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# SRX210 Services Gateway

## Hardware Guide



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# About This Guide

This preface includes the following topics:

- [Objectives on page ix](#)
- [Audience on page ix](#)
- [Documentation Conventions on page ix](#)
- [SRX Series Documentation and Release Notes on page xi](#)
- [Obtaining Documentation on page xi](#)
- [Documentation Feedback on page xii](#)
- [Requesting Technical Support on page xii](#)

## Objectives

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This guide describes hardware components and installation, basic configuration, and basic troubleshooting procedures for the Juniper Networks SRX210 Services Gateway. It explains how to prepare your site for services gateway installation, unpack and install the hardware, power on the services gateway, perform initial software configuration, and perform routine maintenance. After completing the installation and basic configuration procedures covered in this guide, see the Junos OS configuration guides for information about further Junos OS configuration.

## Audience

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This guide is designed for network administrators who are installing and maintaining a Juniper Networks SRX210 Services Gateway or preparing a site for device installation. To use this guide, you need a broad understanding of networks in general and the Internet in particular, networking principles, and network configuration. Any detailed discussion of these concepts is beyond the scope of this guide.

## Documentation Conventions

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[Table 1 on page x](#) defines the notice icons used in this guide.

Table 1: Notice Icons

| Icon  | Meaning            | Description   |
|---|--------------------|---|
|  | Informational note | Indicates important features or instructions.                               |
|  | Caution            | Indicates a situation that might result in loss of data or hardware damage. |
|  | Warning            | Alerts you to the risk of personal injury or death.                         |
|  | Laser warning      | Alerts you to the risk of personal injury from a laser.                     |

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

Table 2: Text and Syntax Conventions

| Convention                   | Description   | Examples   |
|------------------------------|---|--|
| <b>Bold text like this</b>   | Represents text that you type.  | To enter configuration mode, type the <b>configure</b> command:<br><br><code>user@host&gt; configure</code>  |
| Fixed-width text like this   | Represents output that appears on the terminal screen.  | <code>user@host&gt; show chassis alarms</code><br><code>No alarms currently active</code>  |
| <i>Italic text like this</i> | <ul style="list-style-type: none"> <li>Introduces or emphasizes important new terms.</li> <li>Identifies guide names.</li> <li>Identifies RFC and Internet draft titles.</li> </ul> | <ul style="list-style-type: none"> <li>A policy <i>term</i> is a named structure that defines match conditions and actions.</li> <li><i>Junos OS CLI User Guide</i></li> <li><i>RFC 1997, BGP Communities Attribute</i></li> </ul>         |
| <i>Italic text like this</i> | Represents variables (options for which you substitute a value) in commands or configuration statements.  | Configure the machine's domain name:<br><br><code>[edit]</code><br><code>root@# set system domain-name <i>domain-name</i></code>   |
| Text like this               | Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.                           | <ul style="list-style-type: none"> <li>To configure a stub area, include the <b>stub</b> statement at the <code>[edit protocols ospf area area-id]</code> hierarchy level.</li> <li>The console port is labeled <b>CONSOLE</b>.</li> </ul> |
| < > (angle brackets)         | Encloses optional keywords or variables.  | <code>stub &lt;default-metric <i>metric</i>&gt;;</code>  |

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

| Convention                     | Description  | Examples  |
|--------------------------------|--|---|
| (pipe symbol)                  | Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity. | <b>broadcast   multicast</b><br><br><i>(string1   string2   string3)</i>  |
| # (pound sign)                 | Indicates a comment specified on the same line as the configuration statement to which it applies.   | <b>rsvp { # Required for dynamic MPLS only</b>  |
| [ ] (square brackets)          | Encloses a variable for which you can substitute one or more values.   | <b>community name members [ community-ids ]</b>   |
| Indentation and braces ( { } ) | Identifies a level in the configuration hierarchy.   | <b>[edit]</b><br>routing-options {<br>static {<br>route default {<br>nexthop <i>address</i> ;<br>retain;<br>}<br>}<br>}   |
| ;(semicolon)                   | Identifies a leaf statement at a configuration hierarchy level.  |   |
| <b>GUI Conventions</b>         |  |   |
| <b>Bold text like this</b>     | Represents graphical user interface (GUI) items you click or select.   | <ul style="list-style-type: none"> <li>In the Logical Interfaces box, select <b>All Interfaces</b>.</li> <li>To cancel the configuration, click <b>Cancel</b>.</li> </ul> |
| > (bold right angle bracket)   | Separates levels in a hierarchy of menu selections.  | In the configuration editor hierarchy, select <b>Protocols&gt;Ospf</b> .  |

## SRX Series Documentation and Release Notes

For a list of related SRX Series documentation, see <http://www.juniper.net/techpubs/hardware/srx-series-main.html>.

If the information in the latest *SRX Series Release Notes* differs from the information in the documentation, follow the *SRX Series Release Notes*.

## Obtaining Documentation

To obtain the most current version of all Juniper Networks technical documentation, see the products documentation page on the Juniper Networks web site at <http://www.juniper.net/techpubs>.

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Copies of the Management Information Bases (MIBs) available in a software release are included on the documentation CDs and at <http://www.juniper.net/>.

## Documentation Feedback

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- Document name
- Document part number
- Page number
- Software release version (not required for *Network Operations Guides [NOGs]*)

## Requesting Technical Support

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

- JTAC policies- For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at <http://www.juniper.net/customers/support/downloads/710059.pdf>.
- Product warranties- For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC Hours of Operation- The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

### Self-Help Online Tools and Resources

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

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://www.juniper.net/alerts/>

- Join and participate in the Juniper Networks Community Forum:  
<http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Manager: <http://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) tool located at <https://tools.juniper.net/SerialNumberEntitlementSearch/>.

### **Opening a Case with JTAC**

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

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

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



## PART 1

# SRX210 Services Gateway Overview

- Introduction to the SRX210 Services Gateway on page 3
- SRX210 Services Gateway Hardware Components and Specifications on page 7
- SRX210 Services Gateway 3G USB Modem on page 23
- SRX210 Services Gateway Power over Ethernet Support on page 25
- SRX210 Services Gateway Mini-Physical Interface Modules on page 29





## CHAPTER 1

# Introduction to the SRX210 Services Gateway

This chapter includes the following topics:

- [SRX210 Services Gateway Description on page 3](#)
- [SRX210 Services Gateway Hardware Features on page 4](#)

## SRX210 Services Gateway Description

---

This topic includes the following sections:

- [About the SRX210 Services Gateway on page 3](#)
- [SRX210 Services Gateway Models on page 3](#)
- [Accessing the SRX210 Services Gateway on page 4](#)

### About the SRX210 Services Gateway

The Juniper Networks SRX210 Services Gateway offers complete functionality and flexibility for delivering secure and reliable data, along with multiple interfaces that support WAN and LAN connectivity and Power over Ethernet (PoE).

The SRX210 Services Gateway provides Internet Protocol Security (IPsec), virtual private network (VPN), and firewall services for small and medium-sized companies and enterprise branch and remote offices. Additional security features also include Unified Threat Management (UTM), which consists of IPS antispam, antivirus, and Web filtering.

The SRX210 Services Gateway runs the Junos operating system (Junos OS).

### SRX210 Services Gateway Models

[Table 3 on page 3](#) lists the SRX210 Services Gateway models with 1 GB memory. For information on the models with 2 GB memory, see [SRX210 Services Gateway Hardware Guide for HE2 Model Numbers](#).

**Table 3: SRX210 Services Gateway Models**

| Product Name            | Device Type | Model Number |
|-------------------------|-------------|--------------|
| SRX210 Services Gateway | Low Memory  | SRX210B      |

Table 3: SRX210 Services Gateway Models (*continued*)

| Product Name                                      | Device Type   | Model Number     |
|---|---|------------------|
| SRX210 Services Gateway                           | High Memory   | SRX210H          |
| SRX210 Services Gateway with PoE                  | High Memory with Power over Ethernet (PoE)            | SRX210H-POE      |
| SRX210 Services Gateway (Enhanced)                | Low Memory (Enhanced)                                 | SRX210BE         |
| SRX210 Services Gateway High Memory (Enhanced)    | High Memory (Enhanced)                                | SRX210HE         |
| SRX210 Services Gateway (Enhanced) TAA Compliant  | High Memory (Enhanced + TAA Compliant)                | SRX210HE-TAA     |
| SRX210 Services Gateway with PoE (Enhanced)       | High Memory with Power over Ethernet (Enhanced + PoE) | SRX210HE-POE     |
| SRX210 Services Gateway with PoE (Enhanced + TAA) | High Memory with PoE (Enhanced + TAA Compliant)       | SRX210HE-POE-TAA |

All SRX210 Services Gateways run the Junos operating system (Junos OS).

## Accessing the SRX210 Services Gateway

Two user interfaces are available for monitoring, configuring, troubleshooting, and managing the SRX210 Services Gateway:

- **J-Web interface:** Web-based graphical interface that allows you to operate a services gateway without commands. The J-Web interface provides access to all Junos functionality and features.
- **Junos OS command-line interface (CLI):** Juniper Networks command shell that runs on top of a UNIX-based operating system kernel. The CLI is a straightforward command interface. On a single line, you type commands that are executed when you press the Enter key. The CLI provides command Help and command completion.

### Related Documentation

- [SRX210 Services Gateway Specifications on page 7](#)
- [SRX210 Services Gateway Hardware Features on page 4](#)

## SRX210 Services Gateway Hardware Features

Table 4 on page 5 lists the hardware features supported on the SRX210 Services Gateway models with 1 GB memory. For information on the models with 2 GB memory, see [SRX210 Services Gateway Hardware Guide for HE2 Model Numbers](#).

Table 4: SRX210 Services Gateway Hardware Features

| Feature  | SRX210 Services Gateway Low Memory  | SRX210 Services Gateway High Memory                                       | SRX210 Services Gateway Power over Ethernet                               |
|--|---|---|---|
| DDR memory   | 512 MB  | 1 GB  | 1 GB  |
| PoE support  | No  | No  | Yes   |
| Power supply adapter   | 60 watts  | 60 watts  | 150 watts   |
| <b>NOTE:</b> The SRX210 Services Gateway uses a single power supply. |   |   |   |
| AC input voltage   | 100 to 240 VAC  | 100 to 240 VAC  | 100 to 240 VAC  |
| Gigabit Ethernet ports   | 2   | 2   | 2   |
| Fast Ethernet ports  | 6   | 6   | 6   |
| Console port   | 1   | 1   | 1   |
| USB ports  | 2   | 2   | 2   |
| Mini-PIM slots   | 1   | 1   | 1   |
| LEDs   | Status, Alarm, HA, Power, Mini-PIMs, 3G ExpressCard, Port (TX/RX and PoE) | Status, Alarm, HA, Power, Mini-PIMs, 3G ExpressCard, Port (TX/RX and PoE) | Status, Alarm, HA, Power, Mini-PIMs, 3G ExpressCard, Port (TX/RX and PoE) |
| NAND flash   | 1 GB  | 1 GB  | 1 GB  |
| Fans   | 1   | 1   | 1   |



**NOTE:** The PoE LED is enabled only on the PoE model of the SRX210 Services Gateway. For non-PoE services gateways, the PoE LED remains off.

For more details on the SRX210 Services Gateway software features and licenses, see the following guides:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)
- [SRX210 Services Gateway Description on page 3](#)
- [SRX210 Services Gateway Specifications on page 7](#)

#### Related Documentation



## CHAPTER 2

# SRX210 Services Gateway Hardware Components and Specifications

This chapter includes the following topics:

- SRX210 Services Gateway Specifications on page 7
- SRX210 Services Gateway Front Panel and Back Panel Views (Low Memory, High Memory, and PoE Versions) on page 9
- SRX210 Services Gateway Built-In Interfaces on page 11
- SRX210 Services Gateway LEDs on page 13
- SRX210 Services Gateway Boot Devices and Dual-Root Partitioning Scheme on page 17
- SRX210 Services Gateway Cooling System on page 18
- SRX210 Services Gateway Power Supply on page 19

## SRX210 Services Gateway Specifications

---

The SRX210 Services Gateway chassis is a rigid sheet metal structure of 1 rack unit (U) height that houses all the other hardware components.

Figure 1 on page 7 shows the SRX210 Services Gateway chassis (for low memory, high memory, and PoE models).

Figure 1: SRX210 Services Gateway

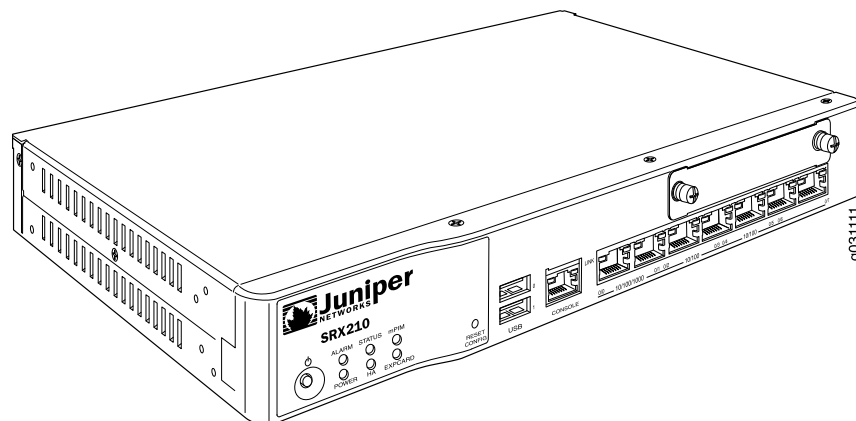


Table 5 on page 8 provides information on the physical specifications of the device.

**Table 5: SRX210 Services Gateway Specifications**

| Specification             | Value  |
|---------------------------|--|
| Dimensions (H x W x D)    | 1.73 in. x 11.02 in. x 7.13 in.<br>44 mm x 280 mm x 181 mm   |
| Chassis weight            | <ul style="list-style-type: none"> <li>• 3.46 lb (1.57 kg) for SRX210 Services Gateway without PoE (no interface modules)</li> <li>• 3.55 lb (1.61 kg) for SRX210 Services Gateway with PoE (no interface modules)</li> </ul>  |
| Average power consumption | <ul style="list-style-type: none"> <li>• SRX210 Services Gateway Low Memory model: 27 watts</li> <li>• SRX210 Services Gateway High Memory model: 28 watts</li> <li>• SRX210 Services Gateway PoE model: 34 watts (excluding PoE load)</li> </ul>  |
| Altitude                  | No performance degradation up to 10,000 ft (3048 m) for SRX210 Services Gateway Low Memory, High Memory, and PoE models  |
| Relative humidity         | 5% to 90%, noncondensing   |
| Temperature               | <p>Normal operation ensured in temperature range of 32°F (0°C) to 104°F (+40°C)</p> <p>Nonoperating storage temperature in shipping container: -40°F (-40°C) to 158°F (70°C)</p>   |
| Maximum thermal output    | <p><b>NOTE:</b> These specifications are estimates and subject to change.</p> <ul style="list-style-type: none"> <li>• SRX210 Services Gateway Low Memory: 120 BTU/hour</li> <li>• SRX210 Services Gateway High Memory: 126 BTU/hour</li> <li>• SRX210 Services Gateway with PoE: 164 BTU/hour (Excluding PoE load)</li> </ul> |
| Noise level               | 29.1 dB per EN ISO 7779  |



**CAUTION:** Before removing or installing components of a functioning services gateway, attach an electrostatic discharge (ESD) strap to an ESD point and place the other end of the strap around your bare wrist. Failure to use an ESD strap could result in damage to the services gateway.

- Related Documentation**
- [SRX210 Services Gateway Description on page 3](#)
  - [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)
  - [Monitoring the SRX210 Services Gateway Components Using LEDs on page 99](#)
  - [SRX210 Services Gateway Electrical Safety Guidelines and Warnings on page 128](#)

## SRX210 Services Gateway Front Panel and Back Panel Views (Low Memory, High Memory, and PoE Versions)

This topic contains views of the front panel and back panel of the SRX210 Services Gateway high memory, low memory, and Power over Ethernet (PoE) versions. This topic includes the following sections:

- [SRX210 Services Gateway Front Panel on page 9](#)
- [SRX210 Services Gateway Back Panel on page 10](#)

### SRX210 Services Gateway Front Panel

Figure 2 on page 9 shows the front panel of the SRX210 Services Gateway.

Figure 2: SRX210 Services Gateway Front Panel

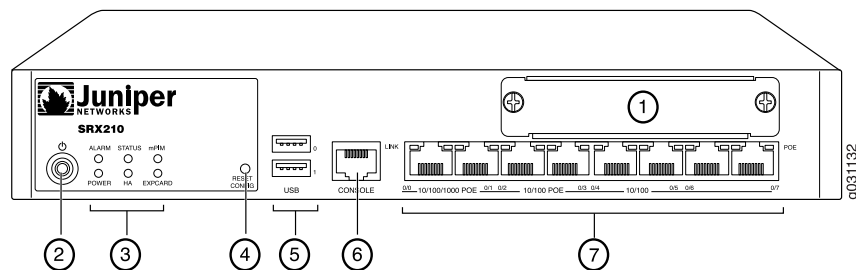


Table 6 on page 9 lists the front panel components of the services gateway.



**NOTE:** The numbers in Figure 2 on page 9 correspond to the numbers in Table 6 on page 9.

Table 6: SRX210 Services Gateway Front Panel Components

| Number | Component  |
|--------|--|
| 1      | Mini-PIM slot  |
| 2      | Power button   |
| 3      | LEDs: Status, Alarm, Power, 3G ExpressCard, Mini-PIM, HA |
| 4      | Reset Config button                                      |

**Table 6: SRX210 Services Gateway Front Panel Components (continued)**

| Number | Component                                      |
|--------|--|
| 5      | Universal Serial Bus (USB) ports               |
| 6      | Console port                                   |
| 7      | Gigabit Ethernet ports and Fast Ethernet ports |

For more information on the front panel components, see the following topics:

- [SRX210 Services Gateway Built-In Interfaces on page 11](#)
- [SRX210 Services Gateway LEDs on page 13](#)
- [SRX210 Services Gateway Boot Devices and Dual-Root Partitioning Scheme on page 17](#)

### SRX210 Services Gateway Back Panel

Figure 3 on page 10 illustrates the back panel of the SRX210 Services Gateway.

**Figure 3: SRX210 Services Gateway Back Panel**

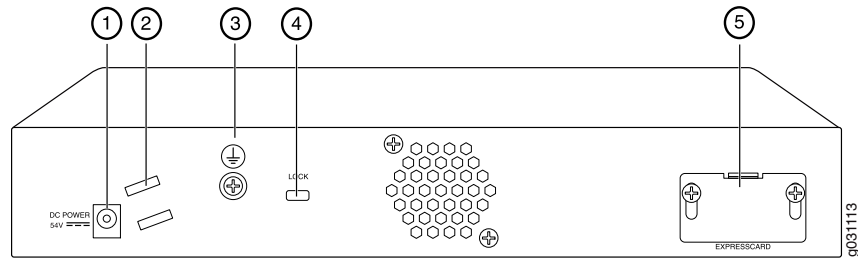


Table 7 on page 10 lists the back panel components of the SRX210 Services Gateway.



**NOTE:** The numbers in Figure 3 on page 10 correspond to the numbers in Table 7 on page 10.

**Table 7: SRX210 Services Gateway Back Panel Components**

| Number | Component          |
|--------|--------------------|
| 1      | Power supply point |
| 2      | Cable tie holder   |
| 3      | Grounding point    |
| 4      | Lock               |
| 5      | ExpressCard slot   |





**NOTE:** The cable tie holder provides support to hold the power cord on to the power supply point.

The lock provides the capability to lock and secure the device to the installation site.

**Related Documentation**

- [SRX210 Services Gateway Built-In Interfaces on page 11](#)
- [SRX210 Services Gateway LEDs on page 13](#)
- [SRX210 Services Gateway Boot Devices and Dual-Root Partitioning Scheme on page 17](#)
- [SRX210 Services Gateway Cooling System on page 18](#)
- [SRX210 Services Gateway Power Supply on page 19](#)

## SRX210 Services Gateway Built-In Interfaces

Table 8 on page 11 summarizes the interface ports supported on the SRX210 Services Gateway.

**Table 8: SRX210 Services Gateway Built-In Hardware Interfaces**

| Interface Type   | Specifications   | Description  |
|------------------|--|--|
| Gigabit Ethernet | <ul style="list-style-type: none"> <li>• Consist of two fixed ports</li> <li>• Are labeled as port 0/0 and port 0/1 on the front panel</li> <li>• Use an RJ-45 connector</li> <li>• Provide link speeds of 10/100/1000 Mbps</li> <li>• Operate in full-duplex and half-duplex modes</li> <li>• Support flow control</li> <li>• Support autonegotiation and autosensing</li> </ul> <p>Both Gigabit Ethernet ports support Power over Ethernet on the PoE models of the SRX210 Services Gateway.</p> | <p>The Gigabit Ethernet ports can be used as follows:</p> <ul style="list-style-type: none"> <li>• To function as front-end network ports</li> <li>• To provide LAN and WAN connectivity to hubs, switches, local servers, and workstations</li> <li>• To forward incoming data packets to the device</li> <li>• To receive outgoing data packets from the device</li> <li>• To connect power devices to receive network connectivity and electric power (PoE functionality) (For the PoE model of the SRX210 Services Gateway)</li> </ul> |

**Table 8: SRX210 Services Gateway Built-In Hardware Interfaces (*continued*)**

| Interface Type             | Specifications  | Description  |
|----------------------------|---|--|
| Fast Ethernet              | <ul style="list-style-type: none"> <li>• Consist of six fixed ports</li> <li>• Are labeled as port 0/2 to port 0/7 on the front panel</li> <li>• Provide link speeds of 10/100 Mbps</li> <li>• Operate in full-duplex and half-duplex modes</li> </ul> <p>The first two Fast Ethernet ports support Power over Ethernet on the SRX210 Services Gateway (PoE version).</p> | <p>The Fast Ethernet ports can be used as follows:</p> <ul style="list-style-type: none"> <li>• To provide LAN connectivity to hubs, switches, local servers, and workstations</li> <li>• To forward incoming data packets to the device</li> <li>• To receive outgoing data packets from the device</li> <li>• To connect power devices to receive network connectivity and electric power (PoE functionality) (For the PoE model of the SRX210 Services Gateway)</li> </ul>  |
| Universal Serial Bus (USB) | <ul style="list-style-type: none"> <li>• Consist of two ports</li> <li>• Function in full speed and high speed</li> <li>• Are compliant with USB revision 2.0</li> </ul>  | <p>The USB ports can be used as follows:</p> <ul style="list-style-type: none"> <li>• To support a USB storage device that functions as a secondary boot device in case of the internal flash failure on startup, if the USB storage device is installed and configured</li> </ul> <p><b>NOTE:</b> You must install and configure the USB storage device on the USB port to use it as secondary boot device. Also, the USB device must have Junos installed.</p> <ul style="list-style-type: none"> <li>• To provide the USB interfaces that are used to communicate with many types of Juniper supported USB storage devices.</li> </ul> <p>Contact your Juniper Networks customer service representative for more information.</p> |

**Table 8: SRX210 Services Gateway Built-In Hardware Interfaces (continued)**

| Interface Type                            | Specifications   | Description   |
|---|--|---|
| Console                                   | <ul style="list-style-type: none"> <li>Consists of one port</li> <li>Uses an RJ-45 serial cable connector</li> <li>Supports the RS-232 (EIA-232) standard</li> </ul> | <p>The console port can be used as follows:</p> <ul style="list-style-type: none"> <li>To provide the console interface</li> <li>To function as a management port to log into a device directly</li> <li>To configure the device using the CLI</li> </ul>   |
| Mini-Physical Interface Module (Mini-PIM) | Consists of one slot for a Mini-PIM  | <p>The Mini-PIM slot can be used to provide LAN and WAN functionality along with connectivity to various media types.</p> <p>For more information about the supported Mini-PIMs, see the <a href="#">SRX Series Services Gateways for the Branch Physical Interface Modules Hardware Guide</a>.</p> |



**NOTE:** We strongly recommend that only transceivers provided by Juniper Networks be used on an SRX210 Services Gateway. We cannot guarantee that the interface module will operate correctly if third-party transceivers are used. Contact Juniper Networks for the correct transceiver part number for your device.

**Related Documentation**

- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)
- [SRX210 Services Gateway LEDs on page 13](#)
- [SRX210 Services Gateway Boot Devices and Dual-Root Partitioning Scheme on page 17](#)
- [SRX210 Services Gateway Cooling System on page 18](#)
- [SRX210 Services Gateway Power Supply on page 19](#)

## SRX210 Services Gateway LEDs

This topic includes the following sections:

- [Front Panel LEDs on page 14](#)
- [Ethernet Port LEDs on page 15](#)

## Front Panel LEDs

Figure 4 on page 14 shows the SRX210 Services Gateway front panel LEDs.

Table 9 on page 14 lists the LED indicators on the SRX210 Services Gateway front panel.

Figure 4: SRX210 Services Gateway Front Panel LEDs

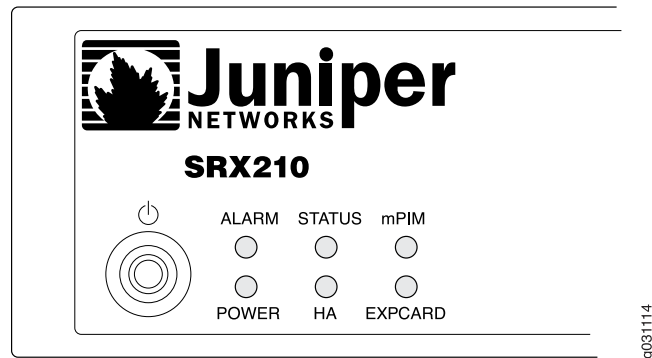


Table 9: SRX210 Services Gateway Front Panel Components LEDs

| Component           | Description  | Usage  |
|---------------------|--|--|
| <i>Alarm</i> LED    | <p>The <i>Alarm</i> LED has the following indicator colors:</p> <ul style="list-style-type: none"> <li>• Solid red indicates a major alarm.</li> <li>• Solid amber indicates a minor alarm.</li> <li>• Off indicates that the device is starting up.</li> </ul> <p><b>NOTE:</b> When the system is up and running, if the Alarm LED is off, it indicates that no alarms are present on the device.</p> | The <i>Alarm</i> LED can be used to gather information on major or minor alarms or to determine if the device is functioning normally. |
| <i>Status</i> LED   | <p>The <i>Status</i> LED has the following indicator colors:</p> <ul style="list-style-type: none"> <li>• Solid green indicates that the device is functioning normally.</li> <li>• Solid amber indicates that the device is starting up.</li> <li>• Solid red indicates that the device has failed.</li> </ul>  | The <i>Status</i> LED can be used to determine whether the device is starting up, is functioning normally, or has failed.              |
| <i>Mini-PIM</i> LED | <p>The <i>Mini-PIM</i> LED has the following indicator colors:</p> <ul style="list-style-type: none"> <li>• Solid green indicates that the Mini-PIM is functioning normally.</li> <li>• Off indicates that the Mini-PIM is not present or not detected by the device.</li> </ul>   | The <i>Mini-PIM</i> LED can be used to determine if the Mini-PIM is present and detected by the device.                                |

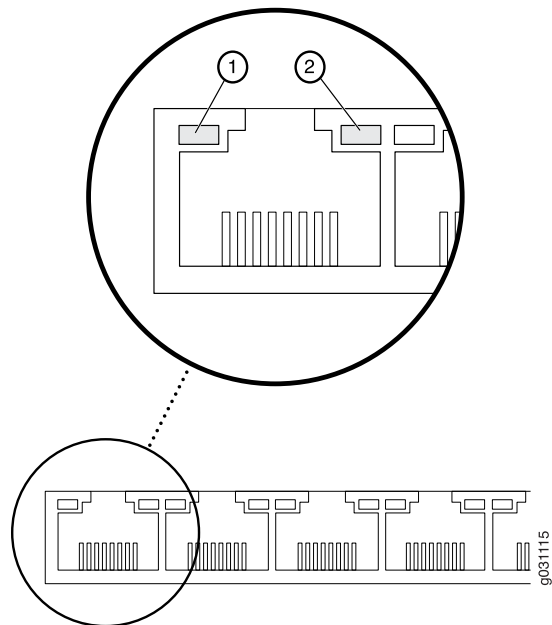
**Table 9: SRX210 Services Gateway Front Panel Components LEDs (continued)**

| Component                 | Description  | Usage  |
|---------------------------|--|--|
| <i>Power</i> LED          | <p>The <i>Power</i> LED has the following indicator colors:</p> <ul style="list-style-type: none"> <li>• Solid green indicates that the device is functioning normally.</li> <li>• Solid amber indicates that the Power button has been pressed and quickly released.</li> <li>• Off indicates that the device is not receiving power.</li> </ul>  | The <i>Power</i> LED can be used to determine if the device is receiving power.                |
| <i>HA</i> LED             | <p>The <i>HA</i> LED has the following indicator colors:</p> <ul style="list-style-type: none"> <li>• Solid green indicates that all HA links are available.</li> <li>• Solid red indicates that the HA links are not working as expected.</li> <li>• Solid amber indicates that some HA links are not working as expected.</li> <li>• Off indicates that HA is not enabled.</li> </ul>  | The <i>HA</i> LED can be used to determine if high availability is enabled on the device.      |
| <i>3G ExpressCard</i> LED | <p>The <i>3G ExpressCard</i> LED has the following indicator colors:</p> <ul style="list-style-type: none"> <li>• Solid green indicates that the ExpressCard is plugged in and the data call is established.</li> <li>• Solid red: <ul style="list-style-type: none"> <li>• Indicates that the ExpressCard plugged in is faulty or not detected by the device.</li> <li>• Indicates that the ExpressCard is plugged in but not registered with the network.</li> </ul> </li> <li>• Solid amber indicates that the ExpressCard is plugged in and registered with the network.</li> <li>• Off indicates that the ExpressCard is not plugged in.</li> </ul> | The <i>3G ExpressCard</i> LED provides information on the functioning of the ExpressCard slot. |

## Ethernet Port LEDs

On the SRX210 Services Gateway, each Gigabit Ethernet port and Fast Ethernet port has two LEDs. [Figure 5 on page 16](#) shows the SRX210 Services Gateway Ethernet port LEDs.

Figure 5: SRX210 Services Gateway Ethernet Port LEDs



**NOTE:** The numbers in [Figure 5 on page 16](#) correspond to the numbers in [Table 10 on page 16](#).

[Table 10 on page 16](#) describes the built-in Ethernet port LEDs.

Table 10: SRX210 Services Gateway Built-In Ethernet Port LEDs

| Number | Function       | Color | State    | Description  |
|--------|----------------|-------|----------|--|
| 1      | TX/RX/LINK LED | Green | Blinking | Link is active. Data communication is taking place.  |
|        |                |       | Solid    | Link is active. No data communication is taking place.   |
|        |                |       | Unlit    | Link is inactive.  |
| 2      | PoE LED        | Green | Solid    | Power over Ethernet is on and the connected power device is receiving power.   |
|        |                |       | Yellow   | PoE (Power over Ethernet) is on, but the connected power device is not receiving power (device fault or not enough power). |
|        |                |       | Unlit    | PoE is off.  |



**NOTE:** The PoE LED is enabled only on the Power over Ethernet (PoE) model of the SRX210 Services Gateway. For non-PoE models, the PoE LED remains off.

#### Related Documentation

- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)
- [SRX210 Services Gateway Built-In Interfaces on page 11](#)
- [SRX210 Services Gateway Boot Devices and Dual-Root Partitioning Scheme on page 17](#)
- [SRX210 Services Gateway Cooling System on page 18](#)
- [SRX210 Services Gateway Power Supply on page 19](#)

## SRX210 Services Gateway Boot Devices and Dual-Root Partitioning Scheme

This topic includes the following sections:

- [Boot Devices on page 17](#)
- [Dual-Root Partitioning Scheme on page 17](#)

### Boot Devices

The SRX210 Services Gateway can boot from two devices:

- Internal NAND Flash (default; always present)
- USB storage key (alternate)

### Dual-Root Partitioning Scheme

The dual-root partitions allow the SRX210 Services Gateways to remain functional if there is file system corruption and facilitate easy recovery of the corrupted file system.

The dual-root partitioning scheme keeps the primary and backup Junos OS images in two independently bootable root partitions. If the primary root partition becomes corrupted, the system will be able to boot from the backup Junos OS image located in the other root partition and remain fully functional.

When the SRX210 Services Gateway powers up, it tries to boot the Junos OS from the default storage media. If the device fails to boot from the default storage media, it tries to boot from the alternate storage media. With the dual-root partitioning scheme, the SRX210 Services Gateway first tries to boot the Junos OS from the primary root partition and then from the backup root partition on the default storage media. If both primary and backup root partitions of a media fail to boot, then the device tries to boot from the next available type of storage media. The SRX210 Services Gateway remains fully functional even if it boots the Junos OS from the backup root partition of storage media.



**NOTE:** SRX210 Services Gateway that ship from the factory with Junos OS Release 10.0 is formatted with the dual-root partitioning scheme.

Existing SRX210 Services Gateways that are running Junos OS Release 9.6 or earlier use the single-root partitioning scheme.

While upgrading these devices to Junos OS Release 10.0, you can choose to format the storage media with dual-root partitions (strongly recommended) or retain the existing single-root partitioning.

For instructions on upgrading to Junos OS Release 10.0, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

**Related  
Documentation**

- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)
- [SRX210 Services Gateway Power Supply on page 19](#)

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## SRX210 Services Gateway Cooling System

The cooling system for the SRX210 Services Gateway with Low Memory, High Memory, or Power over Ethernet (PoE) includes one fixed fan.

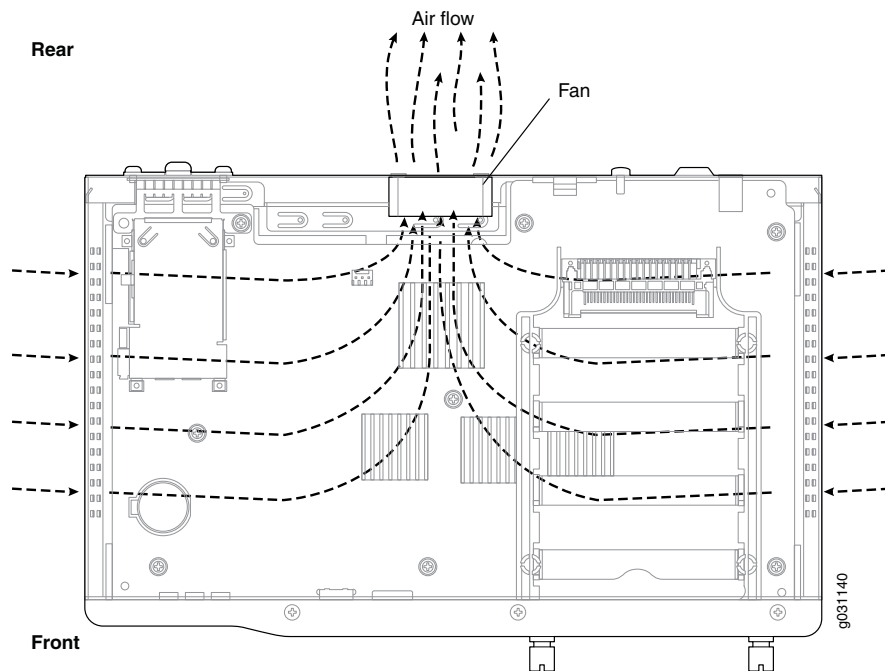
The cooling system works from side-to-rear in the services gateway chassis. The fans draw air through vents along the left and right sides of the chassis and exhaust the air through the rear side of the chassis.

The airflow produced by the fans keeps device components within the acceptable temperature range.

[Figure 6 on page 19](#) shows the airflow through the chassis for the SRX210 Services Gateway with Low Memory, High Memory, and PoE models.



Figure 6: Airflow Through the Chassis



**Related Documentation**

- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\)](#) on page 9
- [SRX210 Services Gateway Power Supply](#) on page 19

## SRX210 Services Gateway Power Supply

The power supply for the SRX210 Services Gateway is external. You must use the power supply adapter provided by Juniper Networks to provide power to the services gateway.

Figure 7 on page 20 shows the label for the 12 V power supply.

Figure 7: SRX210 Services Gateway — 12 V Power Supply

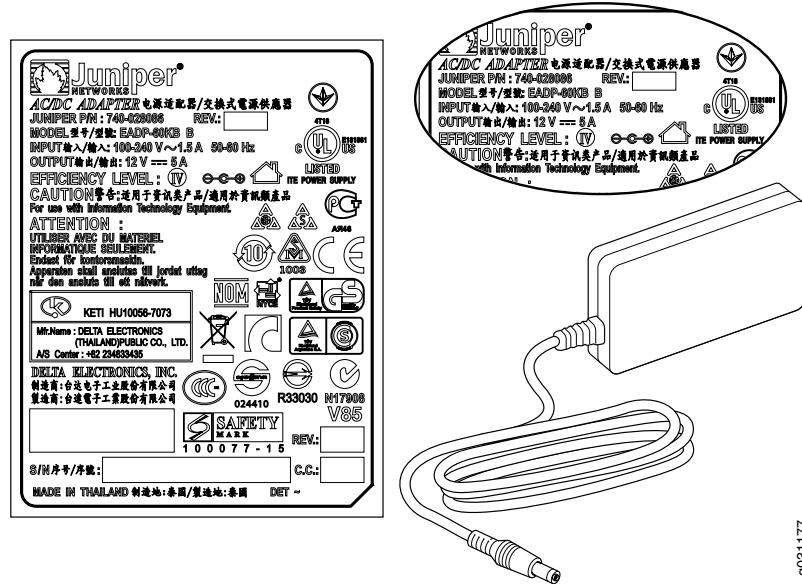


Figure 8 on page 20 shows the label for the 48 V power supply.

Figure 8: SRX210 Services Gateway — 48 V Power Supply

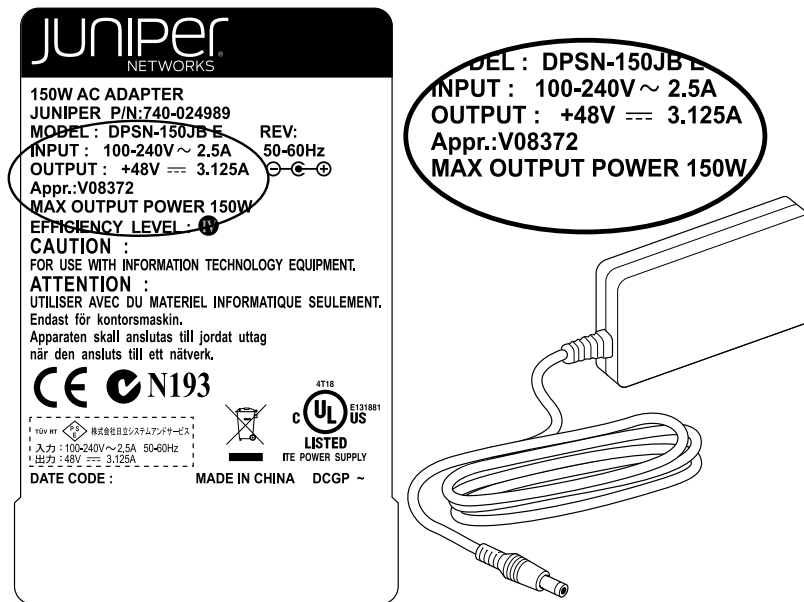


Figure 9 on page 21 shows the label for the 54 V power supply.

Figure 9: SRX210 Services Gateway — 54 V Power Supply

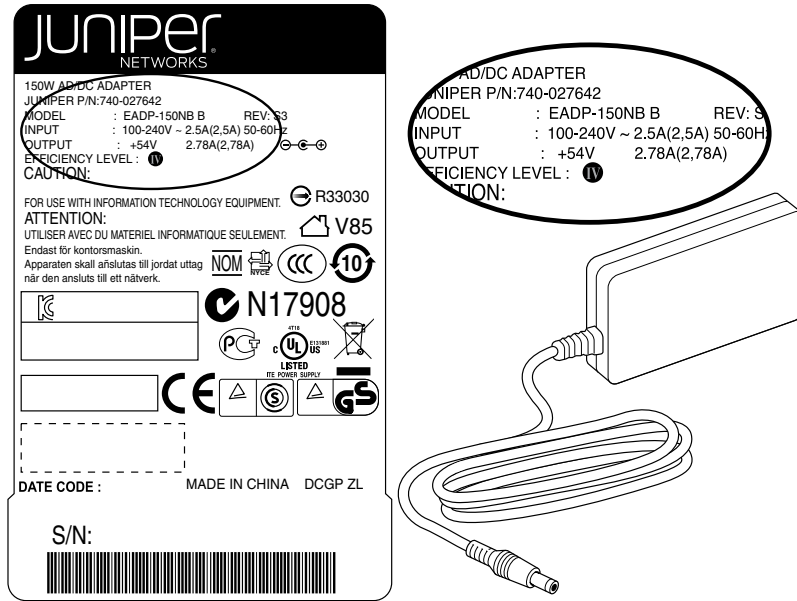
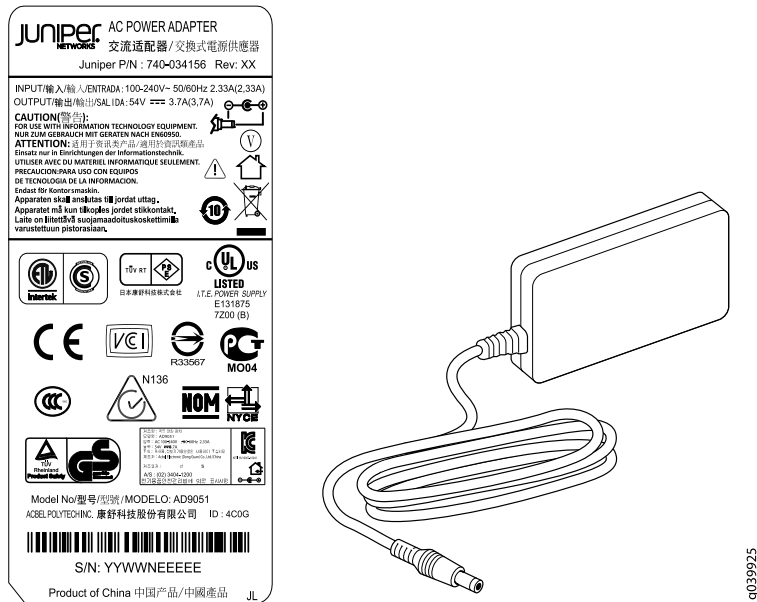


Figure 10 on page 21 shows the label for the 200 W, 54 V power supply.

Figure 10: SRX210 Services Gateway — 200 W, 54 V Power Supply



**Related Documentation**

- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\)](#) on page 9
- [SRX210 Services Gateway Boot Devices and Dual-Root Partitioning Scheme](#) on page 17
- [SRX210 Services Gateway Cooling System](#) on page 18

- [Monitoring the SRX210 Services Gateway Power System on page 104](#)

## CHAPTER 3

# SRX210 Services Gateway 3G USB Modem

This chapter includes the following topics:

- [SRX210 Services Gateway 3G USB Modem Overview on page 23](#)

## SRX210 Services Gateway 3G USB Modem Overview

This topic provides an overview of the SRX210 Services Gateway 3G USB modem. It includes the following sections:

- [Introduction on page 23](#)
- [Supported Modem Types on page 23](#)
- [Using the 3G USB Modem on page 23](#)

### Introduction

Wireless WAN access is becoming widely available and comparably priced to ISDN and DSL. The SRX210 Services Gateway provides support for a wireless interface as a backup for primary interfaces such as Gigabit Ethernet or Fast Ethernet.

To facilitate wireless connectivity, the SRX210 Services Gateway has a USB port on the front panel.

For more information on the SRX210 Services Gateway back panel, see “[SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\)](#)” on page 9.

### Supported Modem Types

For a list of wireless modems supported on the SRX210 Services Gateway, see [KB26116](#).

### Using the 3G USB Modem

A 3G USB modem can be used for wireless connectivity. To use the USB modem, plug it into the USB port 1 of the SRX210 Services Gateway and execute the following configuration command:

```
set chassis routing-engine usb-wwan port 1
```

For more information on configuring the USB modem, see the [Interfaces for Security Devices](#).

- Related Documentation**
- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\)](#) on page 9

## CHAPTER 4

# SRX210 Services Gateway Power over Ethernet Support

This chapter includes the following topics:

- [SRX210 Services Gateway PoE Overview on page 25](#)
- [Configuring PoE Functionality on the SRX210 Services Gateway on page 27](#)

## SRX210 Services Gateway PoE Overview

---

This topic includes the following sections:

- [Introduction on page 25](#)
- [PoE Classes and Power Ratings on page 26](#)

### Introduction

Power over Ethernet (PoE) is the implementation of the IEEE 802.3 AF and IEEE802.3 AT standards that allow both data and electric power to pass over a copper Ethernet LAN cable.

The SRX210 Services Gateway supports PoE on four ports, which supply electric power over the same ports that are used to connect network devices. PoE ports allow you to plug in devices that require both network connectivity and electric power, such as VoIP and IP phones and wireless access points.

You can configure the gateway to act as power sourcing equipment for devices connected on the designated ports.

[Table 11 on page 25](#) lists the SRX210 Services Gateway PoE specifications.

**Table 11: SRX210 Services Gateway PoE Specifications**

| Power Management Schemes | Values   |
|--------------------------|--|
| Supported standards      | <ul style="list-style-type: none"><li>• IEEE 802.3 AF (PoE)</li><li>• IEEE802.3 AT (PoE+)</li><li>• Legacy (pre-standards)</li></ul> |

---

Table 11: SRX210 Services Gateway PoE Specifications (*continued*)

| Power Management Schemes          | Values  |
|-----------------------------------|---|
| Supported ports                   | The following ports support PoE: <ul style="list-style-type: none"> <li>• ge-0/0/0</li> <li>• ge-0/0/1</li> <li>• fe-0/0/2</li> <li>• fe-0/0/3</li> </ul>   |
| Total PoE power sourcing capacity | 50 watts  |
| Per-port power limit              | 30 watts  |
| Power management modes            | <ul style="list-style-type: none"> <li>• Static: power allocated for each interface can be configured</li> <li>• Class: power allocated for interfaces is decided based on the class of powered device connected</li> </ul> |

The IEEE 802.3 AF (PoE) functionality is supported on SRX210 Services Gateway PoE models that have power supply of 48V. The IEEE802.3 AT (PoE+) functionality is supported on SRX210 Services Gateway PoE models that have power supply of 54V. For more information, see [“Adjusting the Power Supply Adapter Tray for the SRX210 Services Gateway for Rack-Mount Installation”](#) on page 54.



## NOTE:

- The PoE+ functionality is available from Junos OS Release 10.2 or later.
- The PoE+ functionality is available only if your gateway is using 54V power supply. You can order the 54V power supply from Juniper Networks. Contact your Juniper Networks customer service representative for more information.

## PoE Classes and Power Ratings

A powered device is classified based on the maximum power that it draws across all input voltages and operational modes. When the class-based power management mode is configured on the services gateway, power is allocated by taking into account the maximum power ratings defined for the different classes of devices.

Table 12 on page 26 lists the classes and their power ratings as specified by the IEEE 802.3 AF standard.

Table 12: PoE Classes and Power Ratings on the SRX210 Services Gateway

| Class | Maximum Power Level Output from the PoE Port |
|-------|--|
| 0     | 15.4 watts                                   |



**Table 12: PoE Classes and Power Ratings on the SRX210 Services Gateway (continued)**

| Class | Maximum Power Level Output from the PoE Port |
|-------|--|
| 1     | 4.0 watts                                    |
| 2     | 7.0 watts                                    |
| 3     | 15.4 watts                                   |
| 4     | 30.0 watts                                   |

**Related Documentation**

- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\)](#) on page 9
- [SRX210 Services Gateway Built-In Interfaces](#) on page 11
- [SRX210 Services Gateway LEDs](#) on page 13
- [SRX210 Services Gateway Mini-Physical Interface Modules](#) on page 29
- [SRX210 Services Gateway 3G USB Modem Overview](#) on page 23

## Configuring PoE Functionality on the SRX210 Services Gateway

To enable the Power over Ethernet (PoE) feature support on your SRX210 Services Gateway, you must configure the services gateway.

You can configure PoE using the Junos OS CLI.

For more details on configuring PoE, see the [Interfaces for Security Devices](#).

**Related Documentation**

- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\)](#) on page 9
- [SRX210 Services Gateway Built-In Interfaces](#) on page 11
- [SRX210 Services Gateway LEDs](#) on page 13



## CHAPTER 5

# SRX210 Services Gateway Mini-Physical Interface Modules

This chapter includes the following topic:

- [SRX210 Services Gateway Mini-Physical Interface Modules on page 29](#)

## SRX210 Services Gateway Mini-Physical Interface Modules

The SRX210 Services Gateway supports Mini-Physical Interface Modules (Mini-PIMs).

A Mini-PIM is a network interface card (NIC) that is installed on the services gateway to provide physical connections to a LAN or a WAN. The Mini-PIM receives incoming packets from the network and transmits outgoing packets to the network. The Mini-PIMs supported on the services gateway are field-replaceable. The field replaceable Mini-PIMs are removable and insertable into the device. You can install a Mini-PIM into the Mini-PIM slot available on the front panel of the services gateway chassis.

For more information about supported Mini-PIMs and the minimum supported Junos OS release, see *SRX Series Services Gateway Interface Modules and Compatibility*

For more information about how to install and configure Mini-PIMs, refer to the [SRX Series Services Gateways for the Branch Physical Interface Modules Hardware Guide](#).



**CAUTION:** The Mini-PIMs available on the SRX210 Services Gateway are not hot-swappable. You need to power off the device before removing or installing Mini-PIMs.

### Related Documentation

- [SRX210 Services Gateway Description on page 3](#)
- [SRX210 Services Gateway Specifications on page 7](#)
- [SRX210 Services Gateway Hardware Features on page 4](#)
- [SRX210 Services Gateway Built-In Interfaces on page 11](#)
- [Physical Interface Modules](#)



## PART 2

# Setting Up the SRX210 Services Gateway

- [Preparing the Site for the SRX210 Services Gateway Installation on page 33](#)
- [Installation Overview for the SRX210 Services Gateway on page 41](#)
- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Preparing the SRX210 Services Gateway for Installation on page 49](#)
- [Installing the SRX210 Services Gateway on page 53](#)
- [Connecting, Grounding, and Powering On the SRX210 Services Gateway on page 63](#)
- [SRX210 Services Gateway Autoinstallation on page 71](#)
- [Connecting the SRX210 Services Gateway to Management Devices on page 73](#)
- [Performing Initial Software Configuration on the SRX210 Services Gateway on page 81](#)



## CHAPTER 6

# Preparing the Site for the SRX210 Services Gateway Installation

This chapter provides a checklist to help you prepare your site for installation of the SRX210 Services Gateway. Read this section to make sure that your site has the proper operating environment and equipment.

This chapter includes the following topics:

- [Site Preparation Checklist for the SRX210 Services Gateway on page 33](#)
- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)
- [SRX210 Services Gateway Cabinet Requirements on page 35](#)
- [SRX210 Services Gateway Rack Requirements on page 36](#)
- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)
- [SRX210 Services Gateway Electrical and Power Requirements on page 38](#)

## Site Preparation Checklist for the SRX210 Services Gateway

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The checklist in [Table 13 on page 33](#) summarizes the tasks you need to perform when preparing a site for installing the SRX210 Services Gateway.

**Table 13: Site Preparation Checklist for the SRX210 Services Gateway Installation**

| Item or Task  | Additional Information                             | Date and Notes |
|---|--|----------------|
| <b>Environment</b>  |  |                |
| Verify that environmental factors such as temperature and humidity do not exceed device tolerances. | "SRX210 Services Gateway Specifications" on page 7 |                |
| <b>Power</b>  |  |                |

**Table 13: Site Preparation Checklist for the SRX210 Services Gateway Installation (continued)**

| Item or Task  | Additional Information  | Date and Notes |
|---|---|----------------|
| <ul style="list-style-type: none"> <li>• Measure distance between external power sources and device installation site.</li> <li>• Locate sites for connection of system grounding.</li> <li>• Calculate the power consumption and requirements.</li> </ul>  | <p>“SRX210 Services Gateway Site Electrical Wiring Guidelines” on page 135</p> <p>“SRX210 Services Gateway Power Specifications and Requirements” on page 137</p> |                |
| <b>Rack Installation</b>  |   |                |
| <ul style="list-style-type: none"> <li>• Verify that your rack meets the minimum requirements.</li> <li>• Plan rack location, including required space clearances.</li> <li>• Secure the rack to the floor and building structure.</li> </ul>   | <p>“SRX210 Services Gateway Rack Requirements” on page 36</p>   |                |
| <b>Cabinet Installation</b>   |   |                |
| <ul style="list-style-type: none"> <li>• Verify that your cabinet meets the minimum requirements.</li> <li>• Plan the cabinet location, including required space clearances.</li> </ul>   | <p>“SRX210 Services Gateway Cabinet Requirements” on page 35</p>  |                |
| <b>Wall Installation</b>  |   |                |
| <ul style="list-style-type: none"> <li>• Verify that the area selected meets the minimum requirements.</li> <li>• Verify that you have the required hardware to proceed with the installation.</li> </ul>   | <p>“Preparing the SRX210 Services Gateway for Wall-Mount Installation” on page 52</p>   |                |
| <b>Desktop Installation</b>   |   |                |
| <ul style="list-style-type: none"> <li>• Verify that the area selected meets the minimum requirements.</li> <li>• Plan the installation location, including required space clearances and airflow requirements.</li> </ul>  | <p>“Preparing the SRX210 Services Gateway for Desk-Mount Installation” on page 51</p>   |                |
| <b>Cables</b>   |   |                |
| <ul style="list-style-type: none"> <li>• Acquire cables and connectors.</li> <li>• Review the maximum distance allowed for each cable. Choose the length of cable based on the distance between the hardware components being connected.</li> <li>• Plan the cable routing and management.</li> </ul> | <p>“Interface Cable and Wire Specifications for the SRX210 Services Gateway” on page 139</p>  |                |

**Related Documentation**

- [SRX210 Services Gateway Specifications on page 7](#)
- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)



- [Installation Overview for the SRX210 Services Gateway on page 41](#)
- [SRX210 Services Gateway Cabinet Requirements on page 35](#)
- [SRX210 Services Gateway Rack Requirements on page 36](#)
- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)

## General Site Guidelines for Installing the SRX210 Services Gateway

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The following precautions help you plan an acceptable operating environment for your SRX210 Services Gateway and avoid environmentally caused equipment failures:

- For the cooling system to function properly, the airflow around the chassis must be unrestricted. Allow sufficient clearance between the front and back of the chassis and adjacent equipment. Ensure that there is adequate circulation in the installation location.
- Follow the ESD procedures to avoid damaging the equipment. Static discharge can cause components to fail completely or intermittently over time.
- Ensure that the blank Mini-PIM panel is installed in the empty slot to prevent any interruption or reduction in the flow of air across internal components.



**NOTE:** Install the device only in restricted areas, such as dedicated equipment rooms and equipment closets, in accordance with Articles 110-16, 110-17, and 110-18 of the National Electrical Code, ANSI/NFPA 70.

### Related Documentation

- [SRX210 Services Gateway Safety Requirements, Warnings, and Guidelines on page 53](#)
- [SRX210 Services Gateway Cabinet Requirements on page 35](#)
- [SRX210 Services Gateway Rack Requirements on page 36](#)
- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)

## SRX210 Services Gateway Cabinet Requirements

---

The SRX210 Services Gateway can be installed in a standard 800 mm (31.5 in.) or larger enclosed cabinet. [Table 14 on page 36](#) provides the details on cabinet size, clearance, and airflow requirements.

Table 14: SRX210 Services Gateway Cabinet Requirements

| Cabinet Requirements         | Specifications   |
|------------------------------|--|
| Cabinet size                 | <p>19 in. (48.3 cm) as defined in <i>Cabinets, Racks, Panels, and Associated Equipment</i> (document number EIA-310-D) published by the Electronics Industry Association (<a href="http://www.eia.org">http://www.eia.org</a>).</p> <p>You can mount the services gateway horizontally in the cabinet.</p>   |
| Clearance requirements       | <ul style="list-style-type: none"> <li>The cabinet is at least 1 U (1.75 in. or 4.5 cm) high.</li> <li>The outer edges of the mounting brackets extend the width of either chassis to 19 in. (48.2 cm), and the front of the chassis extends approximately 0.5 in. (1.27 cm) beyond the mounting brackets.</li> <li>The minimum total clearance inside the cabinet is 30.7 in. (78 cm) between the inside of the front door and the inside of the rear door.</li> </ul> <p><b>NOTE:</b> The holes for the mounting brackets chassis are spaced 1.25 in. (3.2 cm) apart, measured from the center of the hole.</p>  |
| Cabinet airflow requirements | <ul style="list-style-type: none"> <li>Ensure sufficient ventilation through the cabinet is sufficient to prevent overheating.</li> <li>Ensure adequate cool air supply to dissipate the thermal output of the device.</li> <li>Install the device as close as possible to the front of the cabinet so that the cable management system clears the inside of the front door. Installing the chassis close to the front of the cabinet maximizes the clearance in the rear of the cabinet for critical airflow.</li> <li>Route and dress all cables to minimize the blockage of airflow to and from the chassis.</li> </ul> <p><b>NOTE:</b> A cabinet larger than the minimum required provides better airflow and reduces the chance of overheating.</p> |

#### Related Documentation

- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)
- [SRX210 Services Gateway Rack Requirements on page 36](#)
- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)

## SRX210 Services Gateway Rack Requirements

The services gateway can be installed in a rack. Many types of racks are acceptable, including front-mount racks and four-post (telco) racks.



**NOTE:** The services gateway cannot be center mounted in a rack.

[Table 15 on page 37](#) provides the details of requirements for rack size, clearance, airflow, spacing of mounting brackets and flange holes, and connecting to the building structure.

Table 15: Rack Requirements for the Services Gateway

| Rack Requirement                             | Specifications  |
|--|---|
| Size   | A 19 in. (48.3 cm) rack as defined in <i>Cabinets, Racks, Panels, and Associated Equipment</i> (document number EIA-310-D) published by the Electronics Industry Association ( <a href="http://www.eia.org">http://www.eia.org</a> ).   |
| Clearance                                    | <ul style="list-style-type: none"> <li>The outer edges of the mounting brackets extend the width of either chassis to 19 in. (48.3 cm).</li> <li>The front of the chassis extends approximately 0.5 in. (1.27 cm) beyond the mounting ears.</li> <li>Maximum permissible ambient temperature when two devices are placed side by side in a 19 in. rack is 40° C.</li> </ul>   |
| Spacing of Mounting Bracket and Flange Holes | <ul style="list-style-type: none"> <li>The holes within each rack set are spaced at 1 U [1.75 in. (4.5 cm)]. The device can be mounted in any rack that provides holes or hole patterns spaced at 1-U [1.75 in. (4.5 cm)] increments.</li> <li>The mounting brackets and front-mount flanges used to attach the chassis to a rack are designed to fasten to holes spaced at rack distances of 1 U (1.75 in.).</li> <li>The mounting holes in the mounting brackets provided with the device are spaced 1.25 in. (3.2 cm) apart (top and bottom mounting hole).</li> </ul> |
| Connecting to the Building Structure         | Always secure the rack in which you are installing the services gateway to the structure of the building. If your geographical area is subject to earthquakes, bolt the rack to the floor. For maximum stability, also secure the rack to ceiling brackets.   |

#### Related Documentation

- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)
- [SRX210 Services Gateway Cabinet Requirements on page 35](#)
- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)

## Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway

When planning the installation site for the SRX210 Services Gateway, you need to allow sufficient clearance around the rack or cabinet where you are planning to install the device.

When planning the installation site for the services gateway, consider the following:

- For the cooling system to function properly, the airflow around the chassis must be unrestricted.
- For service personnel to remove and install hardware components, there must be adequate space at the front and back of the device. Allow at least 24 in. (61 cm) both in front of and behind the device.

- If you are mounting the device in a rack with other equipment, or if you are placing it on the desktop near other equipment, ensure that the exhaust from other equipment does not blow into the intake vents of the chassis.

[Table 16 on page 38](#) provides information on the clearance requirements for maintaining the optimum airflow and the distances for facilitating easy maintenance of the device.

**Table 16: Clearance Requirements for the Services Gateway**

| Location  | Recommended Clearance | Requirement for Clearance   |
|---|-----------------------|---|
| Front of the chassis  | 2.5 in. (6.35 cm)     | Space for service personnel to remove and install hardware components<br><br><b>NOTE:</b> More space is required for installing and removing Mini-PIMs. |
| Rear of the chassis   | 2.5 in. (6.35 cm)     | Space for service personnel to remove and install hardware components   |
| Between front-mounting flange and rack or cabinet edge  | 2.5 in. (6.35 cm)     | Space for cable management and organization   |
| Between side of the chassis and any non-heat-producing surface such as a wall or cabinet side | 2.5 in. (6.35 cm)     | Space for the cooling system to function properly and to maintain unrestricted airflow around the chassis   |
| Between side of the chassis and devices that have fans or blowers                             | 2.5 in. (6.35 cm)     | Space for the cooling system to function properly and to maintain unrestricted airflow around the chassis   |

#### Related Documentation

- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)
- [SRX210 Services Gateway Cabinet Requirements on page 35](#)
- [SRX210 Services Gateway Rack Requirements on page 36](#)

## SRX210 Services Gateway Electrical and Power Requirements

There are factors you must consider while planning the electrical wiring and power availability at your site. These factors include the following requirements:

- Power specifications and requirements for the device
- Electrical wiring guidelines for the device installation site
- Power, connection, and power cord specifications for the device
- Grounding guidelines and specifications for the device

- Related Documentation**
- [SRX210 Services Gateway Site Electrical Wiring Guidelines on page 135](#)
  - [SRX210 Services Gateway Power Specifications and Requirements on page 137](#)



## CHAPTER 7

# Installation Overview for the SRX210 Services Gateway

This chapter includes the following topic:

- [Installation Overview for the SRX210 Services Gateway on page 41](#)

## Installation Overview for the SRX210 Services Gateway

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After you have prepared your installation site, you are ready to unpack and install the services gateway. It is important to proceed through the installation process as shown in [Table 17 on page 41](#).

**Table 17: Installation Process Order for the SRX210 Services Gateway**

| Step | Task  | For more information, see   |
|------|---|---|
| 1    | Review the safety guidelines explained.   | <a href="#">“SRX210 Services Gateway General Safety Guidelines and Warnings” on page 111</a>  |
| 2    | Verify that you have prepared your site for the installation of the services gateway using the checklist. | <a href="#">“Site Preparation Checklist for the SRX210 Services Gateway” on page 33</a>   |
| 3    | Unpack the services gateway and verify that the parts are received.                                       | <a href="#">“Unpacking the SRX210 Services Gateway” on page 45</a>  |
| 4    | Prepare the services gateway for installation.  | <a href="#">“Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation” on page 49</a>  |
| 5    | Install the services gateway.   | <ul style="list-style-type: none"><li>• <a href="#">Installing the SRX210 Services Gateway in a Rack on page 55</a></li><li>• <a href="#">Installing the SRX210 Services Gateway on a Desk on page 58</a></li><li>• <a href="#">Installing the SRX210 Services Gateway on a Wall on page 59</a></li></ul> |

**Table 17: Installation Process Order for the SRX210 Services Gateway (continued)**

| Step | Task                                | For more information, see   |
|------|-------------------------------------|---|
| 6    | Connect cables to external devices. | "Connecting and Organizing Interface Cables for the SRX210 Services Gateway" on page 64 |
| 7    | Connect the grounding cables.       | "Grounding the SRX210 Services Gateway" on page 66                                      |
| 8    | Power on the services gateway.      | "Powering On and Powering Off the SRX210 Services Gateway" on page 67                   |

**Related Documentation**

- [Unpacking the SRX210 Services Gateway on page 45](#)
- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation on page 49](#)



## CHAPTER 8

# Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway

This chapter includes the following topic:

- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)

## Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway

[Table 18 on page 43](#) lists the tools and equipments required to install and maintain the SRX210 Services Gateway.

**Table 18: Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway**

| Task                                   | Tools and Parts  | Related Topic   |
|--|--|---|
| Installing the SRX210 Services Gateway | <ul style="list-style-type: none"><li>• Phillips (+) screwdriver, number 1</li><li>• Tie wrap</li></ul>  | <ul style="list-style-type: none"><li>• <a href="#">Installing the SRX210 Services Gateway in a Rack on page 55</a></li><li>• <a href="#">Installing the SRX210 Services Gateway on a Desk on page 58</a></li><li>• <a href="#">Installing the SRX210 Services Gateway on a Wall on page 59</a></li></ul> |
| Connecting the SRX210 Services Gateway | Electrostatic discharge (ESD) grounding wrist strap  | <a href="#">“Connecting the SRX210 Services Gateway to the Power Supply” on page 63</a>   |
| Grounding the SRX210 Services Gateway  | Phillips (+) screwdriver, number 1   | <a href="#">“Grounding the SRX210 Services Gateway” on page 66</a>  |
| Packing the SRX210 Services Gateway    | <ul style="list-style-type: none"><li>• Blank panel to cover empty Mini-PIM slot</li><li>• Electrostatic bag or antistatic mat, for each component</li><li>• Electrostatic discharge (ESD) grounding wrist strap</li></ul> | <a href="#">“Packing the SRX210 Services Gateway and Components for Shipment” on page 147</a>   |

**Related  
Documentation**

- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Grounding the SRX210 Services Gateway on page 66](#)
- [Connecting the SRX210 Services Gateway to the Power Supply on page 63](#)
- [Packing the SRX210 Services Gateway and Components for Shipment on page 147](#)

## CHAPTER 9

# Unpacking the SRX210 Services Gateway

This chapter includes the following topics:

- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Verifying Parts Received with the SRX210 Services Gateway on page 45](#)

## Unpacking the SRX210 Services Gateway

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The SRX210 Services Gateway is shipped in a cardboard carton. The carton also contains an accessory box and quick start instructions.



**NOTE:** The device is maximally protected inside the shipping carton. Do not unpack it until you are ready to begin installation.

To unpack the SRX210 Services Gateway:

1. Open the box in which the device is shipped.
2. Verify the parts received against the lists in “[Verifying Parts Received with the SRX210 Services Gateway](#)” on page 45.
3. Store the shipping box and packing material in case you need to return or move the device at a later time.

### Related Documentation

- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation on page 49](#)
- [Installation Overview for the SRX210 Services Gateway on page 41](#)

## Verifying Parts Received with the SRX210 Services Gateway

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The SRX210 Services Gateway shipment package contains a packing list that includes all parts and accessories available with the device. Check the parts in the shipment

against the items on the packing list. The packing list specifies the part numbers and descriptions of each part in your order.

If any part is missing, contact your Juniper Networks customer service representative.

A fully configured SRX210 Services Gateway contains the chassis with installed components, listed in [Table 19 on page 46](#), and an accessory box, which contains the parts listed in [Table 20 on page 47](#).



**NOTE:** The parts shipped with your device can vary depending on the configuration you ordered.

**Table 19: Parts List for a Fully Configured SRX210 Services Gateway**

| Component   | Quantity |
|---|----------|
| <ul style="list-style-type: none"> <li>For Low Memory model (SRX210B and SRX210BE):<br/>SRX210 Services Gateway with 2xGE + 6xFE ports, Mini-PIM slot, and base memory (512 MB RAM, 1GB flash)</li> <li>For High Memory model (SRX210H and SRX210HE):<br/>SRX210 Services Gateway with 2xGE + 6xFE ports, Mini-PIM slot, and high memory (1 GB RAM, 1GB flash)</li> <li>For High Memory model (SRX210HE-TAA):<br/>TAA-compliant SRX210 Services Gateway with 2xGE + 6xFE ports, Mini-PIM slot, and high memory (1 GB RAM, 1GB flash)</li> <li>For PoE model (SRX210H-POE and SRX210HE-POE):<br/>SRX210 Services Gateway with 2xGE + 6xFE ports, Mini-PIM slot, high memory (1 GB RAM, 1 GB flash), 4 PoE 802.11AT ports (50 watts across 4 ports)</li> <li>For PoE model (SRX210H-POE-TAA and SRX210HE-POE-TAA):<br/>TAA-compliant SRX210 Services Gateway with 2xGE + 6xFE ports, Mini-PIM slot, high memory (1 GB RAM, 1 GB flash), 4 PoE 802.11AT ports (50 watts across 4 ports)</li> </ul> | 1        |
| <ul style="list-style-type: none"> <li>Power supply adapter (60 watts for Low Memory and High Memory models)</li> <li>Power supply adapter (150 watts for PoE models)</li> </ul>  | 1        |
| 3-prong power cord  | 1        |
| <p><b>NOTE:</b> For SRX210HE-TAA, SRX210H-POE-TAA, and SRX210HE-POE-TAA models, contact your Juniper Networks customer service representative for more information.</p>   |          |
| DB-9 to RJ-45 adapter, straight-through, 7 feet   | 1        |

Table 20: Accessory Parts List for the SRX210 Services Gateway

| Part                              | Quantity |
|-----------------------------------|----------|
| Juniper Networks Product Warranty | 1        |
| End User License Agreement        | 1        |
| Quick Start Guide                 | 1        |
| Security Products Safety Guide    | 1        |
| Juniper Compliance Form Letter    | 1        |
| Product Registration              | 1        |
| Tie wrap                          | 1        |



**NOTE:** The mounting kits available for rack, wall, and desk installation of the SRX210 Services Gateway must be ordered separately. Contact your Juniper Networks customer service representative for more information.



**NOTE:** The Mini-Physical Interface Modules (Mini-PIMs) are not shipped with the device. You have to order them separately. Contact your Juniper Networks customer service representative for more information.

#### Related Documentation

- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation on page 49](#)



## CHAPTER 10

# Preparing the SRX210 Services Gateway for Installation

This chapter includes the following topics:

- [Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation on page 49](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount Installation on page 49](#)
- [Preparing the SRX210 Services Gateway for Desk-Mount Installation on page 51](#)
- [Preparing the SRX210 Services Gateway for Wall-Mount Installation on page 52](#)

## Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation

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You can mount an SRX210 Services Gateway in a rack, on a desk, or on a wall. See the following topics for more information:

- [Preparing the SRX210 Services Gateway for Rack-Mount Installation on page 49](#)
- [Preparing the SRX210 Services Gateway for Desk-Mount Installation on page 51](#)
- [Preparing the SRX210 Services Gateway for Wall-Mount Installation on page 52](#)

The mounting kits for rack, wall, and desk installation of the SRX210 Services Gateway must be ordered separately. Contact your Juniper Networks customer service representative for more information.

### Related Documentation

- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)

## Preparing the SRX210 Services Gateway for Rack-Mount Installation

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You can mount an SRX210 Services Gateway on four-post (telco) racks, enclosed cabinets, and open-frame racks.



**NOTE:** The SRX210 Services Gateway cannot be center-mounted in racks.

Table 21 on page 50 provides the list of tasks you need to perform before installing the device.

**Table 21: SRX210 Services Gateway Preinstallation Checklist for Rack-Mount Installation**

| Task  | Additional Information   |
|---|--|
| Verify that the site meets the requirements.  | "Site Preparation Checklist for the SRX210 Services Gateway" on page 33  |
| Verify that the racks or cabinets meet the specific requirements.   | "SRX210 Services Gateway Rack Requirements" on page 36   |
| Place the rack or cabinet in its permanent location, allowing adequate clearance for airflow and maintenance, and secure it to the building structure.  | "Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway" on page 37          |
| Remove the services gateway chassis from the shipping carton.   | "Unpacking the SRX210 Services Gateway" on page 45   |
| Verify that you have the following parts available in your rack-mounting kit for the SRX210 Services Gateway: <ul style="list-style-type: none"> <li>• Rack-mounting brackets</li> <li>• Mounting screws</li> <li>• Power supply adapter tray with screws</li> <li>• Adapter stopper bracket</li> </ul> |  |
| Adjust the power supply adapter tray.   | "Adjusting the Power Supply Adapter Tray for the SRX210 Services Gateway for Rack-Mount Installation" on page 54 |



**NOTE:** The rack-mounting kit is not shipped with the device and must be ordered separately.

**Related Documentation**

- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)
- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation on page 49](#)
- [Preparing the SRX210 Services Gateway for Desk-Mount Installation on page 51](#)
- [Preparing the SRX210 Services Gateway for Wall-Mount Installation on page 52](#)



## Preparing the SRX210 Services Gateway for Desk-Mount Installation

You can mount an SRX210 Services Gateway on a desk or other level surface horizontally or vertically. The four rubber feet attached to the chassis provide stability.

Table 22 on page 51 provides the list of tasks you need to perform before installing the device.

**Table 22: SRX210 Services Gateway Preinstallation Checklist for Desk-Mount Installation**

| Task   | Additional Information  |
|--|---|
| Verify that the site meets the requirements.   | "Site Preparation Checklist for the SRX210 Services Gateway" on page 33                                 |
| Place the desk in its permanent location, allowing adequate clearance for airflow and maintenance, and secure it to the building structure.  | "Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway" on page 37 |
| Remove the services gateway chassis from the shipping carton.  | "Unpacking the SRX210 Services Gateway" on page 45  |
| Verify that you have the following parts available in your desk-mounting kit to mount the SRX210 Services Gateway vertically: <ul style="list-style-type: none"> <li>Vertical stand</li> <li>Screws</li> </ul> |   |



**NOTE:** If you are mounting the services gateway horizontally on a desk, verify that the rubber feet are attached to the chassis.



**NOTE:** The vertical desk-mounting kit is not shipped with the device and must be ordered separately.

### Related Documentation

- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)
- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount Installation on page 49](#)
- [Preparing the SRX210 Services Gateway for Wall-Mount Installation on page 52](#)

## Preparing the SRX210 Services Gateway for Wall-Mount Installation

You can mount an SRX210 Services Gateway on a wall. The four rubber feet attached to the chassis provide stability.

Table 23 on page 52 provides the list of tasks you need to perform before installing the device.

**Table 23: SRX210 Services Gateway Preinstallation Checklist for Wall-Mount Installation**

| Task   | Additional Information  |
|--|---|
| Verify that the site meets the requirements.   | "Site Preparation Checklist for the SRX210 Services Gateway" on page 33 |
| Remove the services gateway chassis from the shipping carton.  | "Unpacking the SRX210 Services Gateway" on page 45                      |
| Verify that you have the following parts available in your wall-mounting kit to mount the SRX210 Services Gateway on wall: |   |
| <ul style="list-style-type: none"> <li>• Wall-mounting brackets</li> <li>• Screws</li> </ul>                               |   |



**NOTE:** The wall-mounting kit is not shipped with the device and must be ordered separately.

### Related Documentation

- [Unpacking the SRX210 Services Gateway on page 45](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount Installation on page 49](#)
- [Preparing the SRX210 Services Gateway for Desk-Mount Installation on page 51](#)

# Installing the SRX210 Services Gateway

This chapter includes the following topics:

- [SRX210 Services Gateway Safety Requirements, Warnings, and Guidelines on page 53](#)
- [SRX210 Services Gateway Installation on page 53](#)
- [Replacing or Installing Mini-Physical Interface Modules in the SRX210 Services Gateway on page 62](#)

## SRX210 Services Gateway Safety Requirements, Warnings, and Guidelines

To avoid harm to yourself or the device as you install and maintain it, follow the guidelines for working with and near electrical equipment, as well as the safety procedures for working with devices. For a discussion of how to make the installation site a safe environment along with a list of safety warnings, see Appendix A, Safety and Regulatory Compliance Information.



NOTE: Providing an exhaustive set of guidelines for working with electrical equipment is beyond the scope of this guide.

### **Related Documentation**

- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)
- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation on page 49](#)

## SRX210 Services Gateway Installation

You can install the SRX210 Services Gateway in a rack, on a desk, or on a wall. The device includes rubber feet for desk and wall mounting. The mounting brackets are optional accessories.

Install the device as appropriate for your site using one of the following procedures:

- [Adjusting the Power Supply Adapter Tray for the SRX210 Services Gateway for Rack-Mount Installation on page 54](#)
- [Installing the SRX210 Services Gateway in a Rack on page 55](#)
- [Installing the SRX210 Services Gateway on a Desk on page 58](#)
- [Installing the SRX210 Services Gateway on a Wall on page 59](#)

## Adjusting the Power Supply Adapter Tray for the SRX210 Services Gateway for Rack-Mount Installation

This topic provides details on the power supply adapters provided with different models of the SRX210 Services Gateway and the procedure for adjusting the power supply adapter tray to hold the power supply adapter.

The following power supply adapters are provided with the SRX210 Services Gateway:

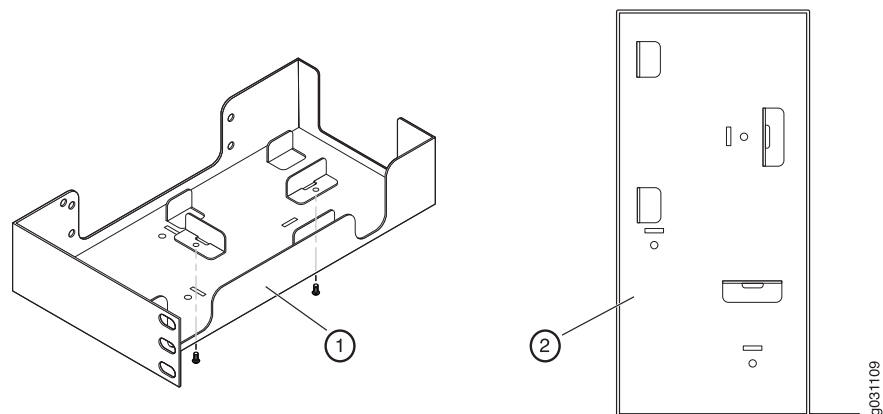
- 60-watt power supply adapter for the SRX210 Services Gateway Low Memory and High Memory models
- 150-watt power supply adapter for the SRX210 Services Gateway with PoE

To adjust the power supply adapter tray:

- To accommodate the 60-watt power supply, use the two 420–028535 screws to attach the adapter stopper brackets at the point on the chassis marked B.

[Figure 11 on page 54](#) shows the adjustments to the power supply adapter tray required for the 60-watt power supply.

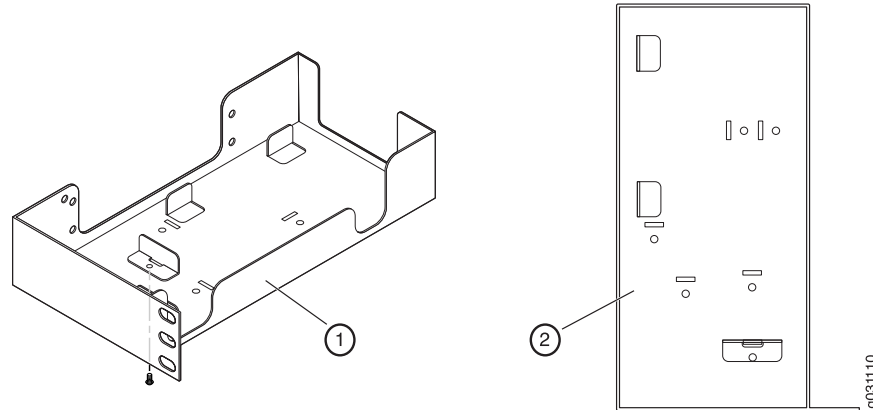
### Figure 11: Adjusting the Power Supply Adapter Tray to Accommodate the 60-Watt Power Supply



1. Location for the adapter stopper brackets in the power supply adapter tray
  2. Fully configured power supply adapter tray
- To accommodate the 150-watt power supply, use the 420–028535 screw to attach the adapter stopper bracket at the point on the chassis marked A.

Figure 12 on page 55 shows the adjustments to the power supply adapter tray required for the 150-watt power supply.

**Figure 12: Adjusting the Power Supply Adapter Tray to Accommodate the 150-Watt Power Supply**



1. Locations for the adapter stopper brackets in the power supply adapter tray
2. Fully configured power supply adapter tray

**Related Documentation**

- [Preparing the SRX210 Services Gateway for Rack-Mount, Desk-Mount, and Wall-Mount Installation on page 49](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount Installation on page 49](#)

## Installing the SRX210 Services Gateway in a Rack

You can front-mount the SRX210 Services Gateway in a rack. Many types of racks are acceptable, including four-post (telco) racks, enclosed cabinets, and open-frame racks. For more information about the type of rack or cabinet the SRX210 Services Gateway can be installed into, see “[SRX210 Services Gateway Rack Requirements](#)” on page 36.



**NOTE:** The rack-mounting kit is not shipped with the device and must be ordered separately.

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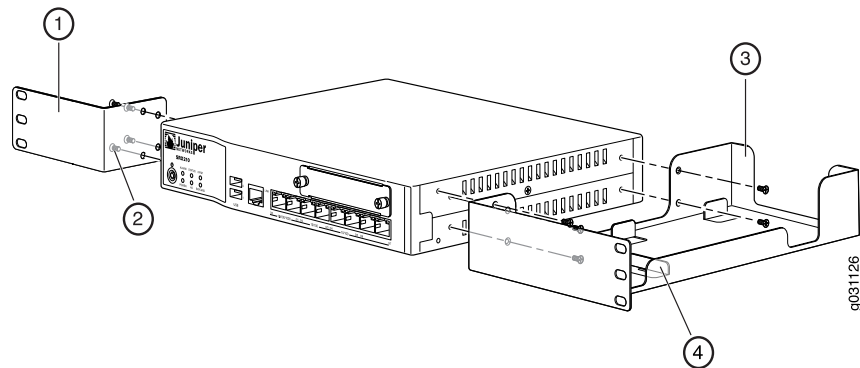
**NOTE:**

- If you are installing multiple devices in one rack, install the lowest one first and proceed upward in the rack.
  - Ensure that the rubber feet from the base of the chassis are removed for rack installation.
- .....

To install the device in a rack:

1. Position a mounting bracket on each side of the chassis as shown in [Figure 13 on page 56](#).

**Figure 13: SRX210 Services Gateway Installation in a Rack — Positioning Mounting Brackets**



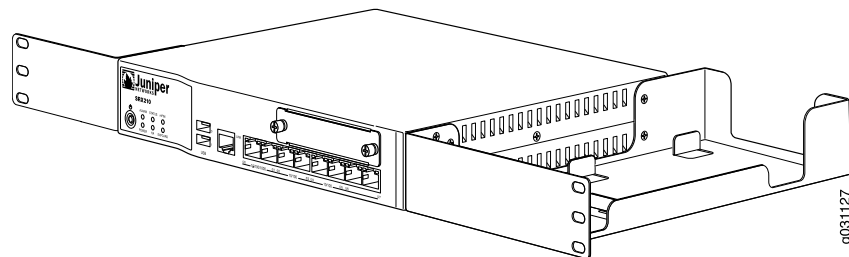
[Table 24 on page 56](#) lists the parts used for installing the SRX210 Services Gateway on the rack. The numbers in [Figure 13 on page 56](#) correspond to the numbers in [Table 24 on page 56](#).

**Table 24: SRX210 Services Gateway Rack Installation Parts**

| Number | Part                      |
|--------|---------------------------|
| 1      | Mounting brackets         |
| 2      | Screws (mounting bracket) |
| 3      | Power supply adapter tray |
| 4      | Adapter stopper bracket   |

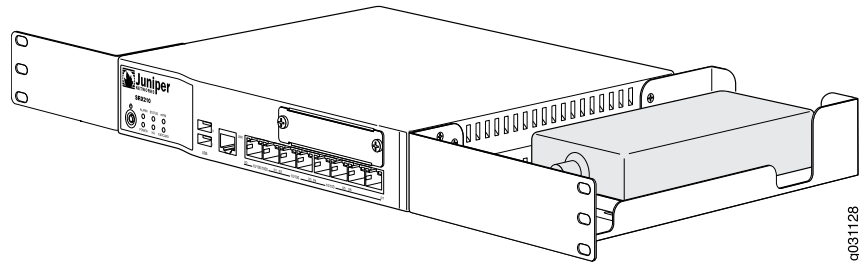
2. Use a number-1 Phillips screwdriver to install the screws that secure the mounting brackets and power supply adapter tray to the chassis as shown in [Figure 14 on page 56](#).

**Figure 14: SRX210 Services Gateway Rack Installation — Securing Mounting Brackets and Power Supply Adapter Tray**



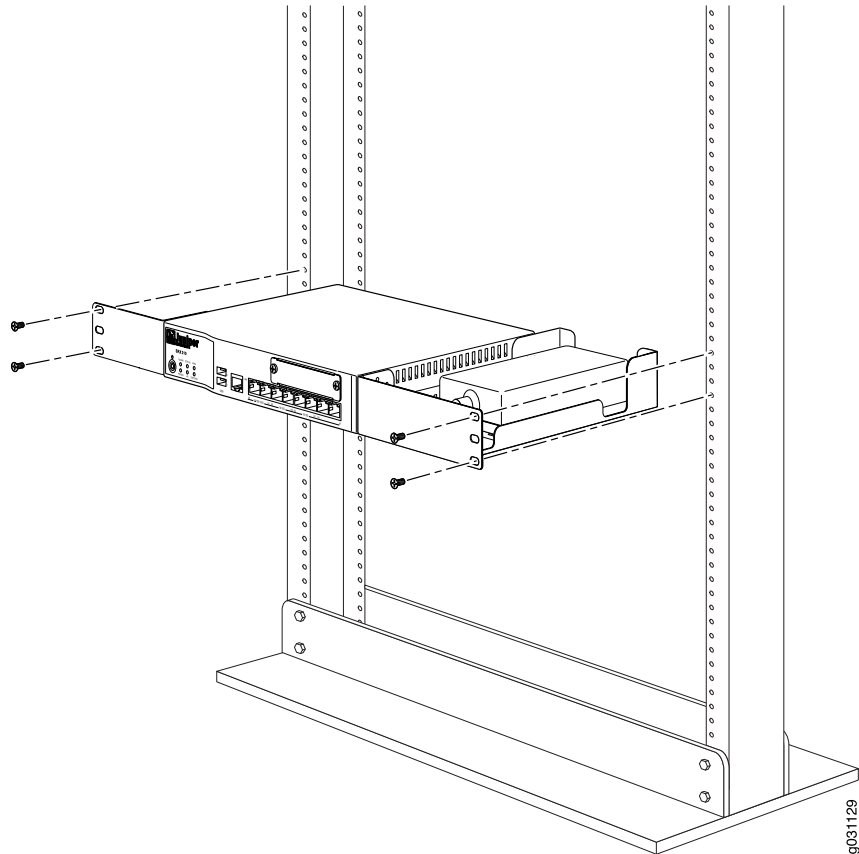
3. Place the power supply adapter in the tray as shown in [Figure 15 on page 57](#).

**Figure 15: SRX210 Services Gateway Rack Installation — Positioning the Power Supply Adapter Tray**



4. Have one person grasp the sides of the device, lift it, and position it in the rack.
5. Align the bottom hole in each mounting bracket with a hole in each rack rail as shown in [Figure 16 on page 57](#), making sure the chassis is level.

**Figure 16: SRX210 Services Gateway Rack Installation — Hanging the Services Gateway in a Rack**



6. Have a second person install a mounting screw into each of the two aligned holes. Use a number-3 Phillips screwdriver to tighten the screws.
7. Install the second screw in each mounting bracket.
8. Verify that the mounting screws on one side of the rack are aligned with the mounting screws on the opposite side and that the device is level.

**Related Documentation**

- [SRX210 Services Gateway General Safety Guidelines and Warnings on page 111](#)
- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount Installation on page 49](#)
- [Adjusting the Power Supply Adapter Tray for the SRX210 Services Gateway for Rack-Mount Installation on page 54](#)
- [Installing the SRX210 Services Gateway on a Desk on page 58](#)
- [Installing the SRX210 Services Gateway on a Wall on page 59](#)

## Installing the SRX210 Services Gateway on a Desk

Follow these guidelines when installing the device on a desk:

- You can install the SRX210 Services Gateway on a desk, table, or other level surface.
- The device is shipped with the rubber feet attached. The rubber feet are necessary to stabilize the device on the desk.
- You can install the device in a horizontal or vertical position.
- The vertical position requires the vertical installation kit, which consists of a vertical installation stand with the rubber feet attached.



**NOTE:** The desk-mounting kit is not shipped with the device and must be ordered separately.

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To install the device in a horizontal position:

The horizontal position is the standard installation position and does not require the vertical installation kit.

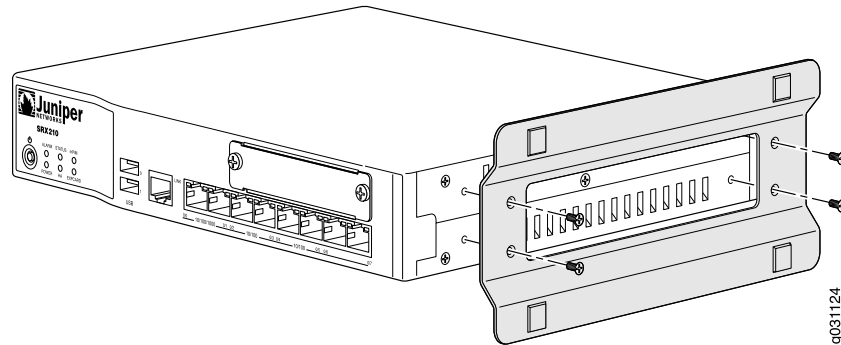
1. Make sure that the rubber feet are attached to the chassis.
2. Place the device on a desk with the Juniper Networks logo embossed on the top cover facing up.

To install the device in a vertical position:

1. Place the device on a flat and level surface with the Juniper Networks logo embossed on the top cover facing up.
2. Attach the vertical stand to the right side of the chassis using the specified screws as shown in [Figure 17 on page 59](#).

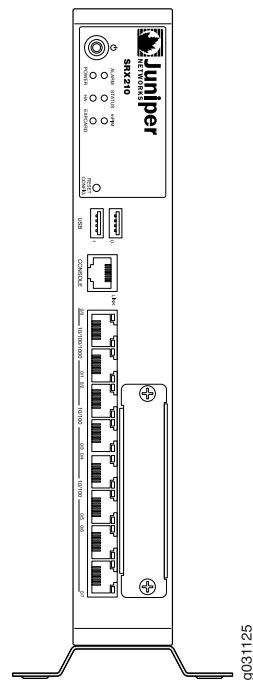


Figure 17: SRX210 Services Gateway Desk Installation — Attaching the Vertical Stand



- Place the chassis vertically on the desk with the stand resting on the desk as shown in Figure 18 on page 59.

Figure 18: SRX210 Services Gateway Desk Installation — Placing the Services Gateway on a Desk



**Related Documentation**

- [SRX210 Services Gateway General Safety Guidelines and Warnings on page 111](#)
- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Preparing the SRX210 Services Gateway for Desk-Mount Installation on page 51](#)

## Installing the SRX210 Services Gateway on a Wall

You can install the SRX210 Services Gateway on a wall.

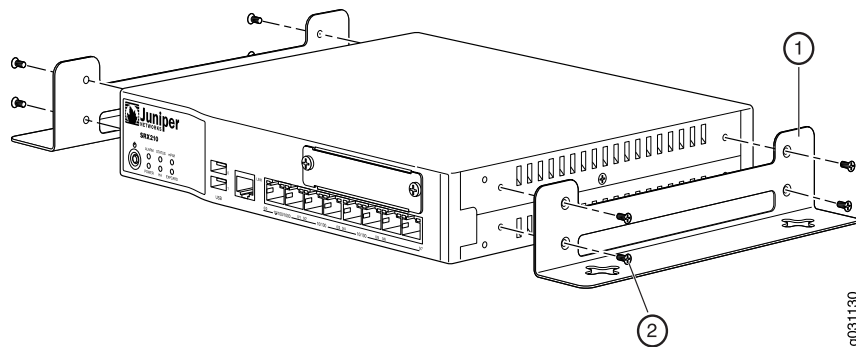


**NOTE:** The wall-mounting kit is not shipped with the device and must be ordered separately.

To install the device on a wall:

1. Place the device on a flat and level surface with Juniper Networks logo embossed on the top cover facing up. Ensure that rubber feet are attached to the bottom of the chassis.
2. Position a mounting bracket on each side of the chassis as shown in [Figure 19 on page 60](#).

**Figure 19: SRX210 Services Gateway Wall Installation — Attaching the Mounting Brackets**



[Table 25 on page 60](#) lists the parts used for installing the SRX210 Services Gateway on a wall. The numbers in [Figure 19 on page 60](#) correspond to the numbers in [Table 25 on page 60](#).

**Table 25: SRX210 Services Gateway Wall Installation Parts**

| Numbers | Part                      |
|---------|---------------------------|
| 1       | Mounting brackets         |
| 2       | Screws (mounting bracket) |

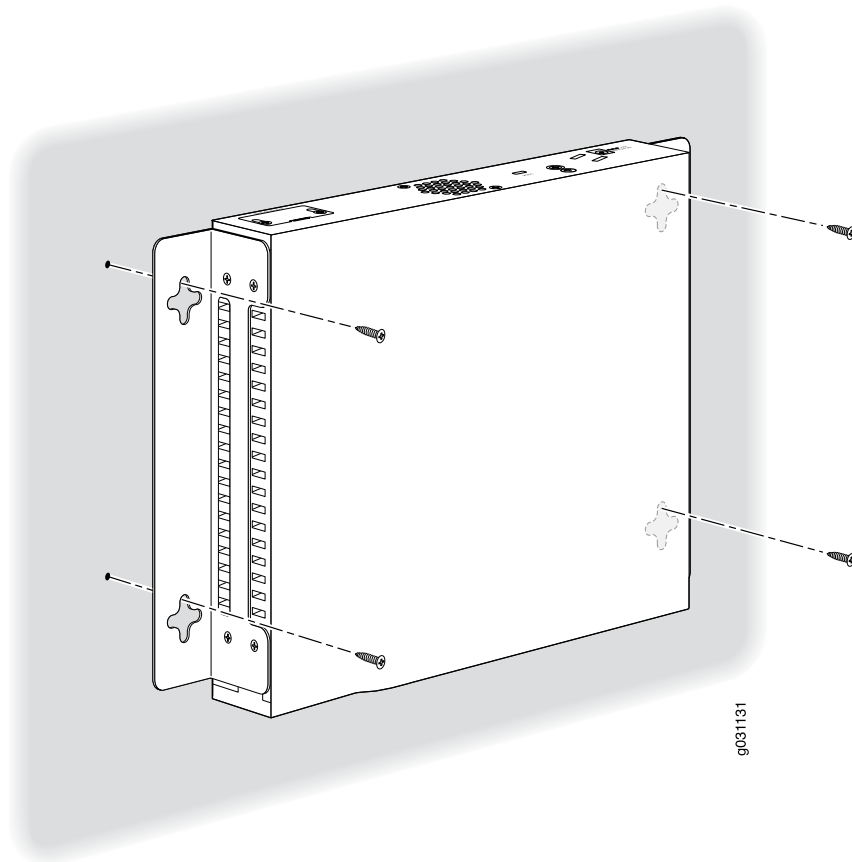
3. Use a number-1 Phillips screwdriver to install the screws that secure the mounting brackets to the chassis.
4. If you are using wall anchors to support the chassis, install two pairs of anchors on the wall with the mounting brackets attached.
5. Have one person grasp the sides of the device, lift it, and position it on the wall.



**NOTE:** Ensure that the fan (back panel) of your device faces the ceiling (see [Figure 20 on page 61](#)).

6. Have a second person install two pairs of mounting screws through the bracket holes on either side of the device to secure it to the wall.
7. Verify that the mounting screws on one side are aligned with the mounting screws on the opposite side and that the device is level (see [Figure 20 on page 61](#)).

**Figure 20: SRX210 Services Gateway Wall Installation — Hanging the Services Gateway on a Wall**



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**Related Documentation**

- [SRX210 Services Gateway General Safety Guidelines and Warnings on page 111](#)
- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Preparing the SRX210 Services Gateway for Rack-Mount Installation on page 49](#)
- [Installing the SRX210 Services Gateway on a Desk on page 58](#)

## Replacing or Installing Mini-Physical Interface Modules in the SRX210 Services Gateway

Mini-Physical Interface Modules (Mini-PIMs) are circuit boards that you can install in a device for enhanced functionality based on your requirements. They enable you to easily add or change physical interfaces on a device.

The Mini-Physical Interface Module (Mini-PIM) slot is covered with a blank faceplate to maintain proper airflow through the services gateway. Before installing the Mini-PIM, you must remove the faceplate.

See the [SRX Series Services Gateways for the Branch Physical Interface Modules Hardware Guide](#) for information about installing Mini-PIMs.



**NOTE:** The Mini-PIMs available on the SRX210 Services Gateway are not hot-swappable. You need to power off the device before removing or installing Mini-PIMs.

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### Related Documentation

- [SRX210 Services Gateway Installation Safety Guidelines and Warnings on page 116](#)

# Connecting, Grounding, and Powering On the SRX210 Services Gateway

This chapter includes the following topics:

- [Connecting the SRX210 Services Gateway to the Power Supply on page 63](#)
- [Connecting and Organizing Interface Cables for the SRX210 Services Gateway on page 64](#)
- [Grounding the SRX210 Services Gateway on page 66](#)
- [Powering On and Powering Off the SRX210 Services Gateway on page 67](#)

## Connecting the SRX210 Services Gateway to the Power Supply

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To connect the device to the power supply:



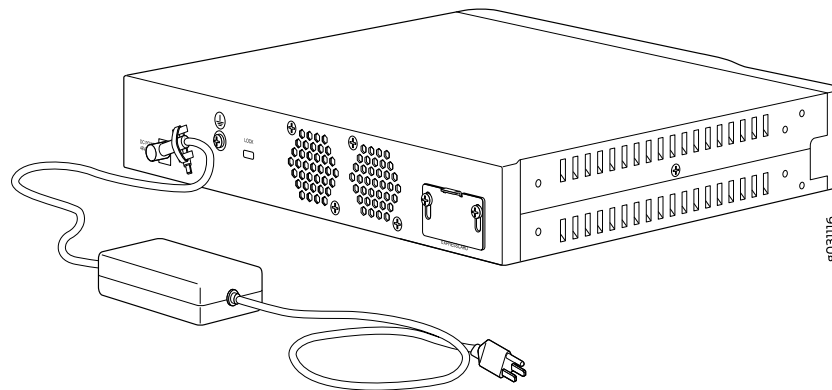
**CAUTION:** Before connecting the device to the power supply, attach an ESD strap to an ESD point and place the other end of the strap around your bare wrist.



**NOTE:** If you are installing your services gateway on a desk, ensure that your device is adequately grounded using the grounding point on the back panel of the chassis.

1. Plug the DC connector end of the power cable into the power connector on the back of the device (see [Figure 21 on page 64](#)).
2. Plug the AC adapter end of the power cable into an AC power outlet.

Figure 21: Connecting the SRX210 Services Gateway to the Power Supply



**NOTE:** The device must be connected to earth ground during normal operation. The protective earthing terminal on the rear of the chassis is provided to connect the device to ground.



**CAUTION:** We recommend using a surge protector for the power connection.



**NOTE:** Use the cable tie holder to secure the power cord on to the power supply point.



**NOTE:** We strongly recommend that you use only the 3-prong power cord supplied with your services gateway. If you are using a 2-prong power cord, then ensure that your device is adequately grounded using the grounding point available on the back panel of the chassis.

#### Related Documentation

- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Grounding the SRX210 Services Gateway on page 66](#)
- [Connecting and Organizing Interface Cables for the SRX210 Services Gateway on page 64](#)
- [SRX210 Services Gateway General Safety Guidelines and Warnings on page 111](#)

## Connecting and Organizing Interface Cables for the SRX210 Services Gateway

You can connect the interfaces installed in the services gateway to various network media. Each type of interface on the services gateway uses a particular medium to

transmit data. You must configure each network interface before it can operate on the device.

To connect and organize an interface cable for the device:

1. Have ready a length of the type of cable used by the interface.
2. Insert the cable connector into the cable connector port on the interface faceplate.
3. Arrange network cables as follows to prevent them from dislodging or developing stress points:
  - Secure cables so that they are not supporting their own weight as they hang to the floor.
  - Place excess cable out of the way in neatly coiled loops.
  - Use fasteners to maintain the shape of cable loops.

**Related  
Documentation**

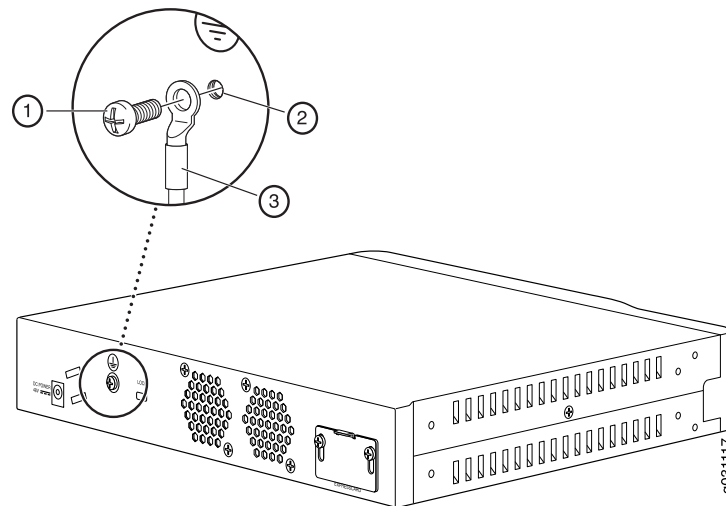
- [Connecting the SRX210 Services Gateway to the Power Supply on page 63](#)
- [Grounding the SRX210 Services Gateway on page 66](#)
- [Interface Cable and Wire Specifications for the SRX210 Services Gateway on page 139](#)
- [SRX210 Services Gateway Installation Safety Guidelines and Warnings on page 116](#)

## Grounding the SRX210 Services Gateway

To meet safety and electromagnetic interference (EMI) requirements and to ensure proper operation, you must adequately ground the SRX210 Services Gateway before connecting power.

Figure 22 on page 66 illustrates connecting a grounding cable to the services gateway.

Figure 22: Grounding the SRX210 Services Gateway



You ground the device by connecting a grounding cable to earth ground and then attaching it to the chassis grounding points using one M3 screw.

Table 26 on page 66 lists the specifications of the grounding cable used with the device.

Table 26: Grounding Cable Specifications for the Services Gateway

| Grounding Requirement       | Specification  |
|-----------------------------|--|
| Grounding cable             | 14 AWG single-strand wire cable                      |
| Amperage of grounding cable | Up to 4 A  |
| Grounding lug               | Ring-type, vinyl-insulated TV14-6R lug or equivalent |



**CAUTION:** Before device installation begins, a licensed electrician must attach a cable lug to the grounding and power cables that you use. A cable with an incorrectly attached lug can damage the device (for example, by causing a short circuit).



To ground the device:

1. Connect the grounding cable to a proper earth ground.
2. Verify that a licensed electrician has attached the cable lug to the grounding cable.
3. Place the grounding cable lug over the grounding point on the upper rear of the chassis.
4. Secure the grounding cable lug to the grounding point with the screw. Apply between 6 in.-lb (0.67 Nm) and 8 in.-lb (0.9 Nm) of torque to the screws.
5. Dress the grounding cable and verify that it does not touch or block access to the services gateway components and that it does not cause create a tripping hazard.



**NOTE:** The device should be permanently connected to ground during normal operation.

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**Related  
Documentation**

- [Connecting the SRX210 Services Gateway to the Power Supply on page 63](#)
- [Connecting and Organizing Interface Cables for the SRX210 Services Gateway on page 64](#)
- [SRX210 Services Gateway Grounding Specifications on page 137](#)
- [Powering On and Powering Off the SRX210 Services Gateway on page 67](#)
- [SRX210 Services Gateway General Safety Guidelines and Warnings on page 111](#)

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## Powering On and Powering Off the SRX210 Services Gateway

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This topic includes the following sections:

- [Powering On the SRX210 Services Gateway on page 67](#)
- [Powering Off the SRX210 Services Gateway on page 68](#)
- [Resetting the SRX210 Services Gateway on page 69](#)

### Powering On the SRX210 Services Gateway

To power on the services gateway:

1. Ensure that you have connected the power supply to the device.
2. Insert the plug of the power supply adapter into an AC power source receptacle.
3. Turn on the power to the AC power receptacle.

The device starts automatically as the power supply completes its startup sequence. The Power LED lights up during startup and remains on when the device is operating normally.



**NOTE:** After the power supply is turned on, it can take up to 60 seconds for status indicators—such as the Status and Power LEDs—to show that the power supply is functioning normally.



**NOTE:** We recommend issuing the CLI command `request system power-off` when you want to power off the device immediately after the device is powered on.

## Powering Off the SRX210 Services Gateway

You can power off the services gateway in one of the following ways:

- Graceful shutdown — Press and release the Power button. The device begins gracefully shutting down the operating system and then powers itself off.
- Forced shutdown — Press the Power button and hold it for more than ten seconds. The device immediately powers itself off without shutting down the operating system.



**NOTE:** Do not press the Power button while the device is shutting down.



**WARNING:** Use the graceful shutdown method to halt, power off, or reboot the services gateway. Use the forced shutdown method as a last resort to recover the services gateway if the services gateway operating system is not responding to the graceful shutdown method.



**CAUTION:** Forced shutdown can result in data loss and corruption of the file system.



**NOTE:** To remove power completely from the device, unplug the AC power cord or switch off the power source.

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

The Power button on the services gateway is a standby power switch.

If you press the Power button to power off the device when it is still connected to a power source, 12 V (Low Memory and High Memory models) /48 V (PoE models) power will still be available in the chassis and the device will be fully powered off.



**TIP:** When you are powering off the device, the system displays the following message: **Turning the system power off.** You can now safely remove the power cable to completely disconnect the power from the device.



**NOTE:** You can use the `request system reboot` command to schedule a reboot of the services gateway.

For more information about halting, powering off, or rebooting the services gateway using the CLI, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

## Resetting the SRX210 Services Gateway

The Reset Config button located at the front panel of the SRX210 Services Gateway removes the current configuration and resets the device to the default configuration. The button is recessed in the front panel to prevent it from being pressed accidentally.



**NOTE:** Pressing and holding the Reset Config button for 15 seconds or more deletes all configurations on the device and loads and commits the factory configuration.

### Related Documentation

- [Connecting the SRX210 Services Gateway to the Power Supply on page 63](#)
- [Grounding the SRX210 Services Gateway on page 66](#)
- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)
- [Using the Reset Config Button on the SRX210 Services Gateway on page 105](#)
- [SRX210 Services Gateway LEDs on page 13](#)



# SRX210 Services Gateway Autoinstallation

This chapter includes the following topic:

- [SRX210 Services Gateway Autoinstallation Overview on page 71](#)

## SRX210 Services Gateway Autoinstallation Overview

The autoinstallation process begins any time a services gateway is powered on and cannot locate a valid configuration file in the internal flash. Typically, a configuration file is unavailable when a services gateway is powered on for the first time or if the configuration file is deleted from the internal flash. The autoinstallation feature enables you to deploy multiple services gateways from a central location in the network.

If you are setting up many devices, autoinstallation can help automate the configuration process by loading configuration files onto new or existing devices automatically over the network. You can use either the J-Web interface or the CLI to configure a device for autoinstallation.

For the autoinstallation process to work, you must store one or more host-specific or default configuration files on a configuration server in the network and have a service available—typically Dynamic Host Configuration Protocol (DHCP)—to assign an IP address to the services gateway.

Autoinstallation takes place automatically when you connect an Ethernet port on a new services gateway to the network and power on the device. To simplify the process, you can explicitly enable autoinstallation on a device and specify a configuration server, an autoinstallation interface, and a protocol for IP address acquisition.

For more information about configuring autoinstallation, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

### **Related Documentation**

- [Connecting the SRX210 Services Gateway to the Power Supply on page 63](#)
- [Grounding the SRX210 Services Gateway on page 66](#)
- [Powering On and Powering Off the SRX210 Services Gateway on page 67](#)



# Connecting the SRX210 Services Gateway to Management Devices

This chapter includes the following topics:

- Connecting an SRX210 Services Gateway to the J-Web Interface on page 73
- Connecting an SRX210 Services Gateway to the CLI Locally on page 75
- Connecting an SRX210 Services Gateway to the CLI Remotely on page 76
- Connecting the Modem at the SRX210 Services Gateway End on page 77
- Connecting the Modem to the Console Port on the SRX210 Services Gateway on page 78
- Connecting to the CLI at the User End for the SRX210 Services Gateway on page 79

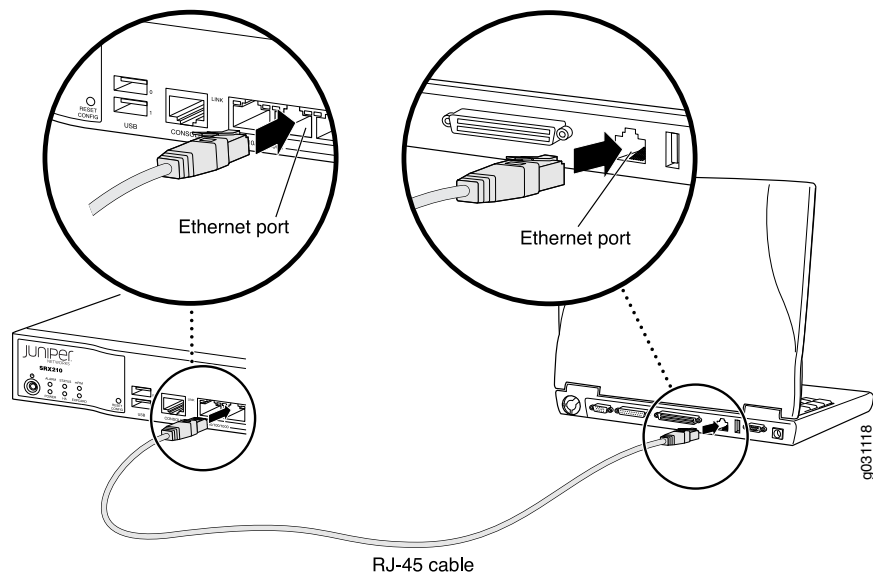
## Connecting an SRX210 Services Gateway to the J-Web Interface

If you plan to use the setup wizard to configure the SRX210 Services Gateway, you must connect your management device (such as a laptop or desktop computer) to one of the built-in Ethernet ports 0/1 through 0/7 as shown in [Figure 23 on page 74](#). Do not use built-in Ethernet port 0/0.



**NOTE:** To access the J-Web interface, your management device requires a supported browser: either Microsoft Internet Explorer version 7.0 or Mozilla Firefox version 3.x.

Figure 23: Connecting to the Ethernet Port on an SRX210 Services Gateway



To enable communication between the management device and the services gateway, ports 0/1 through 0/7 are preconfigured with the IP address **192.168.1.1** and use DHCP to assign an IP address in the **192.168.1.0/24** network to any connected device.

To connect to the Ethernet port:

1. Ensure that the IP address for the Ethernet port on the management device is configured in one of the following ways:
  - The IP address is assigned by DHCP.
  - The IP address is in the **192.168.1.0/24** subnetwork (but is not **192.168.1.1**).
2. Turn off the management device.
3. Plug one end of the CAT-5e (Ethernet cable) into the Ethernet port on the management device.
4. Connect the other end of the Ethernet cable to any of the built-in Ethernet ports 0/1 through 0/7 on the services gateway.

If the services gateway has not already been powered on, power it on now.

5. Wait until the Status LED on the front panel of the services gateway turns steady green.
6. Turn on the power to the management device. The services gateway assigns an IP address to the management device within the **192.168.1.0/24** subnetwork if the management device is configured to use DHCP.
7. To access the setup wizard, open a Web browser on the management device and enter the IP address **192.168.1.1** in the address field.

**Related Documentation**

- [Performing Initial Software Configuration on the SRX210 Services Gateway Using the J-Web Interface on page 87](#)

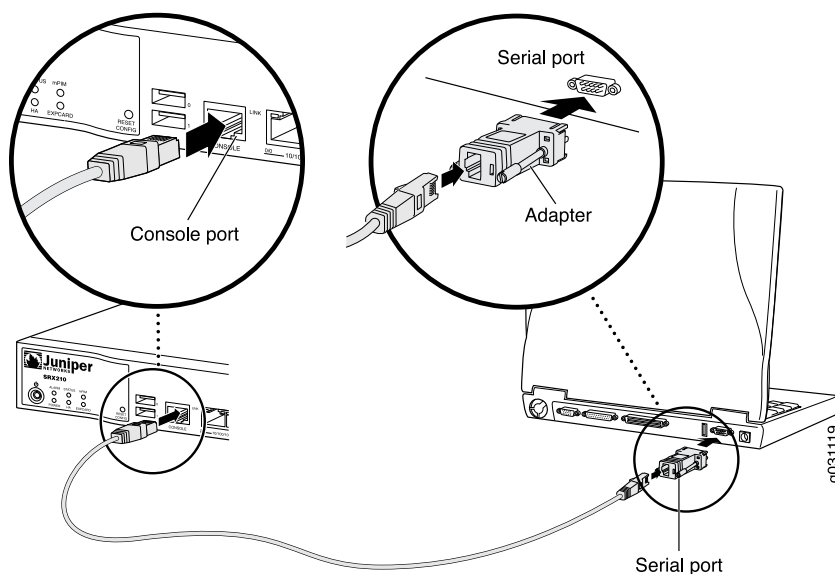


- [Connecting an SRX210 Services Gateway to the CLI Locally on page 75](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)
- [SRX210 Services Gateway Secure Web Access Overview on page 91](#)

## Connecting an SRX210 Services Gateway to the CLI Locally

If you plan to use the CLI to configure the SRX210 Services Gateway, you must connect through the console port, as shown in [Figure 24 on page 75](#).

**Figure 24: Connecting to the Console Port on an SRX210 Services Gateway**



**NOTE:** [Figure 24 on page 75](#) shows a connection to a local management device. A remote connection to the services gateway through a modem requires the cable and connector shown (provided in the services gateway accessory box), plus a DB-9 male to DB-25 male (or similar) adapter for your modem, which you must purchase separately.

To connect to the CLI using a local management device through the console port on the services gateway:

1. Turn off power to the services gateway.
2. Turn off power to the management device, such as a PC or laptop computer, that you are using to access the CLI.
3. Plug one end of the Ethernet cable supplied with your services gateway into the RJ-45 to DB-9 serial port adapter supplied with your services gateway (see [Figure 24 on page 75](#)).

4. Plug the RJ-45 to DB-9 serial port adapter into the serial port on the management device (see [Figure 24 on page 75](#)).
5. Connect the other end of the Ethernet cable to the console port on the services gateway (see [Figure 24 on page 75](#)).
6. Turn on the power to the management device.
7. Start your asynchronous terminal emulation application (such as Microsoft Windows HyperTerminal) and select the appropriate **COM** port to use (for example, **COM1**).
8. Configure the port settings shown in [Table 27 on page 76](#).

**Table 27: Port Settings for Connecting to the Console Port**

| Port Settings   | Value |
|-----------------|-------|
| Bits per second | 9600  |
| Data bits       | 8     |
| Parity          | None  |
| Stop bits       | 1     |
| Flow control    | None  |

9. Power on the services gateway by pressing the Power button on the front panel.
10. Verify that the Power LED on the front panel turns green.  
The terminal emulation screen on your management device displays the startup sequence. When the services gateway has finished starting up, a login prompt appears.
11. Log in as the user **root**. No password is required at initial connection, but you must assign a root password before committing any configuration settings.

**Related Documentation**

- [Connecting an SRX210 Services Gateway to the CLI Remotely on page 76](#)
- [Performing Initial Software Configuration on the SRX210 Services Gateway Using the CLI on page 85](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)
- [SRX210 Services Gateway Secure Web Access Overview on page 91](#)

## Connecting an SRX210 Services Gateway to the CLI Remotely

You can connect an SRX210 Services Gateway to the CLI from a remote location through two dial-up modems:

- A modem that is connected to the console port on the services gateway
- A second modem connected to a remote management device

The modem connection allows you to remotely perform the same console operations you can perform locally.

**Related Documentation**

- [Connecting an SRX210 Services Gateway to the CLI Locally on page 75](#)
- [Performing Initial Software Configuration on the SRX210 Services Gateway Using the CLI on page 85](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)
- [SRX210 Services Gateway Secure Web Access Overview on page 91](#)

## Connecting the Modem at the SRX210 Services Gateway End



**NOTE:** These instructions use Hayes-compatible modem commands to configure the modem. If your modem is not Hayes-compatible, refer to the documentation for your modem and enter the equivalent modem commands.

To configure the modem on the services gateway end:

1. Connect the modem to a PC or laptop computer.
2. Power on the modem.
3. From the PC or laptop computer, start your asynchronous terminal emulation application (such as Microsoft Windows HyperTerminal), and select the **COM** port to which the modem is connected (for example, **COM1**).
4. Configure the port settings as shown in [Table 28 on page 77](#).

**Table 28: Port Settings for Configuring the Modem on the Services Gateway End**

| Port Setting    | Value |
|-----------------|-------|
| Bits per second | 9600  |
| Data bits       | 8     |
| Parity          | None  |
| Stop bits       | 1     |
| Flow control    | None  |

5. In the HyperTerminal window, enter **AT**.

For more information on the AT commands, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

An **OK** response verifies that the modem can communicate successfully with the **COM** port on the PC or laptop.

6. Configure the modem to answer a call on the first ring by entering **ATSO=1**.
7. Configure the modem to accept modem control DTR signals by entering **AT&D1**.
8. Disable flow control by entering **AT&K0**.
9. Save modem settings by entering **AT&W**.

**Related Documentation**

- [Connecting the Modem to the Console Port on the SRX210 Services Gateway on page 78](#)
- [Connecting to the CLI at the User End for the SRX210 Services Gateway on page 79](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)

## Connecting the Modem to the Console Port on the SRX210 Services Gateway

To connect the dial-up modem to the console port on the services gateway:

1. Turn off power to the services gateway.
2. Turn off power to the modem.
3. Plug one end of the Ethernet cable supplied with your services gateway into the console port on the services gateway.
4. Plug the other end of the CAT-5e cable (Ethernet cable) into the RJ-45 to DB-9 serial port adapter supplied with your services gateway.
5. Connect the serial port adapter to a separately purchased DB-9 female to DB-25 male adapter or other adapter appropriate for your modem.
6. Plug the modem adapter into the DB-25 connector on the modem.
7. Connect the modem to your telephone network.
8. Turn on the power to the modem.
9. Power on the services gateway by pressing the Power button on the front panel. Verify that the **Power** LED on the front panel turns green.



**NOTE:** Most modems have an RS-232 DB-25 connector. You must separately purchase an adapter to connect your modem to the RJ-45 to DB-9 adapter and the Ethernet cable supplied with the services gateway.

**Related Documentation**

- [Connecting the Modem at the SRX210 Services Gateway End on page 77](#)
- [Connecting to the CLI at the User End for the SRX210 Services Gateway on page 79](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)

## Connecting to the CLI at the User End for the SRX210 Services Gateway

To remotely connect to the CLI through a dial-up modem connected to the console port on the services gateway:

1. Connect a modem at your remote location to a management device such as a PC or laptop computer.
2. Start your asynchronous terminal emulation application (such as Microsoft Windows HyperTerminal) on the PC or laptop computer.
3. Select the **COM** port to which the modem is connected (for example, **COM1**).
4. Configure the port settings shown in [Table 29 on page 79](#).

**Table 29: Port Settings for Connecting to the CLI at User End**

| Port Setting    | Value |
|-----------------|-------|
| Bits per second | 9600  |
| Data bits       | 8     |
| Parity          | None  |
| Stop bits       | 1     |
| Flow control    | None  |

5. In the HyperTerminal window, enter **AT**.

For more information on the AT commands, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

An **OK** response verifies that the modem can communicate successfully with the **COM** port on the PC or laptop.

6. Dial the modem that is connected to the console port on the services gateway by entering **ATDT remote-modem-number**. For example, if the number of the modem connected to the console port on the services gateway is **0013033033030**, enter **ATDT 0013033033030**.

The services gateway login prompt appears.

7. Log in as the user **root**. No password is required at initial connection, but you must assign a root password before committing any configuration settings.

### Related Documentation

- [Connecting the Modem at the SRX210 Services Gateway End on page 77](#)
- [Connecting the Modem to the Console Port on the SRX210 Services Gateway on page 78](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)



## CHAPTER 15

# Performing Initial Software Configuration on the SRX210 Services Gateway

This chapter includes the following topics:

- [SRX210 Services Gateway Software Configuration Overview on page 81](#)
- [Performing Initial Software Configuration on the SRX210 Services Gateway Using the CLI on page 85](#)
- [Performing Initial Software Configuration on the SRX210 Services Gateway Using the J-Web Interface on page 87](#)
- [SRX210 Services Gateway Secure Web Access Overview on page 91](#)

## **SRX210 Services Gateway Software Configuration Overview**

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This topic includes the following sections:

- [Preparing the SRX210 Services Gateway for Configuration on page 81](#)
- [Understanding the Factory-Default Configuration on page 82](#)
- [Understanding Built-In Ethernet Ports and Initial Configuration on page 82](#)
- [Mapping the Chassis Cluster Ports on page 83](#)
- [Understanding Management Access on page 84](#)

## **Preparing the SRX210 Services Gateway for Configuration**

The services gateway is shipped with the Juniper Networks Junos operating system (Junos OS) preinstalled and ready to be configured when the device is powered on.

You can perform the initial software configuration of the services gateway by using the browser-based setup wizard or by using the command-line interface (CLI).

Before configuring the device, gather the configuration information required to deploy the device in your network. At minimum, the setup wizard requires the following information:

- Device name to be used on the network
- Password for the root user

- Time information for services gateway location
  - Local time zone
  - Name or IP address of a Network Time Protocol (NTP) server, if NTP is used to set the time on the services gateway
  - Local date and time if an NTP server is not used to set the time

## Understanding the Factory-Default Configuration

Your services gateway comes configured with a factory-default configuration. This configuration sets up the following network topology:

- Interface **ge-0/0/0** (port 0/0) is configured for Internet access. A DHCP client running on the interface enables the interface to receive its network settings—IP address, default gateway, and DNS servers—from an Internet service provider (ISP).
- Interfaces **ge-0/0/1** and **fe-0/0/2** through **fe-0/0/7** (port 0/1 through port 0/7) are configured as switched interfaces in a common VLAN on which the IP address **192.168.1.1/24** is configured.
- A DHCP server is active on interfaces **ge-0/0/1** and **fe-0/0/2** through **fe-0/0/7**. The DHCP server assigns IP addresses in the **192.168.1.0/24** network to connected devices.

The default configuration also includes the following security configuration:

- Two security zones are created: trust and untrust.
- Interface **ge-0/0/0** is in the untrust zone, while interfaces **ge-0/0/1** and **fe-0/0/2** through **fe-0/0/7** are in the trust zone.
- A security policy is created that permits outbound traffic from the trust zone to the untrust zone. Inbound traffic originating in the untrust zone is blocked.
- Source Network Address Translation (NAT) is configured on the trust zone.

## Understanding Built-In Ethernet Ports and Initial Configuration

During the initial configuration of the services gateway, how you use the built-in Ethernet ports (ports 0/0 through 0/7) depends on the initial configuration you are performing:

- Configuration using autoinstallation—Use built-in Ethernet port 0/0 to connect to the DHCP server. A DHCP client is configured on this interface, allowing the services gateway to receive its IP address from the DHCP server.
- Configuration using the setup wizard—Use the following built-in Ethernet ports:
  - Port 0/1—Connect your management device to this port. A DHCP server running on this interface automatically assigns your management device an IP address in the same subnetwork as the interface, allowing your management device to communicate with the services gateway through this interface.
  - Port 0/0—Connect your services gateway to the Internet on this port if you plan to download purchased software licenses through the setup wizard. A DHCP client running on this interface allows it to receive its network settings from the ISP.





**NOTE:** Downloading of purchased licenses from the setup wizard is available only in Junos OS Release 11.2R3 or later.

- Configuration of a chassis cluster—Perform the initial configuration of the chassis cluster using a console connection. Before you perform the initial configuration, connect the built-in Ethernet ports as follows:
  - Port 0/6—Connect to the out-of-band management network for management of the device. When you enable chassis clustering as part of configuring the chassis cluster, the management interface (**fxp0**) is automatically created on this port.
  - Port 0/7—Connect to the other device in the chassis cluster. When you enable chassis clustering, the control interface between the two devices (**fxp1**) is automatically created on this port.

You must also make another connection between the two devices for the fabric link. You can use any Fast Ethernet or Gigabit Ethernet port for this connection. You must configure the interface you choose as the fabric link. For more information on configuring chassis clusters, see the [Security Basics](#).

## Mapping the Chassis Cluster Ports

On the SRX210 Services Gateway, the **fxp1** port is not user-configurable when the services gateway is operating in chassis cluster mode.

The **fxp0** port is dedicated as the out-of-band management interface for each of the devices in the chassis cluster setup and the **fxp1** port is dedicated as the chassis-cluster control port.

[Table 30 on page 83](#) shows the mapping of the chassis cluster ports.

**Table 30: Mapping the Chassis Cluster Ports on an SRX210 Services Gateway**

| Ethernet Ports on SRX210 Services Gateway | Management Interface   |
|---|------------------------|
| 0/6 ( <b>fe-0/0/6</b> )                   | fxp0 (management port) |
| 0/7 ( <b>fe-0/0/7</b> )                   | fxp1 (control port)    |

Junos OS automatically creates the **fxp0** and **fxp1** interfaces on these ports when the SRX210 Services Gateway is operating in chassis cluster mode.

For more information, see the following topics:

- [Interfaces for Security Devices](#)
- [Security Basics](#)

## Understanding Management Access

Telnet allows you to connect to the services gateway and access the CLI to execute commands from a remote system. The Telnet CLI connections are not encrypted and therefore can be intercepted.



**NOTE:** Telnet access to the root user is prohibited. You must use more secure methods, such as SSH, to log in as root.

SSH provides the following features:

- Allows you to connect to the device and access the CLI to execute commands from a remote system
- Encrypts traffic so that it cannot be intercepted (unlike Telnet)
- Can be configured so that connections are authenticated by a digital certificate
- Uses public–private key technology for both connection and authentication

The SSH client software must be installed on the machine where the client application runs. If the SSH private key is encrypted (for greater security), the SSH client must be able to access the passphrase used to decrypt the key.

For information about obtaining SSH software, see <http://www.ssh.com> and <http://www.openssh.com>.

If you are using a Junos XML protocol server to configure and monitor devices, you can activate cleartext access on the device to allow unencrypted text to be sent directly over a Transmission Line Protocol (TCP) connection without using any additional protocol (such as SSH, SSL, or Telnet). For more information about the Junos XML management protocol, see [http://www.juniper.net/techpubs/en\\_US/junos12.1/information-products/topic-collections/netconf-guide/netconf-guide.pdf](http://www.juniper.net/techpubs/en_US/junos12.1/information-products/topic-collections/netconf-guide/netconf-guide.pdf).



**NOTE:** Information sent in cleartext is not encrypted and therefore can be intercepted.

If the device is operating in a Common Criteria environment, see the [Configuration Guides for Junos OS Public Sector Certifications](#).

### Related Documentation

- [Connecting an SRX210 Services Gateway to the CLI Locally on page 75](#)
- [Connecting an SRX210 Services Gateway to the CLI Remotely on page 76](#)
- [Performing Initial Software Configuration on the SRX210 Services Gateway Using the CLI on page 85](#)
- [SRX210 Services Gateway Secure Web Access Overview on page 91](#)

## Performing Initial Software Configuration on the SRX210 Services Gateway Using the CLI

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This procedure connects the device to the network but does not enable it to forward traffic. For complete information about enabling the device to forward traffic, including examples, see the appropriate Junos OS configuration guides.

To configure the software:

1. Verify that the device is powered on.
2. Log in as the root user. There is no password.
3. Start the CLI.

```
root# cli
root@>
```

4. Enter configuration mode.

```
configure
[edit]
root@#
```

5. Set the root authentication password by entering 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
```

6. Configure an administrator account on the device.

```
[edit]
root@# set system login user admin class super-user authentication
plain-text-password
```

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

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

8. Log in as the administrative user you configured in Step 6.

9. Configure the name of the device. If the name includes spaces, enclose the name in quotation marks (" ").

```
configure
[edit]
admin@# set system host-name host-name
```

10. Configure the traffic interface.

```
[edit]
admin@# set interfaces ge-0/0/1 unit 0 family inet address address/prefix-length
```

11. Configure the default route.

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

12. Configure basic security zones and bind them to traffic interfaces.

```
[edit]
admin@# set security zones security-zone untrust interfaces ge-0/0/1
```

13. Configure basic security policies.

```
[edit]
admin@# set security policies from-zone trust to-zone untrust policy policy-name
      match source-address any destination-address any application any
admin@# set security policies from-zone trust to-zone untrust policy policy-name
      then permit
```

14. Create a NAT rule for source translation of all Internet bound traffic.

```
[edit]
admin@# set security nat source rule-set interface-nat from zone trust
admin@# set security nat source rule-set interface-nat to zone untrust
admin@# set security nat source rule-set interface-nat rule rule1 match source-address
      0.0.0.0/0 destination-address 0.0.0.0/0
admin@# set security nat source rule-set interface-nat rule rule1 then source-nat
      interface
```

15. Check the configuration for validity.

```
[edit]
admin@# commit check
configuration check succeeds
```

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

```
[edit]
admin@# commit
commit complete
```

17. Optionally, display the configuration to verify that it is correct.

```
[edit]
user@host# show
system {
  host-name devicea;
  domain-name lab.device.net;
  domain-search [ lab.device.net device.net ];
  backup-device 192.168.2.44;
  time-zone America/Los_Angeles;
  root-authentication {
    ssh-rsa "ssh-rsa AAAAB3Nza...D9Y2gXF9ac==root@devicea.lab.device.net";
  }
  name-server {
    10.148.2.32;
  }
  services {
  }
  ntp {
    server 10.148.2.21;
  }
}
```

```

}
interfaces {
  ge-0/0/0 {
    unit 0 {
      family inet {
        address 192.168.1.1/24;
      }
    }
  }
  lo0 {
    unit 0 {
      family inet {
        address 172.16.1.24/32;
      }
    }
  }
}
}

```

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

```

[edit]
admin@# commit

```

19. Optionally, configure additional properties by adding the necessary configuration statements. Then commit the changes to activate them on the device.

```

[edit]
admin@host# commit

```

20. When you have finished configuring the device, exit configuration mode.

```

[edit]
admin@host# exit
admin@host>

```

#### Related Documentation

- [Connecting an SRX210 Services Gateway to the CLI Locally on page 75](#)
- [Connecting an SRX210 Services Gateway to the CLI Remotely on page 76](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)
- [SRX210 Services Gateway Secure Web Access Overview on page 91](#)

## Performing Initial Software Configuration on the SRX210 Services Gateway Using the J-Web Interface

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This topic includes the following sections:

- [Establishing Basic Connectivity on page 88](#)
- [Configuring Basic System Properties on page 89](#)

## Establishing Basic Connectivity

To establish basic connectivity:

1. Connect an Ethernet cable from any of ports 0/1 through 0/7 to the Ethernet port on the management device (workstation or laptop).
2. Connect the power cable to the device and a power source. (We recommend using a surge protector.) Note the following indications:
  - Power LED (steadily green): The device is receiving power.
  - Status LED (steadily green): The device is operating normally.



**NOTE:** The services gateway functions as a DHCP server and will assign an IP address to the management device.

---

3. Ensure that the management device acquires an IP address on the 192.168.1.0/24 subnetwork (other than 192.168.1.1) from the device.



**NOTE:** If an IP address is not assigned to the management device, manually configure an IP address in the 192.168.1.0/24 subnetwork. Do not assign the 192.168.1.1 IP address to the management device, as this IP address is assigned to the services gateway.

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4. Access the J-Web interface:
  - a. Launch a Web browser from the management device.
  - b. Enter **192.168.1.1** in the Address box.
  - c. Specify the default user name as **root**. Do not enter any value in the Password box.
  - d. Press **Enter**. The J-Web Setup Wizard page opens.
5. Use the wizard to configure the basic settings, such as Hostname, Domain Name, and Root Password, for your services gateway.

The upper left area of the wizard page shows where you are in the setup process. Click a field in the wizard page to display information about that field in the lower left area of the page.

You can also use the wizard to configure the following settings:

- Default gateway
- DNS servers
- Domain search
- VLANs
- Interfaces



**NOTE:** All network and management access settings are optional.

See [Table 31 on page 89](#) [Table 32 on page 90](#) summarize the configuration details for the initial setup.

6. Click **Commit** on the Review & Commit page to apply the configuration.



**NOTE:** After you configure the basic settings, the J-Web Setup wizard redirects you to the J-Web pages where you can continue working in the J-Web interface.

## Configuring Basic System Properties

[Table 31 on page 89](#) and [Table 32 on page 90](#) summarizes the configuration details for initial setup.

**Table 31: Required Setup Fields**

| Setup Wizard Page                | Field                           | Your Action  |
|----------------------------------|---------------------------------|--|
| Introduction                     |                                 | Read the introduction page for basic instructions on using the setup wizard. Click <b>Start</b> to continue. |
| Configure System: Identification |                                 |  |
|                                  | Hostname                        | Type the name of the services gateway.   |
|                                  | Domain Name                     | Type the name of the network or subnetwork to which the services gateway belongs                             |
|                                  | Root Password (required)        | Type the password that the user root will use to log in to the device.                                       |
|                                  | Verify Root Password (required) | Retype the root password.  |
| Configure J-Web Preferences      |                                 |  |
|                                  | J-Web starting page options     | Specify the tab you want to appear when J-Web starts.  |
|                                  | J-Web commit options            | Specify when you want J-Web to commit your configuration changes.  |

Table 32: Optional Setup Fields

| Field                            | Function            | Your Action  |
|----------------------------------|---------------------|--|
| Configure System: Identification |                     |  |
|                                  | Default Gateway     | Type the IP address of the default gateway.  |
|                                  | DNS Name Servers    | Type the IP address of each server that maintains databases for resolving hostnames and IP addresses, and click Add.   |
|                                  | Domain Search       | Type the IP address or domain name of each domain that includes the services gateway to include it in a DNS search.  |
| Interface Groups (VLANs)         |                     | Use buttons to add, edit, or delete VLANs.   |
| Configure Interfaces             |                     | Use buttons to add, edit, or delete interfaces other than VLANs.<br><br><b>NOTE:</b> Make sure that you have selected the required services and protocols under Services (Inbound) and Protocols (Inbound). Select all to permit all protocols and services. |
| Configure System: Time           |                     |  |
|                                  | Current System Time | Use Reset Manually button to reset the time.   |
|                                  | Time Zone           | Choose the time zone from the list.  |
|                                  | NTP Servers         | Add Network Time Protocol (NTP) servers that the gateway can reach to synchronize the system time.   |

After you configure the basic setup, the Setup wizard is no longer available, unless you reset the device to the factory default and reboot it. To make changes to the configuration, use the J-Web interface or the command-line interface (CLI).



You can use other wizards to configure basic firewall policies, VPN settings, and NAT rules. Choose **Configure > Wizards** to use the available wizards. Use the J-Web interface or the CLI for more extensive configuration.

For more instructions on managing users and operations, monitoring network performance, upgrading software, and diagnosing common problems on an SRX210 Services Gateway, see [Initial Configuration for Security Devices](#).

**Related  
Documentation**

- [Connecting an SRX210 Services Gateway to the J-Web Interface on page 73](#)
- [SRX210 Services Gateway Software Configuration Overview on page 81](#)
- [Performing Initial Software Configuration on the SRX210 Services Gateway Using the CLI on page 85](#)
- [SRX210 Services Gateway Secure Web Access Overview on page 91](#)

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## SRX210 Services Gateway Secure Web Access Overview

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You can manage a services gateway remotely through the J-Web interface. To communicate with the services gateway, the J-Web interface uses Hypertext Transfer Protocol (HTTP). HTTP allows easy Web access but no encryption. The data that is transmitted between the Web browser and the services gateway by means of HTTP is vulnerable to interception and attack. To enable secure Web access, the services gateway supports HTTP over Secure Sockets Layer (HTTPS). You can enable HTTP or HTTPS access on specific interfaces and ports as needed.

The services gateway uses the SSL protocol to provide secure management of services gateways through the J-Web. SSL uses public-private key technology that requires a paired private key and an authentication certificate for providing the SSL service. SSL encrypts communication between your device and the Web browser with a session key negotiated by the SSL server certificate.

An SSL certificate includes identifying information such as a public key and a signature made by a certificate authority (CA). When you access the services gateway through HTTPS, an SSL handshake authenticates the server and the client and begins a secure session. If the information does not match or if the certificate has expired, your access to the services gateway through HTTPS is restricted.

Without SSL encryption, communication between your services gateway and the browser is sent in the open and can be intercepted. We recommend that you enable HTTPS access on your WAN interfaces.

For more information about configuring secure Web access, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

**Related  
Documentation**

- [SRX210 Services Gateway Software Configuration Overview on page 81](#)



## PART 3

# Maintaining and Monitoring the SRX210 Services Gateway Hardware

- [Maintaining the SRX210 Services Gateway Hardware Components on page 95](#)
- [Monitoring the SRX210 Services Gateway on page 97](#)



# Maintaining the SRX210 Services Gateway Hardware Components

This chapter describes how to maintain the hardware components of the SRX210 Services Gateway. This chapter includes the following topic:

- [Maintaining the SRX210 Services Gateway Hardware Components on page 95](#)

## Maintaining the SRX210 Services Gateway Hardware Components

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[Table 33 on page 95](#) describes the common tasks for maintaining the hardware components of the services gateway.

**Table 33: Maintenance Procedures for Services Gateway Hardware Components**

| Maintenance Procedures         | Description   |
|--------------------------------|---|
| Routine Maintenance            | <p>To maintain optimum performance of the services gateway, you should regularly perform the following preventive maintenance procedures:</p> <ul style="list-style-type: none"> <li>• Inspect the installation site for moisture, loose wires or cables, and excessive dust.</li> <li>• Make sure that airflow is unobstructed around the device and into the air intake vents.</li> <li>• Check the Status LED on the front panel of the device and on the Mini-Physical Interface Module (Mini-PIM) that you are using.</li> </ul> |
| Maintaining the cooling system | <p>The services gateway cooling system works to maintain an optimal temperature for the device. If the fan controller fails, the device temperature will exceed the maximum working temperature, and the device will fail. Ensure that you maintain the recommended clearances behind the device to enable the cooling system to function optimally.</p>  |

**Table 33: Maintenance Procedures for Services Gateway Hardware Components (continued)**

| Maintenance Procedures       | Description   |
|------------------------------|---|
| Maintaining the power supply | <p>To maintain the power supply on the services gateway:</p> <ul style="list-style-type: none"><li>• Make sure that the power and grounding cables are arranged so that they do not obstruct access to other device components.</li><li>• Periodically inspect the site to ensure that the grounding and power cables connected to the device are securely in place and that there is no moisture accumulating near the device.</li></ul> <p><b>CAUTION:</b> We recommend using a surge protector for the power connection.</p> |

**Related Documentation**

- [Connecting the SRX210 Services Gateway to the Power Supply on page 63](#)
- [Clearance Requirements for Airflow and Hardware Maintenance of the SRX210 Services Gateway on page 37](#)

## CHAPTER 17

# Monitoring the SRX210 Services Gateway

This chapter describes how to monitor the SRX210 Services Gateway hardware components. If you encounter software problems, or problems with hardware components not discussed here, contact the Juniper Networks Technical Assistance Center (JTAC). This chapter includes the following topics:

- [Monitoring Hardware Components on the SRX210 Services Gateway on page 97](#)
- [Resetting the Configuration File When the SRX210 Services Gateway Is Inaccessible on page 105](#)
- [Juniper Networks Technical Assistance Center on page 106](#)

## Monitoring Hardware Components on the SRX210 Services Gateway

This topic includes the following sections:

- [Monitoring the SRX210 Services Gateway Chassis Using the CLI on page 97](#)
- [Monitoring the SRX210 Services Gateway Components Using LEDs on page 99](#)
- [Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions on page 101](#)
- [Monitoring the SRX210 Services Gateway Power System on page 104](#)

## Monitoring the SRX210 Services Gateway Chassis Using the CLI

You can monitor alarms to troubleshoot hardware problems on a services gateway. The chassis properties include the status of active chassis alarms on the device, environment measurements, and the status of Mini-PIMs on the device.

To view these chassis properties, select **Monitor** in the J-Web interface, or enter the following CLI **show** commands:

- **show chassis hardware**
- **show chassis hardware detail**
- **show chassis environment**
- **show chassis fpc**
- **show chassis alarms**

Examples:

The following examples provide the sample output of commands:

### show chassis hardware

- For the SRX210 Services Gateway

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

| Item           | Version | Part number | Serial number | Description         |
|----------------|---------|-------------|---------------|---------------------|
| Chassis        |         |             |               | SRX210b             |
| Routing Engine | REV X0  | 750-021778  | 000000PS2627  | RE-SRX210B          |
| FPC 0          |         |             |               | FPC                 |
| PIC 0          |         |             |               | 2x GE, 6x FE, 1x 3G |
| Power Supply 0 |         |             |               |                     |

### show chassis hardware detail

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

Hardware inventory:

| Item           | Version | Part number     | Serial number            | Description         |
|----------------|---------|-----------------|--------------------------|---------------------|
| Chassis        |         |                 |                          | SRX210b             |
| Routing Engine | REV X0  | 750-021778      | 000000PS2631             | RE-SRX210B          |
| da0            | 999 MB  | ST72682         |                          | Nand Flash          |
| usb0 (addr 1)  | DWC OTG | root hub 0      | vendor 0x0000            | uhub0               |
| usb0 (addr 2)  | product | 0x6254 25172    | vendor 0x058f            | uhub1               |
| usb0 (addr 3)  | ST72682 | High Speed Mode | 64218 STMicroelectronics | umass0              |
| FPC 0          |         |                 |                          | FPC                 |
| PIC 0          |         |                 |                          | 2x GE, 6x FE, 1x 3G |
| Power Supply 0 |         |                 |                          |                     |



**NOTE:** The values given in the `usb0` rows provide information for USB level debugging. This information is about USB hub topology.

### show chassis environment

```
user@host > show chassis environment
```

| Class | Item               | Status | Measurement                    |
|-------|--------------------|--------|--------------------------------|
| Temp  | Routing Engine     | OK     | 33 degrees C / 91 degrees F    |
| Fans  | SRX210 Chassis fan | OK     | Spinning at intermediate-speed |
| Power | Power Supply 0     | OK     |                                |

### show chassis fpc

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



```

Temp CPU Utilization (%) Memory Utilization (%)
Slot State (C) Total Interrupt DRAM (MB) Heap Buffer
0 Online ----- CPU less FPC -----
1 Online ----- CPU less FPC -----

```

**show chassis alarms**

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

```

Alarm time Class Description
2009-05-11 10:47:47 UTC Major SRX210 Chassis Fan Failure

```

**Related Documentation**

- [Monitoring the SRX210 Services Gateway Components Using LEDs on page 99](#)
- [Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions on page 101](#)
- [Monitoring the SRX210 Services Gateway Power System on page 104](#)
- [Maintaining the SRX210 Services Gateway Hardware Components on page 95](#)
- [Juniper Networks Technical Assistance Center on page 106](#)

**Monitoring the SRX210 Services Gateway Components Using LEDs****Table 34: Component LEDs on the Services Gateway**

| LED        | State | Meaning   | Possible Causes and Corrective Actions   |
|------------|-------|---|--|
| Status LED | Green | Indicates that the device is functioning normally.  | Normal condition. No action is required.   |
|            | Amber | <ul style="list-style-type: none"> <li>• The device is starting up.</li> <li>• The Reset Config button is pressed.</li> </ul> | Normal condition. No action is required.   |
|            | Red   | An error is detected in the device.   | Contact the Juniper Networks Technical Assistance Center (JTAC). See <a href="#">“Juniper Networks Technical Assistance Center”</a> on page 106. |

Table 34: Component LEDs on the Services Gateway (*continued*)

| LED       | State | Meaning   | Possible Causes and Corrective Actions  |
|-----------|-------|---|---|
| Alarm LED | Red   | The device detects a major alarm.   | A major alarm indicates a critical situation on the gateway that requires immediate action.<br><br>See <a href="#">“Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions”</a> on page 101.   |
|           | Amber | The device detects a minor alarm.   | A minor alarm requires monitoring or maintenance. If left unchecked, it might cause an interruption in service or degradation in performance.<br><br>See <a href="#">“Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions”</a> on page 101.   |
|           | Off   | The device is starting up.<br><br><b>NOTE:</b> When the system is up and running, if the Alarm LED is off, it indicates that no alarms are present on the device. | Normal condition. No action is required.  |
| Power LED | Green | The device is receiving power and is functioning normally.  | Normal condition. No action is required.  |
|           | Amber | The Power button has been pressed and quickly released.   | Normal condition. No action is required.  |
|           | Off   | The device is not receiving power.  | Normal condition if the services gateway is switched off. No action is required.<br><br>If you have not powered off the services gateway, verify that the AC power cord from the power source to the device is not damaged, the socket is in working condition, and the device has an AC input voltage between 110 and 240 VAC.<br><br>See <a href="#">“Monitoring the SRX210 Services Gateway Power System”</a> on page 104. |

Table 34: Component LEDs on the Services Gateway (*continued*)

| LED          | State | Meaning   | Possible Causes and Corrective Actions   |
|--------------|-------|---|--|
| HA LED       | Off   |   | The device is not part of the chassis cluster setup.                                     |
| Mini-PIM LED | Green | The Mini-PIM is present and detected by the device.           | Normal condition. No action is required.   |
|              | Off   | The Mini-PIM is not present or is not detected by the device. | See “Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions” on page 101. |

#### Related Documentation

- [Monitoring the SRX210 Services Gateway Chassis Using the CLI on page 97](#)
- [Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions on page 101](#)
- [Monitoring the SRX210 Services Gateway Power System on page 104](#)
- [Using the Reset Config Button on the SRX210 Services Gateway on page 105](#)
- [Changing the Reset Config Button Behavior on the SRX210 Services Gateway on page 106](#)
- [Juniper Networks Technical Assistance Center on page 106](#)

## Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions

When the services gateway detects an alarm condition, the alarm LED on the front panel turns red or amber as appropriate.

To view a more detailed description of the cause of the alarm, issue the **show chassis alarms** CLI command.

For more information on the **show chassis alarms** command, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

[Table 35 on page 102](#) describes alarms that can occur for an SRX210 Services Gateway chassis component.

**Table 35: SRX210 Services Gateway Chassis Alarm Conditions and Corrective Actions**

| Component                                 | Alarm Condition   | Action  | Alarm Severity |
|---|---|---|----------------|
| Boot media                                | The services gateway boots from an alternate boot device. | <ul style="list-style-type: none"> <li>If the internal flash memory fails at startup, the services gateway automatically boots from the alternative boot device (USB storage device).</li> </ul> <p><b>NOTE:</b> If you configured your services gateway to boot from an alternative boot device, ignore this alarm condition.</p> <ul style="list-style-type: none"> <li>Reformat the internal flash memory, and install a bootable image. (See the <a href="#">Initial Configuration for Security Devices and Monitoring and Troubleshooting for Security Devices</a>.)</li> <li>If you did not configure the services gateway to boot from an alternative boot device, contact Juniper Networks Technical Assistance Center (JTAC). See “<a href="#">Juniper Networks Technical Assistance Center</a>” on page 106.</li> </ul> | Amber (minor)  |
| Mini-Physical Interface Module (Mini-PIM) | A Mini-PIM has failed.                                    | <ul style="list-style-type: none"> <li>Contact the Juniper Networks Technical Assistance Center (JTAC). See “<a href="#">Juniper Networks Technical Assistance Center</a>” on page 106.</li> <li>If you must replace the failed Mini-PIM, see the <a href="#">SRX Series Services Gateways for the Branch Physical Interface Modules Hardware Guide</a> for information about replacing the Mini-PIMs.</li> </ul>   | Red (major)    |

**Table 35: SRX210 Services Gateway Chassis Alarm Conditions and Corrective Actions** (*continued*)

| Component                                   | Alarm Condition  | Action  | Alarm Severity |
|---|--|---|----------------|
| Hardware components on the services gateway | The services gateway chassis temperature or chassis is too warm.   | <ul style="list-style-type: none"> <li>Check the room temperature. See “SRX210 Services Gateway Specifications” on page 7.</li> <li>Check the airflow. See “General Site Guidelines for Installing the SRX210 Services Gateway” on page 35.</li> <li>Check the fans. See “SRX210 Services Gateway Cooling System” on page 18.</li> </ul> <p>If you must replace a fan, contact Juniper Networks Technical Assistance Center (JTAC). See “Juniper Networks Technical Assistance Center” on page 106.</p> | Amber (minor)  |
|   | The services gateway fan has failed.   | <p>Use the CLI command <b>show chassis environment</b> to determine whether the fan is functioning normally.</p> <p>If the fan has failed, contact JTAC. See “Juniper Networks Technical Assistance Center” on page 106.</p>  | Red (major)    |
|   | The services gateway temperature is too high, either because of an internal overheating condition or because the maximum recommended room temperature has been exceeded. | The services gateway shuts down automatically in 4 minutes.   | Red (major)    |

**Related Documentation**

- [Monitoring the SRX210 Services Gateway Chassis Using the CLI on page 97](#)
- [Monitoring the SRX210 Services Gateway Components Using LEDs on page 99](#)
- [Monitoring the SRX210 Services Gateway Power System on page 104](#)
- [Using the Reset Config Button on the SRX210 Services Gateway on page 105](#)
- [Changing the Reset Config Button Behavior on the SRX210 Services Gateway on page 106](#)
- [Juniper Networks Technical Assistance Center on page 106](#)

## Monitoring the SRX210 Services Gateway Power System

The LEDs on the services gateway enable you to determine the performance and operation. The Power LED, located on the front panel of the services gateway, indicates the different settings with respect to the power system.

Table 36 on page 104 describes different Power LED status settings and their corrective actions.

**Table 36: Services Gateway Power LED Status**

| LED Status | Meaning   | Possible Cause and Corrective Action  |
|------------|---|---|
| Green      | The device is receiving power, and the internal power supply is functional.                         | Normal indication. No action is required.   |
| Amber      | The Power button has been pressed and quickly released. The device is shutting down or starting up. | Normal indication. No action is required.   |
| Off        | The device is not receiving power.  | <ul style="list-style-type: none"> <li>Verify that the AC power cord from the power source to the device is not damaged. If the insulation is cracked or broken, immediately replace the cord or cable.</li> <li>Ensure that the socket you plug in is in working condition.</li> <li>Ensure the device has an AC input voltage between 110 and 240 VAC.</li> <li>If you cannot determine the cause of the problem or need additional assistance, contact the Juniper Networks Technical Assistance Center (JTAC). See "Juniper Networks Technical Assistance Center" on page 106.</li> </ul> |

### Related Documentation

- [Monitoring the SRX210 Services Gateway Chassis Using the CLI on page 97](#)
- [Monitoring the SRX210 Services Gateway Components Using LEDs on page 99](#)
- [Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions on page 101](#)
- [Using the Reset Config Button on the SRX210 Services Gateway on page 105](#)
- [Changing the Reset Config Button Behavior on the SRX210 Services Gateway on page 106](#)
- [Juniper Networks Technical Assistance Center on page 106](#)

## Resetting the Configuration File When the SRX210 Services Gateway Is Inaccessible

You can use the SRX210 Services Gateway's Reset Config button to restore the device's configuration file when the current one is faulty or fails. You can also change the default behavior of the Reset Config button.

This topic includes the following sections:

- [Using the Reset Config Button on the SRX210 Services Gateway on page 105](#)
- [Changing the Reset Config Button Behavior on the SRX210 Services Gateway on page 106](#)

### Using the Reset Config Button on the SRX210 Services Gateway

If a configuration fails or denies management access to the services gateway, you can use the RESET CONFIG button to restore the device to the factory-default configuration or a rescue configuration. For example, if someone inadvertently commits a configuration that denies management access to a services gateway, you can delete the invalid configuration and replace it with a rescue configuration by pressing the RESET CONFIG button.



**NOTE:** The RESET CONFIG button is recessed to prevent it from being pressed accidentally.

The rescue configuration is a previously committed, valid configuration. You must have previously set the rescue configuration through the J-Web interface or the CLI.

To press the RESET CONFIG button, insert a small probe (such as a straightened paper clip) into the pinhole on the front panel.

- By default, pressing and quickly releasing the RESET CONFIG button loads and commits the rescue configuration through the J-Web interface or the CLI. The Status LED is solid amber during this time.
- By default, pressing and holding the RESET CONFIG button for 15 seconds or more—until the Status LED is solid amber — deletes all configurations on the device, including the backup configurations and rescue configuration, and loads and commits the factory configuration.

For details about factory-default settings, see the following topics:

- [Initial Configuration for Security Devices](#)
- [Monitoring and Troubleshooting for Security Devices](#)

#### Related Documentation

- [Changing the Reset Config Button Behavior on the SRX210 Services Gateway on page 106](#)
- [Monitoring the SRX210 Services Gateway Chassis Using the CLI on page 97](#)
- [Monitoring the SRX210 Services Gateway Components Using LEDs on page 99](#)
- [Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions on page 101](#)

- [Monitoring the SRX210 Services Gateway Power System on page 104](#)
- [Juniper Networks Technical Assistance Center on page 106](#)

## Changing the Reset Config Button Behavior on the SRX210 Services Gateway

You can change the default operation of the RESET CONFIG button by limiting how the button resets the services gateway:

- To prevent the RESET CONFIG button from setting the device to the factory-default configuration and deleting all other configurations:

```
admin@host# set chassis config-button no-clear
```

You can still press and quickly release the button to reset it to the rescue configuration.

- To prevent the RESET CONFIG button from setting the device to the rescue configuration:

```
admin@host# set chassis config-button no-rescue
```

You can still press and hold the button for 15 seconds or more to reset the gateway to the factory-default configuration.

- To disable the button and prevent the device from resetting to either configuration:

```
admin@host# set chassis config-button no-clear no-rescue
```

The **no-clear** option prevents the RESET CONFIG button from deleting all configurations on the services gateway. The **no-rescue** option prevents the RESET CONFIG button from loading the rescue configuration.

To return the function of the RESET CONFIG button to its default behavior, remove the **config-button** statement from the device configuration.

### Related Documentation

- [Using the Reset Config Button on the SRX210 Services Gateway on page 105](#)
- [Monitoring the SRX210 Services Gateway Chassis Using the CLI on page 97](#)
- [Monitoring the SRX210 Services Gateway Components Using LEDs on page 99](#)
- [Monitoring the SRX210 Services Gateway Using Chassis Alarm Conditions on page 101](#)
- [Monitoring the SRX210 Services Gateway Power System on page 104](#)
- [Juniper Networks Technical Assistance Center on page 106](#)

## Juniper Networks Technical Assistance Center

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If you need assistance while troubleshooting a services gateway, open a support case using the Case Manager link at <http://www.juniper.net/support/>, or call 1-888-314-JTAC (within the United States) or 1-408-745-9500 (from outside the United States).



## PART 4

# Appendixes

- [Safety and Regulatory Compliance Information on page 109](#)
- [SRX210 Services Gateway Power Guidelines, Requirements, and Specifications on page 135](#)
- [SRX210 Services Gateway Interface Cable Specifications and Connector Pinouts on page 139](#)
- [Contacting Customer Support and Returning the SRX210 Services Gateway Hardware on page 143](#)



## APPENDIX A

# Safety and Regulatory Compliance Information

This appendix includes the following topics:

- SRX210 Services Gateway Definition of Safety Warning Levels on page 109
- SRX210 Services Gateway General Safety Guidelines and Warnings on page 111
- SRX210 Services Gateway Fire Safety Requirements on page 115
- SRX210 Services Gateway Installation Safety Guidelines and Warnings on page 116
- SRX210 Services Gateway Laser and LED Safety Guidelines and Warnings on page 120
- SRX210 Services Gateway Maintenance and Operational Safety Guidelines and Warnings on page 123
- SRX210 Services Gateway Electrical Safety Guidelines and Warnings on page 128
- SRX210 Services Gateway Agency Approvals on page 129
- SRX210 Services Gateway Compliance Statements for EMC Requirements on page 130
- SRX210 Services Gateway Compliance Statements for Environmental Requirements on page 132
- SRX210 Services Gateway Compliance Statements for Acoustic Noise on page 133

## SRX210 Services Gateway Definition of Safety Warning Levels

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This topic defines the following four levels of safety warnings used in Juniper Networks technical publications:



.....  
**NOTE:** You might find this information helpful in a particular situation or might otherwise overlook it.  
.....



.....  
**CAUTION:** You need to observe the specified guidelines to avoid minor injury or discomfort to you or severe damage to the services gateway.  
.....



**WARNING:** This symbol is used with laser warnings. Unterminated optical connectors can emit invisible laser radiation. Focusing your eye directly on a laser source—even a low-power laser—could permanently damage the eye.



**WARNING:** This symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

**Waarschuwing** Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van standaard maatregelen om ongelukken te voorkomen.

**Varoitus** Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista.

**Attention** Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant causer des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents.

**Warnung** Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewusst.

**Avvertenza** Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti.

**Advarsel** Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskaade. Før du utfører arbeid på utstyr, må du vare oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker.

**Aviso** Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes.

**¡Atención!** Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes.

**Varning!** Denna varningssymbol signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanligt förfarande för att förebygga skador.

**Related  
Documentation**

- [SRX210 Services Gateway General Safety Guidelines and Warnings on page 111](#)
- [SRX210 Services Gateway Fire Safety Requirements on page 115](#)
- [SRX210 Services Gateway Installation Safety Guidelines and Warnings on page 116](#)
- [SRX210 Services Gateway Laser and LED Safety Guidelines and Warnings on page 120](#)
- [SRX210 Services Gateway Electrical Safety Guidelines and Warnings on page 128](#)
- [SRX210 Services Gateway Maintenance and Operational Safety Guidelines and Warnings on page 123](#)

## SRX210 Services Gateway General Safety Guidelines and Warnings

This topic includes the following sections:

- [General Safety Guidelines and Warnings on page 111](#)
- [Qualified Personnel Warning on page 112](#)
- [Restricted Access Area Warning on page 113](#)
- [Preventing Electrostatic Discharge Damage to the Services Gateway on page 114](#)

### General Safety Guidelines and Warnings

The following guidelines help ensure your safety and protect the services gateway from damage. The list of guidelines might not address all potentially hazardous situations in your working environment, so it is important that you remain alert and exercise good judgment at all times.

- Perform only the procedures explicitly described in these topics. Ensure that only authorized service personnel perform other system services.
- Keep the area around the chassis clear and free from dust before, during, and after installation.
- Keep tools away from areas where people could trip on them.
- Wear safety glasses if you are working under any conditions that could be hazardous to your eyes.
- Do not perform any actions that create a potential hazard to people or make the equipment unsafe.

- Never install or manipulate wiring during electrical storms.
- Never install electrical jacks in wet locations unless the jacks are specifically designed for wet environments.
- Do not open or remove chassis covers or sheet metal parts unless instructions are provided in this guide. Such an action could cause severe electrical shock.
- Do not push or force any objects through any opening in the chassis frame. Such an action could result in electrical shock or fire.
- Avoid spilling liquid onto the services gateway chassis or onto any services gateway component. Such an action could cause electrical shock or damage the services gateway.
- Avoid touching uninsulated electrical wires or terminals that have not been disconnected from their power source. Such an action could cause electrical shock.

## Qualified Personnel Warning

---



**WARNING:** Only trained and qualified personnel should install or replace the services gateway.

**Waarschuwing** Installatie en reparaties mogen uitsluitend door getraind en bevoegd personeel uitgevoerd worden.

**Varoitus** Ainoastaan koulutettu ja pätevä henkilökunta saa asentaa tai vaihtaa tämän laitteen.

**Attention** Tout installation ou remplacement de l'appareil doit être réalisé par du personnel qualifié et compétent.

**Warnung** Gerät nur von geschultem, qualifiziertem Personal installieren oder auswechseln lassen.

**Avvertenza** Solo personale addestrato e qualificato deve essere autorizzato ad installare o sostituire questo apparecchio.

**Advarsel** Kun kvalifisert personell med riktig opplæring bør montere eller bytte ut dette utstyret.

**Aviso** Este equipamento deverá ser instalado ou substituído apenas por pessoal devidamente treinado e qualificado.

**¡Atención!** Estos equipos deben ser instalados y reemplazados exclusivamente por personal técnico adecuadamente preparado y capacitado.

**Varning!** Denna utrustning ska endast installeras och bytas ut av utbildad och kvalificerad personal.

---

## Restricted Access Area Warning



**WARNING:** The services gateway is intended for installation in restricted access areas. A restricted access area is an area to which access can be gained only by service personnel through the use of a special tool, lock and key, or other means of security, and which is controlled by the authority responsible for the location.

**Waarschuwing** Dit toestel is bedoeld voor installatie op plaatsen met beperkte toegang. Een plaats met beperkte toegang is een plaats waar toegang slechts door servicepersoneel verkregen kan worden door middel van een speciaal instrument, een slot en sleutel, of een ander veiligheidsmiddel, en welke beheerd wordt door de overheidsinstantie die verantwoordelijk is voor de locatie.

**Varoitus** Tämä laite on tarkoitettu asennettavaksi paikkaan, johon pääsy on rajoitettua. Paikka, johon pääsy on rajoitettua, tarkoittaa paikkaa, johon vain huoltohenkilöstö pääsee jonkin erikoistyökalun, lukkoon sopivan avaimen tai jonkin muun turvalaitteen avulla ja joka on paikasta vastuussa olevien toimivaltaisten henkilöiden valvoma.

**Attention** Cet appareil est à installer dans des zones d'accès réservé. Ces dernières sont des zones auxquelles seul le personnel de service peut accéder en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité. L'accès aux zones de sécurité est sous le contrôle de l'autorité responsable de l'emplacement.

**Warnung** Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Ein Bereich mit beschränktem Zutritt ist ein Bereich, zu dem nur Wartungspersonal mit einem Spezialwerkzeugs, Schloß und Schlüssel oder anderer Sicherheitsvorkehrungen Zugang hat, und der von dem für die Anlage zuständigen Gremium kontrolliert wird.

**Avvertenza** Questa unità deve essere installata in un'area ad accesso limitato. Un'area ad accesso limitato è un'area accessibile solo a personale di assistenza tramite un'attrezzo speciale, lucchetto, o altri dispositivi di sicurezza, ed è controllata dall'autorità responsabile della zona.

**Advarsel** Denne enheten er laget for installasjon i områder med begrenset adgang. Et område med begrenset adgang gir kun adgang til servicepersonale som bruker et spesielt verktøy, lås og nøkkel, eller en annen sikkerhetsanordning, og det kontrolleres av den autoriteten som er ansvarlig for området.

**Aviso** Esta unidade foi concebida para instalação em áreas de acesso restrito. Uma área de acesso restrito é uma área à qual apenas tem acesso o pessoal de serviço autorizado, que possua uma ferramenta, chave e fechadura especial, ou qualquer outra forma de segurança. Esta área é controlada pela autoridade responsável pelo local.

**¡Atención!** Esta unidad ha sido diseñada para instalarse en áreas de acceso restringido. Área de acceso restringido significa un área a la que solamente tiene acceso el personal de servicio mediante la utilización de una herramienta especial, cerradura con llave, o algún otro medio de seguridad, y que está bajo el control de la autoridad responsable del local.

**Varning!** Denna enhet är avsedd för installation i områden med begränsat tillträde. Ett område med begränsat tillträde får endast tillträdas av servicepersonal med ett speciellt verktyg, lås och nyckel, eller annan säkerhetsanordning, och kontrolleras av den auktoritet som ansvarar för området.

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## Preventing Electrostatic Discharge Damage to the Services Gateway

Many services gateway hardware components are sensitive to damage from static electricity. Some components can be impaired by voltages as low as 30 V. You can easily generate potentially damaging static voltages whenever you handle plastic or foam packing material or if you move components across plastic or carpets. Observe the following guidelines to minimize the potential for electrostatic discharge (ESD) damage, which can cause intermittent or complete component failures:

- Always use an ESD wrist strap or ankle strap, and verify that it is in direct contact with your skin.

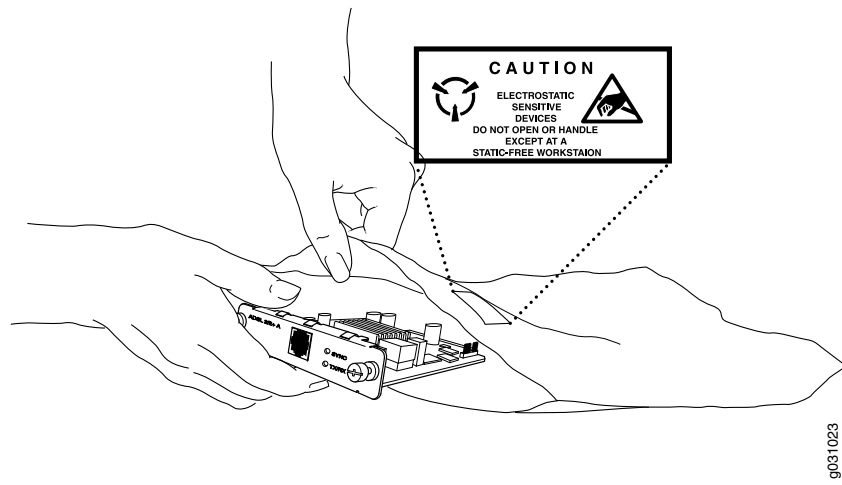


**CAUTION:** For safety, periodically check the resistance value of the ESD strap. The measurement should be in the range of 1 to 10 Mohms.

- 
- When handling any component that is removed from the chassis, verify that the equipment end of your ESD strap is attached to one of the ESD points on the chassis.
  - Avoid contact between the component and your clothing. ESD voltages emitted from clothing can still damage components.
  - When removing or installing a component, always place it component-side up on an antistatic surface, in an antistatic card rack, or in an electrostatic bag. If you are returning a component, place it into an electrostatic bag before packing it. See [Figure 25 on page 115](#).



Figure 25: Placing a Component into an Electrostatic Bag



- Related Documentation**
- [SRX210 Services Gateway Definition of Safety Warning Levels on page 109](#)
  - [SRX210 Services Gateway Fire Safety Requirements on page 115](#)

## SRX210 Services Gateway Fire Safety Requirements

In the event of a fire emergency involving devices and other network equipment, the safety of people is the primary concern. Establish procedures for protecting people in the event of a fire emergency, provide safety training, and properly provision fire-control equipment and fire extinguishers.

In addition, establish procedures to protect your equipment in the event of a fire emergency. Juniper Networks products should be installed in an environment suitable for electronic equipment. We recommend that fire suppression equipment be available in the event of a fire in the vicinity of the equipment and that all local fire, safety, and electrical codes and ordinances be observed when installing and operating your equipment.

In the event of an electrical hazard or an electrical fire, first turn power off to the equipment at the source. Then use a Type C fire extinguisher to extinguish the fire. Type C fire extinguishers, which use noncorrosive fire retardants such as carbon dioxide (CO<sub>2</sub>) and Halotron, are most effective for suppressing electrical fires. Type C fire extinguishers displace the oxygen from the point of combustion to eliminate the fire. For extinguishing fire on or around equipment that draws air from the environment for cooling, use this type of inert oxygen displacement extinguisher instead of an extinguisher that leaves residue on equipment.

Do not use multipurpose Type ABC chemical fire extinguishers (dry chemical fire extinguishers) near Juniper Networks equipment. The primary ingredient in these fire extinguishers is monoammonium phosphate, which is very sticky and difficult to clean. In addition, in minute amounts of moisture, monoammonium phosphate can become highly corrosive and corrodes most metals.

Any equipment in a room in which a chemical fire extinguisher has been discharged is subject to premature failure and unreliable operation. The equipment is considered to be irreparably damaged.



**NOTE:** To keep warranties effective, do not use a dry chemical fire extinguisher to control a fire at or near a Juniper Networks services gateway. If a dry chemical fire extinguisher is used, the unit is no longer eligible for coverage under a service agreement.

We recommend that you dispose of any irreparably damaged equipment in an environmentally responsible manner.

**Related  
Documentation**

- [SRX210 Services Gateway General Safety Guidelines and Warnings on page 111](#)
- [SRX210 Services Gateway Installation Safety Guidelines and Warnings on page 116](#)

## SRX210 Services Gateway Installation Safety Guidelines and Warnings

### Installation Instructions Warning



**WARNING:** Read the installation instructions before you connect the services gateway to a power source.

**Waarschuwing** Raadpleeg de installatie-aanwijzingen voordat u het systeem met de voeding verbindt.

**Varoitus** Lue asennusohjeet ennen järjestelmän yhdistämistä virtalähteeseen.

**Attention** Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.

**Warnung** Lesen Sie die Installationsanweisungen, bevor Sie das System an die Stromquelle anschließen.

**Avvertenza** Consultare le istruzioni di installazione prima di collegare il sistema all'alimentatore.

**Advarsel** Les installasjonsinstruksjonene før systemet kobles til strømkilden.

**Aviso** Leia as instruções de instalação antes de ligar o sistema à sua fonte de energia.

**¡Atención!** Ver las instrucciones de instalación antes de conectar el sistema a la red de alimentación.

**Varning!** Läs installationsanvisningarna innan du kopplar systemet till dess strömförsörjningsenhet.

### Rack-Mounting Requirements and Warnings

Ensure that the equipment rack into which the services gateway is installed is evenly and securely supported to avoid the hazardous condition that could result from uneven mechanical loading.



**WARNING:** To prevent bodily injury when mounting or servicing the services gateway in a rack, take the following precautions to ensure that the system remains stable. The following directives help maintain your safety:

- The services gateway must be installed into a rack that is secured to the building structure.
- The services gateway should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting the services gateway in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the services gateway in the rack.

**Waarschuwing** Om lichamelijk letsel te voorkomen wanneer u dit toestel in een rek monteert of het daar een servicebeurt geeft, moet u speciale voorzorgsmaatregelen nemen om ervoor te zorgen dat het toestel stabiel blijft. De onderstaande richtlijnen worden verstrekt om uw veiligheid te verzekeren:

- De Juniper Networks services gateway moet in een stelling worden geïnstalleerd die aan een bouwsel is verankerd.
- Dit toestel dient onderaan in het rek gemonteerd te worden als het toestel het enige in het rek is.
- Wanneer u dit toestel in een gedeeltelijk gevuld rek monteert, dient u het rek van onderen naar boven te laden met het zwaarste onderdeel onderaan in het rek.
- Als het rek voorzien is van stabiliseringshulpmiddelen, dient u de stabilisatoren te monteren voordat u het toestel in het rek monteert of het daar een servicebeurt geeft.

**Varoitus** Kun laite asetetaan telineeseen tai huolletaan sen ollessa telineessä, on noudatettava erityisiä varotoimia järjestelmän vakavuuden säilyttämiseksi, jotta vältetään loukkaantumiselta. Noudata seuraavia turvallisuusohjeita:

- Juniper Networks services gateway on asennettava telineeseen, joka on kiinnitetty rakennukseen.
- Jos telineessä ei ole muita laitteita, aseta laite telineen alaosaan.

- Jos laite asetetaan osaksi täytettyyn telineeseen, aloita kuormittaminen sen alaosaan kaikkein raskaimmalla esineellä ja siirry sitten sen yläosaan.
- Jos telinettä varten on vakaimet, asenna ne ennen laitteen asettamista telineeseen tai sen huoltamista siinä.

**Attention** Pour éviter toute blessure corporelle pendant les opérations de montage ou de réparation de cette unité en casier, il convient de prendre des précautions spéciales afin de maintenir la stabilité du système. Les directives ci-dessous sont destinées à assurer la protection du personnel:

- Le rack sur lequel est monté le Juniper Networks services gateway doit être fixé à la structure du bâtiment.
- Si cette unité constitue la seule unité montée en casier, elle doit être placée dans le bas.
- Si cette unité est montée dans un casier partiellement rempli, charger le casier de bas en haut en plaçant l'élément le plus lourd dans le bas.
- Si le casier est équipé de dispositifs stabilisateurs, installer les stabilisateurs avant de monter ou de réparer l'unité en casier.

**Warnung** Zur Vermeidung von Körperverletzung beim Anbringen oder Warten dieser Einheit in einem Gestell müssen Sie besondere Vorkehrungen treffen, um sicherzustellen, daß das System stabil bleibt. Die folgenden Richtlinien sollen zur Gewährleistung Ihrer Sicherheit dienen:

- Der Juniper Networks services gateway muß in einem Gestell installiert werden, das in der Gebäudestruktur verankert ist.
- Wenn diese Einheit die einzige im Gestell ist, sollte sie unten im Gestell angebracht werden.
- Bei Anbringung dieser Einheit in einem zum Teil gefüllten Gestell ist das Gestell von unten nach oben zu laden, wobei das schwerste Bauteil unten im Gestell anzubringen ist.
- Wird das Gestell mit Stabilisierungszubehör geliefert, sind zuerst die Stabilisatoren zu installieren, bevor Sie die Einheit im Gestell anbringen oder sie warten.

**Avvertenza** Per evitare infortuni fisici durante il montaggio o la manutenzione di questa unità in un supporto, occorre osservare speciali precauzioni per garantire che il sistema rimanga stabile. Le seguenti direttive vengono fornite per garantire la sicurezza personale:

- Il Juniper Networks services gateway deve essere installato in un telaio, il quale deve essere fissato alla struttura dell'edificio.
- Questa unità deve venire montata sul fondo del supporto, se si tratta dell'unica unità da montare nel supporto.

- Quando questa unità viene montata in un supporto parzialmente pieno, caricare il supporto dal basso all'alto, con il componente più pesante sistemato sul fondo del supporto.
- Se il supporto è dotato di dispositivi stabilizzanti, installare tali dispositivi prima di montare o di procedere alla manutenzione dell'unità nel supporto.

**Advarsel** Unngå fysiske skader under montering eller reparasjonsarbeid på denne enheten når den befinner seg i et kabinett. Vær nøye med at systemet er stabilt. Følgende retningslinjer er gitt for å verne om sikkerheten:

- Juniper Networks services gateway må installeres i et stativ som er forankret til bygningsstrukturen.
- Denne enheten bør monteres nederst i kabinettet hvis dette er den eneste enheten i kabinettet.
- Ved montering av denne enheten i et kabinett som er delvis fylt, skal kabinettet lastes fra bunnen og opp med den tyngste komponenten nederst i kabinettet.
- Hvis kabinettet er utstyrt med stabiliseringsutstyr, skal stabilisatorene installeres før montering eller utføring av reparasjonsarbeid på enheten i kabinettet.

**Aviso** Para se prevenir contra danos corporais ao montar ou reparar esta unidade numa estante, deverá tomar precauções especiais para se certificar de que o sistema possui um suporte estável. As seguintes directrizes ajudá-lo-ão a efectuar o seu trabalho com segurança:

- O Juniper Networks services gateway deverá ser instalado numa prateleira fixa à estrutura do edifício.
- Esta unidade deverá ser montada na parte inferior da estante, caso seja esta a única unidade a ser montada.
- Ao montar esta unidade numa estante parcialmente ocupada, coloque os itens mais pesados na parte inferior da estante, arrumando-os de baixo para cima.
- Se a estante possuir um dispositivo de estabilização, instale-o antes de montar ou reparar a unidade.

**¡Atención!** Para evitar lesiones durante el montaje de este equipo sobre un bastidor, o posteriormente durante su mantenimiento, se debe poner mucho cuidado en que el sistema quede bien estable. Para garantizar su seguridad, proceda según las siguientes instrucciones:

- El Juniper Networks services gateway debe instalarse en un bastidor fijado a la estructura del edificio.
- Colocar el equipo en la parte inferior del bastidor, cuando sea la única unidad en el mismo.

- Cuando este equipo se vaya a instalar en un bastidor parcialmente ocupado, comenzar la instalación desde la parte inferior hacia la superior colocando el equipo más pesado en la parte inferior.
- Si el bastidor dispone de dispositivos estabilizadores, instalar éstos antes de montar o proceder al mantenimiento del equipo instalado en el bastidor.

**Varning!** För att undvika kroppsskada när du installerar eller utför underhållsarbete på denna enhet på en ställning måste du vidta särskilda försiktighetsåtgärder för att försäkra dig om att systemet står stadigt. Följande riktlinjer ges för att trygga din säkerhet:

- Juniper Networks services gateway måste installeras i en ställning som är förankrad i byggnadens struktur.
- Om denna enhet är den enda enheten på ställningen skall den installeras längst ned på ställningen.
- Om denna enhet installeras på en delvis fylld ställning skall ställningen fyllas nedifrån och upp, med de tyngsta enheterna längst ned på ställningen.
- Om ställningen är försedd med stabiliseringsdon skall dessa monteras fast innan enheten installeras eller underhålls på ställningen.

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- Related Documentation**
- [SRX210 Services Gateway Fire Safety Requirements on page 115](#)
  - [SRX210 Services Gateway Laser and LED Safety Guidelines and Warnings on page 120](#)

## SRX210 Services Gateway Laser and LED Safety Guidelines and Warnings

The 1-Port SFP Mini-Physical Interface Module (Mini-PIM) is equipped with laser transmitters, which are considered a Class 1 Laser Product by the U.S. Food and Drug Administration, and they are evaluated as a Class 1 Laser Product per EN 60825-1 +A11 +A2 requirements.

This topic includes the following sections:

- [Laser and LED Safety Guidelines and Warnings on page 120](#)

### Laser and LED Safety Guidelines and Warnings

#### General Laser Safety Guidelines

When working around Mini-PIMs, observe the following safety guidelines to prevent eye injury:

- Do not look into unterminated ports or at fibers that connect to unknown sources.
- Do not examine unterminated optical ports with optical instruments.
- Avoid direct exposure to the beam.



**WARNING:** Unterminated optical connectors can emit invisible laser radiation. The lens in the human eye focuses all the laser power on the retina, so focusing the eye directly on a laser source—even a low-power laser—could permanently damage the eye.

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### Class 1 Laser Product Warning

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**WARNING:** Class 1 laser product.

**Waarschuwing** Klasse-1 laser produkt.

**Varoitus** Luokan 1 lasertuote.

**Attention** Produit laser de classe I.

**Warnung** Laserprodukt der Klasse 1.

**Avvertenza** Prodotto laser di Classe 1.

**Advarsel** Laserprodukt av klasse 1.

**Aviso** Produto laser de classe 1.

**¡Atención!** Producto láser Clase I.

**Varning!** Laserprodukt av klass 1.

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### Class 1 LED Product Warning

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**WARNING:** Class 1 LED product.

**Waarschuwing** Klasse 1 LED-product.

**Varoitus** Luokan 1 valodiodituote.

**Attention** Alarme de produit LED Class I.

**Warnung** Class 1 LED-Produktwarnung.

**Avvertenza** Avvertenza prodotto LED di Classe 1.

**Advarsel** LED-produkt i klasse 1.

**Aviso** Produto de classe 1 com LED.

**¡Atención!** Aviso sobre producto LED de Clase 1.

**Varning!** Lysdiodprodukt av klass 1.

### Laser Beam Warning

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**WARNING:** Do not stare into the laser beam or view it directly with optical instruments.

**Waarschuwing** Niet in de straal staren of hem rechtstreeks bekijken met optische instrumenten.

**Varoitus** Älä katso säteeseen äläkä tarkastele sitä suoraan optisen laitteen avulla.

**Attention** Ne pas fixer le faisceau des yeux, ni l'observer directement à l'aide d'instruments optiques.

**Warnung** Nicht direkt in den Strahl blicken und ihn nicht direkt mit optischen Geräten prüfen.

**Avvertenza** Non fissare il raggio con gli occhi né usare strumenti ottici per osservarlo direttamente.

**Advarsel** Stirr eller se ikke direkte p strlen med optiske instrumenter.

**Aviso** Não olhe fixamente para o raio, nem olhe para ele directamente com instrumentos ópticos.

**¡Atención!** No mirar fijamente el haz ni observarlo directamente con instrumentos ópticos.

**Varning!** Rikta inte blicken in mot strålen och titta inte direkt på den genom optiska instrument.

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### Radiation from Open Port Apertures Warning

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**WARNING:** Because invisible radiation may be emitted from the aperture of the port when no fiber cable is connected, avoid exposure to radiation and do not stare into open apertures.

**Waarschuwing** Aangezien onzichtbare straling vanuit de opening van de poort kan komen als er geen fiberkabel aangesloten is, dient blootstelling aan straling en het kijken in open openingen vermeden te worden.

**Varoitus** Koska portin aukosta voi emittoitua näkymätöntä säteilyä, kun kuitukaapelia ei ole kytkettynä, vältä säteilylle altistumista äläkä katso avoimiin aukkoihin.

**Attention** Des radiations invisibles à l'il nu pouvant traverser l'ouverture du port lorsqu'aucun câble en fibre optique n'y est connecté, il est recommandé de ne pas regarder fixement l'intérieur de ces ouvertures.



**Warnung** Aus der Port-Öffnung können unsichtbare Strahlen emittieren, wenn kein Glasfaserkabel angeschlossen ist. Vermeiden Sie es, sich den Strahlungen auszusetzen, und starren Sie nicht in die Öffnungen!

**Avvertenza** Quando i cavi in fibra non sono inseriti, radiazioni invisibili possono essere emesse attraverso l'apertura della porta. Evitate di esporvi alle radiazioni e non guardate direttamente nelle aperture.

**Advarsel** Unngå utsettelse for stråling, og stirr ikke inn i åpninger som er åpne, fordi usynlig stråling kan emitteres fra portens åpning når det ikke er tilkoblet en fiberkabel.

**Aviso** Dada a possibilidade de emissão de radiação invisível através do orifício da via de acesso, quando esta não tiver nenhum cabo de fibra conectado, deverá evitar a exposição à radiação e não deverá olhar fixamente para orifícios que se encontrarem a descoberto.

**¡Atención!** Debido a que la apertura del puerto puede emitir radiación invisible cuando no existe un cable de fibra conectado, evite mirar directamente a las aperturas para no exponerse a la radiación.

**Varning!** Osynlig strålning kan avges från en portöppning utan ansluten fiberkabel och du bör därför undvika att bli utsatt för strålning genom att inte stirra in i oskyddade öppningar.

- Related Documentation**
- [SRX210 Services Gateway Installation Safety Guidelines and Warnings on page 116](#)
  - [SRX210 Services Gateway Maintenance and Operational Safety Guidelines and Warnings on page 123](#)

## SRX210 Services Gateway Maintenance and Operational Safety Guidelines and Warnings

This topic includes the following section:

- [Safety Guidelines and Warnings on page 123](#)

### Safety Guidelines and Warnings

#### Battery Handling Warning



**WARNING:** Replacing the battery incorrectly might result in an explosion. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

**Waarschuwing** Er is ontploffingsgevaar als de batterij verkeerd vervangen wordt. Vervang de batterij slechts met hetzelfde of een equivalent type dat

door de fabrikant aanbevolen is. Gebruikte batterijen dienen overeenkomstig fabrieksvoorschriften weggeworpen te worden.

**Varoitus** Räjähdyksen vaara, jos akku on vaihdettu väärään akkuun. Käytä vaihtamiseen ainoastaan saman- tai vastaavantyyppistä akkua, joka on valmistajan suosittelema. Hävitä käytetyt akut valmistajan ohjeiden mukaan.

**Attention** Danger d'explosion si la pile n'est pas remplacée correctement. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

**Warnung** Bei Einsetzen einer falschen Batterie besteht Explosionsgefahr. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

**Avvertenza** Pericolo di esplosione se la batteria non è installata correttamente. Sostituire solo con una di tipo uguale o equivalente, consigliata dal produttore. Eliminare le batterie usate secondo le istruzioni del produttore.

**Advarsel** Det kan være fare for eksplosjon hvis batteriet skiftes på feil måte. Skift kun med samme eller tilsvarende type som er anbefalt av produsenten. Kasser brukte batterier i henhold til produsentens instruksjoner.

**Aviso** Existe perigo de explosão se a bateria for substituída incorrectamente. Substitua a bateria por uma bateria igual ou de um tipo equivalente recomendado pelo fabricante. Destrua as baterias usadas conforme as instruções do fabricante.

**¡Atención!** Existe peligro de explosión si la batería se reemplaza de manera incorrecta. Reemplazar la batería exclusivamente con el mismo tipo o el equivalente recomendado por el fabricante. Desechar las baterías gastadas según las instrucciones del fabricante.

**Varning!** Explosionsfara vid felaktigt batteribyte. Ersätt endast batteriet med samma batterityp som rekommenderas av tillverkaren eller motsvarande. Följ tillverkarens anvisningar vid kassering av använda batterier.

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### Jewelry Removal Warning

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**WARNING:** Before working on equipment that is connected to power lines, remove jewelry, including rings, necklaces, and watches. Metal objects heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.

**Waarschuwing** Alvorens aan apparatuur te werken die met elektrische leidingen is verbonden, sieraden (inclusief ringen, kettingen en horloges) verwijderen. Metalen voorwerpen worden warm wanneer ze met stroom en

aarde zijn verbonden, en kunnen ernstige brandwonden veroorzaken of het metalen voorwerp aan de aansluitklemmen lassen.

**Varoitus** Ennen kuin työskentelet voimavirtajohtoihin kytkettyjen laitteiden parissa, ota pois kaikki korut (sormukset, kaulakorut ja kellot mukaan lukien). Metalliesineet kuumenevat, kun ne ovat yhteydessä sähkövirran ja maan kanssa, ja ne voivat aiheuttaa vakavia palovammoja tai hitsata metalliesineet kiinni liitäntänapoihin.

**Attention** Avant d'accéder à cet équipement connecté aux lignes électriques, ôter tout bijou (anneaux, colliers et montres compris). Lorsqu'ils sont branchés à l'alimentation et reliés à la terre, les objets métalliques chauffent, ce qui peut provoquer des blessures graves ou souder l'objet métallique aux bornes.

**Warnung** Vor der Arbeit an Geräten, die an das Netz angeschlossen sind, jeglichen Schmuck (einschließlich Ringe, Ketten und Uhren) abnehmen. Metallgegenstände erhitzen sich, wenn sie an das Netz und die Erde angeschlossen werden, und können schwere Verbrennungen verursachen oder an die Anschlußklemmen angeschweißt werden.

**Avvertenza** Prima di intervenire su apparecchiature collegate alle linee di alimentazione, togliersi qualsiasi monile (inclusi anelli, collane, braccialetti ed orologi). Gli oggetti metallici si riscaldano quando sono collegati tra punti di alimentazione e massa: possono causare ustioni gravi oppure il metallo può saldarsi ai terminali.

**Advarsel** Fjern alle smykker (inkludert ringer, halskjeder og klokker) før du skal arbeide på utstyr som er koblet til kraftledninger. Metallgjenstander som er koblet til kraftledninger og jord blir svært varme og kan forårsake alvorlige brannskader eller smelte fast til polene.

**Aviso** Antes de trabalhar em equipamento que esteja ligado a linhas de corrente, retire todas as jóias que estiver a usar (incluindo anéis, fios e relógios). Os objectos metálicos aquecerão em contacto com a corrente e em contacto com a ligação à terra, podendo causar queimaduras graves ou ficarem soldados aos terminais.

**¡Atención!** Antes de operar sobre equipos conectados a líneas de alimentación, quitarse las joyas (incluidos anillos, collares y relojes). Los objetos de metal se calientan cuando se conectan a la alimentación y a tierra, lo que puede ocasionar quemaduras graves o que los objetos metálicos queden soldados a los bornes.

**Varning!** Tag av alla smycken (inklusive ringar, halsband och armbandsur) innan du arbetar på utrustning som är kopplad till kraftledningar. Metallobjekt hettas upp när de kopplas ihop med ström och jord och kan förorsaka allvarliga brännskador; metallobjekt kan också sammansvetsas med kontakterna.

### Lightning Activity Warning

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**WARNING:** Do not work on the system or connect or disconnect cables during periods of lightning activity.

**Waarschuwing** Tijdens onweer dat gepaard gaat met bliksem, dient u niet aan het systeem te werken of kabels aan te sluiten of te ontkoppelen.

**Varoitus** Älä työskentele järjestelmän parissa äläkä yhdistä tai irrota kaapeleita ukkosilmalla.

**Attention** Ne pas travailler sur le système ni brancher ou débrancher les câbles pendant un orage.

**Warnung** Arbeiten Sie nicht am System und schließen Sie keine Kabel an bzw. trennen Sie keine ab, wenn es gewittert.

**Avvertenza** Non lavorare sul sistema o collegare oppure scollegare i cavi durante un temporale con fulmini.

**Advarsel** Utfør aldri arbeid på systemet, eller koble kabler til eller fra systemet når det tordner eller lyner.

**Aviso** Não trabalhe no sistema ou ligue e desligue cabos durante períodos de mau tempo (trovoada).

**¡Atención!** No operar el sistema ni conectar o desconectar cables durante el transcurso de descargas eléctricas en la atmósfera.

**Varning!** Vid åska skall du aldrig utföra arbete på systemet eller ansluta eller koppla loss kablar.

---

### Operating Temperature Warning

---



**WARNING:** To prevent the services gateway from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 104°F (40°C). To prevent airflow restriction, allow at least 6 in. (15.2 cm) of clearance around the ventilation openings.

**Waarschuwing** Om te voorkomen dat welke services gateway van de Juniper Networks services gateway dan ook oververhit raakt, dient u deze niet te bedienen op een plaats waar de maximale aanbevolen omgevingstemperatuur van 40°C wordt overschreden. Om te voorkomen dat de luchtstroom wordt beperkt, dient er minstens 15,2 cm speling rond de ventilatie-openingen te zijn.

**Varoitus** Ettei Juniper Networks services gateway-sarjan reititin ylikuumentuusi, sitä ei saa käyttää tilassa, jonka lämpötila ylittää korkeimman suositellun

ympäristölämpötilan 40°C. Ettei ilmanvaihto estyisi, tuuletusaukkojen ympärille on jätettävä ainakin 15,2 cm tilaa.

**Attention** Pour éviter toute surchauffe des routeurs de la gamme Juniper Networks services gateway, ne l'utilisez pas dans une zone où la température ambiante est supérieure à 40°C. Pour permettre un flot d'air constant, dégagez un espace d'au moins 15,2 cm autour des ouvertures de ventilations.

**Warnung** Um einen services gateway der services gateway vor Überhitzung zu schützen, darf dieser nicht in einer Gegend betrieben werden, in der die Umgebungstemperatur das empfohlene Maximum von 40°C überschreitet. Um Lüftungsverschluß zu verhindern, achten Sie darauf, daß mindestens 15,2 cm lichter Raum um die Lüftungsöffnungen herum frei bleibt.

**Avvertenza** Per evitare il surriscaldamento dei services gateway, non adoperateli in un locale che ecceda la temperatura ambientale massima di 40°C. Per evitare che la circolazione dell'aria sia impedita, lasciate uno spazio di almeno 15.2 cm di fronte alle aperture delle ventole.

**Advarsel** Unngå overoppheting av eventuelle rutere i Juniper Networks services gateway Disse skal ikke brukes på steder der den anbefalte maksimale omgivelsestemperaturen overstiger 40°C (104°F). Sørg for at klaringen rundt lufteåpningene er minst 15,2 cm (6 tommer) for å forhindre nedsatt luftsirkulasjon.

**Aviso** Para evitar o sobreaquecimento do encaminhador Juniper Networks services gateway, não utilize este equipamento numa área que exceda a temperatura máxima recomendada de 40°C. Para evitar a restrição à circulação de ar, deixe pelo menos um espaço de 15,2 cm à volta das aberturas de ventilação.

**¡Atención!** Para impedir que un encaminhador de la serie Juniper Networks services gateway se recaliente, no lo haga funcionar en un área en la que se supere la temperatura ambiente máxima recomendada de 40°C. Para impedir la restricción de la entrada de aire, deje un espacio mínimo de 15,2 cm alrededor de las aperturas para ventilación.

**Varning!** Förhindra att en Juniper Networks services gateway överhettas genom att inte använda den i ett område där den maximalt rekommenderade omgivningstemperaturen på 40°C överskrids. Förhindra att luftcirkulationen inskränks genom att se till att det finns fritt utrymme på minst 15,2 cm omkring ventilationsöppningarna.

---

### Product Disposal Warning

---



**WARNING:** Disposal of this product must be handled according to all national laws and regulations.

**Waarschuwing** Dit produkt dient volgens alle landelijke wetten en voorschriften te worden afgedankt.

**Varoitus** Tämän tuotteen lopullisesta hävittämisestä tulee huolehtia kaikkia valtakunnallisia lakeja ja säännöksiä noudattaen.

**Attention** La mise au rebut définitive de ce produit doit être effectuée conformément à toutes les lois et réglementations en vigueur.

**Warnung** Dieses Produkt muß den geltenden Gesetzen und Vorschriften entsprechend entsorgt werden.

**Avvertenza** L'eliminazione finale di questo prodotto deve essere eseguita osservando le normative italiane vigenti in materia

**Advarsel** Endelig disponering av dette produktet må skje i henhold til nasjonale lover og forskrifter.

**Aviso** A descartagem final deste produto deverá ser efectuada de acordo com os regulamentos e a legislação nacional.

**¡Atención!** El desecho final de este producto debe realizarse según todas las leyes y regulaciones nacionales

**Varning!** Slutlig kassering av denna produkt bör skötas i enlighet med landets alla lagar och föreskrifter.

- 
- Related Documentation**
- [SRX210 Services Gateway Laser and LED Safety Guidelines and Warnings on page 120](#)
  - [SRX210 Services Gateway Electrical Safety Guidelines and Warnings on page 128](#)

## [SRX210 Services Gateway Electrical Safety Guidelines and Warnings](#)

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### **In Case of Electrical Accident**

If an electrical accident results in an injury, take the following actions in this order:

1. Use caution. Be aware of potentially hazardous conditions that could cause further injury.
2. Disconnect power from the services gateway.
3. If possible, send another person to get medical aid. Otherwise, assess the condition of the victim, then call for help.

### **General Electrical Safety Guidelines and Warnings**

- Install the services gateway in compliance with the following local, national, or international electrical codes:

- United States—National Fire Protection Association (NFPA 70), United States National Electrical Code
- Canada—Canadian Electrical Code, Part 1, CSA C22.1
- Other countries—International Electromechanical Commission (IEC) 60364, Part 1 through Part 7
- Evaluated to the TN power system
- Locate the emergency power-off switch for the room in which you are working so that if an electrical accident occurs, you can quickly turn off the power.
- Do not work alone if potentially hazardous conditions exist anywhere in your workspace.
- Never assume that power is disconnected from a circuit. Always check the circuit before starting to work.
- Carefully look for possible hazards in your work area, such as moist floors, ungrounded power extension cords, and missing safety grounds.
- Operate the services gateway within marked electrical ratings and product usage instructions.
- For the services gateway and peripheral equipment to function safely and correctly, use the cables and connectors specified for the attached peripheral equipment, and make certain they are in good condition.

**Related Documentation**

- [SRX210 Services Gateway Electrical and Power Requirements on page 38](#)
- [SRX210 Services Gateway Maintenance and Operational Safety Guidelines and Warnings on page 123](#)
- [SRX210 Services Gateway Agency Approvals on page 129](#)
- [Grounding the SRX210 Services Gateway on page 66](#)

## SRX210 Services Gateway Agency Approvals

The SRX210 Services Gateway complies with the following standards:

- Safety
  - CSA 60950-1 (2003) Safety of Information Technology Equipment
  - UL 60950-1 (2003) Safety of Information Technology Equipment
  - EN 60950-1 (2001) Safety of Information Technology Equipment
  - IEC 60950-1 (2001) Safety of Information Technology Equipment (with country deviations)
  - EN 60825-1 +A1+A2 (1994) Safety of Laser Products - Part 1: Equipment Classification
  - EN 60825-2 (2000) Safety of Laser Products - Part 2: Safety of Optical Fiber Comm. Systems
- EMC

- EN 300 386 V1.3.3 (2005) Telecom Network Equipment - EMC requirements
- EMI ( SRX210 Services Gateway Low Memory and High Memory Models ) :
  - FCC Part 15 Class B (2007) USA Radiated Emissions
  - EN 55022 Class B (2006) European Radiated Emissions
  - VCCI Class B (2007) Japanese Radiated Emissions
- EMI ( SRX210 Services Gateway with PoE ) :
  - FCC Part 15 Class A (2007) USA Radiated Emissions
  - EN 55022 Class A (2006) European Radiated Emissions
  - VCCI Class A (2007) Japanese Radiated Emissions
- Immunity
  - EN 55024 +A1+A2 (1998) Information Technology Equipment Immunity Characteristics
  - EN-61000-3-2 (2006) Power Line Harmonics
  - EN-61000-3-3 +A1 +A2 +A3 (1995) Power Line Voltage Fluctuations
  - EN-61000-4-2 +A1 +A2 (1995) Electrostatic Discharge
  - EN-61000-4-3 +A1+A2 (2002) Radiated Immunity
  - EN-61000-4-4 (2004) Electrical Fast Transients
  - EN-61000-4-5 (2006) Surge
  - EN-61000-4-6 (2007) Immunity to Conducted Disturbances
  - EN-61000-4-11 (2004) Voltage Dips and Sags

**Related Documentation**

- [SRX210 Services Gateway Electrical Safety Guidelines and Warnings on page 128](#)
- [SRX210 Services Gateway Compliance Statements for EMC Requirements on page 130](#)
- [SRX210 Services Gateway Compliance Statements for Environmental Requirements on page 132](#)
- [SRX210 Services Gateway Compliance Statements for Acoustic Noise on page 133](#)

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## SRX210 Services Gateway Compliance Statements for EMC Requirements

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### For the SRX210 Services Gateway Low Memory and High Memory Models

#### Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

#### European Community



This is a Class B product.

#### Japan

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。  
取扱説明書に従って正しい取り扱いをして下さい。

The preceding translates as follows:

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this product is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

#### Korean

This is a Class B product.

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

Korean Class B Warning 9040914

#### United States

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## For the SRX210 Services Gateway with PoE

### Canada

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

### European Community

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.

### Japan

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA 情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。  
取扱説明書に従って正しい取り扱いをして下さい。

The preceding translates as follows:

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio interference may occur, in which case, the user may be required to take corrective actions.

### United States

The services gateway has been tested and found to comply with the limits for a Class A digital device of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### Related Documentation

- [SRX210 Services Gateway Agency Approvals on page 129](#)
- [SRX210 Services Gateway Compliance Statements for Environmental Requirements on page 132](#)
- [SRX210 Services Gateway Compliance Statements for Acoustic Noise on page 133](#)

## [SRX210 Services Gateway Compliance Statements for Environmental Requirements](#)

This topic includes the compliance statement for the following environmental requirement:

### Lithium Battery

Batteries in this product are not based on mercury, lead, or cadmium substances. The batteries used in this product are in compliance with EU Directives 91/157/EEC, 93/86/EEC, and 98/101/EEC. The product documentation includes instructional information about the proper method of reclamation and recycling.

- Related Documentation**
- [SRX210 Services Gateway Compliance Statements for EMC Requirements on page 130](#)
  - [SRX210 Services Gateway Compliance Statements for Acoustic Noise on page 133](#)
  - [SRX210 Services Gateway Agency Approvals on page 129](#)

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### SRX210 Services Gateway Compliance Statements for Acoustic Noise

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Maschinenlärminformations-Verordnung - 3. GPSGV, der höchste Schalldruckpegel beträgt 70 dB(A) oder weniger gemäss EN ISO 7779

Translation:

The maximum emitted sound pressure level is 70 dB(A) or less per EN ISO 7779.

- Related Documentation**
- [SRX210 Services Gateway Compliance Statements for EMC Requirements on page 130](#)
  - [SRX210 Services Gateway Compliance Statements for Environmental Requirements on page 132](#)
  - [SRX210 Services Gateway Agency Approvals on page 129](#)



## APPENDIX B

# SRX210 Services Gateway Power Guidelines, Requirements, and Specifications

This appendix includes the following topics:

- SRX210 Services Gateway Site Electrical Wiring Guidelines on page 135
- SRX210 Services Gateway Power Specifications and Requirements on page 137
- SRX210 Services Gateway Grounding Specifications on page 137

## SRX210 Services Gateway Site Electrical Wiring Guidelines

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Table 37 on page 136 describes the factors you must consider while planning the electrical wiring for the services gateway at your site.



.....  
**CAUTION:** It is particularly important to provide a properly grounded and shielded environment and to use electrical surge-suppression devices.  
.....



.....  
**CAUTION:** For devices with AC power supplies, an external surge protective device (SPD) must be used at the AC power source.  
.....

Table 37: Site Electrical Wiring Guidelines for the Services Gateway

| Site Wiring Factor                  | Guideline  |
|-------------------------------------|--|
| Signaling Limitations               | <p>To ensure that signaling functions optimally:</p> <ul style="list-style-type: none"> <li>Install wires correctly.<br/>Improperly installed wires can emit radio interference.</li> <li>Do not exceed the recommended distances or pass wires between buildings.<br/>The potential for damage from lightning strikes increases if wires exceed recommended distances or if wires pass between buildings.</li> <li>Shield all conductors.<br/>The electromagnetic pulse (EMP) caused by lightning can damage unshielded conductors and destroy electronic devices.</li> </ul> |
| Radio Frequency Interference (RFI)  | <p>To reduce or eliminate the emission of RFI from your site wiring:</p> <ul style="list-style-type: none"> <li>Use twisted-pair cable with a good distribution of grounding conductors.</li> <li>Use a high-quality twisted-pair cable with one ground conductor for each data signal when applicable, if you must exceed the recommended distances.</li> </ul>   |
| Electromagnetic Compatibility (EMC) | <p>Provide a properly grounded and shielded environment and use electrical surge-suppression devices.</p> <p>Strong sources of electromagnetic interference (EMI) can cause the following damage:</p> <ul style="list-style-type: none"> <li>Destroy the signal drivers and receivers in the device</li> <li>Conduct power surges over the lines into the equipment, resulting in an electrical hazard</li> </ul> <p><b>NOTE:</b> If your site is susceptible to problems with EMC, particularly from lightning or radio transmitters, you may want to seek expert advice.</p> |



**CAUTION:** To comply with intrabuilding lightning/surge requirements, the intrabuilding wiring must be shielded. The shielding for the wiring must be grounded at both ends.

#### Related Documentation

- [General Site Guidelines for Installing the SRX210 Services Gateway on page 35](#)
- [SRX210 Services Gateway Electrical and Power Requirements on page 38](#)
- [SRX210 Services Gateway Power Specifications and Requirements on page 137](#)

## SRX210 Services Gateway Power Specifications and Requirements

The AC power system electrical specifications for the SRX210 Services Gateway are listed in [Table 38 on page 137](#).

**Table 38: Power Supply Electrical Specifications for the SRX210 Services Gateway**

| Power Requirement        | Specification                                   |
|--------------------------|---|
| AC input voltage         | 100 to 240 VAC                                  |
| AC input line frequency  | 50 to 60 Hz                                     |
| AC system current rating | 1.5 A maximum<br>2.5 A maximum (for PoE models) |



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

### Related Documentation

- [SRX210 Services Gateway Power Supply on page 19](#)
- [SRX210 Services Gateway Site Electrical Wiring Guidelines on page 135](#)
- [SRX210 Services Gateway Grounding Specifications on page 137](#)
- [Interface Cable and Wire Specifications for the SRX210 Services Gateway on page 139](#)

## SRX210 Services Gateway Grounding Specifications

To meet safety and electromagnetic interference (EMI) requirements and to ensure proper operation, the services gateway must be adequately grounded before power is connected. A grounding point available on the rear of the services gateway chassis is used to connect the device to earth ground.



**WARNING:** Before device installation begins, a licensed electrician must attach a cable lug to the grounding and power cables that you use. A cable with an incorrectly attached lug can damage the device (for example, by causing a short circuit).

To ground the device before connecting power, you connect the grounding cable to earth ground and then attach the lug on the cable to the chassis grounding point with the screw.

[Table 39 on page 138](#) lists the specifications for the grounding cable used with the device.

**Table 39: Grounding Cable Specifications for the Services Gateway**

| Grounding Requirement       | Specification  |
|-----------------------------|--|
| Grounding cable             | 14 AWG single-strand wire cable                      |
| Amperage of grounding cable | Up to 4 A  |
| Grounding lug               | Ring-type, vinyl-insulated TV14-6R lug or equivalent |

**Related Documentation**

- [SRX210 Services Gateway Site Electrical Wiring Guidelines on page 135](#)
- [SRX210 Services Gateway Power Specifications and Requirements on page 137](#)
- [Grounding the SRX210 Services Gateway on page 66](#)
- [Interface Cable and Wire Specifications for the SRX210 Services Gateway on page 139](#)



## APPENDIX C

# SRX210 Services Gateway Interface Cable Specifications and Connector Pinouts

The network interfaces supported on the services gateway accept different types of network cables.

This appendix includes the following topics:

- [Interface Cable and Wire Specifications for the SRX210 Services Gateway on page 139](#)
- [RJ-45 Connector Pinouts for the SRX210 Services Gateway Ethernet Port on page 140](#)
- [RJ-45 Connector Pinouts for the SRX210 Services Gateway Console Port on page 141](#)

## Interface Cable and Wire Specifications for the SRX210 Services Gateway

Table 40 on page 139 lists the specifications for the cables that connect to ports.

**Table 40: Cable and Wire Specifications for Ports**

| Port          | Cable Specification  | Cable/Wire Required                                   | Maximum Length | Device Receptacle |
|---------------|--|---|----------------|-------------------|
| Console port  | RS-232 (EIA-232) serial cable  | One 6-ft (1.83-m) length with DB-9/RJ-45 connectors   | 6 ft (1.83 m)  | RJ-45             |
| Ethernet port | CAT-5e (Category 5) cable or equivalent suitable for 100BASE-T operation | One 15-ft (4.57-m) length with RJ-45/RJ-45 connectors | 328 ft (100 m) | RJ-45             |

### Related Documentation

- [RJ-45 Connector Pinouts for the SRX210 Services Gateway Ethernet Port on page 140](#)
- [RJ-45 Connector Pinouts for the SRX210 Services Gateway Console Port on page 141](#)
- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)

## RJ-45 Connector Pinouts for the SRX210 Services Gateway Ethernet Port

Figure 26 on page 140 shows the RJ-45 cable connector pinouts for Ethernet ports.

**Figure 26: Ethernet Cable Connector (RJ-45)**

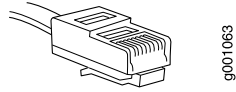


Table 41 on page 140 describes the RJ-45 connector pinouts for the Ethernet port for 10/100 Mbps.

**Table 41: RJ-45 Connector Pinouts for the Services Gateway Ethernet Port (10/100 Mbps)**

| Pin | Signal              |
|-----|---------------------|
| 1   | TX+                 |
| 2   | TX-                 |
| 3   | RX+                 |
| 4   | Termination network |
| 5   | Termination network |
| 6   | RX-                 |
| 7   | Termination network |
| 8   | Termination network |

Table 42 on page 140 describes the RJ-45 connector pinouts for the Ethernet port for 1 Gbps (1000 Mbps).

**Table 42: RJ-45 Connector Pinouts for the Services Gateway Ethernet Port (1 Gbps)**

| Pin | Signal |
|-----|--------|
| 1   | BL_DA+ |
| 2   | BL_DA- |
| 3   | BL_DB+ |
| 4   | BL_DC+ |
| 5   | BL_DC- |

**Table 42: RJ-45 Connector Pinouts for the Services Gateway Ethernet Port (1 Gbps) (continued)**

| Pin | Signal |
|-----|--------|
| 6   | BL_DB- |
| 7   | BL_DD+ |
| 8   | BL_DD- |

**Related Documentation**

- [Interface Cable and Wire Specifications for the SRX210 Services Gateway on page 139](#)
- [RJ-45 Connector Pinouts for the SRX210 Services Gateway Console Port on page 141](#)
- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)

## RJ-45 Connector Pinouts for the SRX210 Services Gateway Console Port

Figure 27 on page 141 shows the RJ-45 connector pinouts for the console port.

**Figure 27: Console Cable Connector**

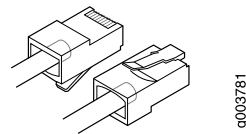


Table 43 on page 141 describes the RJ-45 connector pinouts for the console port.

**Table 43: RJ-45 Connector Pinouts for the Services Gateway Console Port**

| Pin | Signal  | Description         |
|-----|---------|---------------------|
| 1   | RTS     | Request to Send     |
| 2   | DTR     | Data Terminal Ready |
| 3   | TXD     | Transmit Data       |
| 4   | Ground  | Signal Ground       |
| 5   | Ground  | Signal Ground       |
| 6   | RXD     | Receive Data        |
| 7   | DSR/DCD | Data Set Ready      |
| 8   | CTS     | Clear to Send       |

**Related  
Documentation**

- [Interface Cable and Wire Specifications for the SRX210 Services Gateway on page 139](#)
- [RJ-45 Connector Pinouts for the SRX210 Services Gateway Ethernet Port on page 140](#)
- [SRX210 Services Gateway Front Panel and Back Panel Views \(Low Memory, High Memory, and PoE Versions\) on page 9](#)

## APPENDIX D

# Contacting Customer Support and Returning the SRX210 Services Gateway Hardware

This appendix describes how to return the SRX210 Services Gateway or an individual component such as Mini-Physical Interface module (Mini-PIM) to Juniper Networks for repair or replacement. This appendix includes the following topics:

- [Return Procedure for the SRX210 Services Gateway on page 143](#)
- [Locating an SRX210 Services Gateway Component Serial Number and Agency Labels on page 144](#)
- [Contacting Customer Support to Obtain Return Materials Authorization on page 146](#)
- [Packing the SRX210 Services Gateway and Components for Shipment on page 147](#)

## Return Procedure for the SRX210 Services Gateway

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Follow the tasks list provided in [Table 44 on page 143](#) to return an SRX210 Services Gateway or component to Juniper Networks for repair or replacement:

**Table 44: Return Procedure for SRX210 Services Gateway**

| Step | Task  | For more information, see   |
|------|---|---|
| 1    | Determine the part number and serial number of the device or component. | <a href="#">“Locating an SRX210 Services Gateway Component Serial Number and Agency Labels” on page 144</a> |
| 2    | Obtain a Return Materials Authorization (RMA) number from JTAC.         | <a href="#">“Contacting Customer Support” on page 146</a>   |
| 3    | Pack the SRX210 Services Gateway or component for shipping.             | <a href="#">“Packing the SRX210 Services Gateway and Components for Shipment” on page 147</a>               |

---



**NOTE:** Do not return the device or 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. Refused shipments are returned to the customer via collect freight.

For more information about return and repair policies, see the customer support Web page at <http://www.juniper.net/support/guidelines.html>.

For product problems or technical support issues, open a support case using the Case Manager link at <http://www.juniper.net/support/> or call 1-888-314-JTAC (within the United States) or 1-408-745-9500 (outside the United States).

#### Related Documentation

- [Locating an SRX210 Services Gateway Component Serial Number and Agency Labels on page 144](#)
- [Information You Might Need to Supply to Juniper Networks Technical Assistance Center on page 146](#)
- [Packing the SRX210 Services Gateway and Components for Shipment on page 147](#)
- [Contacting Customer Support on page 146](#)

## Locating an SRX210 Services Gateway Component Serial Number and Agency Labels

This topic includes the following sections:

- [Listing the SRX210 Services Gateway and Component Details with the CLI on page 144](#)
- [SRX210 Services Gateway Chassis Serial Number and Agency Labels on page 145](#)
- [SRX210 Services Gateway Mini-Physical Interface Module Serial Number Label on page 145](#)

### Listing the SRX210 Services Gateway and Component Details with the CLI

Before contacting Juniper Networks to request an RMA, you must find the serial number on the SRX210 Services Gateway or component.

To list all of the SRX210 Services Gateway components and their serial numbers, enter the following command-line interface (CLI) command:

```
user@host> show chassis hardware
Hardware inventory:
Item                Version  Part number  Serial number  Description
-----
Chassis              SRX210b
Routing Engine      REV X0   750-021778   000000PS2627   RE-SRX210-LOWMEM
FPC 0
PIC 0
Power Supply 0      2x GE, 6x FE, 1x 3G
```



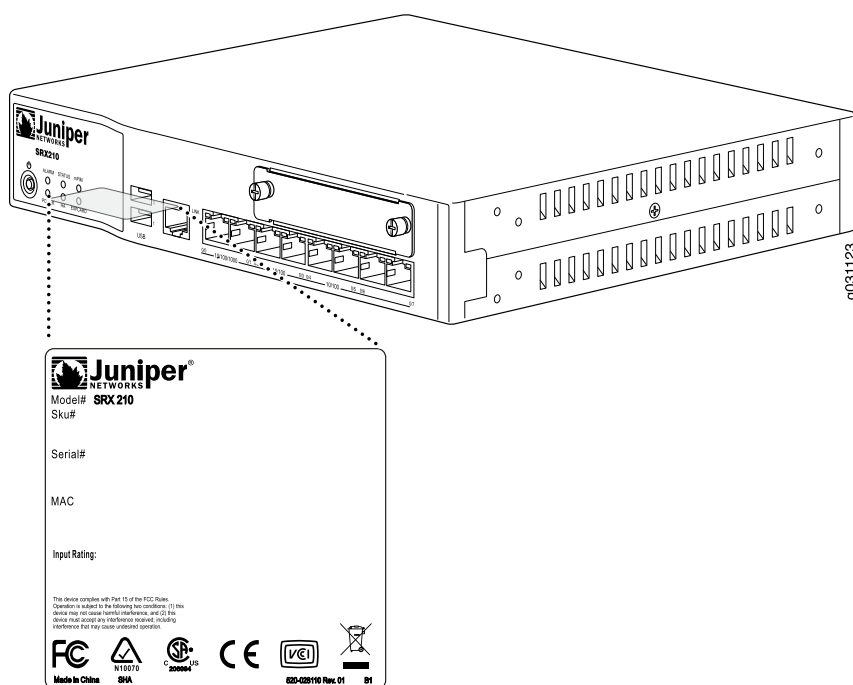
**NOTE:** In the `show chassis hardware` command, the Mini-Physical Interface Module (Mini-PIM) slot number is reported as an FPC number, and the Mini-PIM number (always 0) is reported as the PIC number.

Most components also have a serial number ID label attached to the component body.

## SRX210 Services Gateway Chassis Serial Number and Agency Labels

The SRX210 Services Gateway has a serial number ID and agency labels on the bottom of the chassis as shown in [Figure 28 on page 145](#).

**Figure 28: Location of SRX210 Serial Number and Agency Labels**



## SRX210 Services Gateway Mini-Physical Interface Module Serial Number Label

Mini-Physical Interface Modules (Mini-PIMs) are field-replaceable on the SRX210 Services Gateway. Each Mini-PIM has a unique serial number. The serial number label is located on the right side of the Mini-PIM, when the Mini-PIM is horizontally oriented (as it would be installed on the device). The exact location might be slightly different on different Mini-PIMs, depending on the placement of components on the Mini-PIM.

### Related Documentation

- [Packing the SRX210 Services Gateway and Components for Shipment on page 147](#)
- [Return Procedure for the SRX210 Services Gateway on page 143](#)
- [Contacting Customer Support on page 146](#)

## Contacting Customer Support to Obtain Return Materials Authorization

---

This topic includes the following sections:

- [Information You Might Need to Supply to Juniper Networks Technical Assistance Center on page 146](#)
- [Contacting Customer Support on page 146](#)

### Information You Might Need to Supply to Juniper Networks Technical Assistance Center

If you are returning a services gateway or hardware component to Juniper Networks for repair or replacement, obtain a Return Materials Authorization (RMA) number from Juniper Networks Technical Assistance Center (JTAC).

When requesting support from JTAC by telephone, be prepared to provide the following information:

- Your existing case number, if you have one
- Details of the failure or problem
- Type of activity being performed on the services gateway when the problem occurred
- Configuration data displayed by one or more **show** commands
- Your name, organization name, telephone number, fax number, and shipping address

#### Related Documentation

- [Return Procedure for the SRX210 Services Gateway on page 143](#)
- [Locating an SRX210 Services Gateway Component Serial Number and Agency Labels on page 144](#)
- [Packing the SRX210 Services Gateway and Components for Shipment on page 147](#)
- [Contacting Customer Support on page 146](#)

## Contacting Customer Support

Once you have located the serial numbers of the services gateway or component, you can return them for repair or replacement. For this, you need to contact Juniper Networks Technical Assistance Center (JTAC).

You can contact JTAC 24 hours a day, 7 days a week, using any of the following methods:

- On the Web: Using the Case Manager link at <http://www.juniper.net/support/>
- By telephone:
  - From the US and Canada: 1-888-314-JTAC
  - From all other locations: 1-408-745-9500





**NOTE:** If contacting JTAC by telephone, enter your 11-digit case number followed by the pound (#) key if this is an existing case, or press the star (\*) key to be routed to the next available support engineer.

#### Related Documentation

- [Return Procedure for the SRX210 Services Gateway on page 143](#)
- [Locating an SRX210 Services Gateway Component Serial Number and Agency Labels on page 144](#)
- [Information You Might Need to Supply to Juniper Networks Technical Assistance Center on page 146](#)
- [Packing the SRX210 Services Gateway and Components for Shipment on page 147](#)

## Packing the SRX210 Services Gateway and Components for Shipment

This topic includes the following sections:

- [Packing the Services Gateway on page 147](#)
- [Packing the Components for Shipment on page 148](#)

### Packing the Services Gateway

To pack the services gateway for shipment:

1. Retrieve the shipping carton and packing materials in which the device was originally shipped. If you do not have these materials, contact your Juniper Networks representative about approved packaging materials.
2. Attach an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the strap to the ESD point on the chassis or to an outside ESD point if the device is disconnected from earth ground.
3. On the console or other management device connected to the services gateway, enter CLI operational mode and issue the following command to shut down the services gateway software:

```
user@host> request system power-off
```

Wait until a message appears on the console confirming that the operating system has halted.

4. Shut down power to the device by pressing the Power button on the front panel of the device.
5. Disconnect power from the device.
6. Remove the cables that connect to all external devices.
7. Remove all field-replaceable units (FRUs) from the device.
8. If the device is installed on a wall or rack, have one person support the weight of the device while another person unscrews and removes the mounting screws.

9. Place the device in the shipping carton.
10. Cover the device with an ESD bag, and place the packing foam on top of and around the device.
11. Replace the accessory box on top of the packing foam.
12. Securely tape the box closed.
13. Write the Return Materials Authorization (RMA) number on the exterior of the box to ensure proper tracking.

## Packing the Components for Shipment

Follow these guidelines for packing and shipping individual components of the services gateway:

- When you return a component, make sure that it is adequately protected with packing materials and packed so that the pieces are prevented from moving around inside the carton.
- Use the original shipping materials if they are available.
- Place individual Mini-Physical Interface Modules (Mini-PIMs) in electrostatic bags.
- Write the Return Materials Authorization (RMA) number on the exterior of the box to ensure proper tracking.



**CAUTION:** Do not stack any of the services gateway components during packing.

---

### Related Documentation

- [Required Tools and Parts for Installing and Maintaining the SRX210 Services Gateway on page 43](#)
- [Locating an SRX210 Services Gateway Component Serial Number and Agency Labels on page 144](#)
- [Information You Might Need to Supply to Juniper Networks Technical Assistance Center on page 146](#)
- [Return Procedure for the SRX210 Services Gateway on page 143](#)
- [Contacting Customer Support on page 146](#)

## PART 5

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