Juniper Networks | Engineering Simplicity

SRX4120 Firewall Hardware Guide

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SRX4120 Firewall Hardware Guide
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About This Guide

Use this guide to install hardware and perform initial software configuration, routine maintenance, and troubleshooting for the SRX4120 Firewall.

After completing the installation and basic configuration procedures covered in this guide, refer to the Junos OS documentation for information about further software configuration. You can also manage the SRX4120 using Mist or Security Director.

1

CHAPTER

Fast Track: Initial Installation

IN THIS CHAPTER

- Fast Track to Rack Installation and Power | **2**
- Claim, Onboard, and Configure SRX4120 | **6**

Fast Track to Rack Installation and Power

SUMMARY

This section guides you through the simplest steps to install your SRX4120 Firewall in a rack and connect it to power. For more complex installation needs, see "Install the SRX4120 " on page 62.

IN THIS SECTION

- Install the SRX4120 in a Rack | 2
- Connect to Power | 5



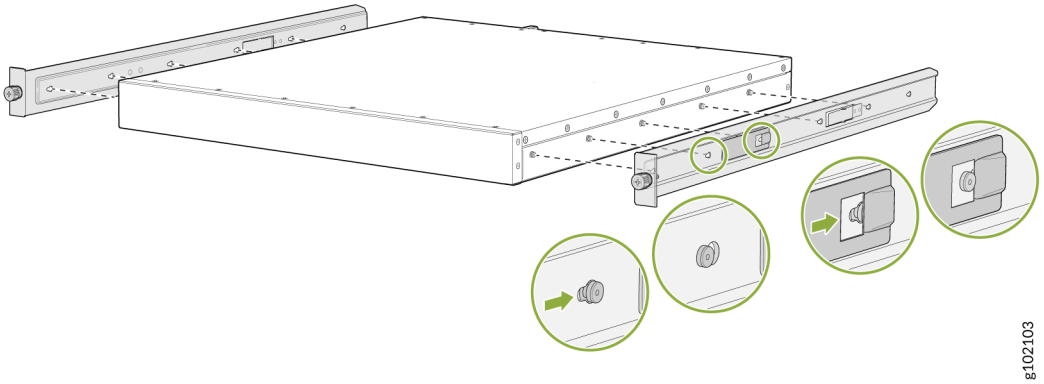
Install the SRX4120 in a Rack

You can install the Juniper Networks® SRX4120 Firewall in a four-post rack or cabinet. here, we'll walk you through the steps to install an AC-powered device in a square-hole four-post rack.

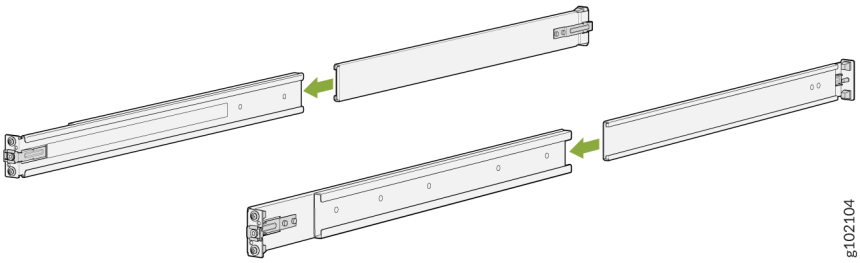
Before you install, review the following:

- Site Guidelines and Requirements
- General Safety Guidelines and warnings
- "Unpack the SRX4120" on page 60

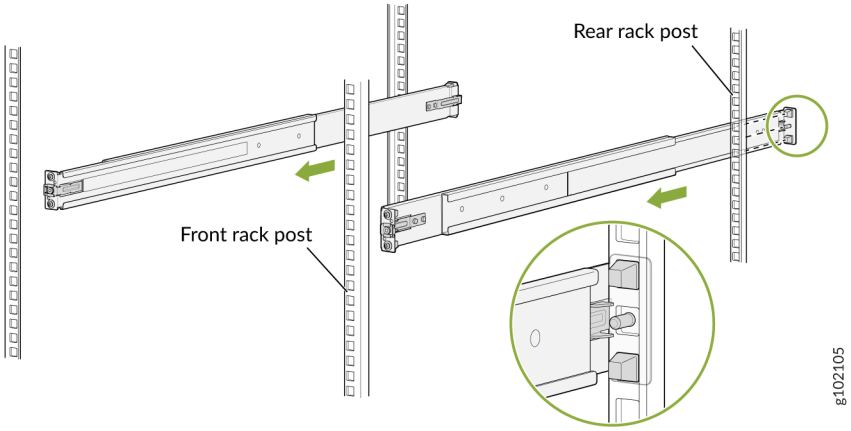
1. Wrap and fasten one end of the electrostatic discharge (ESD) cable grounding strap around your bare wrist, and connect the other end to a site ESD point.
2. Attach the side-mounting brackets to the chassis. Align the keyholes of the mounting brackets over the shoulder screws of the chassis and slide the mounting brackets towards the rear of the chassis.



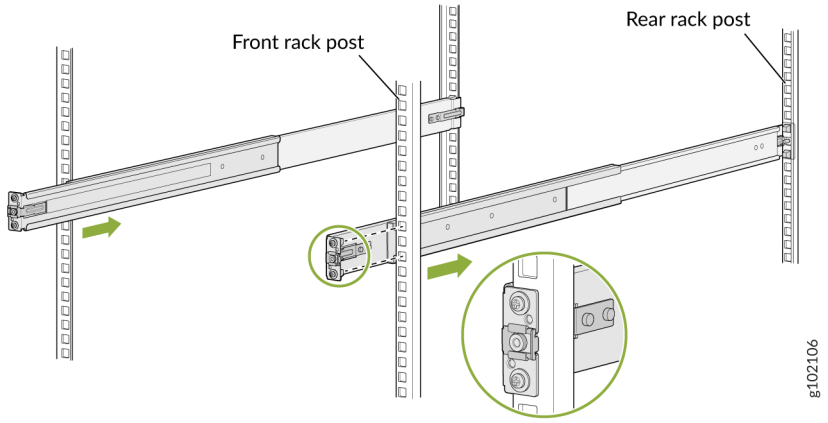
3. Assemble the mounting rails by sliding the rear rails into the front rails.



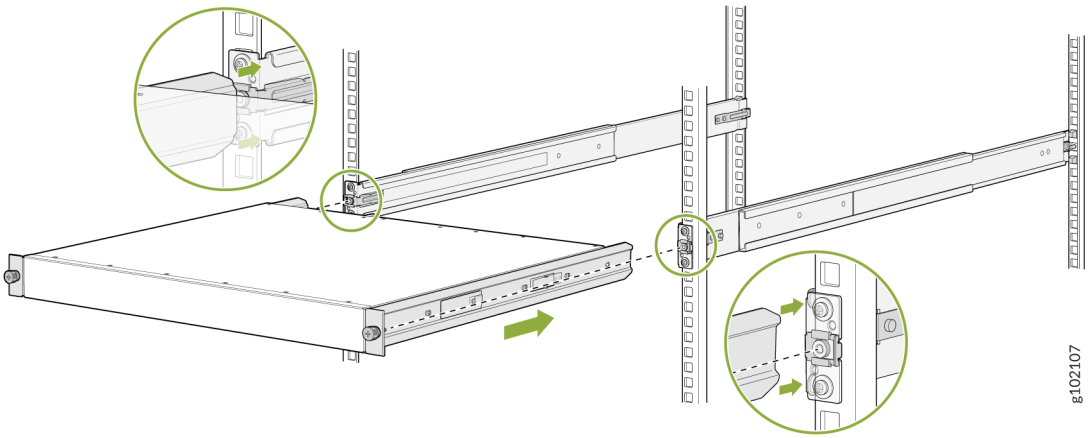
4. Align the guide blocks of the rear-mounting rail with the rear-post holes. Pull the rear-mounting rail toward the front of the rack to lock the rail in place. You'll hear a distinct click when the latch locks into the rack holes.



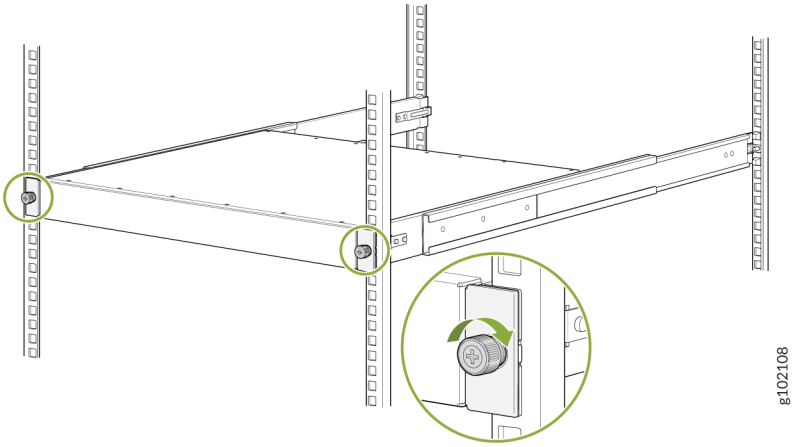
5. Align the guide blocks of the front-mounting rail with the front-post holes. Push the front-mounting rail toward the rear of the rack to lock the rail in place. You'll hear a distinct click when the latch locks into the rack holes.



6. Ensure that the front and rear latches on the mounting rails are locked in place.
7. Lift the device and position it in the rack, aligning the side-mounting brackets with the mounting rails. Slide the device into the channels of the mounting rails.



8. Tighten the two thumbscrews to secure the device.



Connect to Power

IN THIS SECTION

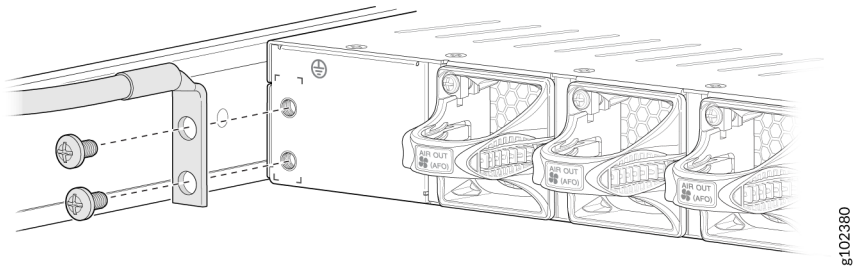
- Ground the SRX4120 Firewall | 5
- Connect the Power Cord and Power On the SRX4120 Firewall | 6

To connect the SRX4120 Firewall to AC power, you must do the following:

Ground the SRX4120 Firewall

To ground the SRX4120 Firewall:

1. Wrap and fasten one end of the electrostatic discharge (ESD) cable grounding strap around your bare wrist, and connect the other end to a site ESD point.
2. Connect the grounding cable to a proper earth ground, such as the rack in which you mount the device.
3. Place the grounding cable terminal attached to the grounding cable over the grounding point.
4. Secure the grounding cable terminal to the grounding point using screws.



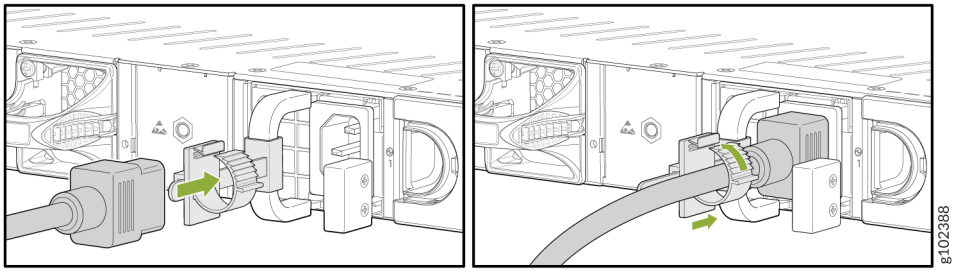
5. Dress the grounding cable. Ensure that the cable doesn't block access to or come in contact with other device components, and that it doesn't drape where people could trip over it.

Connect the Power Cord and Power On the SRX4120 Firewall

For information about the supported AC power cord specifications on your device, see "SRX4120 Power System" on page 36.

To connect the power cord, do the following:

1. Ensure that the power supply units are fully inserted in the rear panel of the device.
2. Insert the coupler end of the power cord into the AC power cord socket on the rear panel.
3. Push the power cord retainer on to the power cord.



4. If the AC power source outlet has a power switch, turn it off.
5. Plug the power cord into an AC power source outlet.
6. If the AC power source outlet has a power switch, turn it on. The device doesn't have a power switch and powers on as soon as you plug it in.

Claim, Onboard, and Configure SRX4120

SUMMARY

This topic provides you the pointers to onboard and configure the SRX4120 using Juniper® Mist, Juniper® Security Director, or configure the SRX4120 using J-Web or Junos OS CLI.

IN THIS SECTION

- Claim, Onboard and Configure the SRX4120 using Mist | 7
- Onboard and Configure the SRX4120 using Security Director | 7

- Configure SRX4120 Using the Junos OS CLI | 8

Claim, Onboard and Configure the SRX4120 using Mist

The SRX4120 is a cloud-ready device, and you can manage it using the Mist AI cloud portal. If you have a Mist WAN Assurance license, you can follow a few simple steps to get the SRX4120 up and running in the Mist AI cloud portal.

If you want to	Then
Claim and onboard to Mist	See Cloud-Ready SRX Series Firewalls with Mist.
Configure WAN Assurance	Mist WAN Assurance Configuration Guide.
See all available documentation for WAN Assurance	See WAN Assurance Documentation.

Onboard and Configure the SRX4120 using Security Director

If you have a Juniper Security Director license, you can follow a few simple steps to get the SRX4120 up and running on the Security Director Cloud portal. You can also manage the SRX4120 using Security Director On-Premise.

If you want to	Then
Claim and onboard to Security Director Cloud	See Onboard SRX Firewalls to Security Director Cloud.
Claim and onboard to Security Director On-Premise	See Onboard SRX Series Firewalls to Security Director.
Configure additional features	See Juniper Security Director On-Premise user Guide and Juniper Security Director Cloud User Guide.

(Continued)

If you want to	Then
See all available documentation for Security Director	See Security Director Cloud Documentation and Security Director On-Premise Documentation.

Configure SRX4120 Using the Junos OS CLI

You can configure the SRX4120 using the Junos OS CLI.

If you want to	Then
Customize basic configuration	See "Configure Root Authentication and Management Interface from the CLI" on page 91.
Explore software features supported on the SRX4120	See Feature Explorer.
Configure Junos OS features on the SRX4120	See User Guides.
Stay up-to-date about new and changed features, and known and resolved issues	See Junos OS Release Notes.

2

CHAPTER

Device Overview

IN THIS CHAPTER

- SRX4120 Overview | **10**
- SRX4120 Field-Replaceable Units | **13**
- SRX4120 Software Features | **14**

SRX4120 Overview

SUMMARY

Learn about the hardware features and benefits of the SRX4120 Firewall.

IN THIS SECTION

- Meet the SRX4120 | **10**
- Where Can You Use the SRX4120? | **11**
- Why Upgrade to the SRX4120? | **12**

Meet the SRX4120

The SRX4120 Firewall is a midrange firewall that consolidates networking and security features. It is a next-generation firewall that is designed to cater to your current network needs and is scalable to meet future demands. It provides capabilities including Application ID (AppID), User Firewall (UserFW), intrusion prevention system (IPS), and Content Security. It also provides advanced threat detection and mitigation capabilities through Juniper® Advanced Threat Protection Cloud (Juniper ATP Cloud).

The SRX4120 is ideal for small to medium enterprise edge, campus edge, data center edge firewall, and secure VPN router deployments for distributed enterprise use-cases.

Table 1: SRX4120 Description

SRX4120 Firewall	
Form factor	1 U
Chassis type	Fixed configuration
Operating system	Junos OS
Power system variants	AC and DC
Cooling system variants	Only AFO

Port configuration	• Eight 1/2.5/5/10 Gigabit-Ethernet (GbE) BASE-T ports • Eight 1/10 GbE SFP+ ports • Four 1/10/25 GbE SFP28 ports • Two 4x10/4x25/2x50/40/100 GbE QSFP28 ports • Two 1 GbE SFP High Availability ports All ports are Media Access Control Security (MACsec) capable ports.
Storage	Two 120 GB SSDs
Memory	32 GB
Managed using	• Juniper® Mist • Juniper® Security Director Cloud • Juniper® Security Director On-Premise • J-Web • Junos OS CLI

Where Can You Use the SRX4120?

The SRX4120 is part of Juniper's AI-native security solutions and facilitates seamless transitioning from an on-premises to a cloud environment. With zero trust principles and EVPN-VXLAN support, the SRX4120 integrates into the network fabric to secure and protect your network from external threats and potential vulnerabilities.

Here are some possible use-cases for the SRX4120:

- Enterprise/Campus Edge Firewall—The next-generation firewall capabilities of the SRX4120 help to secure your small to medium enterprise or campus networks. Advanced security features such as Content Security and IPS protect your network.

- Data Center Firewall—At the data center edge, the SRX4120 allows secure access to the data center servers. At the core, the SRX4120 maintains control over the traffic flowing between different parts of the data center. Threat mitigation and detection, IPS, high availability, and EVPN-VXLAN support enable the SRX4120 to secure your data center.
- Secure VPN Router—In large distributed enterprises, the SRX4120 uses IPsec VPN to simplify the hub-and-spoke deployment. Routing protocols transfer routing information over the IPsec tunnels. The SRX4120 also supports SD-WAN use cases.

Why Upgrade to the SRX4120?

The SRX4120 enhances the capabilities of the SRX4100.

Table 2: Compare the SRX4120 and SRX4100

Category	Feature	SRX4120	SRX4100
Physical specifications	Dimensions (HxWxD)	1.74 x 17.28 x 18.2 in.	1.7 x 17.48 x 25 in.
	Weight	With 1 PSU: 17.1 lb With 2 PSUs: 19.12 lb	With 2 AC PSUs: 29 lb With 2 DC PSUs: 28.9 lb
Port configuration	Ports	• Eight 1/2.5/5/10 GbE BASE-T ports • Eight 1/10 GbE SFP+ ports • Four 1/10/25 GbE SFP28 ports • Two 4x10/4x25/2x50/40/100 GbE QSFP28 ports	Eight 1/10 GbE SFP ports
	High availability ports	Two 1 GbE SFP ports	Two 1/10 GbE SFP+ ports

Table 2: Compare the SRX4120 and SRX4100 *(Continued)*

Category	Feature	SRX4120	SRX4100
	MACsec capability	Supported on all network ports	-
Management	Juniper® Mist WAN Assurance	Yes	-
	Juniper® Security Director	Yes	Yes
Performance	Firewall throughput	IMIX: 28 Gbps 1518B: 39 Gbps	IMIX: 25 Gbps 1518B: 40 Gbps
	IPsec VPN throughput	IMIX: 18 Gbps 1400B: 36 Gbps	IMIX: 13 Gbps 1400B: 17.5 Gbps

For the complete performance data, see the SRX4120 and SRX4100 datasheets.

For a detailed list of features available on both devices, see Feature Explorer.

For a comparison of hardware features, see Hardware Compatibility Tool.

SRX4120 Field-Replaceable Units

SUMMARY

Learn about the field-replaceable units in the SRX4120.

IN THIS SECTION

Field-replaceable units (FRUs) are components that you can replace at your site. There are two types of FRUs:

- Hot-insertable and hot-removable—You can remove and replace these components without powering off the device or disrupting the device functions.
- Hot-pluggable—You can remove and replace these components without powering off the device, but the device function is interrupted until you replace the component.

Table 3: SRX4120 FRUs

FRU	Type
Power supply units	Hot-insertable and hot-removable
Fan modules	Hot-insertable and hot-removable
Transceivers	Hot-insertable and hot-removable

CAUTION:

- Replace a failed PSU with a new PSU within five minutes of removal to maintain power redundancy when two PSUs are installed. The device continues to operate with only one PSU running.

  If only one PSU is installed, there is no power redundancy.

- Replace a failed fan module with a new fan module within five minutes of removal to prevent chassis overheating.

SRX4120 Software Features

SUMMARY

This topic describes the key software features available on the SRX4120.

IN THIS SECTION

For a complete list of all software features supported on the SRX4120, see Feature Explorer.

Some key features are listed below:

Table 4: SRX4120 Software Features

Feature Category	Documentation
Chassis Clustering	Chassis Cluster User Guide for SRX Series Devices
High Availability	High Availability User Guide
IPsec VPN	IPsec VPN User Guide
Routing Policies and Firewall Filters	Routing Policies, Firewall Filters, and Traffic Policers User Guide
Security Policies	Security Policies User Guide for Security Devices
Security Services	Security Services Administration Guide

3

CHAPTER

Chassis

IN THIS CHAPTER

- SRX4120 Chassis | **17**
- SRX4120 Chassis LEDs | **22**

SRX4120 Chassis

SUMMARY

Learn about the components in the SRX4120 chassis.

IN THIS SECTION

- SRX4120 Specifications | **17**
- SRX4120 Front Panel | **18**
- SRX4120 Rear Panel | **20**

The SRX4120 chassis is a rigid sheet-metal structure that houses all components of the device.

SRX4120 Specifications

Table 5: Physical Specifications

Specification	Value
Height	1.74 in (4.42 cm)
Width	17.28 in (43.89 cm)
Depth	18.20 in (46.23 cm)
Weight	We ship the SRX4120 with only one power supply unit (PSU). As shipped (one PSU): 17.10 lb (7.6 kg) Fully-loaded with 2 PSUs: 19.12 lb (8.5 kg)

Table 6: Environmental Specifications

Specification	Value
Operating altitude	6000 ft (1828 m)
Operating temperature	32 °F to 104 °F (0 °C to 40 °C)
Storage temperature	-40 °F to 158 °F (-40 °C to 70 °C)
Relative humidity (operating) (non-condensing)	5% through 90%

SRX4120 Front Panel

Figure 1: SRX4120 Front Panel

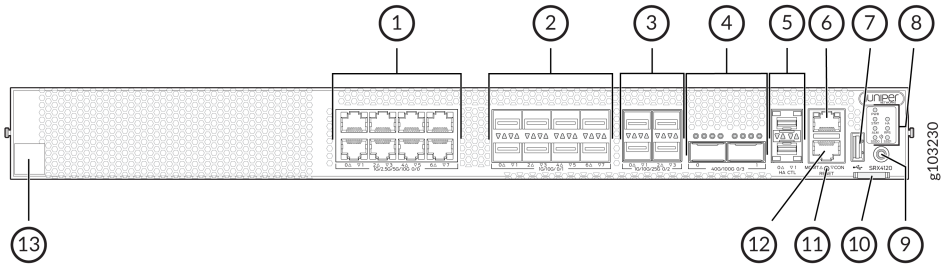


Table 7: Components on the SRX4120 Front Panel

Callout	Item	Description
1	Ethernet ports	Eight 1/2.5/5/10-Gigabit Ethernet (GbE) MACsec ports for network traffic
2	SFP+ ports	Eight 1/10 GbE SFP+ MACsec ports for network traffic

Table 7: Components on the SRX4120 Front Panel *(Continued)*

Callout	Item	Description
3	SFP28 ports	Four 1/10/25 GbE SFP28 MACsec ports for network traffic
4	QSFP28	Two 40/100 GbE QSFP28 MACsec ports for network traffic
5	Chassis cluster ports (**HA**)	Two 1 GbE SFP chassis cluster control **CTL** ports with MACsec support
6	Management port (**MGMT**)	1 GbE RJ-45 port
7	USB port	One USB 3.0 Type A port that accepts a USB storage device.
8	Chassis LEDs	Indicate component and system status and troubleshooting information at a glance.
9	Power button	Power button
10	Pull tab	Contains the CLEI code and serial number of the device.
11	RESET	Reset button. To reset the system, press and hold the **RESET** button for around 250 ms.
12	Console port (**CON**)	You can connect a laptop to the device for CLI management. The port uses an RJ-45 serial connection and supports the RS-232 (EIA-232) standard.

Table 7: Components on the SRX4120 Front Panel *(Continued)*

Callout	Item	Description
13	Claim code	You can use the QR code to claim and onboard your device to Juniper Security Director.

SRX4120 Rear Panel

Figure 2: SRX4120 Rear Panel (AC Variant)

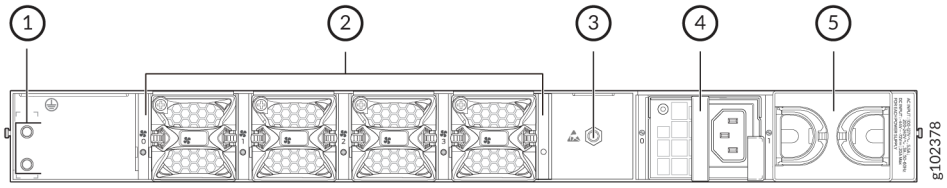


Table 8: Components on the SRX4120 Rear Panel (AC Variant)

Callout	Item	Description
1	Grounding point	Used to connect the device to earth ground.
2	Fan modules	Four airflow out (AFO) fan modules (3+1 redundancy). Three fan modules are required for proper airflow across the chassis internal components. The fourth fan module provides redundancy.
3	ESD	ESD socket.

Table 8: Components on the SRX4120 Rear Panel (AC Variant) ***(Continued)***

Callout	Item	Description
4	PSU (Power Supply Unit)	A 450 W AC PSU is provided with the SRX4120.
5	Empty PSU slot	A blank slot to install an additional PSU (1+1 redundancy).

NOTE: We ship the SRX4120 with only one power supply. You can order the second power supply separately, if required.

You must not mix AC and DC power supplies in the same chassis.

Figure 3: SRX4120 Rear Panel (DC Variant)

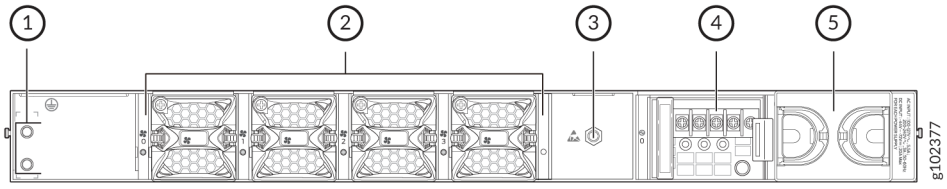


Table 9: Components on the SRX4120 Rear Panel (DC Variant)

Callout	Item	Description
1	Grounding point	Used to connect the device to earth ground.
2	Fan modules	Four airflow out (AFO) fan modules (3+1 redundancy). Three fan modules are required for proper airflow across the chassis internal components. The fourth fan module provides redundancy.

Table 9: Components on the SRX4120 Rear Panel (DC Variant) ***(Continued)***

Callout	Item	Description
3	ESD	ESD socket
4	PSU (Power Supply Unit)	A 650W DC PSU is provided with the SRX4120.
5	Empty PSU slot	A blank slot to install an additional PSU (1+1 redundancy).

NOTE: We ship the SRX4120 with only one power supply. You can order the second power supply separately, if required.

You must not mix AC and DC power supplies in the same chassis.

SRX4120 Chassis LEDs

SUMMARY

This topic describes the status LEDs for the chassis and ports on the SRX4120.

IN THIS SECTION

- Chassis Status LEDs | **23**
- Management Port Status LEDs | **25**
- RJ-45, SFP+, and SFP28 Network Port Status LEDs | **26**
- QSFP28 Network Port Status LEDs | **28**
- HA Port Status LEDs | **29**

The LEDs on the SRX4120 indicate the status of the device and its components. You can also use the LEDs for troubleshooting.

Chassis Status LEDs

You can find the chassis status LEDs on the front panel of the SRX4120.

Figure 4: Chassis Status LEDs

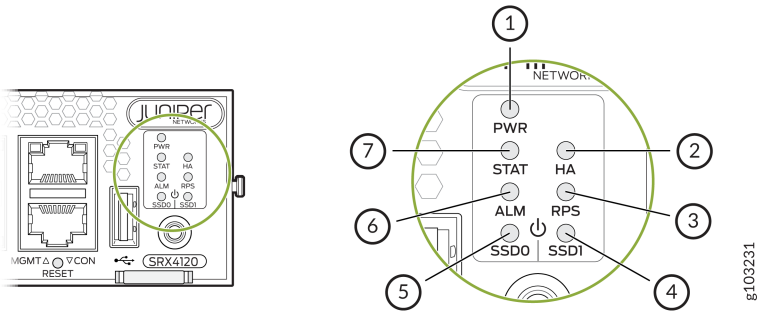


Table 10: Chassis Status LEDs

Callout	Label	State	Description
1	PWR	Solid green	The device is powered on.
		Blinking green	The device is in the bootup phase before OS initialization.
		Solid red	The power supply has failed and must be replaced.
		Off	The device is powered off.
2	HA	Solid green	All HA links are available.
		Solid amber	Some HA links are unavailable.

Table 10: Chassis Status LEDs *(Continued)*

Callout	Label	State	Description
		Solid red	The device is inoperable due to a monitor failure.
		Off	HA is disabled.
3	RPS	Solid green	The redundant power supply (RPS) is operating normally.
		Solid red	The RPS is not operating normallly.
		Off	The RPS is not present on the device.
4 and 5	SSD0 and SSD1	Blinking green	The device is transferring data to or from the SSD storage device.
		Solid red	Indicates an SSD storage device failure.
		Off	SSD storage device is not present on the device.
6	ALM	Solid red	Critical alarm
		Solid amber	Non-critical alarm
		Off	No alarms
7	STAT	Solid green	The device is operating normally.

Table 10: Chassis Status LEDs *(Continued)*

Callout	Label	State	Description
		Solid amber	A hardware component has failed.
		Off	The device is not receiving power.

Management Port Status LEDs

Figure 5: Management Port Status LEDs

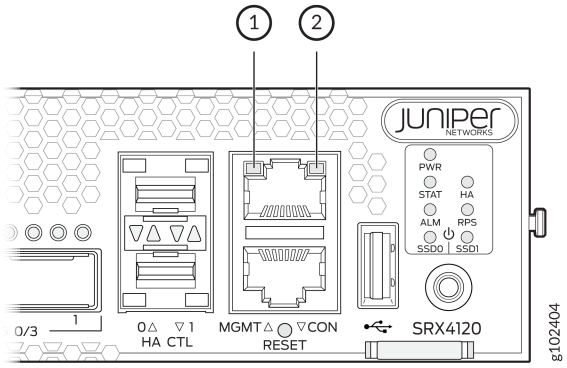


Table 11: Management Port Status LEDs

Callout	Label	State	Description
1	Link (LED on the left)	Solid green	A link is established.
		Off	No link established.
2	Activity (LED on the right)	Blinking green	There is activity on the link.

Table 11: Management Port Status LEDs *(Continued)*

Callout	Label	State	Description
		Off	There is no link activity.

RJ-45, SFP+, and SFP28 Network Port Status LEDs

Figure 6: RJ-45 Network Port Status LEDs

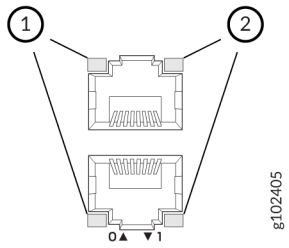


Figure 7: SFP+ and SFP28 Network Port Status LEDs

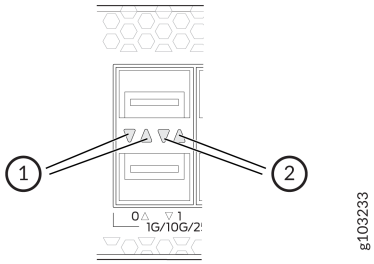


Table 12: RJ-45, SFP+, and SFP28 Network Port Status LEDs

Callout 1	Callout 2	Description (for RJ-45, SFP+, and SFP28 ports)
Status LED (Left LED)	Link and Activity LED (Right LED)	
Off	Off	Default (power on with or without Transceiver)
Solid green	Solid green	25-Gbps link is up but there is no traffic on the port.
	Blinking green	25-Gbps link is up, and there is traffic on the port.
Blinking green	Solid green	10-Gbps link is up but there is no traffic on the port.
	Blinking green	10-Gbps link is up, and there is traffic on the port.
Off	Solid green	1-Gbps link is up but there is no traffic on the port.
	Blinking green	1-Gbps link is up, and there is traffic on the port.
Off	Off	This indicates one of the following: • The link is down or a fault has occurred. • The port has been disabled by the administrator.

QSFP28 Network Port Status LEDs

Figure 8: QSFP28 Network Port Status LEDs

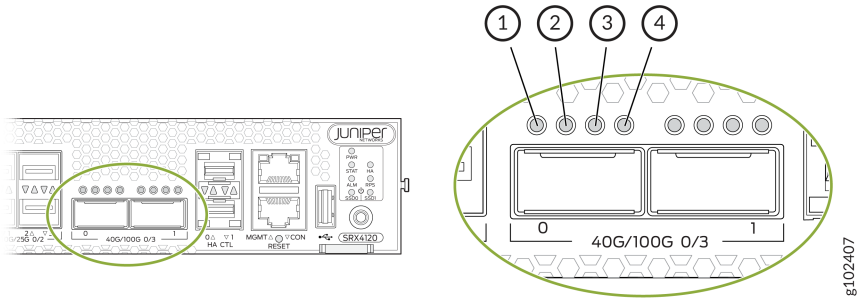


Table 13: QSFP28 Network Port Status LEDs

LED	State	Description
1 (non-channelized)	Solid green	100-Gbps or 40-Gbps link is up but there is no traffic on the port.
	Blinking green	100-Gbps or 40-Gbps link is up, and there is traffic on the port.
1-4 (channelized)	Solid green	4x25 Gbps or 4x10 Gbps link is up but there is no traffic on the port.
	Blinking green	4x25 Gbps or 4x10 Gbps link is up, and there is traffic on the port.
1-4	Off	This indicates one of the following: • The link is down or a fault has occurred. • The port has been disabled by the administrator.

HA Port Status LEDs

Figure 9: HA Port Status LEDs

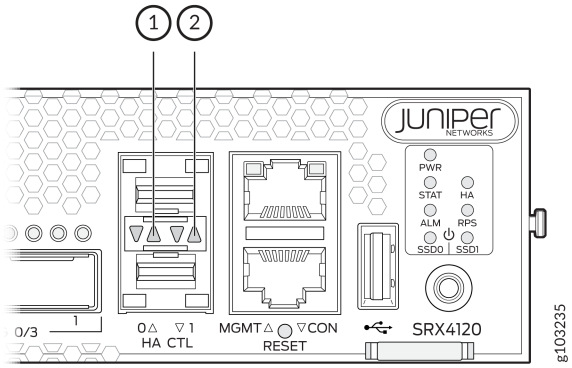


Table 14: HA Port Status LEDs

Callout	Label	State	Description
1	Link (LED on the left)	Blinking green	A link is established.
		Off	No link established.
2	Activity (LED on the right)	Blinking green	There is activity on the link.
		Off	There is no link activity.

CHAPTER 4

Ports and Channelization

IN THIS CHAPTER

- SRX4120 Ports and Interfaces | 31

SRX4120 Ports and Interfaces

SUMMARY

This topic describes the ports on the SRX4120 and their corresponding Junos OS interfaces.

IN THIS SECTION

- Interface Naming on the SRX4120 | **31**
- Network Ports on the SRX4120 | **32**
- Interfaces on the SRX4120 | **33**

Interface Naming on the SRX4120

The ports on the SRX4120 have interfaces associated with them in Junos OS. These interfaces follow the below naming convention:

type-fpc/pic/port:channel

- type—This refers to the media type of the interface. For some interfaces, the media type depends on the transceiver plugged into the physical port.
  - ge—1 Gigabit Ethernet (GbE) interface
  - xe—10 GbE interface
  - mge—1/2.5/5/10 GbE Multirate Gigabit Ethernet interface
  - et—25/40/100 GbE interface
- fpc—Flexible PIC Concentrator. On the SRX4120, FPC number is 0.
- pic—Physical Interface Card. On the SRX4120:
  - PIC 0 consists of eight multirate RJ-45 ports.
  - PIC 1 consists of eight SFP+ ports.
  - PIC 2 consists of four SFP28 ports.
  - PIC 3 consists of two QSFP28 ports.
- port—You can check the port number from the front panel of the SRX4120.

- channel—This is only applicable to channelized interfaces. For all other interfaces, this option is absent.

Network Ports on the SRX4120

Table 15: SRX4120 Network Ports

Form Factor	Port Component	Port Count	Speeds Supported	FPC	PIC	Junos Interfaces
RJ-45	Multirate Gigabit Ethernet	8	1/2.5/5/10 G	0	0	mge-0/0/0 to mge-0/0/7
SFP+	SFP/SFP+	8	1/10 G	0	1	1G: ge-0/1/0 to ge-0/1/7 10G: xe-0/1/0 to xe-0/1/7
SFP28	SFP/SFP+/ SFP28	4	1/10/25 G	0	2	1G: ge-0/2/0 to ge-0/2/3 10G: xe-0/2/0 to xe-0/2/3 25G: et-0/2/0 to et-0/2/3
QSFP28	QSFP/ QSFP28	2	4x10/4x25/2 x50/40/100 G	0	3	et-0/3/0 to et-0/3/1

See the Hardware Compatibility Tool for a list of all supported optics for the SRX4120.

NOTE: The BASE-T PIC 0 ports support autonegotiation. The SFP+ PIC 1 ports support 1 GbE SFP-T but do not support autonegotiation. The SFP28 PIC 2 ports and QSFP28 PIC 3 ports do not support SFP-T or autonegotiation.

Interfaces on the SRX4120

Each network port on the SRX4120 has a unique interface on Junos OS associated with it.

The interfaces for all PIC 0 ports are already created. The interfaces for PIC 1, PIC 2, and PIC 3 ports are created when you insert a transceiver into the respective port. PIC 1 and PIC 3 interfaces automatically determine the interface speed from the type of transceiver plugged into the port. PIC 2 interfaces are automatically created when using a 25G transceiver. When using a 10G/1G transceiver, you need to manually configure the interface speed using the CLI.

The example below shows the actual hardware or transceivers plugged into a device and how Junos OS creates the corresponding interfaces. The output has been truncated to only show the relevant sections.

```
host@device> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                FP4023AN0038      SRX4120
Midplane         REV 06   650-191121   FP4023AN0038      SRX4120
Routing Engine 0          BUILTIN      BUILTIN           SRX Routing Engine
CB 0                      BUILTIN      BUILTIN           Control Board
FPC 0                     BUILTIN      BUILTIN           SRX4120 FPC
  PIC 0                   BUILTIN      BUILTIN           8x10G-T
  PIC 1                   BUILTIN      BUILTIN           8xSFP+
    Xcvr 0       REV 01   740-021308   A3DABVC           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   A3DACK6           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   A3DACU9           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4xSFP28
    Xcvr 0       REV 01   740-021308   N6AE85M           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   CG15KN0UW         SFP+-10G-SR
    Xcvr 2       REV 01   740-031851   PKS4PXX           SFP-SX
    Xcvr 3       REV 01   740-011782   P9M0V8F           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           2xQSFP28
Power Supply 0   REV 01   740-168323   1EDPD2000TZ       PS 450W 90-264V AC in
Fan Tray 0                                              Fan Tray 0, Front to Back Airflow - AFO
Fan Tray 1                                              Fan Tray 1, Front to Back Airflow - AFO
```

```
Fan Tray 2                                              Fan Tray 2, Front to Back Airflow - AFO
Fan Tray 3                                              Fan Tray 3, Front to Back Airflow - AFO
```

```
host@device> show interfaces terse
Interface               Admin Link Proto    Local                 Remote
mge-0/0/0               up    up
mge-0/0/1               up    down
mge-0/0/2               up    down
mge-0/0/3               up    down
mge-0/0/4               up    down
mge-0/0/5               up    down
mge-0/0/6               up    down
mge-0/0/7               up    down
xe-0/1/0                up    up
xe-0/1/1                up    up
xe-0/1/2                up    up
```

In this example:

- The interfaces for PIC 0 ports are automatically created (mge-0/0/0 to mge-0/0/7).
- PIC 1 has three 10G transceivers plugged into ports 0 through 2. Junos OS creates corresponding 10G interfaces (xe-0/1-0 to xe-0/1/2).
- PIC 2 has two 10G and two 1G transceivers plugged into it. Without explicit configuration, Junos OS does not identify these interface speeds and so does not create the PIC 2 interfaces.
- There are no transceivers plugged into PIC 3.

5

CHAPTER

Power System

IN THIS CHAPTER

- SRX4120 Power System | **36**
- Replace Power Supply Units on the SRX4120 | **45**

SRX4120 Power System

SUMMARY

The SRX4120 power system includes AC and DC power supply units and related power cords and cables. The power supply units operate within certain ranges and are equipped with status indicator LEDs.

IN THIS SECTION

- JPSU-450W-AC | 37
- JPSU-650W-DC-AFO | 42

The SRX4120 is powered by two AC or two DC power supply units (PSUs). The power system supports 1+1 redundancy.

NOTE: We ship the SRX4120 with only one PSU. You can order the second PSU separately if required.

The PSUs in the SRX4120 are hot-insertable and hot-removable field-replaceable units (FRUs). You can install the PSUs in the power supply unit slots on the rear of the device.

The system supports the following PSUs:

AC	DC
"JPSU-450W-AC" on page 37	"JPSU-650W-DC-AFO" on page 42

CAUTION: Do not mix AC and DC PSUs in the same chassis.

The maximum and typical power consumption of the system depends upon the type of PSU.

Table 16: System Power Consumption

PSU Type	Maximum System Power Consumption	Typical System Power Consumption
JPSU-450W-AC	229 W	186 W

Table 16: System Power Consumption *(Continued)*

PSU Type	Maximum System Power Consumption	Typical System Power Consumption
JPSU-650W-DC-AFO	238 W	194 W

Table 17: Average System Heat Dissipation

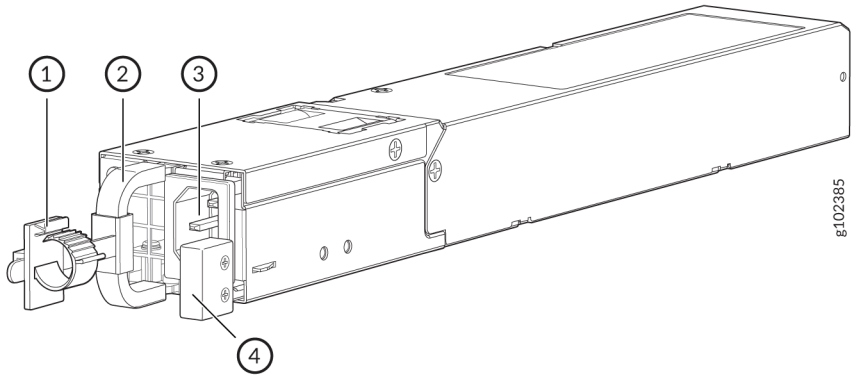
PSU	Average Heat Dissipation
1 DC PSU (40 V)	653.4 BTU/h
2 DC PSUs (40 V)	737 BTU/h
1 AC PSU (110 V)	682 BTU/h
1 AC PSU (230 V)	662 BTU/h
2 AC PSUs (110 V)	703 BTU/h
2 AC PSUs (230 V)	682 BTU/h

JPSU-450W-AC

IN THIS SECTION

- JPSU-450W-AC | **38**
- JPSU-450W-AC Specifications | **38**
- JPSU-450W-AC LEDs | **39**
- Supported AC Power Cords on the JPSU-450W-AC | **40**

JPSU-450W-AC



Callout	Name
1	Power cord retainer
2	PSU handle
3	AC power inlet
4	PSU latch

JPSU-450W-AC Specifications

Table 18: Physical Specifications

Specification	Value
Height	1.61 in. (4.1 cm)
Width	2.17 in. (5.5 cm)
Depth	14.17 in. (36 cm) (including handle)
Weight	2.14 lb (0.97 kg)

Table 18: Physical Specifications *(Continued)*

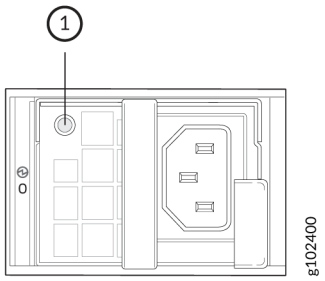
Specification	Value
Airflow	AFO

Table 19: Electrical Specifications

Specification	Value
Maximum power output	450 W
Input voltage	100–127 VAC / 200–240 VAC
Input current rating	5.5 A at 100-127 VAC 3 A at 200-240 VAC
Input line frequency	50–60 Hz
Circuit breaker rating	10 A (250 VAC)

JPSU-450W-AC LEDs

The PSU has a single bi-color LED that indicates the status.



Callout	Name	State	Description
1	Status	Off	No power input.

(Continued)

Callout	Name	State	Description
		Solid green	PSU is operating normally.
		Blinking green	The device is in standby mode.
		Solid amber	The system has detected an error in the PSU. Replace the PSU immediately. To maintain proper airflow through the chassis, leave the PSU installed in the chassis until you are ready to replace it.
		Blinking amber	PSU is operating under overload.

Supported AC Power Cords on the JPSU-450W-AC

WARNING: The AC power cord for the device is intended for use with the device only and not for any other use.

NOTE: In North America, AC power cords must not exceed a length of 4.5 m (approximately 14.75 ft). This length complies with National Electrical code (NEC) Section 400-8 (NFPA 75, 5-2.2) and 210-52, and Canadian Electrical Code (CEC) Section 4-010(3).

Table 20: Supported AC Power Cords

Locale	Cord Set Rating	Plug Standard
Australia	250 VAC, 10 A, 50 Hz	AS/NZ 3112-1993
China	250 VAC, 10 A, 50 Hz	GB2099.1 1996 and GB 1002 1996 (CH1-10P)
Europe (except Italy and United Kingdom)	250 VAC, 10 A, 50 Hz	CEE (7) VII
Italy	250 VAC, 10 A, 50 Hz	CEI 23-16/VII
Japan	125 VAC, 12 A, 50 or 60 Hz	JIS 8303
North America	125 VAC, 10 A, 60 Hz	NEMA 5-15
United Kingdom	250 VAC, 10 A, 50 Hz	BS 1363A

Figure 10: AC Plug Types



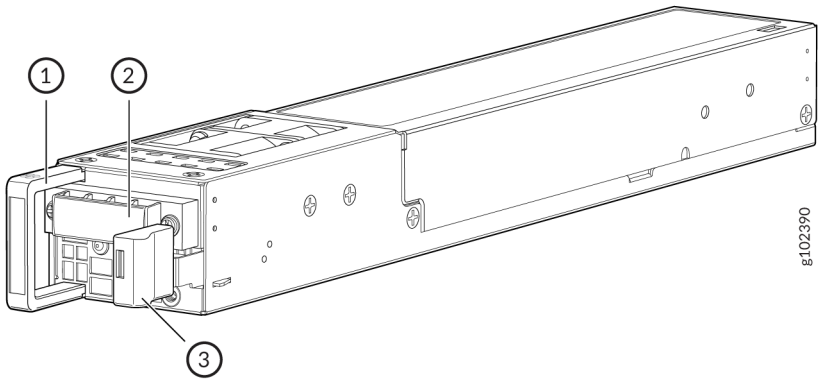
NOTE: Power cords and cables must not block access to device components or drape where people might trip on the cables.

JPSU-650W-DC-AFO

IN THIS SECTION

- JPSU-650W-DC-AFO | 42
- JPSU-650W-DC-AFO Specifications | 43
- JPSU-650W-DC-AFO LEDs | 44

JPSU-650W-DC-AFO



Callout	Name
1	PSU handle
2	DC power terminals
3	PSU latch

JPSU-650W-DC-AFO Specifications

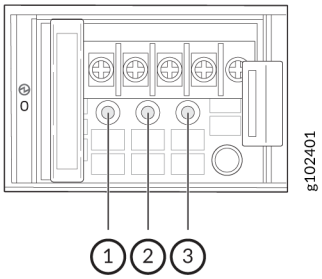
Table 21: Physical Specifications

Specification	Value
Height	1.61 in. (4.1 cm)
Width	2.17 in. (5.5 cm)
Depth	14.17 in. (36 cm)
Weight	2.16 lb (0.98 kg)
Airflow	AFO

Table 22: Electrical Specifications

Specification	Value
Maximum power output	650 W
Input voltage	-44 VDC through -72 VDC
Input current rating	20 A maximum
Circuit breaker rating	10 A (80 VDC)

JPSU-650W-DC-AFO LEDs



Callout	Name	State	Description
1	Input	Off	No power input.
		Solid green	The PSU is operating normally.
2	Output	Off	No power output.
		Solid green	The PSU is operating normally.
3	Fault	Solid amber	The system has detected an error in the PSU. Replace the PSU immediately. To maintain proper airflow through the chassis, leave the PSU installed in the chassis until you are ready to replace it.

Replace Power Supply Units on the SRX4120

SUMMARY

Maintaining the SRX4120 includes removing and installing the power supply units.

IN THIS SECTION

- Remove Power Supply Units from the SRX4120 | **45**
- Install Power Supply Units in the SRX4120 | **47**

Power supply units (PSUs) in the SRX4120 are hot-removable and hot-insertable field-replaceable units (FRUs). You can remove and replace the PSUs without powering off the SRX4120 or disrupting the device functions.

Ensure that you have the following parts and tools:

- An electrostatic discharge (ESD) grounding strap
- An antistatic bag or an antistatic mat
- A replacement PSU
- A blank cover panel (in case you're not replacing the PSU)
- A number 2 Philips screwdriver

Ensure that you understand how to prevent electrostatic discharge (ESD) damage.

Remove Power Supply Units from the SRX4120

IN THIS SECTION

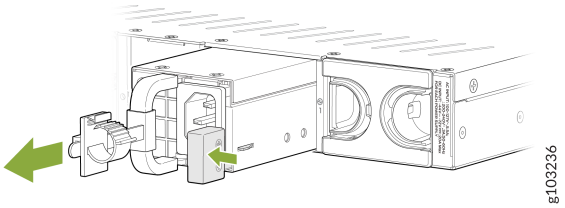
- Remove the JPSU-450W-AC from the SRX4120 | **46**
- Remove the JPSU-650W-DC-AFO from the SRX4120 | **46**

Remove the JPSU-450W-AC from the SRX4120

CAUTION: Avoid leaving the PSU slot empty for more than 30 minutes when the device is operational. For proper airflow, you must place the PSU in the chassis. Always cover the empty PSU slot with a blank panel.

To remove the JPSU-450W-AC from the SRX4120:

1. If the AC power source outlet has a power switch, set it to the off (0) position.
2. Pull out the power cord connected to the power source outlet.
3. Place the antistatic bag or the antistatic mat on a flat, stable surface.
4. Wrap and fasten one end of the electrostatic discharge (ESD) grounding strap to your bare wrist and connect the other end of the strap to the ESD point on the chassis.
5. Unplug the power cord from the device inlet on the PSU.
6. Press the latch, which is on the right side of the power outlet, to the left.
7. Pull the PSU straight out of the chassis.



8. Place the PSU in the antistatic bag or on the antistatic mat.
9. If you're not replacing the PSU, install the cover panel over the PSU slot.

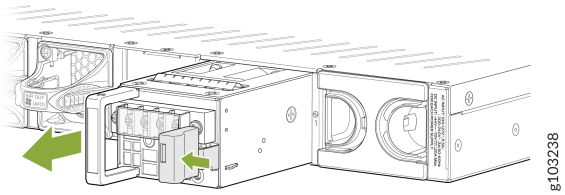
Remove the JPSU-650W-DC-AFO from the SRX4120

CAUTION: Avoid leaving the PSU slot empty for more than 30 minutes when the device is operational. For proper airflow, you must place the PSU in the chassis. Always cover the empty PSU slot with a blank panel.

To remove the JPSU-650W-DC-AFO from the SRX4120:

1. Wrap and fasten one end of the electrostatic discharge (ESD) grounding strap to your bare wrist and connect the other end of the strap to the ESD point on the chassis.
2. Place the antistatic bag or the antistatic mat on a flat, stable surface.

3. Switch off the external circuit breakers for all cables connected to the PSU. Ensure that the voltage across the power source cable leads is 0 V. You must ensure that the cables do not become active during the removal process.
4. Remove the clear plastic cover protecting the terminal studs from the faceplate.
5. Remove the screws and washers from the terminals using a number 2 Phillips screwdriver.
6. Remove the cable terminals from the terminal studs. Carefully move the power cables out of the way.
7. Press the latch, which is on the right side of the power outlet, to the left.
8. Pull the PSU straight out of the chassis.



9. Place the PSU in the antistatic bag or on the antistatic mat.
10. If you are not replacing the PSU, install the cover panel over the PSU slot.

Install Power Supply Units in the SRX4120

IN THIS SECTION

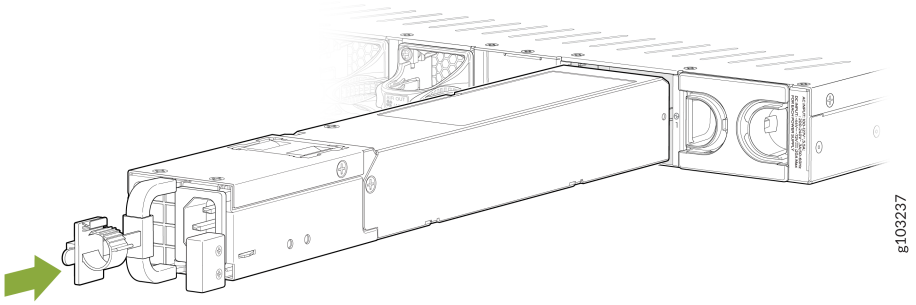
- Install the JPSU-450W-AC in the SRX4120 | **47**
- Install the JPSU-650W-DC-AFO in the SRX4120 | **48**

Install the JPSU-450W-AC in the SRX4120

To install the JPSU-450W-AC in the SRX4120:

1. Wrap and fasten one end of the electrostatic discharge (ESD) grounding strap to your bare wrist and connect the other end of the strap to the ESD point on the chassis.
2. If the PSU slot has a cover panel on it, remove the cover panel. Save the cover panel for subsequent use.

3. Taking care not to touch the pins, leads, or solder connections on the PSU, remove the PSU from the bag.
4. Using both hands, place the PSU in the PSU slot. Slide the PSU straight into the chassis until the PSU is fully seated in the chassis slot. Ensure that the PSU faceplate is flush with the adjacent PSU faceplate.

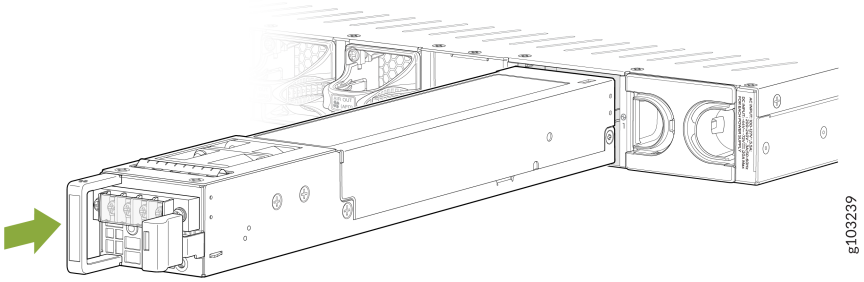


5. Connect the power cord.

Install the JPSU-650W-DC-AFO in the SRX4120

To install the JPSU-650W-DC-AFO in the SRX4120:

1. Wrap and fasten one end of the electrostatic discharge (ESD) grounding strap to your bare wrist and connect the other end of the strap to the ESD point on the chassis.
2. Switch off the circuit breaker on the panel board that services the DC circuit. Tape the handle of the circuit breaker in the OFF position. Ensure that the voltage across the power source cable leads is 0 V. You must ensure that the cables do not become active during the removal process.
3. If the PSU slot has a cover panel on it, remove the cover panel. Save the cover panel for subsequent use.
4. Taking care not to touch the terminals, leads, or solder connections on the PSU, remove the PSU from the bag.
5. Using both hands, place the PSU in the PSU slot. Slide the PSU straight into the chassis until the PSU is fully seated in the chassis slot. Ensure that the PSU faceplate is flush with the adjacent PSU faceplate.



6. Connect the power cables.

CHAPTER 6

Cooling System

IN THIS CHAPTER

- SRX4120 Cooling System | 51
- Replace Fans on the SRX4120 | 55

SRX4120 Cooling System

SUMMARY

The SRX4120 cooling system includes fan modules and status indicator LEDs.

IN THIS SECTION

- SRX-FAN-1RU-AFO | 52

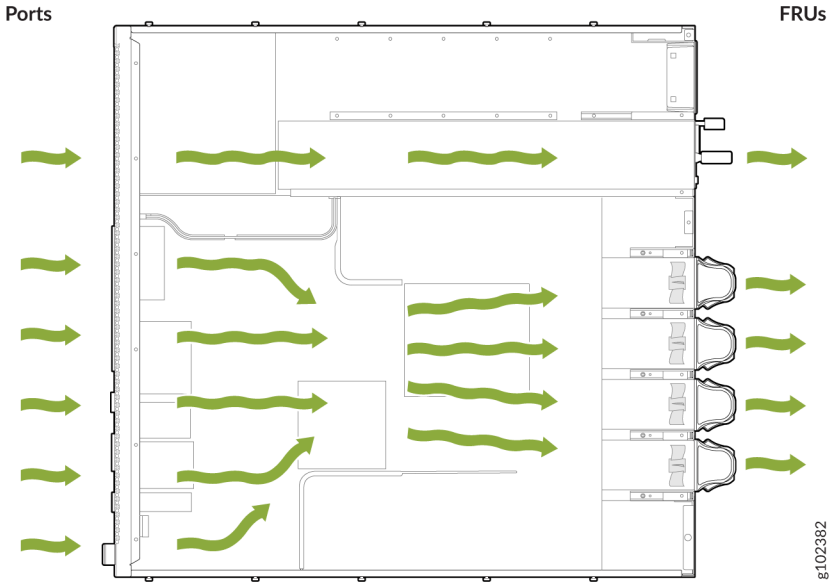
You can install four fan modules (SRX-FAN-1RU-AFO) in the SRX4120 for 3+1 redundancy.

The fan modules in the SRX4120 are hot-insertable and hot-removable field-replaceable units (FRUs). You can install the fan modules in the fan module slots on the rear of the device.

Airflow

The SRX4120 has a front-to-back (AIR OUT) cooling system. Air is pulled through the front of the chassis toward the fans, which exhaust the air out of the device.

Figure 11: Airflow Through the Chassis



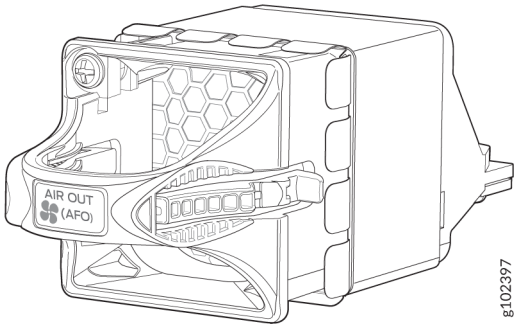
Power Supply Cooling System

The power supply units (PSUs) are self-cooling and are located at the rear of the SRX4120. There are multiple airflow ducts on the front of the chassis that provide fresh air to the PSUs to maintain the thermal requirements.

SRX-FAN-1RU-AFO

IN THIS SECTION

- SRX-FAN-1RU-AFO Specifications | **53**
- SRX-FAN-1RU-AFO LEDs | **54**



SRX-FAN-1RU-AFO Specifications

Table 23: Physical Specifications

Specification	Value
Height	1.61 in. (4.1 cm)
Width	1.61 in. (4.1 cm)
Depth	4.41 in. (11.2 cm)
Weight	0.16 lb (0.074 kg)
Airflow	AFO

Table 24: Power Specifications

Specification	Value
Maximum power requirement	17.28 W
Typical power requirement	14.4 W

SRX-FAN-1RU-AFO LEDs

Figure 12: SRX-FAN-1RU-AFO LEDs

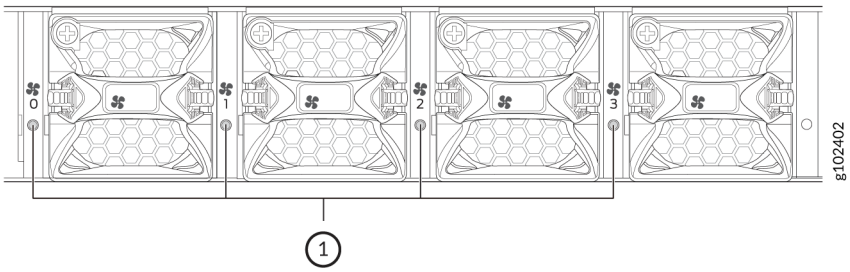


Table 25: SRX-FAN-1RU-AFO LEDs

Callout	State	Description
1	Solid green	The fan module is operating normally. The system has verified that the module is engaged, that the airflow is in the correct direction, and that the fan is operating correctly.
	Solid red	The system has detected an error in the fan module. Replace the module immediately. Either the fan has failed, or it is seated incorrectly. To maintain proper airflow through the chassis, leave the fan module installed in the chassis until you are ready to replace it.

Replace Fans on the SRX4120

SUMMARY

Maintaining the SRX4120 includes removing and installing the fans.

IN THIS SECTION

- Remove Fans from the SRX4120 | **55**
- Install Fans in the SRX4120 | **56**

Fan modules in the SRX4120 are hot-removable and hot-insertable field-replaceable units (FRUs). You can remove and replace the fan modules without powering off the SRX4120 or disrupting the device functions.

Ensure that you have the following parts and tools:

- An electrostatic discharge (ESD) grounding strap
- An antistatic bag or an antistatic mat
- A replacement fan module
- A blank cover panel (in case you're not replacing the fan module)
- A screwdriver

Ensure that you understand how to prevent electrostatic discharge (ESD) damage.

Remove Fans from the SRX4120

IN THIS SECTION

- Remove the SRX-FAN-1RU-AFO from the SRX4120 | **56**

Remove the SRX-FAN-1RU-AFO from the SRX4120

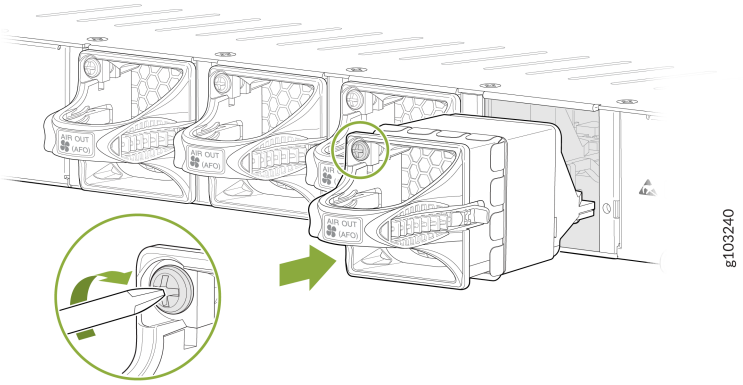
CAUTION: Do not remove a fan unless you have a replacement fan available.

To remove the SRX-FAN-1RU-AFO from the SRX4120:

1. Wrap and fasten one end of the ESD grounding strap around your bare wrist, and connect the other end of the strap to the ESD point on the chassis.
2. Place the antistatic bag or the antistatic mat on a flat, stable surface.
3. Loosen the captive screws on the front faceplate of the fan module by using your fingers. If you can't loosen the captive screws by using your fingers, use the screwdriver.

WARNING: To prevent injury, do not touch the fan with your hands or any tools as you slide the fan module out of the chassis—the fan might still be running.

4. Grasp the handle on the fan module and pull it firmly to slide the fan module out of the chassis.



5. Place the fan module in the antistatic bag or on the antistatic mat.

Install Fans in the SRX4120

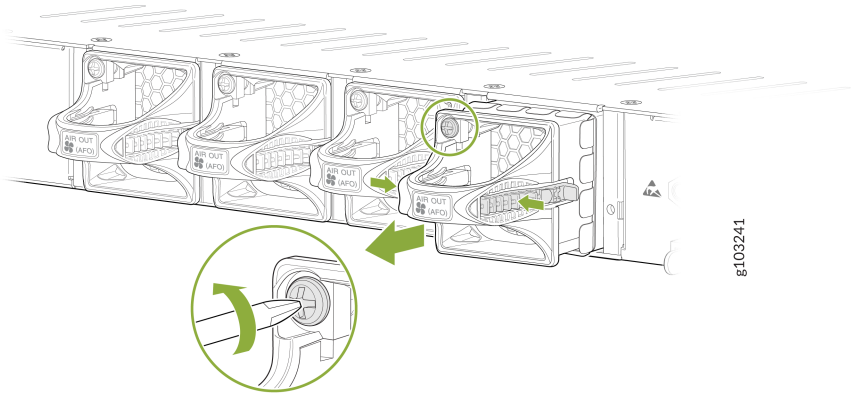
IN THIS SECTION

- Install the SRX-FAN-1RU-AFO in the SRX4120 | 57

Install the SRX-FAN-1RU-AFO in the SRX4120

To install the SRX-FAN-1RU-AFO in the SRX4120:

1. Wrap and fasten one end of the ESD grounding strap around your bare wrist, and connect the other end of the strap to the ESD point on the chassis.
2. Remove the fan module from its bag.
3. Hold the handle of the fan module with one hand and support the weight of the module with the other hand. Place the fan module in the fan module slot on the rear panel of the switch and slide the module in until it is fully seated.



4. Tighten the captive screws on the faceplate of the fan module by using your fingers. If you can't tighten the captive screws by using your fingers, use the screwdriver.

CHAPTER 7

Installation and Setup

IN THIS CHAPTER

- SRX4120 Installation Overview | **59**
- Unpack the SRX4120 | **60**
- Register Products—Mandatory to Validate SLAs | **62**
- Install the SRX4120 | **62**
- Connect the SRX4120 to the Network | **75**
- Connect the SRX4120 to External Devices | **79**
- Connect the SRX4120 to Power | **81**
- Configure Junos OS on the SRX4120 | **90**

SRX4120 Installation Overview

SUMMARY

This topic lists the steps that you need to follow to get your SRX4120 up and running.



To install and configure your SRX4120:

1. Unpack your device as described in "Unpack the SRX4120" on page 60.
2. Install the device as described in "Install the SRX4120 " on page 62.
3. Connect cables to network devices as described in "Connect the SRX4120 to the Network" on page 75.
4. Connect cables to external devices as described in "Connect the SRX4120 to External Devices" on page 79.
5. Connect the grounding cable and power supplies as described in "Connect the SRX4120 to Power" on page 81. Power on the device.
6. Perform initial configuration by following the instructions in "Configure Junos OS on the SRX4120" on page 90.

RELATED DOCUMENTATION

- Rack and Cabinet Requirements
- Site Guidelines and Requirements

Unpack the SRX4120

SUMMARY

Unpack the SRX4120 by following the recommended procedure and check that you have received all the components.

IN THIS SECTION

- Unpack the SRX4120 | **60**
- Packing List for the SRX4120 | **61**

Unpack the SRX4120

We ship the SRX4120 in a cardboard carton, secured with foam packing material.

CAUTION: The SRX4120 has maximum protection inside the shipping carton. Do not unpack the device until you are ready to mount it.

To unpack the device and prepare for installation, you need the following tools:

- A Phillips (+) screwdriver, number 2
- A box cutter or packing knife to slice open the tape that seals the boxes

To unpack the device:

1. Move the shipping carton to a staging area as close to the installation site as possible, but where you have enough room to remove the device and its components.
2. Position the carton so that the arrows marked on the carton are pointing up.
3. Open the top flaps on the shipping carton.
4. Pull out the packing material holding the device in place.
5. Verify the parts received against the list in "Packing List for the SRX4120" on page 61.
6. Save the shipping carton and packing materials in case you need to move or ship the device later.

Packing List for the SRX4120

The shipment includes a packing list. Check the parts you receive in the shipping carton against the items on the packing list. We ship the parts as per the configuration that you order.

If any part on the packing list is missing, contact your customer service representative or contact Juniper customer care from within the U.S. or Canada by telephone at 1-888-314-5822. For international-dial or direct-dial options in countries without toll-free numbers, see https://www.juniper.net/support/requesting-support.html.

Table 26: Parts List for the SRX4120

Component	Part Number	Quantity
SRX4120 Chassis	SRX4120-CHAS	1
Power supply unit	AC: JPSU-450W-AC DC: JPSU-650W-DC-AFO	1
Fan modules	SRX-FAN-1RU-AFO	4
Rack mount kit	JNP-4P-TL-1RU-RMK	1
AC power cord that is appropriate for your geographic location		1 (only for AC models)
Documentation Roadmap/End User License Agreement (EULA)/ Warranty card		1

NOTE: We ship the SRX4120 with only one power supply unit (PSU). You can order the second power supply separately, if required.

Register Products—Mandatory to Validate SLAs

Juniper Networks auto registers newly purchased products based on the end customer information provided at the point of sale. Registering products and changes to products activates your hardware replacement service-level agreements (SLAs).

CAUTION: Update the installation base data if any installation base data is added or changed or if the installation base is moved. Juniper Networks is not responsible for customers not meeting the hardware replacement service-level agreement (SLA) for products that do not have registered serial numbers or accurate installation base data.

To know more about how to register your product and update your installation base, see Juniper Networks Product Registration and Install Base Management.

Install the SRX4120

SUMMARY

This topic guides you through the steps to install the SRX4120 on four-post racks.

IN THIS SECTION

- JNP-4P-TL-1RU-RMK Components | **64**
- Mount your Device by Using the JNP-4P-TL-1RU-RMK Rack Mount Kit on a Square Hole 4-Post Rack | **64**
- Mount your Device by Using the JNP-4P-TL-1RU-RMK Rack Mount Kit on a Threaded-Hole 4-Post Rack | **67**
- SRX-2PST-TLESS-RMK Components | **73**
- Mount your Device by Using the SRX-2PST-TLESS-RMK Rack Mount Kit on a 2-Post Rack | **73**

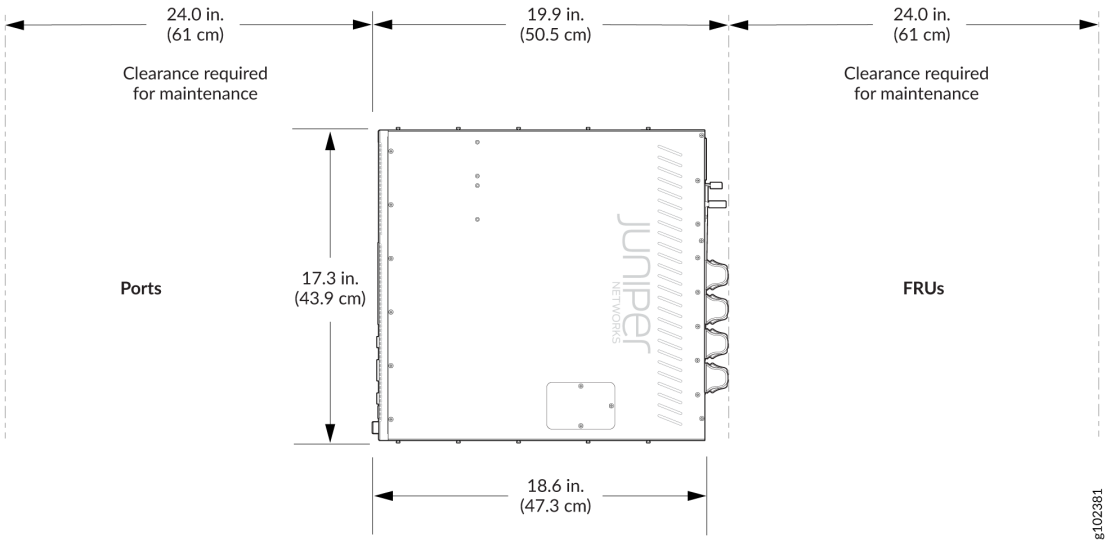
You can mount the SRX4120 on a four-post rack or cabinet. Use the rack mount kit shipped with the device.

Complete these prerequisites before you mount the device:

- Prepare the site for installation as described in Site Guidelines and Requirements.

- Ensure that the site has adequate clearance for both airflow and hardware maintenance.

Figure 13: Clearance Requirements for SRX4120



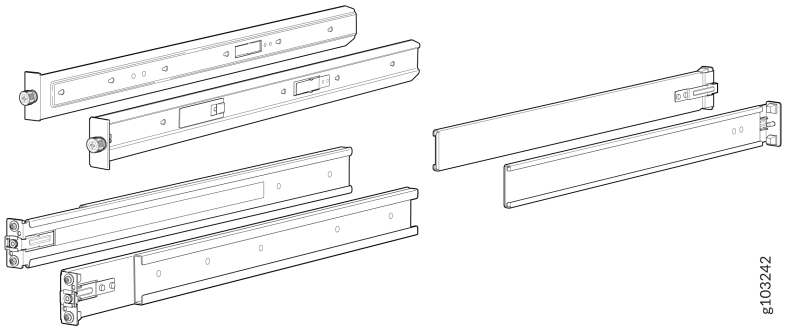
- Unpack the device as described in "Unpack the SRX4120" on page 60.

NOTE: Ensure that you support the rear of the chassis throughout the process of mounting the appliance on the rack.

CAUTION: A qualified technician must verify that the rack or cabinet is strong enough to support the device's weight before mounting the device. Have the technician also verify that the rack or cabinet has adequate support at the installation site.

If you are installing more than one device on a rack or in a cabinet, install the first device at the bottom of the rack.

JNP-4P-TL-1RU-RMK Components



Component	Quantity
Side mounting brackets	2
Front mounting rails	2
Rear mounting rails	2

Mount your Device by Using the JNP-4P-TL-1RU-RMK Rack Mount Kit on a Square Hole 4-Post Rack

Ensure that you have the following tools and parts available:

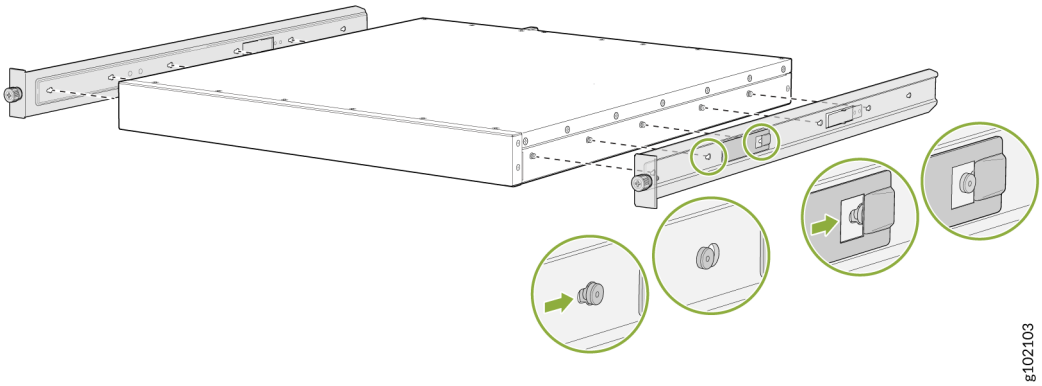
- An ESD grounding strap—not provided.
- A pair of side mounting brackets that attach to the chassis—provided with the rack mount kit.
- A pair of front and rear mounting rails that attach to the rack posts—provided with the rack mount kit.

To mount the device on a four-post rack:

1. Review the General Safety Guidelines and Warnings.
2. Wrap and fasten one end of the electrostatic discharge (ESD) cable grounding strap around your bare wrist, and connect the other end to a site ESD point.

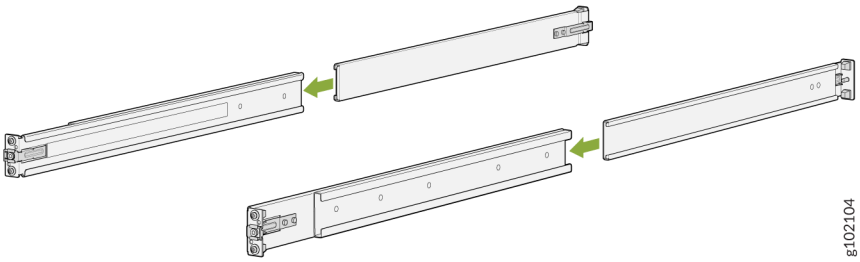
3. To attach the side mounting brackets to the chassis, align the keyholes on the mounting brackets over the shoulder screws on the chassis. Slide the mounting brackets toward the rear of the chassis so that the shoulder screws get locked in place.

Figure 14: Attach the Side Mounting Brackets



4. Assemble the mounting rails by sliding the rear mounting rails into the front rails.

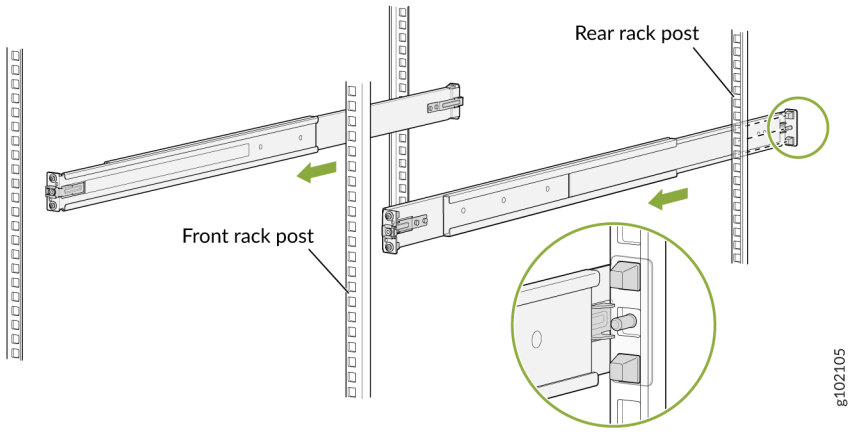
Figure 15: Assemble the Mounting Rails



5. Install the mounting rails on the rack:

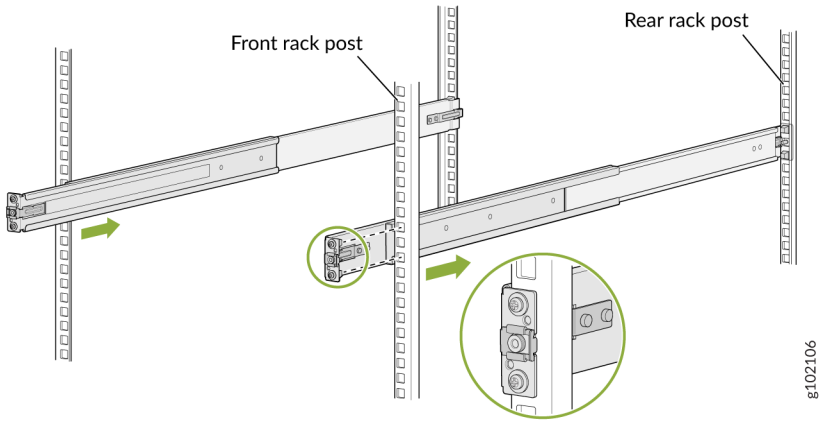
   a. Align the guide blocks of the rear mounting rails with the rear-post holes. Pull the rear mounting rails toward the front of the rack to lock the rails in place. You will hear a distinct click sound when the latch locks into the corresponding rack holes.

Figure 16: Install the Rear Mounting Rails



b. Align the guide blocks of the front mounting rails with the front-post holes. Push the front mounting rails toward the rear of the rack to lock the rails in place. You will hear a distinct click sound when the latch locks into the corresponding rack holes.

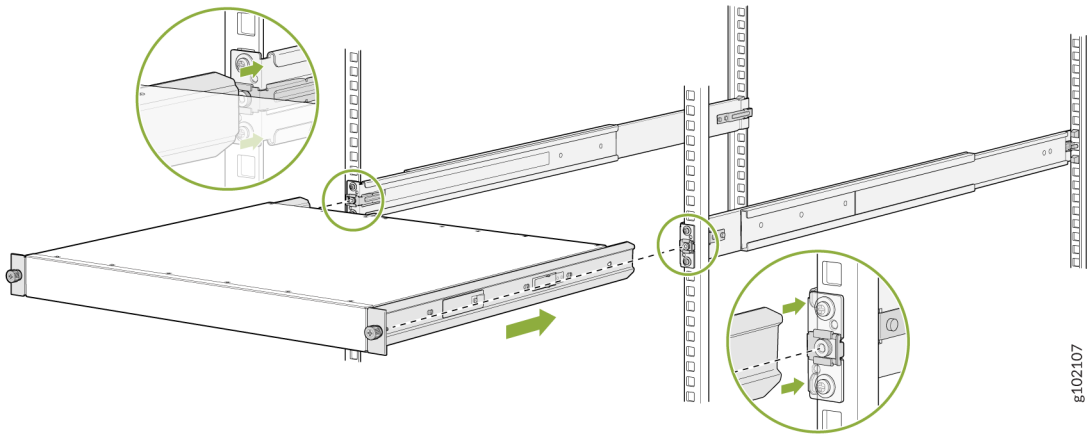
Figure 17: Install the Front Mounting Rails



c. Visually ensure that the front and rear latches are locked into place on the mounting rails. The mounting rails should be securely installed on the rack.

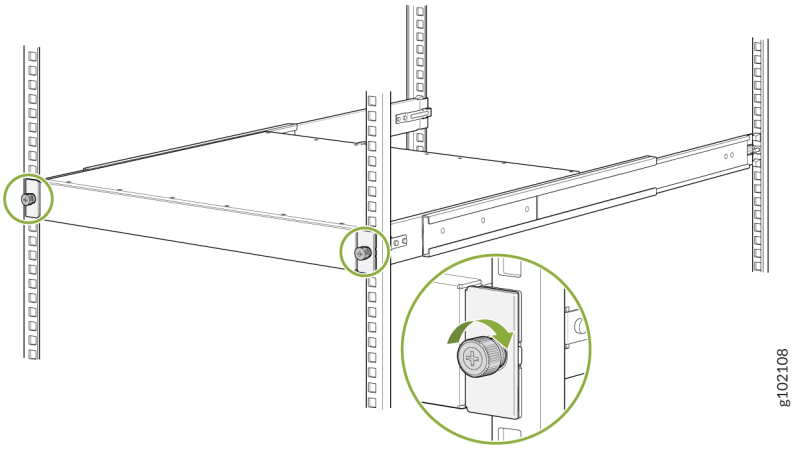
6. Lift the device and position it in the rack, aligning the side mounting brackets with the mounting rails. Slide the device into the channels of the rack mounting rails.

Figure 18: Slide the Device into the Rack



7. Tighten the two thumbscrews to secure the device.

Figure 19: Tighten the Thumbscrews



Mount your Device by Using the JNP-4P-TL-1RU-RMK Rack Mount Kit on a Threaded-Hole 4-Post Rack

Ensure that you have the following tools and parts available:

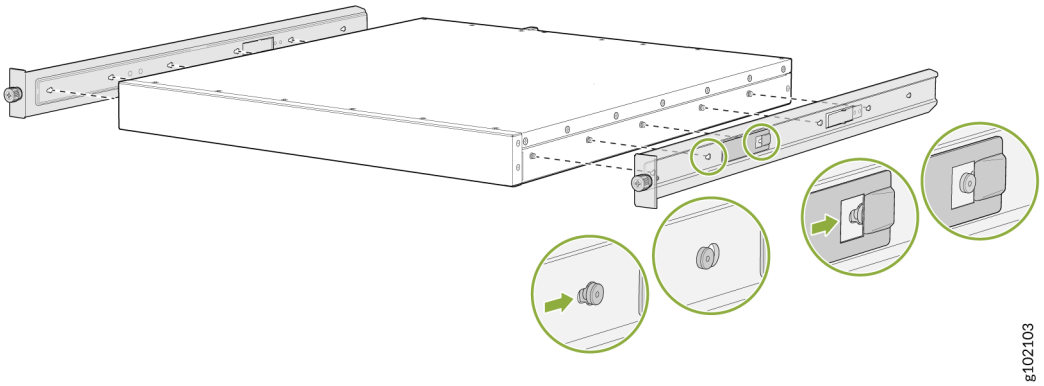
- An ESD grounding strap—not provided.
- A Phillips (+) screwdriver, number 2—not provided.

- Eight screws to attach the mounting rails to the rack posts—not provided.
- A pair of side mounting brackets that attach to the chassis—provided with the rack mount kit.
- A pair of mounting front and rear rails that attach to the rack posts—provided with the rack mount kit.

To mount the device on a four-post rack with threaded holes:

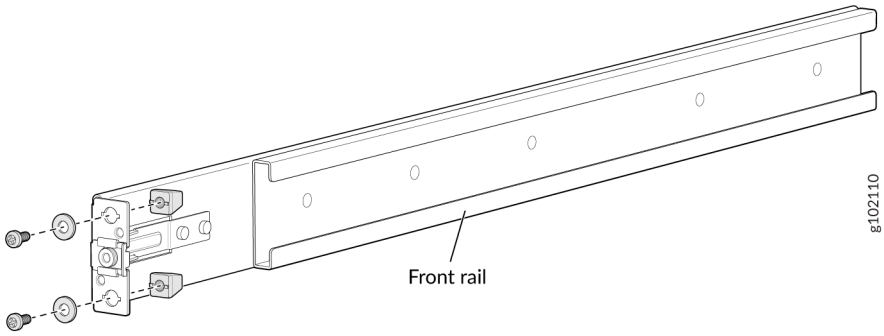
1. Review the General Safety Guidelines and Warnings.
2. Wrap and fasten one end of the electrostatic discharge (ESD) cable grounding strap around your bare wrist, and connect the other end to a site ESD point.
3. To attach the side mounting brackets to the chassis, align the keyholes on the mounting brackets over the shoulder screws on the chassis. Slide the mounting brackets toward the rear of the chassis so that the shoulder screws get locked in place.

Figure 20: Attach the Side Mounting Brackets



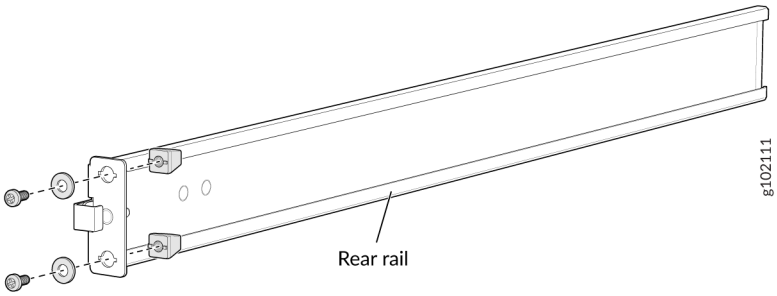
4. Assemble the mounting rails:
   a. Remove the guide blocks from the front mounting rails by loosening the screws and washers.

Figure 21: Removing the Guide Blocks from the Front Mounting Rail



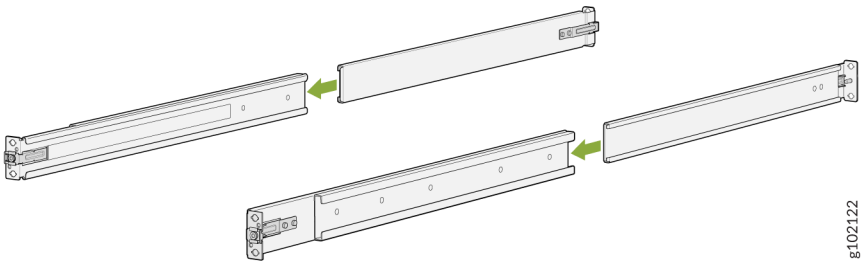
b. Remove the guide blocks from the rear mounting rail by loosening the screws and washers.

Figure 22: Removing the Guide Blocks from the Rear Mounting Rail



c. Slide the rear mounting rails into the front rails.

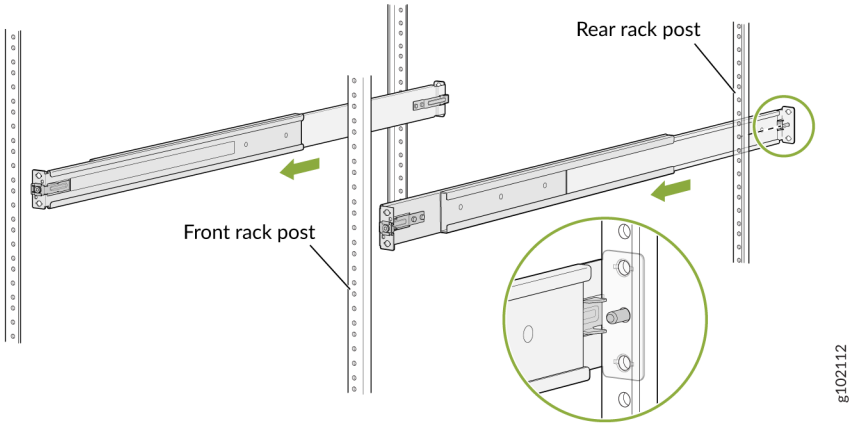
Figure 23: Assemble the Mounting Rails



5. Install the mounting rails on the rack:

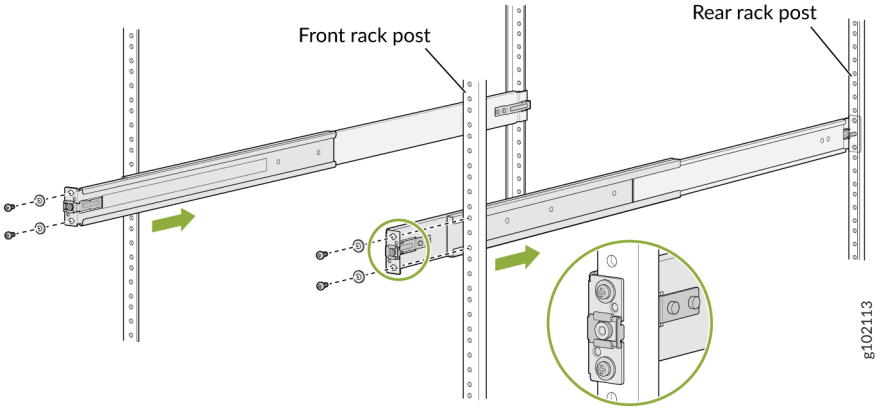
a. Insert the guide pin of the rear mounting rails into the rear-post holes. Pull the rear mounting rails toward the front of the rack to lock the rails in place. You will hear a distinct click sound when the latch locks into place.

Figure 24: Install the Rear Mounting Rails



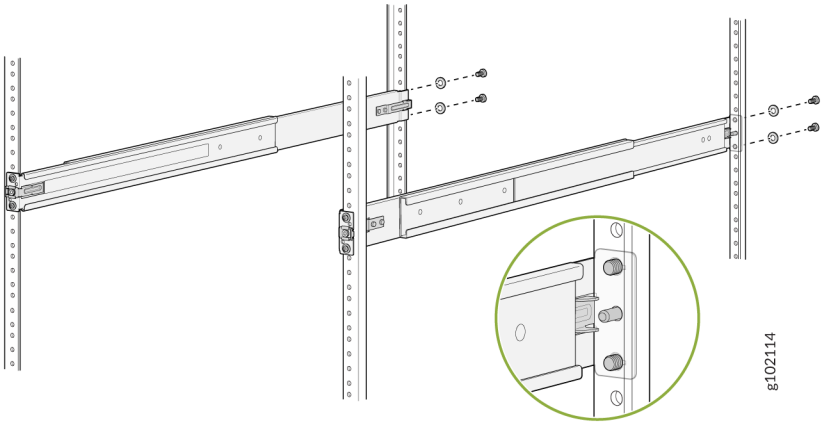
b. Insert the guide pin of the front mounting rails into the front-post holes. Push the front mounting rails toward the rear of the rack to lock the rails in place. You will hear a distinct click sound when the latch locks into place. Secure the front mounting rails to the front rack post by using screws appropriate for your rack threaded size (not provided).

Figure 25: Install and Secure the Front Mounting Rails



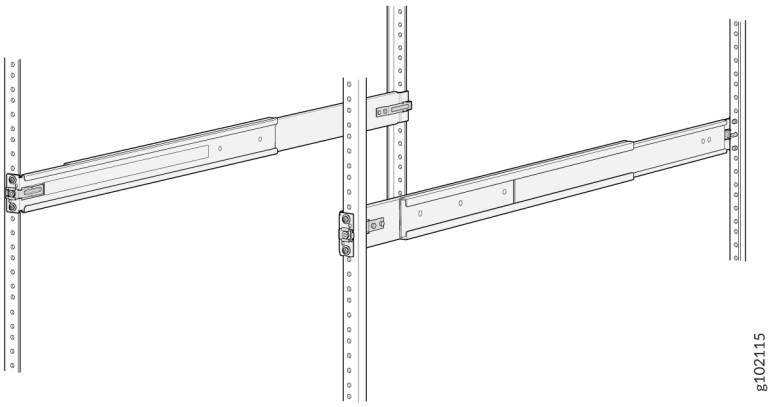
c. Secure the rear mounting rails to the rear rack post by using screws appropriate for your rack threaded size (not provided).

Figure 26: Secure the Rear Mounting Brackets



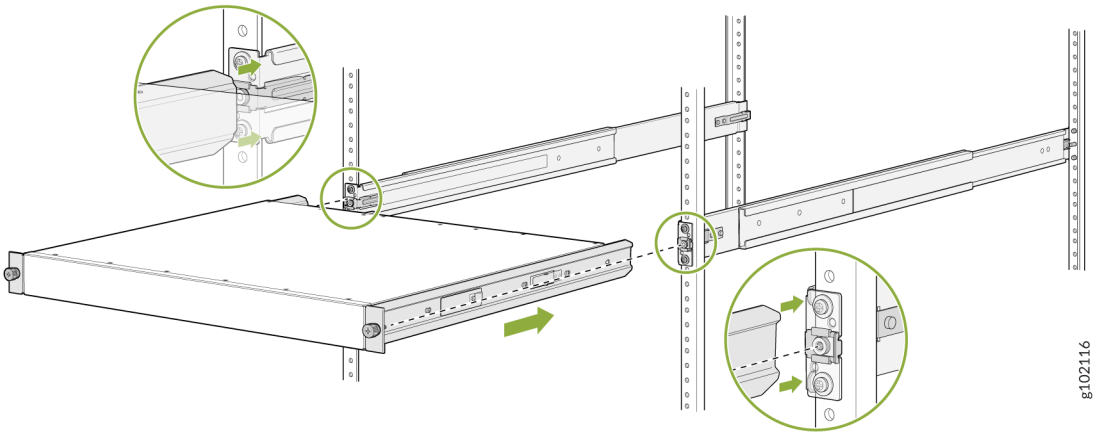
d. Visually ensure that the front and rear latches are locked into place on the mounting rails. The mounting rails should be securely installed on the rack.

Figure 27: Mounting Rails Installed and Secured



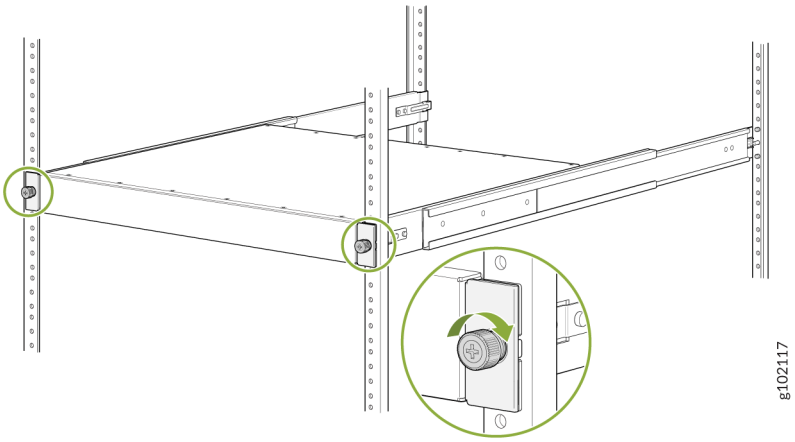
6. Lift the device and position it in the rack, aligning the side mounting brackets with the mounting rails. Slide the device into the channels of the rack mounting rails.

Figure 28: Slide the Device into the Rack



7. Tighten the two thumbscrews to secure the device.

Figure 29: Tighten the Thumbscrews



SRX-2PST-TLESS-RMK Components

Figure 30: SRX-2PST-TLESS-RMK Components

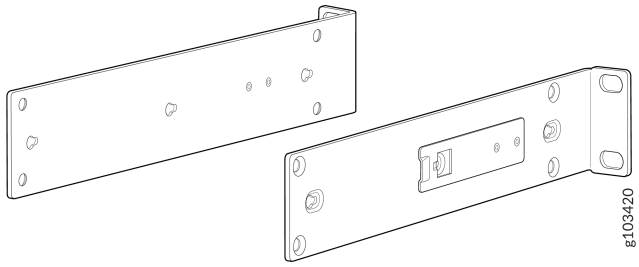


Table 27: SRX-2PST-TLESS-RMK Components

Description	Quantity
Side mounting brackets	2

Mount your Device by Using the SRX-2PST-TLESS-RMK Rack Mount Kit on a 2-Post Rack

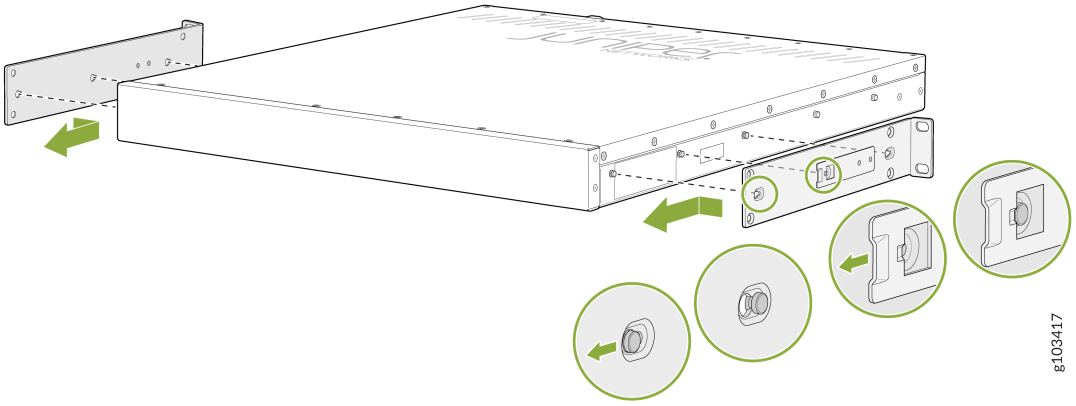
Ensure that you have the following tools and parts available:

- An ESD grounding strap—not provided.
- A screwdriver—not provided.
- Four screws appropriate for your rack threaded size—not provided.
- A pair of side mounting brackets that attach to the chassis—provided with the rack mount kit.

To mount the device on a two-post rack:

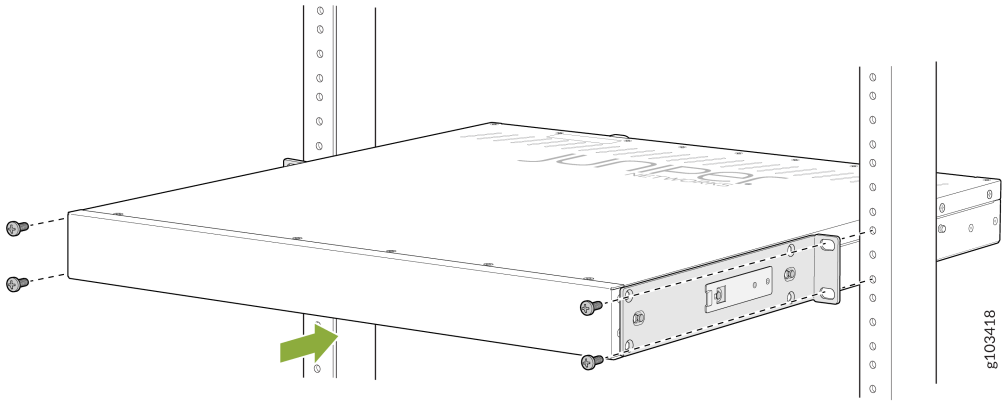
1. Review the General Safety Guidelines and Warnings.
2. Wrap and fasten one end of the electrostatic discharge (ESD) cable grounding strap around your bare wrist, and connect the other end to a site ESD point.
3. To attach the side mounting brackets to the chassis, align the keyholes on the mounting brackets over the shoulder screws on the chassis. Slide the mounting brackets toward the front of the chassis. The latch on the mounting brackets locks into place.

Figure 31: Attach the Side Mounting Brackets



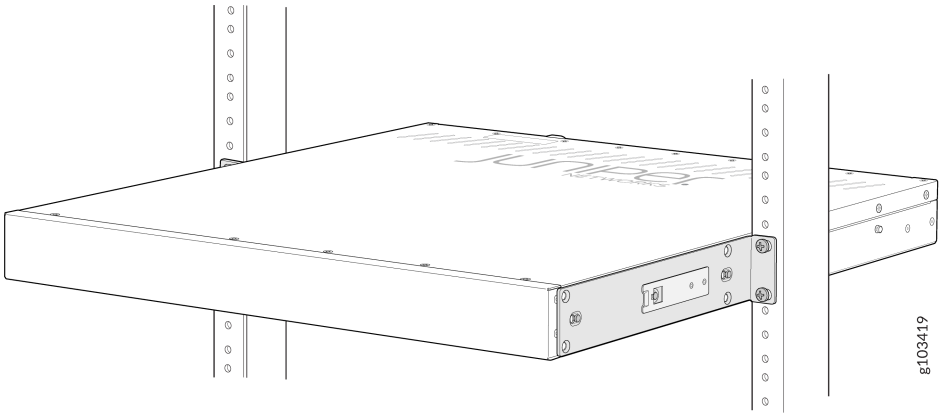
4. Lift the device and position it in the rack, aligning the holes on the side mounting brackets with the rack post holes. Attach the mounting brackets to the rack post by using screws appropriate for your rack threaded size (not provided).

Figure 32: Attach the Device to the Rack Posts



5. Tighten the screws using a screwdriver. Ensure that the device is secured to the rack posts.

Figure 33: Secure the Device



Connect the SRX4120 to the Network

SUMMARY

Connecting network cables to the SRX4120 involves the following steps and safety precautions to prevent equipment damage and personal injury.

IN THIS SECTION

- Install a Transceiver | 76
- Connect a Fiber-Optic Cable | 78

The transceivers for Juniper Networks devices are hot-removable and hot-insertable field-replaceable units (FRUs). You can remove and replace the transceivers without powering off the device or disrupting the device functions.

NOTE: We recommend that you use only optical transceivers and optical connectors purchased from Juniper Networks with your Juniper Networks device.

CAUTION: The Juniper Networks Technical Assistance Center (JTAC) provides complete support for Juniper-supplied optical modules and cables. However, JTAC does not provide support for third-party optical modules and cables that are not qualified or supplied by Juniper Networks. If you face a problem running a Juniper device that uses third-party optical modules or cables, JTAC may help you diagnose host-related issues if

the observed issue is not, in the opinion of JTAC, related to the use of the third-party optical modules or cables. Your JTAC engineer will likely request that you check the third-party optical module or cable and, if required, replace it with an equivalent Juniper-qualified component.

Use of third-party optical modules with high-power consumption (for example, coherent ZR or ZR+) can potentially cause thermal damage to or reduce the lifespan of the host equipment. Any damage to the host equipment due to the use of third-party optical modules or cables is the users' responsibility. Juniper Networks will accept no liability for any damage caused due to such use.

NOTE: After you insert a transceiver or after you change the media-type configuration, wait for 6 seconds for the interface to display operational commands.

Install a Transceiver

Before you install a transceiver in a device, ensure that you have taken the necessary precautions for safe handling of lasers (see Laser and LED Safety Guidelines and Warnings).

Ensure that you have a rubber safety cap available to cover the transceiver.

Figure 34 on page 77 shows how to install a QSFP+ transceiver. The procedure is the same for all types of transceivers except the QSFP28 transceivers.

CAUTION: To prevent electrostatic discharge (ESD) damage to the transceiver, do not touch the connector pins at the end of the transceiver.

To install a transceiver:

1. Wrap and fasten one end of the ESD wrist strap around your bare wrist, and connect the other end of the strap to the ESD point on the device.
2. Remove the transceiver from its bag.
3. Check to see whether the transceiver is covered with a rubber safety cap. If it is not, cover the transceiver with a rubber safety cap.

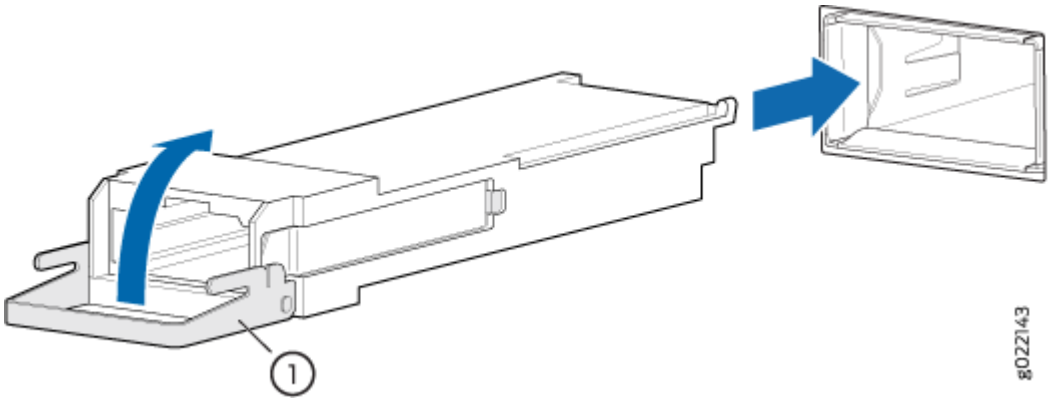
LASER WARNING: Do not leave a fiber-optic transceiver uncovered except when inserting or removing a cable. The rubber safety cap keeps the port clean and protects your eyes from accidental exposure to laser light.

4. If the port in which you want to install the transceiver is covered with a dust cover, remove the dust cover and save it in case you need to cover the port later. If you are hot-swapping a transceiver, wait for at least 10 seconds after removing the transceiver from the port before installing a new transceiver.
5. Using both hands, carefully place the transceiver in the empty port. The connectors must face the chassis.

> **CAUTION**: Before you slide the transceiver into the port, ensure that the transceiver is aligned correctly. Misalignment might cause the pins to bend, making the transceiver unusable.

6. Slide the transceiver in gently until it is fully seated. If you are installing a CFP transceiver, use your fingers to tighten the captive screws on the transceiver.

Figure 34: Install a Transceiver



1– Ejector lever

7. Remove the rubber safety cap from the transceiver and the end of the cable, and insert the cable into the transceiver.

> **LASER WARNING**: Do not look directly into a fiber-optic transceiver or into the ends of fiber-optic cables. Fiber-optic transceivers and fiber-optic cable connected to a transceiver emit laser light that can damage your eyes.

> **CAUTION**: Do not leave a fiber-optic transceiver uncovered except when inserting or removing cable. The safety cap keeps the port clean and protects your eyes from accidental exposure to laser light.

8. If there is a cable management system, arrange the cable in the cable management system to prevent the cable from dislodging or developing stress points. Secure the cable so that it does not support its own weight as it hangs toward the floor. Place excess cable out of the way in a neatly coiled loop in the cable management system. Placing fasteners on the loop helps to maintain its shape.

> **CAUTION**: Do not let fiber-optic cable hang free from the connector. Do not allow fastened loops of cable to dangle, which stresses the cable at the fastening point.

> **CAUTION**: Avoid bending fiber-optic cable beyond its minimum bend radius. An arc smaller than a few inches in diameter can damage the cable and cause problems that are difficult to diagnose.

Connect a Fiber-Optic Cable

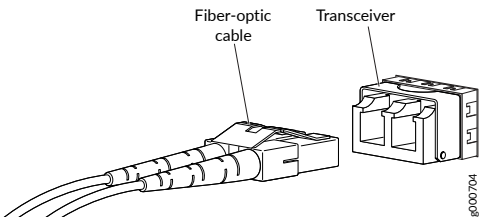
Before you connect a fiber-optic cable to an optical transceiver installed in a device, ensure that you have taken the necessary precautions for safe handling of lasers (see Laser and LED Safety Guidelines and Warnings).

> **LASER WARNING**: Do not look directly into a fiber-optic transceiver or into the ends of fiber-optic cables. Fiber-optic transceivers and fiber-optic cables connected to transceivers emit laser light that can damage your eyes.

To connect a fiber-optic cable to an optical transceiver installed in a device:

1. If the fiber-optic cable connector is covered with a rubber safety cap, remove the cap. Save the cap.
2. Remove the rubber safety cap from the optical transceiver. Save the cap.
3. Insert the cable connector into the optical transceiver.

Figure 35: Connect a Fiber-Optic Cable to an Optical Transceiver Installed in a Device



4. Secure the cables so that they do not support their own weight. Place excess cable out of the way in a neatly coiled loop. Placing fasteners on a loop helps cables maintain their shape.

> **CAUTION**: Do not bend fiber-optic cables beyond their minimum bend radius. An arc smaller than a few inches in diameter can damage the cables and cause problems that are difficult to diagnose.
>
> Do not let fiber-optic cables hang free from the connector. Do not allow fastened loops of cables to dangle, which stresses the cables at the fastening point.

Connect the SRX4120 to External Devices

SUMMARY

This topic guides you on how to connect your SRX4120 to external management devices.

IN THIS SECTION

- Connect the SRX4120 to a Network for Out-of-Band Management | **79**
- Connect the SRX4120 to a Management Console Using an RJ-45 Connector | **80**

You can monitor and manage the SRX4120 by using a dedicated management channel. Use the management port to connect your device to the management device.

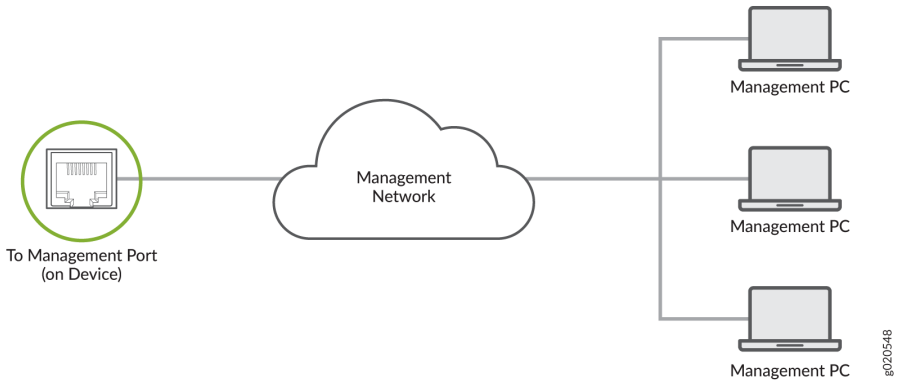
Connect the SRX4120 to a Network for Out-of-Band Management

Ensure that you have an Ethernet cable that has an RJ-45 connector at each end.

To connect a device to a network for out-of-band management:

1. Wrap and fasten on end of an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the other end of the strap to one of the ESD points on the chassis.
2. Connect one end of the Ethernet cable to the management port on the device.
3. Connect the other end of the cable to the management device.

Figure 36: Connecting Your Device to a Network for Out-of-Band Management



Connect the SRX4120 to a Management Console Using an RJ-45 Connector

Ensure that you have an Ethernet cable that has an RJ-45 connector at either end. You will also need the appropriate adapter (not provided) depending upon your console server or management console.

You can order the following separately from Juniper:

- RJ-45 to DB-9 adapter (JNP-CBL-RJ45-DB9)
- RJ-45 to USB-A adapter (JNP-CBL-RJ45-USBA)
- RJ-45 to USB-C adapter (JNP-CBL-RJ45-USBC)

NOTE: If you want to use the RJ-45 to USB-A or RJ-45 to USB-C adapter you must have X64 (64-Bit) Virtual COM port (VCP) driver installed on your PC. See https://ftdichip.com/drivers/vcp-drivers/ to download the driver.

To connect the device to a management console:

1. Wrap and fasten on end of an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the other end of the strap to one of the ESD points on the chassis.
2. Connect one end of the Ethernet cable to the console port on the device.
3. Connect the other end of the cable to the console server.

Figure 37: Connecting Your Device to a Management Console through a Console Server

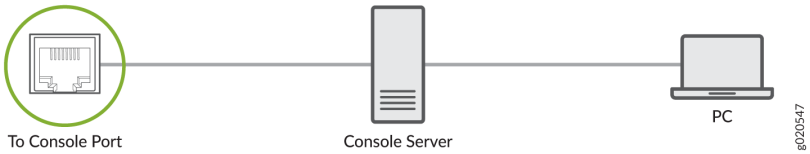


Figure 38: Connecting the Your Device directly to a Management Console



Connect the SRX4120 to Power

SUMMARY

This section takes you through the steps and safety precautions to be foolowing while connnecting power to the SRX4120, to prevent equipment damage and personal injury.

IN THIS SECTION

- Ground the SRX4120 | **82**
- Install Heat-Shrink Tubing on a Power Cable | **84**
- Connect AC Power to the SRX4120 | **85**
- Connect DC Power to the SRX4120 | **87**
- Power Off the SRX4120 | **89**

Ground the SRX4120

NOTE: To meet safety and electromagnetic interference (EMI) requirements and to ensure proper operation, you must connect the SRX4120 to an earth ground before you connect it to power.

Before you connect an earth ground to the protective earthing terminal of the device, ensure that a licensed electrician attaches an appropriate grounding terminal to the grounding cable you supply. Using a grounding cable with an incorrectly -attached terminal can damage the device.

Before connecting the device to an earth ground, ensure that you have the following parts and tools:

- An electrostatic discharge (ESD) grounding strap.
- A grounding cable for your device—The grounding cable must be 6 AWG (4.11 mm^2) stranded wire and rated 90 °C or per local electrical code.
- A grounding 2-hole terminal for your grounding cable—This attaches to the chassis grounding point. The Panduit LCD6-14A-L terminal lugs, or equivalent are sized for 6 AWG (4.11 mm^2) power source cables.
- A Phillips screwdriver to tighten the screw.

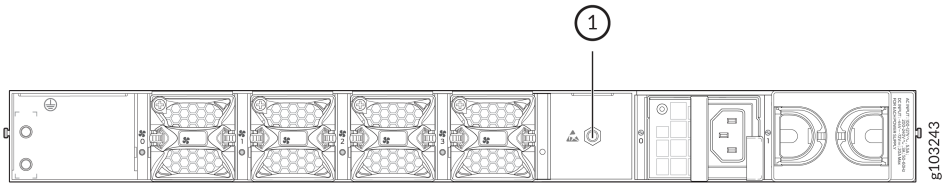
You must install heat-shrink tubing insulation around the crimped section of the power cables and lugs.

To ground the SRX4120, connect a grounding cable to earth ground. Attach the grounding cable to the chassis grounding point. Under all circumstances, use this grounding connection to ground the chassis.

To ground the device:

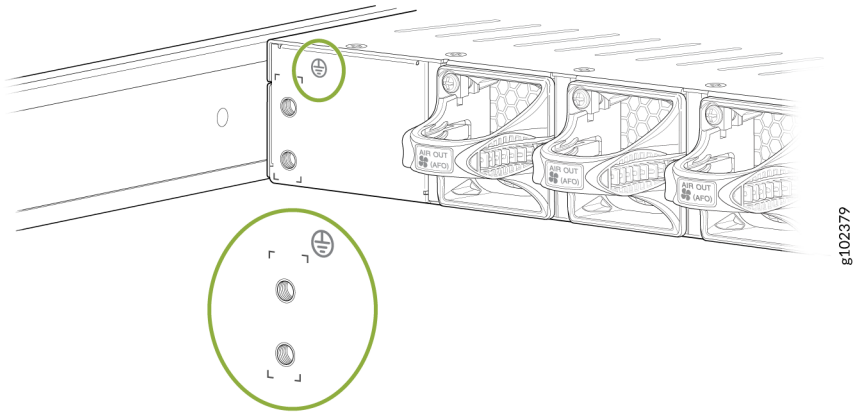
1. Wrap and fasten one end of the electrostatic discharge (ESD) grounding strap to your bare wrist and connect the other end of the strap to the ESD point on the chassis.

Figure 39: Chassis ESD point



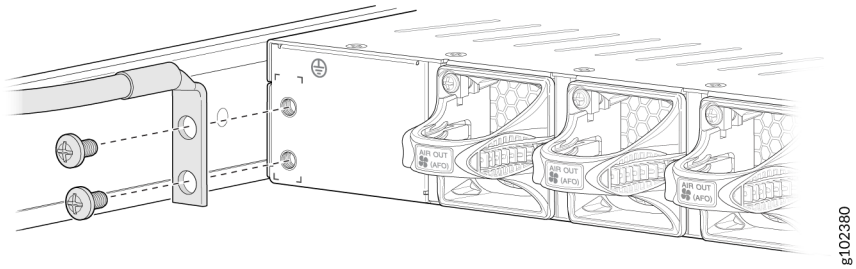
2. Ensure that all grounding surfaces are clean and brought to a bright finish before making the grounding connections.
3. Connect the grounding cable to a proper earth ground, such as the rack in which you mount the device.
4. Using a Phillips screwdriver, remove the screws from the chassis grounding point.

Figure 40: Grounding Point on the SRX4120



5. Secure the grounding cable terminal to the grounding point with the screws removed earlier.

Figure 41: Connect the Grounding Cable to the SRX4120



6. Place the grounding cable terminal attached to the grounding cable over the grounding point.
7. Verify that the grounding cable does not touch or block access to the device components. Make sure that it does not trail across the floor where people could trip over it.

NOTE: Ensure that the device is permanently connected to ground during operation.

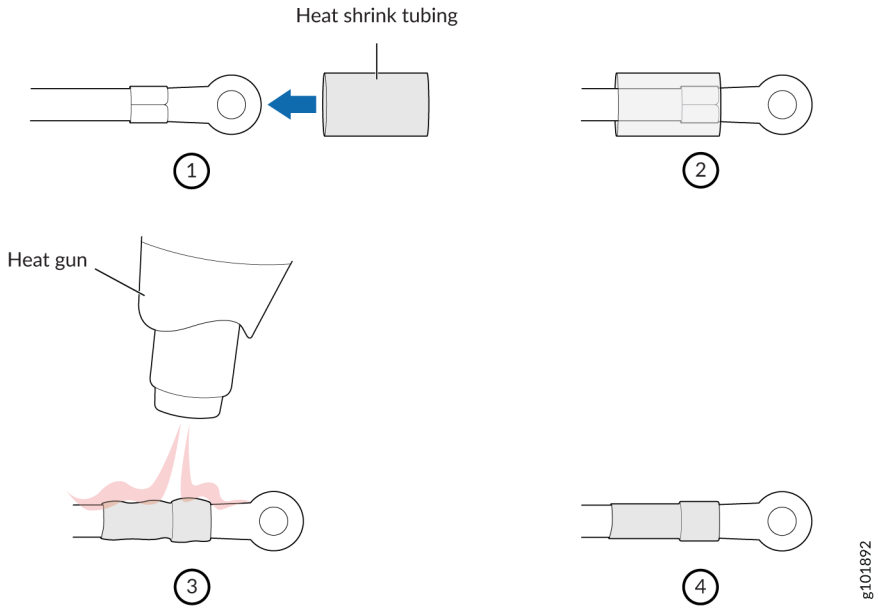
Install Heat-Shrink Tubing on a Power Cable

To install heat-shrink tubing insulation around the power cables:

1. Slide the tubing over the portion of the cable where it is attached to the lug barrel. Ensure that tubing covers the end of the wire and the barrel of the lug attached to it.
2. Shrink the tubing with a heat gun. Ensure that you heat all sides of the tubing evenly so that it shrinks around the cable tightly.

CAUTION: Do not overheat the tubing.

Figure 42: Install Heat-Shrink Tubing



Connect AC Power to the SRX4120

IN THIS SECTION

- Connect the JPSU-450W-AC to Power | **86**

Before you begin:

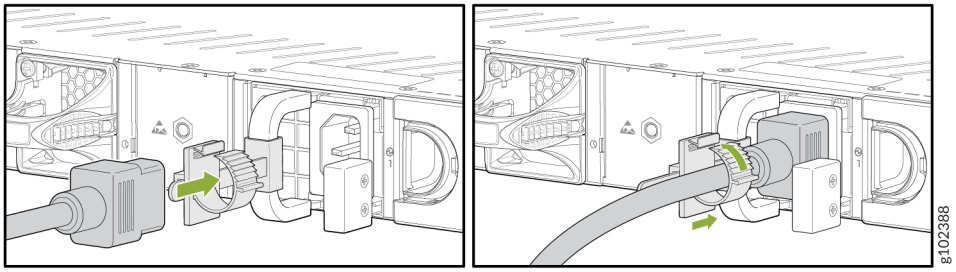
- Ensure that you have grounded the SRX4120.
- Ensure that you have read the guidelines and precautions in the Juniper Networks Safety Guide.
- Ensure that you have a power cord appropriate for your geographical location available to connect AC power to the device.
- Ensure that you fully insert the PSUs into the chassis.

Connect the JPSU-450W-AC to Power

To connect the JPSU-450W-AC to AC power:

1. Wrap and fasten one end of the ESD wrist strap around your bare wrist, and connect the other end of the strap to the ESD point on the device.
2. Locate the AC power cords shipped with the SRX4120; the cords have plugs appropriate for your geographical location.
3. Insert the coupler end of the power cord into the AC power cord inlet on the AC power supply faceplate.
4. Push the power cord retainer onto the power cord.

Figure 43: Connect AC Power Cord



5. Repeat step 4 and step 5 to insert the second power cord.
6. If the AC power source outlet has a power switch, set it to the off (O) position.
7. Insert the power cord plug into an AC power source outlet.

> **NOTE**: Connect each power supply to a dedicated AC power feed and a dedicated external circuit breaker. We recommend that you use a 10 A (250 VAC) minimum, or as permitted by the local code.

8. If the AC power source outlet has a power switch, set it to the on (|) position.

Connect DC Power to the SRX4120

IN THIS SECTION

- Connect the JPSU-650W-DC-AFO to Power | 87

Before you begin:

- Ensure that you have grounded the SRX4120.
- Ensure that you have installed heat-shrink tubing as described in "Install Heat-Shrink Tubing on a Power Cable" on page 84.
- Ensure that you have read the guidelines and precautions in the Juniper Networks Safety Guide.
- Ensure that you fully insert the PSUs into the chassis.



WARNING: Before performing the following procedure, ensure that you remove the power from the DC circuit. To ensure that all power is off, locate the circuit breaker on the panel board that services the DC circuit. Switch the circuit breaker to the OFF position (0), and tape the switch handle of the circuit breaker in the OFF position.

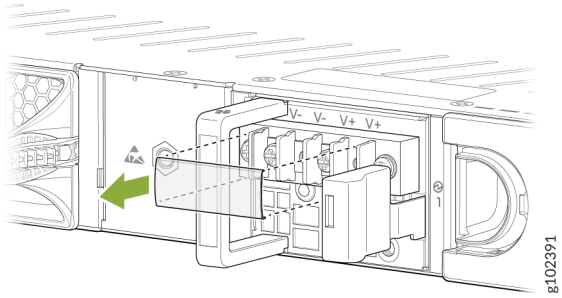
Connect the JPSU-650W-DC-AFO to Power

The DC power cables for the JPSU-650W-DC-AFO are rated 16 AWG.

To connect the JPSU-650W-DC-AFO to power:

1. Switch off the dedicated facility circuit breakers. Ensure that the voltage across the DC power source cable leads is 0 V. You must ensure that the cable leads do not become active during installation.
2. Wrap and fasten one end of the ESD wrist strap around your bare wrist, and connect the other end of the strap to the ESD point on the device.
3. Remove the clear plastic cover that protects the terminal studs on the faceplate.

Figure 44: Remove the Terminal Cover



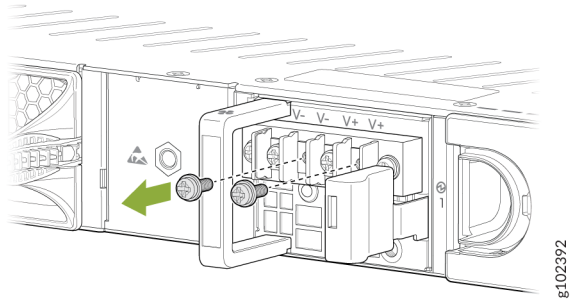
4. Verify that you have correctly labeled the DC power cables before making connections to the power supply.

   In a typical power distribution scheme where the return is connected to chassis ground at the battery plant, you can use a multimeter to verify the ohm output of the –48 V and return (RTN) DC cables to chassis ground. The cable with very large resistance (indicating an open circuit) to chassis ground will be –48V. The cable with very low resistance (indicating a closed circuit) to chassis ground will be RTN.

   CAUTION: You must ensure that power connections maintain the proper polarity. The power source cables might be labeled **(+)** and **(–)** to indicate their polarity. There is no standard color coding for DC power cables. The color coding used by the external DC power source at your site determines the color coding for the leads on the power cables that attach to the terminal studs on each power supply.

5. Remove the screws from the terminals, using a Phillips (+) screwdriver, number 2.

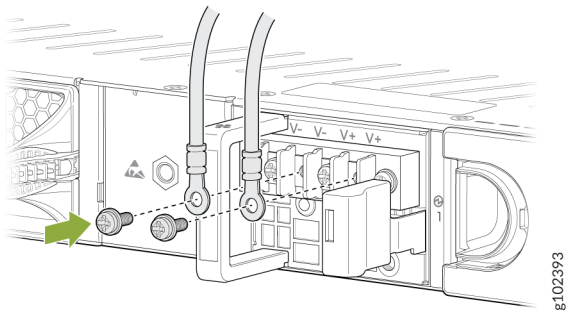
Figure 45: Remove the Screws



6. Secure each power cable ring terminal to the terminals with the screws.
   - Secure each positive (+) DC source power cable lug to an RTN (return) terminal.

- Secure each negative (–) DC source power cable lug to a –48 V (input) terminal.

Figure 46: Connect the DC Power Cables



NOTE: Connect each power cable to a dedicated external circuit breaker. We recommend that you use a 10 A (80 VDC), or as permitted by the local code.

7. Replace the clear plastic cover over the terminal studs on the faceplate.
8. Verify that the power cables are connected correctly. The cables must not touch or block access to device components, and they must not cause a tripping hazard.
9. Switch the circuit breaker on the panel board that services the DC circuit to the ON (|) position.
10. Connect the power cables to the external DC power source. If the external DC power source has a switch, set it to the ON (|) position.

Power Off the SRX4120

You can power off the SRX4120 in any of the following ways:

- Graceful shutdown:
  - Using hardware—Press and immediately release the Power button.
  - Using the CLI—Use the `request system power-off` command.

  The device begins gracefully shutting down the operating system (OS) and then powers itself off.

CAUTION: Use the graceful shutdown method to power off or reboot the firewall.

- Forced shutdown—Press the Power button and hold it for ten seconds. The device immediately powers itself off without shutting down the OS.

> **CAUTION**: Use the forced shutdown method as a last resort to recover the firewall if the firewall OS is not responding to the graceful shutdown method.

To remove power completely from the device, unplug the AC power cord or DC power supply cable.

After powering off a PSU, wait at least 60 seconds before turning it back on. After powering on a PSU, wait at least 10 seconds before turning it off.

When the system is completely powered off and you turn on the power supply, the device starts as the PSU completes its startup sequence. If the device finishes starting and you need to power off the system again, first issue the `request vmhost halt` command.

> **NOTE**: The fans in the PSU continue to rotate even after you power off the SRX4120. To stop the fans, remove the power cord from the PSU. The fans will stop in a few seconds.

After turning on the PSU, it can take up to 60 seconds for status indicators—such as the PWR LED and the `show chassis` command display—to indicate that the PSU is functioning normally. Ignore error indicators that appear during the first 60 seconds.

Configure Junos OS on the SRX4120

SUMMARY

This topic guides you through the initial configuration of your SRX4120 by using Juniper® Mist, Juniper® Security Director on Premise, Juniper® Security Director Cloud, the J-Web GUI, and the CLI.

IN THIS SECTION

- Access the CLI on the SRX4120 | **91**
- Configure Root Authentication and Management Interface from the CLI | **91**
- Configure the SRX4120 Using J-Web | **93**
- Configure the SRX4120 using Juniper Mist | **94**
- Configure the SRX4120 using Juniper Security Director On-Premise | **95**

Configure the SRX4120 using Juniper Security Director Cloud | 95

We ship the SRX4120 with preinstalled Junos OS, which is ready to be configured when you power on the device. You can use Juniper® Mist, Juniper® Security Director on Premise, Juniper® Security Director Cloud, the J-Web GUI, or the CLI to perform the initial configuration.

Access the CLI on the SRX4120

To access the CLI on your device:

1. Verify that the router is powered on.
2. Connect the management device to the serial console port as described in "Connect the SRX4120 to External Devices" on page 79.
3. Start your asynchronous terminal emulation application (such as Microsoft Windows HyperTerminal) and select the appropriate COM port to use (for example, COM1).
4. Configure the serial port settings with the following values:
   - Baud rate—9600
   - Parity—N
   - Data bits—8
   - Stop bits—1
   - Flow control—none
5. Power on the device. You can start performing initial software configuration on the device after the device is up.

> **NOTE**: After you complete the initial configuration, you can connect your device to a network for out-of-band management as described in "Connect the SRX4120 to External Devices" on page 79.

Configure Root Authentication and Management Interface from the CLI

You must perform the initial configuration of the device through the console port.

Gather the following information before configuring the device:

- Root authentication
- IP address of the management interface
- IP address of the default gateway
- IP address of a DNS server

To configure root authentication and the management interface:

1. Log in as `root`. There is no password.
2. Start the CLI and enter configuration mode.

```
root@% cli
root@>configure
root@#
```

3. Set the root authentication password. You can enter a cleartext password, an encrypted password, or an SSH public key string (DSA or RSA).

```
[edit]
root@# set system root-authentication plain-text-password
New password: password
Retype new password: password
```

4. (Optional) Configure the host name of the device.

```
[edit]
root@# set system host-name host-name
```

5. Commit the configuration to activate it on the device.

```
[edit]
root@# commit
```

6. Configure the IP address and prefix length for the Ethernet management interface on the device.

```
[edit]
root@# set interfaces fxp0 unit 0 family inet address address/prefix-length
```

7. Configure the default route.

```
[edit]
root@# set routing-options static route 0.0.0.0/0 next-hop gateway-address
```

8. Enable Web access to launch J-Web.

```
[edit]
root@# set system services web-management http
```

9. Enable SSH access on the device.

```
[edit]
root@# set system services ssh root-login allow
```

10. Configure the IP address of a DNS server.

```
[edit]
root@# st system name-server server-address
```

11. Commit the configuration changes.

```
[edit]
root@# commit
```

Configure the SRX4120 Using J-Web

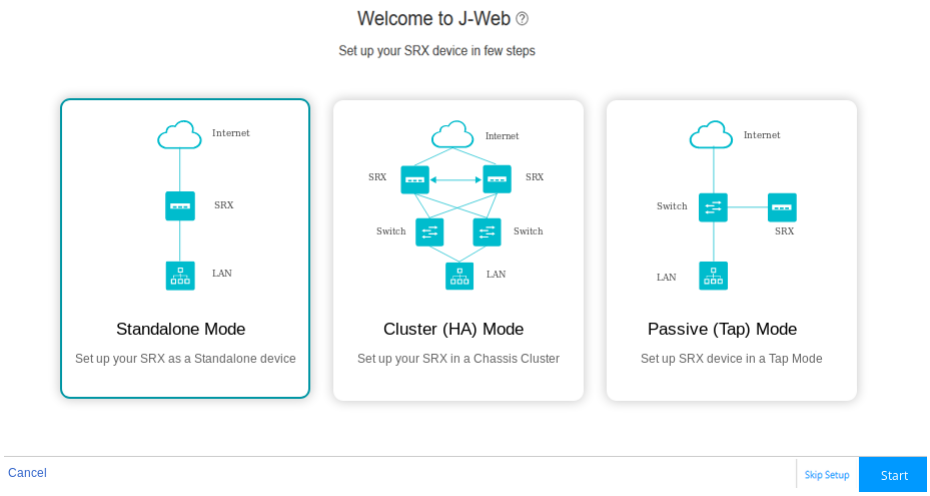
The J-Web interface is a Web-based graphical interface that allows you to operate a device without commands.

To access the J-Web interface on a new device that has the factory-default configuration:

1. Connect the management port (MGMT) on your device to the Ethernet port on the management device (laptop or PC), using an RJ-45 cable.
2. Manually configure the management device with a compatible IP address in the 192.168.1.0 network (for example, 192.168.1.2). Do not use the 192.168.1.1 IP address for the management device as this IP address is assigned to the fxp0 interface.
3. Open a browser and enter **https://192.168.1.1** in the address bar.

The **J-Web Setup** page opens. You can choose one of the following setup modes to configure the device:

- Standalone mode—In this mode, you can configure the basic settings such as device credentials, time, management interface, zones and interfaces, and DNS servers and default gateways.
- Cluster (HA) mode—In cluster mode, a pair of devices are connected and configured to operate like a single node, providing device-, interface-, and service-level redundancy.
- Passive (Tap) mode—Tap mode allows you to passively monitor traffic flows across a network. If intrusion prevention system (IPS) is enabled, then the tap mode inspects the incoming and outgoing traffic to detect the number of threats.



4. Select the setup mode that you want to use to configure the device, and click **Start**.

   The **Setup Wizard** page appears.
5. Follow the instructions on the **Setup Wizard** to to configure your device.

Configure the SRX4120 using Juniper Mist

You can configure and manage your device using the Mist cloud portal. If you have a Mist WAN Assurance license, follow the instructions in the Cloud-Ready SRX Series Firewalls with Mist.

If you don't have a license, use the CLI to configure your system.

Configure the SRX4120 using Juniper Security Director On-Premise

Juniper® Security Director is an on-premises management solution that allows you to manage your firewalls through a centralized web interface.

Follow the instructions in the Onboard SRX Series Firewalls to Security Director guide to configure your device.

Configure the SRX4120 using Juniper Security Director Cloud

Juniper® Security Director Cloud is a cloud-based software as a solution (SaaS) portal that helps you securely migrate your network to a Secure Access Service Edge (SASE) architecture.

Follow the instructions in the Onboard SRX Series Firewalls to Security Director Cloud guide to configure your device.

8

CHAPTER

Maintenance

IN THIS CHAPTER

- Routine Maintenance Procedures for the SRX4120 | **97**

Routine Maintenance Procedures for the SRX4120

To maintain optimum performance of the device, you must regularly perform the following preventive maintenance procedures.

- Inspect the installation site for moisture, loose wires or cables, and excessive dust.
- Ensure that the airflow in unobstructed around the device and into the air intake vents.
- Check status LEDs on the front panel of the device.

9

CHAPTER

Troubleshooting and Support

IN THIS CHAPTER

- Troubleshoot the SRX4120 | **99**
- Contact Customer Support and Return the Chassis or Components | **103**

Troubleshoot the SRX4120

SUMMARY

This topic contains some common troubleshooting resources for the SRX4120 and a list of alarms and how to fix them.

IN THIS SECTION

- Troubleshooting Resources for SRX4120 | **99**
- Alarm Types and Alarm Severity | **100**
- Troubleshoot Chassis and Interface Alarms on the SRX4120 Firewall | **101**
- Use the RESET Button | **102**

Troubleshooting Resources for SRX4120

To troubleshoot a device, you use the Junos OS CLI and LEDs on the components:

- LEDs—When the device detects an alarm condition, the alarm LED on the interfaces glows red or yellow.
- CLI—The CLI is the primary tool for controlling and troubleshooting hardware, Junos OS, and network connectivity. Use the CLI to see more information about alarms. CLI command outputs displayinformation about network connectivity, which Junos derives from the ping and traceroute utilities.

  For information about using the CLI to troubleshoot Junos OS, see the appropriate Junos OS configuration guide.
- JTAC—If you need assistance during troubleshooting, you can contact the Juniper Networks Technical Assistance Center (JTAC) by using the Web or by telephone. If you encounter software problems, or problems with hardware components not discussed here, contact JTAC.

Alarm Types and Alarm Severity

IN THIS SECTION

- Alarm Types | 100
- Alarm Severity | 101

Table 28: Alarm Terms

Term	Definition
Alarm	A signal alerting you to conditions that might prevent normal operation. On a device, the alarm signal is the red system LED that is lit on the front of the chassis.
Alarm condition	A failure event that triggers an alarm.
Alarm severity	The seriousness of the alarm. The level of severity can be either major or minor.

Alarm Types

Table 29: Alarm Types

Term	Definition
Chassis alarms	A predefined alarm triggered by a physical condition on the device such as a power supply failure or excessive component temperature.
Interface alarms	An alarm that you configure to alert you when an interface link is down. Applies to ethernet, fibre-channel, and management-ethernet interfaces. You can configure a major or minor alarm for the link-down condition, or have the condition ignored.

Table 29: Alarm Types *(Continued)*

Term	Definition
System alarms	A predefined alarm that might be triggered by a missing rescue configuration, failure to install a license for a licensed software feature, or high disk usage. You can configure system alarms to appear automatically in the J-Web interface display or CLI display.

Alarm Severity

Table 30: Alarm Severity

Term	Definition
Major (red)	Indicates a critical situation on the router that has resulted from one of the following conditions and that requires immediate action: • One or more hardware components have failed. • One or more hardware components have exceeded temperature thresholds. • An alarm condition configured on an interface has triggered a critical warning.
Minor (amber or blinking red)	Indicates a noncritical condition on the router that, if left unchecked, might cause an interruption in service or degradation in performance. A minor alarm condition requires monitoring or maintenance. A missing rescue configuration generates a minor system alarm.

Troubleshoot Chassis and Interface Alarms on the SRX4120 Firewall

Table 31 on page 102 lists the chassis alarm messages on the SRX4120, their severity levels, and the actions you can take to respond to them.

Table 31: Alarm Conditions on the SRX4120

Component	Alarm Condition	Severity	Remedy
Boot media	If the internal flash fails at startup, the firewall automatically boots from the alternative boot device (USB storage device).	Amber (minor)	If you configured the firewall to boot from an alternative boot device, ignore this alarm condition. If you did not configure the firewall to boot from an alternative boot device, contact JTAC.
Hardware components	The firewall chassis temperature is too warm.	Amber (minor)	• Check the room temperature. See Table 6 on page 18. • Check the air flow. See Figure 13 on page 63.
	The firewall fan has failed.	Red (major)	Place your hand near the exhaust vents at the rear of the chassis to determine whether the fan is pushing air out of the chassis.

Use the RESET Button

If a configuration fails or denies management access to the firewall, you can use the RESET button to restore the device.

The RESET button is recessed to prevent it from being pressed accidentally. To press the RESET button, insert a small probe (such as a straightened paper clip) into the pinhole on the front panel.

- Pressing the RESET button for about 250 milliseconds will reboot the device.

- Pressing and holding the RESET button for more than 10 seconds will reboot the device and recover the primary BIOS.

Contact Customer Support and Return the Chassis or Components

SUMMARY

If you need to return a hardware component to Juniper Networks, Inc., you need a Return Material Authorization (RMA) number and the equipment serial number. Contact the Juniper Networks Technical Assistance Center (JTAC) to generate an RMA number. You may also need to locate the chassis or component details using the CLI or by referring to equipment labels. You then pack and ship the component.

IN THIS SECTION

- Contact Customer Support | **103**
- Return a Hardware Component to Juniper Networks | **104**
- Locate the Serial Number of the SRX4120 or its Components | **105**
- Request a Return Material Authorization | **106**
- Guidelines for Packing and Shipping Hardware Components | **107**

Contact Customer Support

You can contact JTAC 24 hours a day, seven days a week.

Chat	Use the **Ask me** icon at the bottom right of the Support page. Don't see the Chat icon? Read this.
Web	Juniper Support Portal Government Support Portal

Telephone	U.S. and Canada (Toll-free): 1-888-314-JTAC (5822) Outside the US or Canada, use the relevant country number listed on the regional tabs listed on the Contact Support page. Federal Government Support: 1-833-900-1454

NOTE: We do not support opening new cases via email. Please use one of the above options to contact JTAC.

Return a Hardware Component to Juniper Networks

If a hardware component fails, contact Juniper Networks to obtain an RMA number. We use this number to track the returned material at the factory and to return the repaired or new components to you, as needed.

NOTE: Do not return any component to Juniper Networks unless you have first obtained an RMA number. Juniper Networks reserves the right to refuse shipments that do not have an RMA number. Refused shipments are returned to you by collect freight.

To return a defective hardware component:

1. Determine the part number and the serial number of the defective component. See "Locate the Serial Number of the SRX4120 or its Components" on page 105.
2. Obtain an RMA number from JTAC as described in "Request a Return Material Authorization" on page 106.
3. Pack the component for shipment. See "Guidelines for Packing and Shipping Hardware Components" on page 107.

For more information about return and repair policies, see the **Support** page at https://support.juniper.net/support/.

Locate the Serial Number of the SRX4120 or its Components

IN THIS SECTION

- List the SRX4120 Chassis and Component Details Using the CLI | 105
- Locate the Chassis Serial Number ID Label | 106

If the device is operational and you can access the CLI, you can list serial numbers for the device and for some components with a CLI command. If you don't have access to the CLI, or if the serial number for the component doesn't appear in the command output, you can locate the serial number ID label on the device or component.

NOTE: If you want to find the serial number ID label on a component, you need to remove the component from the device chassis.

List the SRX4120 Chassis and Component Details Using the CLI

To list the device and device components and their serial numbers, enter the `show chassis hardware` command on the CLI.

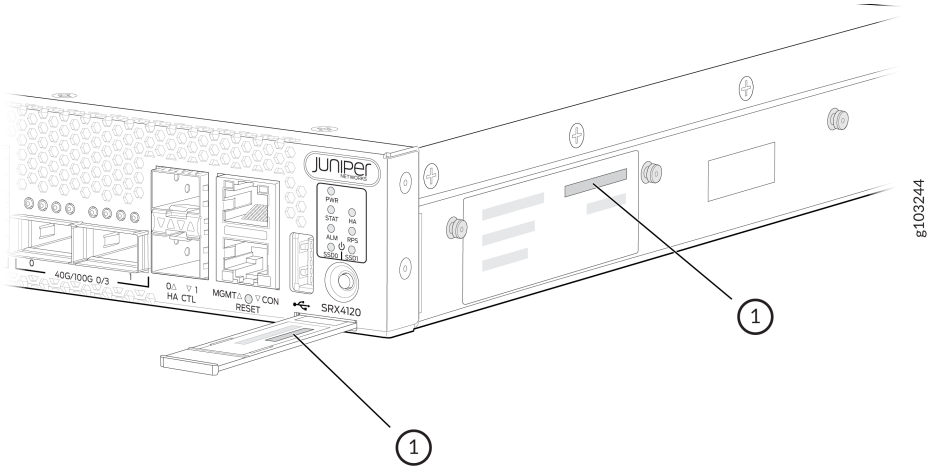
```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                FP4023AN0038      SRX4120
Midplane         REV 06   650-191121   FP4023AN0038      SRX4120
Routing Engine 0          BUILTIN      BUILTIN           SRX Routing Engine
CB 0                      BUILTIN      BUILTIN           Control Board
FPC 0                     BUILTIN      BUILTIN           SRX4120 FPC
  PIC 0                   BUILTIN      BUILTIN           8x10G-T
  PIC 1                   BUILTIN      BUILTIN           8xSFP+
  PIC 2                   BUILTIN      BUILTIN           4xSFP28
  PIC 3                   BUILTIN      BUILTIN           2xQSFP28
Power Supply 0   REV 01   740-168323   1EDPD2000TZ       PS 450W 90-264V AC in
Fan Tray 0                                               Fan Tray 0, Front to Back Airflow - AFO
Fan Tray 1                                               Fan Tray 1, Front to Back Airflow - AFO
```

Fan Tray 2	Fan Tray 2, Front to Back Airflow - AFO
Fan Tray 3	Fan Tray 3, Front to Back Airflow - AFO

Locate the Chassis Serial Number ID Label

You can find the serial number on the pull out tab on the front panel of the device, or on the label on the side of the device.

Figure 47: Location of the Serial Number Label



Request a Return Material Authorization

If you are returning a device or hardware component to Juniper Networks for repair or replacement, obtain an RMA number from JTAC.

Before you request an RMA from JTAC, be prepared to provide the following information:

- Your existing service request number, if you have one
- Serial number of the device or component
- Your name, organization name, telephone number, fax number, and shipping address
- Details of the failure or problem
- Type of activity you were performing on the device when the problem occurred

- Configuration data displayed by one or more `show` commands

You can contact JTAC using the Support page or by telephone.
If you're contacting JTAC by telephone:

- To report a new incident, press the star (*) key to be routed to the next available support engineer.
- To enquire about an existing case, enter your 12-digit service request number followed by the pound (#) key.

The support representative validates your request and issues an RMA number for return of the device or component.

Guidelines for Packing and Shipping Hardware Components

To pack and ship individual components:

- When you return the chassis or components, make sure to adequately protect them with packing materials. Pack them properly to prevent the pieces from moving around the carton.
- Use the original shipping materials, if they are available.
- Place the individual components in antistatic bags.
- Write the RMA number on the exterior of the box to ensure proper tracking.

10

CHAPTER

Safety and Compliance Information

IN THIS CHAPTER

- Safety Information | **109**
- Agency Approvals for SRX4120 | **109**

Safety Information

The Juniper Networks Safety Guide provides general safety information and guidelines for all Juniper Networks products. Follow the guidelines provided in the guide to reduce the likelihood of personal injury, equipment damage, and damage to surrounding areas.

Along with the information provided in the Juniper Networks Safety Guide, you must read and understand the *SRX4120* specific safety information provided in this hardware guide.

Agency Approvals for SRX4120

IN THIS SECTION

- Agency Approvals | **109**
- Compliance Statements | **111**
- EMC Requirements for Japan | **112**

Agency Approvals

The SRX4120 complies with the following standards:

Safety

- UL 60950-1:2007 R10.14 Information Technology Equipment
- CAN/CSA-C22.2 No. 60950-1-07, AMD 1:2011, AMD 2:2014 Information Technology Equipment
- IEC/EN 60825-1 Safety of Laser Products – Part 1: Equipment Classification
- IEC 62368-1 2014 (2nd Edition) Audio/Video, Information and Communication Technology Equipment
- IEC 62368-1 2018 (3rd Edition) Audio/Video, Information and Communication Technology Equipment

- EN 62368-1:2014+A11:2017 Audio/Video, Information and Communication Technology Equipment
- UL/CSA 62368-1 :2019 (3rd Edition) Audio/Video, Information and Communication Technology Equipment

EMC

- FCC 47 CFR Part 15
- ICES-003 / ICES-GEN
- BS EN 55032
- BS EN 55035
- EN 300 386 V1.6.1
- EN 300 386 V2.2.1
- BS EN 300 386
- EN 55032
- CISPR 32
- EN 55035
- CISPR 35
- IEC/EN 61000 Series
- IEC/EN 61000-3-2
- IEC/EN 61000-3-3
- AS/NZS CISPR 32
- VCCI-CISPR 32
- BSMI CNS 15936
- KS C 9835 (Old KN 35)
- KS C 9832 (Old KN 32)
- KS C 9610
- BS EN 61000 Series
- GR3160

- VCCI 32-1
- VCCI Class A (2007) Japanese Radiated Emissions

Environmental

- Reduction of Hazardous Substances (RoHS)

Other

- ETSI EN-300386-2 Telecommunication Network Equipment. Electromagnetic Compatibility Requirements
- Common Language Equipment Identifier (CLEI) code

Compliance Statements

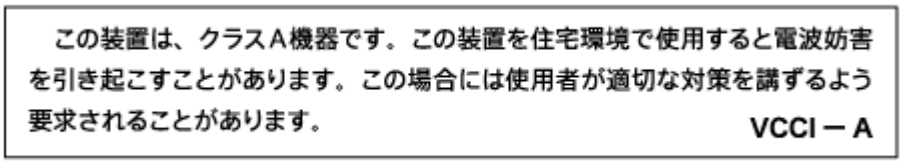
Compliance Statements for NEBS

- The equipment is suitable for installation as part of the Common Bonding Network (CBN).
- The equipment is suitable for installation in locations where the National Electrical Code (NEC) applies.
- The battery return connection is to be treated as an isolated DC return (i.e.DC-I), as defined in GR-1089-CORE.
- For Juniper Networks systems with AC power supplies, an external surge protective device (SPD) must be used at the AC power source.

Compliance Statement for Argentina

EQUIPO DE USO IDÓNEO.

EMC Requirements for Japan



The preceding translates as follows:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

VCCI-A