active</b>—Number of routes that are active.</li> <li>• <b>holddown</b>—Number of routes that are in the hold-down state before being declared inactive.</li> <li>• <b>hidden</b>—Number of routes that are not used because of routing policy.</li> </ul>
Restart complete	<p>All protocols have restarted for this routing table.</p> <p>Restart state:</p> <ul style="list-style-type: none"> <li>• <b>Pending:protocol-name</b>—List of protocols that have not yet completed graceful restart for this routing table.</li> <li>• <b>Complete</b>—All protocols have restarted for this routing table.</li> </ul> <p>For example, if the output shows-</p> <ul style="list-style-type: none"> <li>• <b>LDP.inet.0: 5 routes (4 active, 1 holddown, 0 hidden)</b> Restart Pending: OSPF LDP VPN</li> </ul> <p>This indicates that <b>OSPF</b>, <b>LDP</b>, and <b>VPN</b> protocols did not restart for <b>LDP.inet.0</b> routing table.</p> <ul style="list-style-type: none"> <li>• <b>vpls_1.l2vpn.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)</b> Restart Complete</li> </ul> <p>This indicates that all protocols have restarted for <b>vpls_1.l2vpn.0</b> routing table.</p>
<b>Limit/Threshold</b>	<p>Displays the configured route limits for the routing table set with the <i>maximum-prefixes</i> and the <i>maximum-paths</i> statements. If you do not configure route limits for the routing table, the show output does not display this information.</p> <ul style="list-style-type: none"> <li>• <b>destinations</b>—The first number represents the maximum number of route prefixes installed in the routing table. The second number represents the number of route prefixes that trigger a warning message.</li> <li>• <b>routes</b>—The first number represents the maximum number of routes. The second number represents the number of routes that trigger a warning message.</li> </ul>
<b>Direct</b>	Routes on the directly connected network.
<b>Local</b>	Local routes.
<i>protocol-name</i>	Name of the protocol from which the route was learned. For example, <b>OSPF</b> , <b>RSVP</b> , and <b>Static</b> .



## Sample Output

### show route summary

```

user@host> show route summary
Autonomous system number: 69
Router ID: 10.255.71.52
Maximum-ECMP: 32
inet.0: 24 destinations, 25 routes (23 active, 0 holddown, 1 hidden)
Restart Complete
    Direct:    6 routes,    5 active
    Local:    4 routes,    4 active
    OSPF:     5 routes,    4 active
    Static:   7 routes,    7 active
    IGMP:     1 routes,    1 active
    PIM:      2 routes,    2 active

inet.3: 2 destinations, 2 routes (2 active, 0 holddown, 0 hidden)
Restart Complete
    RSVP:     2 routes,    2 active

iso.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
Restart Complete
    Direct:    1 routes,    1 active

mpls.0: 7 destinations, 7 routes (5 active, 0 holddown, 2 hidden)
Restart Complete
    MPLS:     3 routes,    3 active
    VPLS:     4 routes,    2 active

inet6.0: 5 destinations, 5 routes (5 active, 0 holddown, 0 hidden)
Restart Complete
    Direct:    2 routes,    2 active
    PIM:       2 routes,    2 active
    MLD:       1 routes,    1 active

green.l2vpn.0: 4 destinations, 4 routes (4 active, 0 holddown, 0 hidden)
Restart Complete
    BGP:       2 routes,    2 active
    L2VPN:     2 routes,    2 active

red.l2vpn.0: 3 destinations, 3 routes (3 active, 0 holddown, 0 hidden)
Restart Complete
    BGP:       2 routes,    2 active
    L2VPN:     1 routes,    1 active

bgp.l2vpn.0: 4 destinations, 4 routes (4 active, 0 holddown, 0 hidden)
Restart Complete
    BGP:       4 routes,    4 active

```

### show route summary table

```

user@host> show route summary table inet
Router ID: 192.168.0.1

inet.0: 32 destinations, 34 routes (31 active, 0 holddown, 1 hidden)
    Direct:    6 routes,    5 active
    Local:     9 routes,    9 active
    OSPF:      3 routes,    1 active
    Static:   13 routes,   13 active
    IGMP:      1 routes,    1 active

```

```

PIM:      2 routes,      2 active

inet.1: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
Multicast: 1 routes,      1 active

inet6.0: 3 destinations, 3 routes (3 active, 0 holddown, 0 hidden)
Local:    1 routes,      1 active
PIM:      2 routes,      2 active

inet6.1: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
Multicast: 1 routes,      1 active
```


#### show route summary table (with Route Limits Configured for the Routing Table)

```

user@host> show route summary table VPN-A.inet.0
Autonomous system number: 100
Router ID: 10.255.182.142

VPN-A.inet.0: 13 destinations, 14 routes (13 active, 0 holddown, 0 hidden)
Limit/Threshold: 2000/200 destinations 20/12 routes
Direct:      2 routes,      2 active
Local:       1 routes,      1 active
OSPF:        4 routes,      3 active
BGP:         4 routes,      4 active
IGMP:        1 routes,      1 active
PIM:         2 routes,      2 active
```

## show system uptime

<b>List of Syntax</b>	<a href="#">Syntax on page 395</a> <a href="#">Syntax (EX Series Switches) on page 395</a> <a href="#">Syntax (QFX Series) on page 395</a> <a href="#">Syntax (TX Matrix Router) on page 395</a> <a href="#">Syntax (TX Matrix Plus Router) on page 395</a> <a href="#">Syntax (MX Series Router) on page 395</a>
<b>Syntax</b>	show system uptime
<b>Syntax (EX Series Switches)</b>	show system uptime <all-members> <local> <member <i>member-id</i> >
<b>Syntax (QFX Series)</b>	show system uptime <director-group <i>name</i> > <infrastructure <i>name</i> > <interconnect-device <i>name</i> > <node-group <i>name</i> >
<b>Syntax (TX Matrix Router)</b>	show system uptime <all-chassis   all-lcc   lcc <i>number</i>   scc>
<b>Syntax (TX Matrix Plus Router)</b>	show system uptime <detail> <all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i> >
<b>Syntax (MX Series Router)</b>	show system uptime <all-members> <invoke-on> <local> <member <i>member-id</i> >
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in JUNOS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
<b>Description</b>	Display the current time and information about how long the router or switch, router or switch software, and routing protocols have been running.
<div>  <p><b>NOTE:</b> Time values computed from differences in timestamps can vary due to the insertion or deletion of leap-seconds between them.</p> </div>	
<b>Options</b>	<b>none</b> —Show time since the system rebooted and processes started.

**all-chassis**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Show time since the system rebooted and processes started on all the routers in the chassis.

**all-lcc**—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show time since the system rebooted and processes started for all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, show time since the system rebooted and processes started for all connected T1600 or T4000 LCCs.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on all members of the Virtual Chassis configuration.

**director-group *name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Director group.

**infrastructure *name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the fabric control Routing Engine and fabric manager Routing Engine.

**interconnect-device *name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Interconnect device.

**invoke-on**—(MX Series routers only) (Optional) Display the time since the system rebooted and processes started on the master Routing Engine, backup Routing Engine, or both, on a router with two Routing Engines.

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show time since the system rebooted and processes started for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, show time since the system rebooted and processes started for a specific router 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**—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a

value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**node-group name**—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Node group.

**scc**—(TX Matrix routers only) (Optional) Show time since the system rebooted and processes started for the TX Matrix router (or switch-card chassis).

**sfc number**—(TX Matrix Plus routers only) (Optional) Show time since the system rebooted and processes started for the TX Matrix Plus router. Replace *number* with 0.

**Additional Information** By default, when you issue the **show system uptime** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise, if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.

**Required Privilege Level** view

**Related Documentation**

- [10-Gigabit Ethernet LAN/WAN PIC with XFP \(T640 Router\)](#)
- [Routing Matrix with a TX Matrix Plus Router Solutions Page](#)

**List of Sample Output**

- [show system uptime on page 398](#)
- [show system uptime all-lcc \(TX Matrix Router\) on page 398](#)
- [show system uptime all-lcc \(TX Matrix Plus Router\) on page 398](#)
- [show system uptime \(EX Series\) on page 399](#)
- [show system uptime \(QFX Series\) on page 399](#)

**Output Fields** [Table 15 on page 397](#) describes the output fields for the **show system uptime** command. Output fields are listed in the approximate order in which they appear.

**Table 15: show system uptime Output Fields**

Field Name	Field Description
<b>Current time</b>	Current system time in UTC.
<b>Time Source</b>	Reference time source that the system is locked to.
<b>System booted</b>	Date and time when the Routing Engine on the router or switch was last booted and how long it has been running.
<b>Protocols started</b>	Date and time when the routing protocols were last started and how long they have been running.
<b>Last configured</b>	Date and time when a configuration was last committed. Also shows the name of the user who issued the last <b>commit</b> command.
<b>time and up</b>	Current time, in the local time zone, and how long the router or switch has been operational.

Table 15: show system uptime Output Fields (*continued*)

Field Name	Field Description
<b>users</b>	Number of users logged in to the router or switch.
<b>load averages</b>	Load averages for the last 1 minute, 5 minutes, and 15 minutes.

## Sample Output

### show system uptime

```

user@host> show system uptime
Current time:      1998-10-13 19:45:47 UTC
Time Source:      NTP CLOCK
System booted:    1998-10-12 20:51:41 UTC (22:54:06 ago)
Protocols started: 1998-10-13 19:33:45 UTC (00:12:02 ago)
Last configured:  1998-10-13 19:33:45 UTC (00:12:02 ago) by abc
12:45PM up 22:54, 2 users, load averages: 0.07, 0.02, 0.01

```

### show system uptime all-lcc (TX Matrix Router)

```

user@host> show system uptime all-lcc
lcc0-re0:
-----
Current time: 2004-09-13 09:55:35 PDT
Time Source: LOCAL CLOCK
System booted: 2004-09-13 03:13:55 PDT (06:41:40 ago)
Last configured: 2004-09-13 03:17:48 PDT (06:37:47 ago) by root
9:55AM PDT up 6:42, 1 user, load averages: 0.02, 0.03, 0.00
lcc2-re0:
-----
Current time: 2004-09-13 09:55:35 PDT
Time Source: LOCAL CLOCK
System booted: 2004-09-12 03:23:43 PDT (1d 06:31 ago)
Last configured: 2004-09-13 03:05:36 PDT (06:49:59 ago) by root
9:55AM PDT up 1 day, 6:32, 1 user, load averages: 0.02, 0.01, 0.00

```

### show system uptime all-lcc (TX Matrix Plus Router)

```

user@host> show system uptime all-lcc
sfc0-re0:
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:33 PDT (17:44:57 ago)
Protocols started: 2009-05-24 06:40:30 PDT (17:44:00 ago)
Last configured: 2009-05-24 06:33:27 PDT (17:51:03 ago) by user1
12:24AM up 17:45, 2 users, load averages: 0.07, 0.05, 0.01

lcc0-re0:
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:46 PDT (17:44:44 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:47 PDT (17:43:43 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00

```

```
lcc1-re0:
```

```
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:38 PDT (17:44:52 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:18 PDT (17:44:12 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

```
lcc2-re0:
```

```
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:48 PDT (17:44:42 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:44 PDT (17:43:46 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

```
lcc3-re0:
```

```
-----
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:44 PDT (17:44:46 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:08 PDT (17:44:22 ago) by root
12:24AM up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

#### show system uptime (EX Series)

```
user@switch> show system uptime
Current time: 2014-03-12 16:39:56 UTC
Time Source: NTP CLOCK
System booted: 2014-03-12 14:58:05 UTC (01:41:51 ago)
Protocols started: 2014-03-12 14:59:48 UTC (01:40:08 ago)
Last configured: 2014-03-12 14:58:58 UTC (01:40:58 ago) by root
4:39PM up 1:42, 4 users, load averages: 0.02, 0.02, 0.00
```

#### show system uptime (QFX Series)

```
user@switch> show system uptime
Current time: 2010-08-27 03:12:30 PDT
Time Source: NTP CLOCK
System booted: 2010-08-13 17:11:54 PDT (1w6d 10:00 ago)
Protocols started: 2010-08-13 17:13:56 PDT (1w6d 09:58 ago)
Last configured: 2010-08-26 05:54:00 PDT (21:18:30 ago) by user
3:12AM up 13 days, 10:01, 3 users, load averages: 0.00, 0.00, 0.00
```

## show version

---

<b>List of Syntax</b>	<a href="#">Syntax on page 400</a> <a href="#">Syntax (EX Series Switches) on page 400</a> <a href="#">Syntax (TX Matrix Router) on page 400</a> <a href="#">Syntax (TX Matrix Plus Router) on page 400</a> <a href="#">Syntax (MX Series Router) on page 400</a> <a href="#">Syntax (QFX Series) on page 400</a> <a href="#">Syntax (ACX5048 and ACX5096 Routers) on page 400</a>
<b>Syntax</b>	<code>show version</code> <code>&lt;brief   detail&gt;</code>
<b>Syntax (EX Series Switches)</b>	<code>show version</code> <code>&lt;all-members&gt;</code> <code>&lt;brief   detail&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code>
<b>Syntax (TX Matrix Router)</b>	<code>show version</code> <code>&lt;brief   detail&gt;</code> <code>&lt;all-chassis   all-lcc   lcc <i>number</i>   scc&gt;</code>
<b>Syntax (TX Matrix Plus Router)</b>	<code>show version</code> <code>&lt;all-chassis   all-lcc   lcc <i>number</i>   sfc <i>number</i>&gt;</code> <code>&lt;brief   detail&gt;</code>
<b>Syntax (MX Series Router)</b>	<code>show version</code> <code>&lt;brief   detail&gt;</code> <code>&lt;all-members&gt;</code> <code>&lt;local&gt;</code> <code>&lt;member <i>member-id</i>&gt;</code>
<b>Syntax (QFX Series)</b>	<code>show version</code> <code>&lt;brief   detail&gt;</code> <code>&lt;component <i>component-name</i>   all&gt;</code>
<b>Syntax (ACX5048 and ACX5096 Routers)</b>	<code>show version</code> <code>&lt;brief   detail&gt;</code>
<b>Release Information</b>	Command introduced before Junos OS Release 7.4. Command introduced in Junos OS Release 9.0 for EX Series switches. <b>sfc</b> option introduced for the TX Matrix Plus router in Junos OS Release 9.6. Command introduced in Junos OS Release 11.1 for the QFX Series. Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.
<b>Description</b>	Display the hostname and version information about the software running on the router or switch.  Beginning in Junos OS Release 13.3, the <b>show version</b> command output includes the <b>Junos</b> field that displays the Junos OS version running on the device. This field provides a



consistent means of identifying the Junos OS version, rather than extracting that information from the list of installed sub-packages.

**Options** **none**—Display standard information about the hostname and version of the software running on the router or switch.

**brief | detail**—(Optional) Display the specified level of output.

**all-members**—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on all members of the Virtual Chassis configuration.

**component all**—(QFabric systems only) (Optional) Display the host name and version information about the software running on all the components on the QFabric system.

**component *component-name***—(QFabric systems only) (Optional) Display the host name and version information about the software running on a specific QFabric system component. Replace *component-name* with the name of the QFabric system component. The *component-name* can be the name of a diagnostics Routing Engine, Director group, fabric control Routing Engine, fabric manager Routing Engine, Interconnect device, or Node group.

**local**—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on the local Virtual Chassis member.

**member *member-id***—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on the specified member of the Virtual Chassis configuration. For EX4200 switches, replace *member-id* with a value from 0 through 9. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

**scc**—(TX Matrix routers only) (Optional) Display the hostname and version information about the software running on the TX Matrix router (or switch-card chassis).

**lcc *number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display the host name and version information about the software running on for a specified T640 router (line-card chassis or LCC) that is connected to the TX Matrix router. On a TX Matrix Plus router, display the host name and version information about the software running for a specified T1600 or T4000 router (LCC) 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.

**sfc *number***—(TX Matrix Plus routers only) (Optional) Display the hostname and version information about the software running on the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

**Additional Information** By default, when you issue the **show version** command on a TX Matrix or TX Matrix Plus master Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on a TX Matrix router) or T1600 or T4000 (in a routing matrix based on a TX Matrix Plus router) master Routing Engines connected to it. Likewise, if you issue the same command on the TX Matrix or TX Matrix Plus backup Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on a TX Matrix router) or T1600 or T4000 (in a routing matrix based on a TX Matrix Plus router) backup Routing Engines that are connected to it.

**Required Privilege Level** view

**List of Sample Output** [show version \(Devices Running Junos OS Release 13.3 and Later\) on page 403](#)  
[show version on page 403](#)  
[show version \(TX Matrix Plus Router\) on page 404](#)  
[show version \(TX Matrix Plus Router with 3D SIBs\) on page 406](#)  
[show version \(MX Series Router\) on page 410](#)  
[show version \(QFX3500 Switch\) on page 410](#)  
[show version \(QFabric System\) on page 410](#)  
[show version component all \(QFabric System\) on page 411](#)  
[show version \(ACX5048 Router\) on page 412](#)  
[show version \(ACX5096 Router\) on page 413](#)

## Sample Output

### show version (Devices Running Junos OS Release 13.3 and Later)

The following output is from the MX240 Router and shows the **Junos** field introduced in Junos OS 13.3. Depending on the platform running Junos OS 13.3, you might see different installed sub-packages, but the **Junos** field is common across all platforms that run Junos OS 13.3 and later.

```
user@host > show version
Hostname: lab
Model: mx240
Junos: 13.3R1.4
JUNOS Base OS boot [13.3R1.4]
JUNOS Base OS Software Suite [13.3R1.4]
JUNOS Kernel Software Suite [13.3R1.4]
JUNOS Crypto Software Suite [13.3R1.4]
JUNOS Packet Forwarding Engine Support (M/T/EX Common) [13.3R1.4]
JUNOS Packet Forwarding Engine Support (MX Common) [13.3R1.4]
JUNOS Online Documentation [13.3R1.4]
JUNOS Services ACL Container package [13.3R1.4]
JUNOS Services Application Level Gateways [13.3R1.4]
JUNOS AppId Services [13.3R1.4]
JUNOS Border Gateway Function package [13.3R1.4]
JUNOS Services Captive Portal and Content Delivery Container package [13.3R1.4]
JUNOS Services HTTP Content Management package [13.3R1.4]
JUNOS IDP Services [13.3R1.4]
JUNOS Services Jflow Container package [13.3R1.4]
JUNOS Services LL-PDF Container package [13.3R1.4]
JUNOS Services MobileNext Software package [13.3R1.4]
JUNOS Services Mobile Subscriber Service Container package [13.3R1.4]
JUNOS Services NAT [13.3R1.4]
JUNOS Services PTSP Container package [13.3R1.4]
JUNOS Services RPM [13.3R1.4]
JUNOS Services Stateful Firewall [13.3R1.4]
JUNOS Voice Services Container package [13.3R1.4]
JUNOS Services Crypto [13.3R1.4]
JUNOS Services SSL [13.3R1.4]
JUNOS Services IPSec [13.3R1.4]
JUNOS platform Software Suite [13.3R1.4]
JUNOS Runtime Software Suite [13.3R1.4]
JUNOS Routing Software Suite [13.3R1.4]
JUNOS py-base-i386 [13.3R1.4]
```

### show version

```
user@host> show version
Hostname: router1
Model: m20
JUNOS Base OS boot [7.2-20050312.0]
JUNOS Base OS Software Suite [7.2-20050312.0]
JUNOS Kernel Software Suite [7.2R1.7]
JUNOS Packet Forwarding Engine Support (M20/M40) [7.2R1.7]
JUNOS Routing Software Suite [7.2R1.7]
JUNOS Online Documentation [7.2R1.7]
JUNOS Crypto Software Suite [7.2R1.7]

{master}

user@host> show version psd 1
```

psd1-re0:

```
-----  
Hostname: china  
Model: t640  
JUNOS Base OS boot [9.1I20080311_1959_builder]  
JUNOS Base OS Software Suite [9.1-20080321.0]  
JUNOS Kernel Software Suite [9.1-20080321.0]  
JUNOS Crypto Software Suite [9.1-20080321.0]  
JUNOS Packet Forwarding Engine Support (M/T Common) [9.1-20080321.0]  
JUNOS Packet Forwarding Engine Support (T-series) [9.1-20080321.0]  
JUNOS Online Documentation [9.1-20080321.0]  
JUNOS Routing Software Suite [9.1-20080321.0]  
labpkg [7.0]
```

#### show version (TX Matrix Plus Router)

user@host> show version

sfc0-re0:

```
-----  
Hostname: host  
Model: txp  
JUNOS Base OS boot [12.3-20121019.0]  
JUNOS Base OS Software Suite [12.3-20121019.0]  
JUNOS Kernel Software Suite [12.3-20121019.0]  
JUNOS Crypto Software Suite [12.3-20121019.0]  
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]  
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]  
JUNOS Online Documentation [12.3-20121019.0]  
JUNOS Services AACL Container package [12.3-20121019.0]  
JUNOS Services Application Level Gateways [12.3-20121019.0]  
JUNOS AppId Services [12.3-20121019.0]  
JUNOS Border Gateway Function package [12.3-20121019.0]  
JUNOS Services Captive Portal and Content Delivery Container package  
[12.3-20121019.0]  
JUNOS Services HTTP Content Management package [12.3-20121019.0]  
JUNOS IDP Services [12.3-20121019.0]  
JUNOS Services LL-PDF Container package [12.3-20121019.0]  
JUNOS Services NAT [12.3-20121019.0]  
JUNOS Services PTSP Container package [12.3-20121019.0]  
JUNOS Services RPM [12.3-20121019.0]  
JUNOS Services Stateful Firewall [12.3-20121019.0]  
JUNOS Voice Services Container package [12.3-20121019.0]  
JUNOS Services Example Container package [12.3-20121019.0]  
JUNOS Services Crypto [12.3-20121019.0]  
JUNOS Services SSL [12.3-20121019.0]  
JUNOS Services IPSec [12.3-20121019.0]  
JUNOS Runtime Software Suite [12.3-20121019.0]  
JUNOS Routing Software Suite [12.3-20121019.0]
```

lcc0-re0:

```
-----  
Hostname: host1  
Model: t1600  
JUNOS Base OS boot [12.3-20121019.0]  
JUNOS Base OS Software Suite [12.3-20121019.0]  
JUNOS Kernel Software Suite [12.3-20121019.0]  
JUNOS Crypto Software Suite [12.3-20121019.0]  
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]  
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]  
JUNOS Online Documentation [12.3-20121019.0]  
JUNOS Services AACL Container package [12.3-20121019.0]
```

```

JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

```

```
lcc1-re0:
```

```

-----
Hostname: host2
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services ACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

```

```
lcc2-re0:
```

```

-----
Hostname: host3
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]

```

```
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]
```

```
lcc3-re0:
```

```
-----
Hostname: host4
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]
```

#### show version (TX Matrix Plus Router with 3D SIBs)

```
user@host>show version
sfc0-re0:
```

```
-----
Hostname: sfc0
```

```

Model: txp
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services ACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

```

```
lcc0-re0:
```

```

-----
Hostname: lcc0
Model: t4000
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services ACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]

```

JUNOS Services Crypto [13.1-20130306.0]  
JUNOS Services SSL [13.1-20130306.0]  
JUNOS Services IPSec [13.1-20130306.0]  
JUNOS Runtime Software Suite [13.1-20130306.0]  
JUNOS Routing Software Suite [13.1-20130306.0]

lcc2-re0:

-----  
Hostname: lcc2  
Model: t4000  
JUNOS Base OS boot [13.1-20130306.0]  
JUNOS Base OS Software Suite [13.1-20130306.0]  
JUNOS Kernel Software Suite [13.1-20130306.0]  
JUNOS Crypto Software Suite [13.1-20130306.0]  
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]  
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]  
JUNOS Online Documentation [13.1-20130306.0]  
JUNOS Services AACL Container package [13.1-20130306.0]  
JUNOS Services Application Level Gateways [13.1-20130306.0]  
JUNOS AppId Services [13.1-20130306.0]  
JUNOS Border Gateway Function package [13.1-20130306.0]  
JUNOS Services Captive Portal and Content Delivery Container package [13.1-20130306.0]  
JUNOS Services HTTP Content Management package [13.1-20130306.0]  
JUNOS IDP Services [13.1-20130306.0]  
JUNOS Services Jflow Container package [13.1-20130306.0]  
JUNOS Services LL-PDF Container package [13.1-20130306.0]  
JUNOS Services MobileNext Software package [13.1-20130306.0]  
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]  
JUNOS Services NAT [13.1-20130306.0]  
JUNOS Services PTSP Container package [13.1-20130306.0]  
JUNOS Services RPM [13.1-20130306.0]  
JUNOS Services Stateful Firewall [13.1-20130306.0]  
JUNOS Voice Services Container package [13.1-20130306.0]  
JUNOS Services Example Container package [13.1-20130306.0]  
JUNOS Services Crypto [13.1-20130306.0]  
JUNOS Services SSL [13.1-20130306.0]  
JUNOS Services IPSec [13.1-20130306.0]  
JUNOS Runtime Software Suite [13.1-20130306.0]  
JUNOS Routing Software Suite [13.1-20130306.0]

lcc4-re0:

-----  
Hostname: lcc4  
Model: t4000  
JUNOS Base OS boot [13.1-20130306.0]  
JUNOS Base OS Software Suite [13.1-20130306.0]  
JUNOS Kernel Software Suite [13.1-20130306.0]  
JUNOS Crypto Software Suite [13.1-20130306.0]  
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]  
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]  
JUNOS Online Documentation [13.1-20130306.0]  
JUNOS Services AACL Container package [13.1-20130306.0]  
JUNOS Services Application Level Gateways [13.1-20130306.0]  
JUNOS AppId Services [13.1-20130306.0]  
JUNOS Border Gateway Function package [13.1-20130306.0]  
JUNOS Services Captive Portal and Content Delivery Container package [13.1-20130306.0]  
JUNOS Services HTTP Content Management package [13.1-20130306.0]  
JUNOS IDP Services [13.1-20130306.0]



```

JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

```

lcc6-re0:

```

-----
Hostname: lcc6
Model: t1600
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

```

lcc7-re0:

```

-----
Hostname: lcc7
Model: t1600
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]

```

```
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]
```

#### show version (MX Series Router)

```
user@host5> show version
Hostname: host5
Model: mx80
JUNOS Base OS boot [11.3-20110717.0]
JUNOS Base OS Software Suite [11.3-20110717.0]
JUNOS Kernel Software Suite [11.3-20110717.0]
JUNOS Crypto Software Suite [11.3-20110717.0]
JUNOS Packet Forwarding Engine Support (MX80) [11.3-20110717.0]
JUNOS Online Documentation [11.3-20110717.0]
JUNOS Routing Software Suite [11.3-20110717.0]
```

#### show version (QFX3500 Switch)

```
user@switch> show version
Hostname: switch
Model: qfx_s3500
JUNOS Base OS boot [11.1R1]
JUNOS Base OS Software Suite [11.1R1]
JUNOS Kernel Software Suite [11.1R1]
JUNOS Crypto Software Suite [11.1R1]
JUNOS Online Documentation [11.1R1]
JUNOS Enterprise Software Suite [11.1R1]
JUNOS Packet Forwarding Engine Support (QFX) [11.1R1]
JUNOS Routing Software Suite [11.1R1]
```

#### show version (QFabric System)

```
user@qfabric> show version
Hostname: qfabric
Model: qfx3000-g
Serial Number: qfsn-0123456789
QFabric System ID: f158527a-f99e-11e0-9fbd-00e081c57cda
JUNOS Base Version [12.2I20111018_0215_dc-builder]
```

**show version component all (QFabric System)**

```

user@switch> show version component all
dg1:
-
Hostname: qfabric
Model: qfx3100
JUNOS Base Version [11.3R1.6]

dg0:
-
Hostname: qfabric
Model: qfx3100
JUNOS Base Version [11.3R1.6]

NW-NG-0:
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

FC-0:
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

FC-1:
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

DRE-0:
-
Hostname: dre-0
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]

```

```
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
```

FM-0:

```
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
```

nodedevice1:

```
-
Hostname: qfabric
Model: QFX3500
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
```

interconnectdevice1:

```
-
Hostname: qfabric
Model: QFX3108
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
warning: from interconnectdevice0: Disconnected
```

### show version (ACX5048 Router)

```
user@host> show version
fpc0:
Hostname: acx5k11-ac
Model: acx5048
Junos: 15.1X54-D20.3
JUNOS Base OS boot [15.1X54-D20.3]
JUNOS Online Documentation [15.1X54-D20.3]
JUNOS Crypto Software Suite [15.1X54-D20.3]
JUNOS Base OS Software Suite [15.1X54-D20.3]
JUNOS Kernel Software Suite [15.1X54-D20.3]
JUNOS Packet Forwarding Engine Support (acx5k) [15.1X54-D20.3]
JUNOS Enterprise Software Suite [15.1X54-D20.3]
JUNOS Routing Software Suite [15.1X54-D20.3]
```

```
JUNOS py-base-i386 [15.1X54-D20.3]  
JUNOS Host Software [15.1X54-D20.3]
```

#### show version (ACX5096 Router)

```
user@host> show version  
fpc0:  
Hostname: acx5k13-ac  
Model: acx5096  
Junos: 15.1X54-D20.3  
JUNOS Base OS boot [15.1X54-D20.3]  
JUNOS Online Documentation [15.1X54-D20.3]  
JUNOS Crypto Software Suite [15.1X54-D20.3]  
JUNOS Base OS Software Suite [15.1X54-D20.3]  
JUNOS Kernel Software Suite [15.1X54-D20.3]  
JUNOS Packet Forwarding Engine Support (acx5k) [15.1X54-D20.3]  
JUNOS Enterprise Software Suite [15.1X54-D20.3]  
JUNOS Routing Software Suite [15.1X54-D20.3]  
JUNOS py-base-i386 [15.1X54-D20.3]  
JUNOS Host Software [15.1X54-D20.3]
```

