



# Installing Ethernet Routing Switch 4900 Series

Release 7.8  
9036220-00 Rev AA  
February 2020

© 2017-2020, Extreme Networks, Inc.  
All Rights Reserved.

### **Legal Notice**

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

### **Trademarks**

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries.

All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see: [www.extremenetworks.com/company/legal/trademarks](http://www.extremenetworks.com/company/legal/trademarks)

### **Open Source Declarations**

Some software files have been licensed under certain open source or third-party licenses. End-user license agreements and open source declarations can be found at: [www.extremenetworks.com/support/policies/software-licensing](http://www.extremenetworks.com/support/policies/software-licensing)

# Contents

<b>Chapter 1: About this Document</b> .....	5
Purpose.....	5
Conventions.....	5
Text Conventions.....	5
Documentation and Training.....	7
Getting Help.....	8
Providing Feedback.....	9
<b>Chapter 2: New in this document</b> .....	10
<b>Chapter 3: Preinstallation Checklist</b> .....	11
<b>Chapter 4: Installation Preparation</b> .....	13
Ethernet Routing Switch 4900 Series Models.....	13
Common Hardware Features.....	14
Universal Serial Bus Ports.....	15
Electrostatic Discharge Prevention.....	16
Technical Specifications.....	17
Power Specifications.....	18
MTBF Values.....	19
Power Supply Cords.....	20
Verify the Package Contents.....	22
Optional rack-mounting equipment.....	23
Power Supply Unit specifications.....	24
Connecting Switch to AC Power.....	24
<b>Chapter 5: Switch Installation</b> .....	25
Installing the ERS 4900 Series in an Equipment Rack.....	25
Installing Optional Four-Post Rack-Mount Brackets.....	29
Installing the Secondary Power Supply.....	33
Connecting a Transceiver to the Switch or Stack.....	34
Installing SFP Transceivers.....	34
Removing SFP Transceivers.....	35
Supported Optical Devices .....	36
Cable Requirements.....	37
Console port adapters .....	37
Stacking.....	38
Stack Connector.....	38
Connecting Switches in a Stack.....	41
Stack Configurations.....	42
Replacing or Adding a Stack Unit.....	45
Removing a Stack Unit.....	45
Checking Light Emitting Diode on the Switch.....	45

Switch LED State Indicators.....	46
Port LED State Indicators.....	47
<b>Chapter 6: Installation Reference.....</b>	<b>49</b>
Console Port Pin Assignments.....	49
RJ-45 Connector Pin Assignments for PoE Switches.....	49
<b>Chapter 7: Translations of safety Messages.....</b>	<b>51</b>
Safety Messages.....	51
<b>Appendix A: Regulatory information and safety precautions.....</b>	<b>55</b>
Federal Communications Commission (FCC) Notice.....	55
Industry Canada Notice.....	55
Class A ITE Notice.....	56
Klasse A ITE Anmerkung.....	56
Product Safety.....	56
Produktsicherheit.....	56
Korea EMC Statement.....	56
Electromagnetic Compatibility (EMC).....	57
Elektro-magnetische Kompatibilität (EMC).....	57
VCCI Notice.....	57
BSMI EMC Statement — Taiwan.....	57
CCC EMC Statement — China.....	58
Battery Warning — Taiwan.....	58
Battery Notice.....	58
Restriction of Hazardous Substances.....	59
Hazardous Substances .....	59
European Waste Electrical and Electronic Equipment (WEEE) Notice.....	59
Safety.....	60

# Chapter 1: About this Document

This section discusses the purpose of this document, the conventions used, ways to provide feedback, additional help, and information regarding other Extreme Networks publications.

---

## Purpose

This document provides the information and procedures required to install the hardware, software, cabling, and power for the Extreme Networks Ethernet Routing Switch 4900 Series.

Unless otherwise indicated, this information applies to:

- ERS 4950GTS
- ERS 4950GTS-PWR+
- ERS 4926GTS
- ERS 4926GTS-PWR+

---

## Conventions

This section discusses the conventions used in this guide.

---

## Text Conventions

The following tables list text conventions that can be used throughout this document.

**Table 1: Notice Icons**

Icon	Alerts you to...
 <b>Important:</b>	A situation that can cause serious inconvenience.
 <b>Note:</b>	Important features or instructions.

*Table continues...*

Icon	Alerts you to...
 <b>Tip:</b>	Helpful tips and notices for using the product.
 <b>Danger:</b>	Situations that will result in severe bodily injury; up to and including death.
 <b>Warning:</b>	Risk of severe personal injury or critical loss of data.
 <b>Caution:</b>	Risk of personal injury, system damage, or loss of data.

**Table 2: Text Conventions**

Convention	Description
Angle brackets ( < > )	<p>Angle brackets ( &lt; &gt; ) indicate that you choose the text to enter based on the description inside the brackets. Do not type the brackets when you enter the command.</p> <p>If the command syntax is <code>cfm maintenance-domain maintenance-level &lt;0-7&gt;</code> , you can enter <code>cfm maintenance-domain maintenance-level 4</code>.</p>
<b>Bold text</b>	<p>Bold text indicates the GUI object name you must act upon.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Click <b>OK</b>.</li> <li>• On the <b>Tools</b> menu, choose <b>Options</b>.</li> </ul>
Braces ( { } )	<p>Braces ( { } ) indicate required elements in syntax descriptions. Do not type the braces when you enter the command.</p> <p>For example, if the command syntax is <code>ip address {A.B.C.D}</code>, you must enter the IP address in dotted, decimal notation.</p>
Brackets ( [ ] )	<p>Brackets ( [ ] ) indicate optional elements in syntax descriptions. Do not type the brackets when you enter the command.</p> <p>For example, if the command syntax is <code>show clock [detail]</code>, you can enter either <code>show clock</code> or <code>show clock detail</code>.</p>
Ellipses ( ... )	<p>An ellipsis ( ... ) indicates that you repeat the last element of the command as needed.</p> <p>For example, if the command syntax is <code>ethernet/2/1 [ &lt;parameter&gt;</code></p>

*Table continues...*

Convention	Description
	<value> ] . . . , you enter ethernet/2/1 and as many parameter-value pairs as you need.
<i>Italic Text</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles that are not active links.
Plain Courier Text	Plain Courier text indicates command names, options, and text that you must enter. Plain Courier text also indicates command syntax and system output, for example, prompts and system messages.  Examples: <ul style="list-style-type: none"> <li>• show ip route</li> <li>• Error: Invalid command syntax [Failed][2013-03-22 13:37:03.303 -04:00]</li> </ul>
Separator ( > )	A greater than sign ( > ) shows separation in menu paths.  For example, in the Navigation tree, expand the <b>Configuration &gt; Edit</b> folders.
Vertical Line (   )	A vertical line (   ) separates choices for command keywords and arguments. Enter only one choice. Do not type the vertical line when you enter the command.  For example, if the command syntax is access-policy by-mac action { allow   deny }, you enter either access-policy by-mac action allow or access-policy by-mac action deny, but not both.

---

## Documentation and Training

Find Extreme Networks product information at the following locations:

[Current Product Documentation](#)

[Release Notes](#)

[Hardware/software compatibility matrices](#) for Campus and Edge products

[Supported transceivers and cables](#) for Data Center products

[Other resources](#), like white papers, data sheets, and case studies

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For details, visit [www.extremenetworks.com/education/](http://www.extremenetworks.com/education/).

---

## Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

### [Extreme Portal](#)

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

### [The Hub](#)

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

### [Call GTAC](#)

For immediate support: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2826. For the support phone number in your country, visit: [www.extremenetworks.com/support/contact](http://www.extremenetworks.com/support/contact)

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

### Subscribe to Service Notifications

You can subscribe to email notifications for product and software release announcements, Vulnerability Notices, and Service Notifications.

1. Go to [www.extremenetworks.com/support/service-notification-form](http://www.extremenetworks.com/support/service-notification-form).
2. Complete the form (all fields are required).
3. Select the products for which you would like to receive notifications.

**\* Note:**

You can modify your product selections or unsubscribe at any time.

4. Select **Submit**.

---

## Providing Feedback

The Information Development team at Extreme Networks has made every effort to ensure the accuracy and completeness of this document. We are always striving to improve our documentation and help you work better, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information.
- Improvements that would help you find relevant information in the document.
- Broken links or usability issues.

If you would like to provide feedback, you can do so in three ways:

- In a web browser, select the feedback icon and complete the online feedback form.
- Access the feedback form at <https://www.extremenetworks.com/documentation-feedback/>.
- Email us at [documentation@extremenetworks.com](mailto:documentation@extremenetworks.com).

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

# Chapter 2: New in this document

The following section details what is new in this document.

## **Regulatory and Compliance Information**

This document is updated with the Regulatory and Compliance information from Regulatory Reference for Ethernet Routing Switch 4900 Series, which is now obsolete. For more information, see [Regulatory information and safety precautions](#) on page 55.

# Chapter 3: Preinstallation Checklist

Before you install the Ethernet Routing Switch 4900 Series, make sure that you complete the tasks in the preinstallation checklist.

No.	Task	Description	✓
1.	Review the technical specification for the switch. Make sure that the area where you install the switch and where it will operate meet the requirements.	For the physical, electrical, and environmental specifications, see <a href="#">Technical specifications</a> on page 17.	
2.	Verify the power supply unit (PSU) specifications. Optionally order a redundant PSU to provide redundancy and load sharing.	See <a href="#">AC power specifications</a> on page 18.	
3.	Make sure that you have the following tools and cables: <ul style="list-style-type: none"> <li>• Phillips #2 screwdriver RJ-45 console port cable</li> <li>• ESD cable</li> </ul>	See <a href="#">Cable requirements</a> on page 37.	
4.	Unpack the equipment.	Observe ESD precautions when you unpack the equipment. See <a href="#">Electrostatic discharge prevention</a> on page 16.	
5.	Verify the contents of the shipped package.	See <a href="#">Verifying package contents</a> on page 22 for a description of the components that are provided with the switch. If any components are missing, contact Extreme Networks support at <a href="http://www.extremenetworks.com/support">http://www.extremenetworks.com/support</a> .	
6.	Make sure that the power cord has the correct country-specific termination.	See <a href="#">Power cord type and order codes</a> on page 20.	
7.	Prepare the rack.	Ensure that there is enough rack space to accommodate specific models.  For more information, see <a href="#">Installing the ERS 4900 Series in an Equipment Rack</a> on page 25 for rack space unit requirements.	

*Table continues...*

Preinstallation Checklist

No.	Task	Description	✓
		<p>Ensure that the rack is bolted to the floor and braced if necessary.</p> <p>Ensure that the rack is grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.</p> <p>See <a href="#">Installing the switch in an equipment rack</a> on page 25.</p>	

# Chapter 4: Installation Preparation

## Ethernet Routing Switch 4900 Series Models

The following table lists the ERS 4900 Series models and the key features for each switch.

**Table 3: ERS 4900 Series models**

Model	Key features	Part Number
ERS 4926GTS	<ul style="list-style-type: none"> <li>• 24 ports, 10/100/1000 Base-T Ethernet with two ports of SFP + (10 Gbps) interfaces</li> <li>• Stackable Ethernet switch</li> <li>• Non-PoE</li> <li>• Supports two modular 250 W Power Supply Units (PSU), where one PSU is required for operation and the optional second is redundant</li> </ul>	AL4900A01-E6 (no power cord)
ERS 4926GTS-PWR+	24 ports 10/100/1000BaseT Stackable Ethernet switch PoE 1 rack unit high Uses modular power supply units and has two field-serviceable power supply receptacles, which support 250 W AC power supply modules	AL4900A02-E6 (no power cord)
ERS 4950GTS	48 ports 10/100/1000BaseT Stackable Ethernet switch Non-PoE 1 rack unit high Uses modular power supply units and has two field-serviceable power	AL4900A03-E61 (no power cord)

*Table continues...*

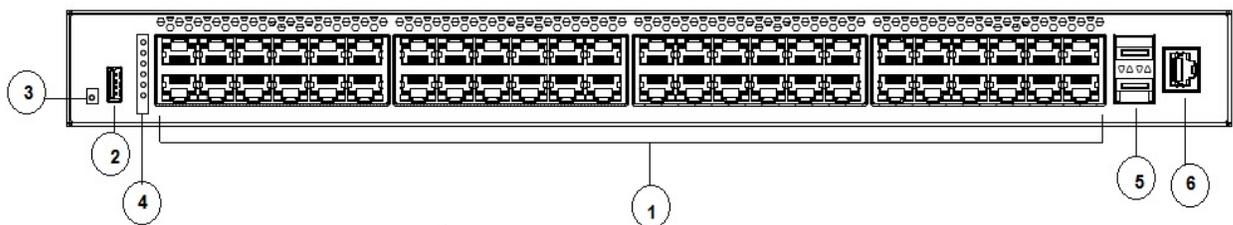
Model	Key features	Part Number
	supply receptacles, which support 1025 W AC power supply modules	
ERS 4950GTS-PWR+	48 ports 10/100/1000BaseT Stackable Ethernet switch PoE 1 rack unit high Uses modular power supply units and has two field-serviceable power supply receptacles, which support 1025 W AC power supply modules	AL4900A04-E6 (no power cord)
Power cords must be ordered separately.		
Depending on the switch model, a 250 W or 1025 W PSU and .5 m stacking cable is provided for all switches.		

## Common Hardware Features

The following hardware features are part of all switches in ERS 4900 Series:

- Standard ERS 19 inch rack mount hole pattern allowing horizontal or vertical, flush or offset, front or rear mount options
- Front panel:
  - one serial console connection
  - one USB 2.1 Type A port
  - status LED display panel

The following figure illustrates ERS 4900 Series front panel.



1. 10/100/1000 Ports (LEDs above the ports)
2. USB Type-A port
3. Reset push button
4. Status LEDs
5. SFP+ ports
6. Serial console port

**Figure 1: Front panel**

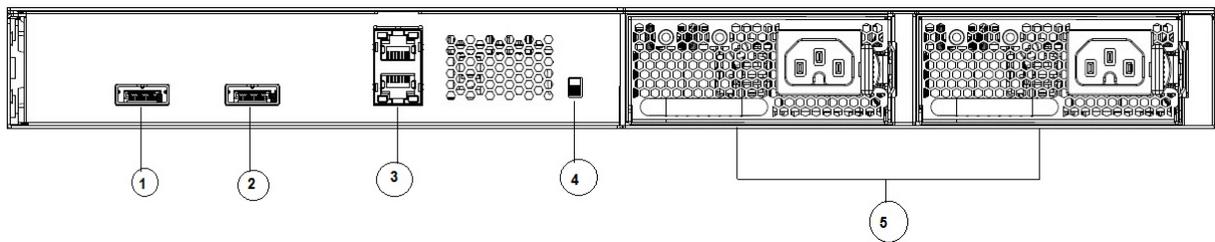
- Rear panel:
  - two stack connectors
  - one Base Select switch
  - ports

**\* Note:**

The port labeled AUX is disabled.

- power supply units
- one Kensington Lock slot located on the left side, near the back end of the chassis

The following figure illustrates ERS 4900 Series rear panel.



1. Stack up connector
2. Stack down connector
3. Ports
4. Base Select Switch
5. Power Supply Units

**Figure 2: Rear panel**

## Universal Serial Bus Ports

The switches feature a Universal Serial Bus (USB) port on the front panel. Switch administrators can use the USB port to perform tasks, previously performed through Trivial File Transfer Protocol (TFTP), with a USB Mass Storage Device (for example, a flash drive or thumb drive):

- download software
- generate and download the ASCII configuration file
- generate and download the binary configuration file

The storage capacity of the USB device in use limits file and system operations.

Support is available only for USB drives that comply with the Mass Storage subsection of the USB 1.1 and USB 2.0 specification. Support does not extend to third-party devices that do not comply with these standards. Off-the-shelf drives that do not comply with these standards cannot operate with the switch. Only FAT or FAT32 file systems are currently supported; USB drives with NTFS file systems are not supported. Consult the documentation provided with the USB drive to ensure compliance with these standards.

---

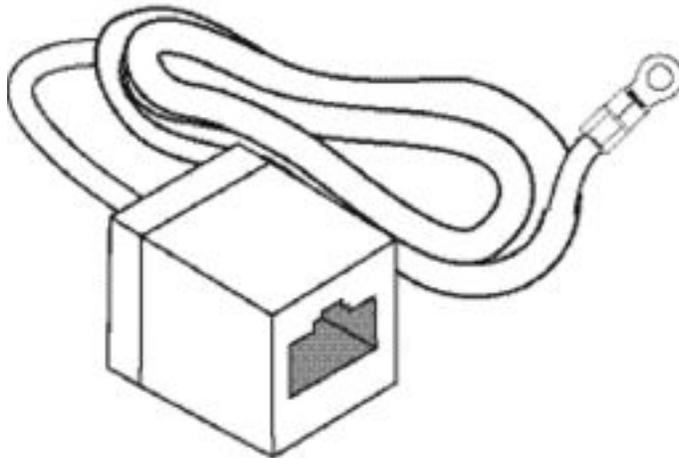
## Electrostatic Discharge Prevention

Electrostatic discharge (ESD) is a discharge of stored static electricity that can damage equipment and impair electrical circuitry. These electrostatic voltages can result from friction, including, but not exclusive to, pulling cabling through conduits, walking across carpeted areas, and building up of static charge in clothing. ESD damage occurs when electronic components are improperly handled and can result in complete or intermittent failures. While networking equipment is commonly designed and tested to withstand common mode ESD events, voltage sometimes can be discharged to some connector pins but not others, or to some pins before others, which has the potential to damage the networking equipment.

To protect the switch against ESD damage, take the following preventive measures before connecting any data cables to the device:

- Always use antistatic wrist straps. Make sure the strap is adjusted to provide good skin contact.
- Ensure that work surfaces and equipment racks are properly grounded for protection against electrostatic discharge. The common point must be connected to the building ground wire. In a properly wired building, the nearest reliable ground is typically at the electrical outlet.
- Avoid contact between equipment and clothing. The wrist or ankle strap only protects the equipment from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- Avoid touching any connector pins.
- Do not remove the wrist or ankle strap until the installation is complete.

With new cable installations, you should use an ESD cable to reduce the potential for damage from static that can build up in cables. See the following figure.



**Figure 3: ESD cable**

## Technical Specifications

The following table provides the technical specifications for the switches in this series. Ensure that the area where you install the switch and where it operates meets these requirements.

 **Warning:**

To avoid bodily injury from hazardous electrical shock and current, never remove the top of the device. No user-serviceable components are inside.

**Table 4: Physical specifications**

Height	4.4 cm – 1RU
Width	17.32 inch (440 mm or 44 cm) - 19 inch rack mountable
Depth	18.89 inch (480 mm or 48 cm)
Weight (switch weight with one PSU. Where, PSU approximately weighs 1.6 kg)	<ul style="list-style-type: none"> <li>• ERS 4926GTS: 7.2 kg</li> <li>• ERS 4926GTS-PWR+: 7.9 kg</li> <li>• ERS 4950GTS: 7.3 kg</li> <li>• ERS 4950GTS-PWR+: 8.0 kg</li> </ul>

**Table 5: Environmental specifications**

Operating Temperature	0° and 50° C (32° and 106° F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Operating Humidity	0 to 95 percent non-condensing
Storage Humidity	0 to 95 percent non-condensing
Maximum Operating Altitude	3,048 m (10,000 feet) above sea level
Storage Altitude	0 to 12,192 m (0 to 40,000 feet) above sea level
Acoustic Noise	At 25°C Ambient Temperature, less than 48 dBA typical, at 50°C, less than 61 dBA.
Miscellaneous Operating Considerations	<ul style="list-style-type: none"> <li>• No nearby heat sources such as hot air vents or direct sunlight</li> <li>• No nearby sources of severe electromagnetic noise</li> <li>• No excessive dust</li> <li>• Adequate power source within six feet; one circuit required for each power supply (see table, AC power specifications)</li> <li>• At least 2 inches (5.08 cm) on each side of the switch unit for ventilation</li> <li>• Cables should be dressed to prevent blocking air flow.</li> </ul>

## Power Specifications

This section provides the following power specifications for the switch:

- [AC power specifications](#) on page 18
- [Typical power consumption](#) on page 19
- [PoE+ budget calculations](#) on page 19

The following table describes the AC power specifications.

**Table 6: AC power specifications**

Model	Number of Power supplies	Power supply		Input power (margined by 10%)		Thermal rating (BTUs/hr maximum)
		Rated	Line voltage	Watts (Total)	Amps	
ERS 4950GTS	1	250 W	200–240 VAC	53.14	0.30	181.31
	2	250 W/PSU	200–240 VAC	58.88	0.44	200.89
	1	250 W	100–110 VAC	53.67	0.51	183.12
	2	250 W/PSU	100–110 VAC	59.53	0.58	203.11
ERS 4926GTS	1	250 W	200–240 VAC	39.37	0.25	134.33
	2	250 W/PSU	200–240 VAC	46.23	0.40	157.73
	1	250 W	100–110 VAC	39.43	0.38	134.53
	2	250 W/PSU	100–110 VAC	44.35	0.46	151.32
ERS 4950GTS-PWR+	1	1025 W	200–240 VAC	820.89	3.80	358.90
	2	1025 W	200–240 VAC	1586.25	7.15	584.30
	1	1025 W	100–110 VAC	842.10	7.75	431.95
	2	1025 W	100–110 VAC	1660.07	15.15	837.88
ERS 4926GTS-PWR+	1	1025 W	200–240 VAC	792.53	3.57	308.88
	2	1025 W	200–240 VAC	816.03	3.78	342.32
	1	1025 W	100–110 VAC	825.11	7.55	413.56
	2	1025 W	100–110 VAC	839.64	7.73	424.24

The following table provides typical power consumption.

**Table 7: Typical power consumption**

Model	Idle Power consumption (Watts)	Typical Power consumption (Watts)		
		Devices connected to all ports, typical traffic, without SFPs	Devices connected to all ports, typical traffic, 6 W average per PoE device	With Energy Saver enabled (PoE Saver disabled on PoE models)
ERS 4950GTS	43.9	53.0	NA	44.0
ERS 4926GTS	34.9	40.0	NA	34.9
ERS 4950GTS-PWR+	65.9	73.4	382.0	65.9
ERS 4926GTS-PWR+	51.4	55.8	208.8	51.5

The following table describes the Power over Ethernet (PoE+) specifications.

**Table 8: PoE+ budget calculations**

Model	Power supply configuration	Power supply		Power over Ethernet (PoE+) power output		
		Rated power per PSU (W)	Line voltage	Max Power per Port (W)	Max # ports Max PWR/port	Max power output Sum of all Ports (W)
ERS 4926GTS-PWR+	2 PSU	1025	110–240VAC	30	24	720
	1 PSU			30	24	720
ERS 4950GTS-PWR+	2 PSU	1025	110–240VAC	30	48	1440
	1 PSU			30	25	750

## MTBF Values

The following table lists the MTBF values for the switches in ERS 4900 Series in combination with one or two PSUs.

Model	Number of PSUs	Power Supply rating	MTBF (hours)
ERS 4926GTS	1	250W	212,509
	2	250W	191,705
ERS 4926GTS-PWR+	1	1025W	211,044
	2	1025W	197,295
ERS 4950GTS	1	250W	199,834
	2	250W	181,329

*Table continues...*

Model	Number of PSUs	Power Supply rating	MTBF (hours)
ERS 4950GTS-PWR+	1	1025W	195,578
	2	1025W	183,714

## Power Supply Cords

Each control unit and expansion module requires a switched power outlet socket rated at 110-240V AC, 50-60 Hz. Connection from that power outlet socket requires an appropriate locale specific power cord which is not supplied with the unit and must be ordered separately.

Power cords must not be attached to the building surface or run through walls, ceilings, floors and similar openings. Installation measures must be taken to prevent physical damage to the power supply cord, including proper routing of the power supply cord and provision of a socket outlet near the fixed equipment or positioning of the equipment near a socket outlet.

## Power Cord Type and Order Codes

Two modular power supplies are supported and each power supply has its own power cord.

ERS 4900 Series switch models that support PoE use 1025 W power supply. This power supply is unique to ERS 4900 Series. The power adapter on 1025 W power supply utilizes an IEC 60320 C16 connector. The IEC 60320 C16 connector accepts only an IEC 60320 C15 mating power cable and the IEC 60320 C16 connector utilizes a keying feature which prevents IEC 60320 C13 connector from being inserted in C16 socket.

The switches that do not support PoE, use 250 W power supply. The power adapter on the 250 W power supply utilizes an IEC 60320 C14 connector. The IEC 60320 C14 connector accepts either an IEC 60320 C13 or IEC 60320 C15 mating power cable.

The following table provides information about the switches and their supported cord type.

**Table 9: Support matrix**

ERS Model	Power Supply	Power socket	
		IEC 60320 C14	IEC 60320 C16
			
ERS 4950GTS	AL1905A09-E6	✓	
ERS 4926GTS	AL1905A09-E6	✓	

*Table continues...*

ERS Model	Power Supply	Power socket	
		IEC 60320 C14	IEC 60320 C16
ERS 4950GTS-PWR+	AL1905A19-E6		✓
ERS 4926GTS-PWR+	AL1905A19-E6		✓

This section provides ordering information for power cords.

**Table 10: Power cords for power distribution units**

Order Code	Length	Power supply side connector	Power source side connector	Safety Approval
700512239	3 m	C13	C14	USA
700512240	3 m	C15	C14	USA
700512241	3 m	C13	C14	International except Japan and Taiwan
700512242	3 m	C15	C14	International except Japan and Taiwan

**Table 11: Power Cords with C14 power supply side connector**

Order Code	Description	Region
AA0020062E6	Power cord 3.05 m IEC C13 to NEMA 5-15P	North America
AA0020063E6	Power cord 2.5 m IEC C13 to BS1363	United Kingdom
AA0020064E6	Power cord 2.5 m IEC C13 to CEE 7/7	European Union
AA0020065E6	Power cord 2.5 m IEC C13 to CEI 23-16	Italy
AA0020066E6	Power cord 2.5 m IEC C13 to GB 2099.1-1996	China
AA0020067E6	Power cord 2.5 m IEC C13 to BS-546/SANS164-1	India & South Africa
AA0020068E6	Power cord 2.5 m IEC C13 to AS 3112	Australia
AA0020069E6	Power cord 2.5 m IEC C13 to JIS 8303	Japan
AA0020101-E6	Power cord 2.5 m IEC C13 to NBR 14136 (IEC 60906-1)	Brazil
AA0020104-E6	Power cord 2.5 m IEC C13 to SEV 1011	Switzerland

*Table continues...*

Order Code	Description	Region
AA0020107-E6	Power cord 2.5 m IEC C13 to SI-32	Israel

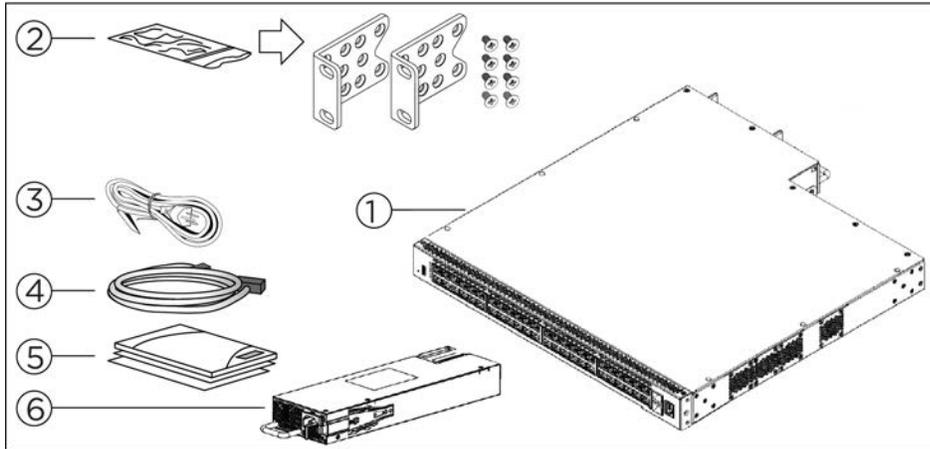
**Table 12: Power cords for use with C14 or C16 power supply side connector**

Order Code	Description	Region
AA0020071-E6	Power cord 2.5 m IEC C15 to BS1363	United Kingdom
AA0020072-E6	Power cord 2.5 m IEC C15 to CEE 7/7	European Union
AA0020073-E6	Power cord 2.5 m IEC C15 to JIS 8303	Japan
AA0020074-E6	Power cord 2.0 m IEC C15 to NEMA 5-15P	North America
AA0020075-E6	Power cord 2.5 m IEC C15 to AS 3112	Australia
AA0020094-E6	Power cord 2.5 m IEC C15 to CNS 690 BSMI	Taiwan
AA0020097-E6	Power cord 2.5 m IEC C15 to SANS 164-1 PLUG	South Africa
AA0020100-E6	Power cord 2.5 m IEC C15 to NBR 14136	Brazil
AA0020103-E6	Power cord 2.5 m IEC C15 to SEV 1011	Switzerland
AA0020105-E6	Power cord 2.5 m IEC C15 to CEI 23-16	Italy
AA0020106-E6	Power cord 2.5 m IEC C15 to SI-32	Israel
AA0020108-E6	Power cord 2.5 m IEC C15 to NEMA L6-15P TWIST LOCK	North America
AA0020109-E6	Power cord 2.5 m IEC C15 to BS-546	India
AA0020110-E6	Power cord 2.5 m IEC C15 to IRAM 2073	Argentina

---

## Verify the Package Contents

For each ERS 4900 Series, verify the package contents with the items in the following figure to ensure you have received all components. If any components are missing, contact the vendor where you purchased the switch.



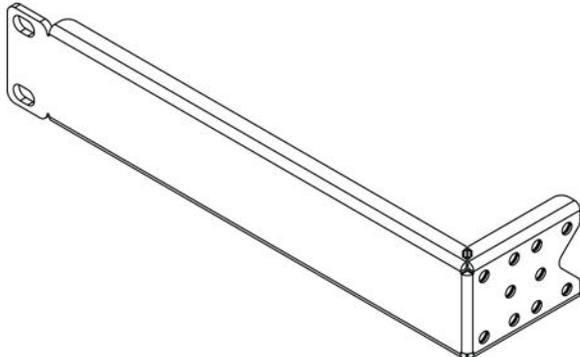
1. Ethernet Routing Switch 4900 Series.
  2. Rack-mounting hardware that includes:
    - Rack-mount brackets (2)
    - Screws to attach brackets to the switch (8)

**Note:** Screws to attach the rack mount kit to rack are not provided.
  3. AC power cord.  
(Note: A power cord is not included for the A variant of the switch)
  4. Standard .5 m stacking cable.
  5. Documentation includes the Base software license kit, Quick Install poster, and Regulatory documents.
  6. Field replaceable power supply.
- Note:** Two field replaceable power supplies are supported for models ERS 4950GTS, ERS 4926GTS, ERS 4950GTS-PWR+, and ERS 4926GTS-PWR+. One power supply is already installed.
- Note:** Ensure to order Direct Attach cables and SFP or SFP+ Transceivers if required.

## Optional rack-mounting equipment

If you plan to rack-mount the switch, ensure the following equipment is available:

**Table 13: Optional equipment**

Optional equipment	Order code	Equipment
Spare Rack Mount Kit—used as a replacement rack mount kit.  19 inch Rack Mount kit	700512595	

## Power Supply Unit specifications

The following table lists the order codes for optional Power Supply Units (PSU).

**Table 14: PSU specifications**

Switch Model	Primary PSU	Optional Secondary PSU
p ERS 4950GTS, ERS 4926GTS	250W AC power supply (replacement order code: AL1905?09-E6)	250W AC Power Supply (order code: AL1905?09-E6)
ERS 4950GTS-PWR+, ERS 4926GTS-PWR+	1025W AC POE+ power supply (replacement order code: AL1905?19-E6)	1025W AC power supply (order code: AL1905?19-E6)

## Connecting Switch to AC Power

### About this task

Connect a switch to a power source.

### Before you begin

- Ensure to check AC power specifications for the switch. For more information, see [AC power specifications](#) on page 18.
- Ensure to check the AC power cord for international use. You must use a power cord that is approved for the receptacle type in your country. For more information, see [Power cord type and order codes](#) on page 20.

### Procedure

Connect the AC power cord to the back of the switch, then connect the cord to a power outlet.

#### \* Note:

ERS 4900 does not have a power switch. When you connect the AC power cord to a suitable AC power outlet, the switch powers up immediately.

### Next steps

Check the front-panel LEDs as the device is powered on to be sure the PWR LED is lit. If not, check that the power cable is correctly plugged in.

See [Checking Light Emitting Diode on the switch](#) on page 45.

# Chapter 5: Switch Installation

This section describes how to install the switch in an equipment rack.

---

## Installing the ERS 4900 Series in an Equipment Rack

### About this task

Install the ERS 4900 Series in an equipment rack using the supplied brackets. The brackets secure the chassis and prevent it from sliding around during vibration or when inserting or extracting transceivers.

### Before you begin

#### Rack requirements

- EIA or IEC-standard 19-inch (48.2-centimeter) equipment rack that is bolted to the floor and braced, if necessary.
- Rack is grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.
- Appropriate rack space is available to accommodate 1U switch height (44 mm).

#### Note:

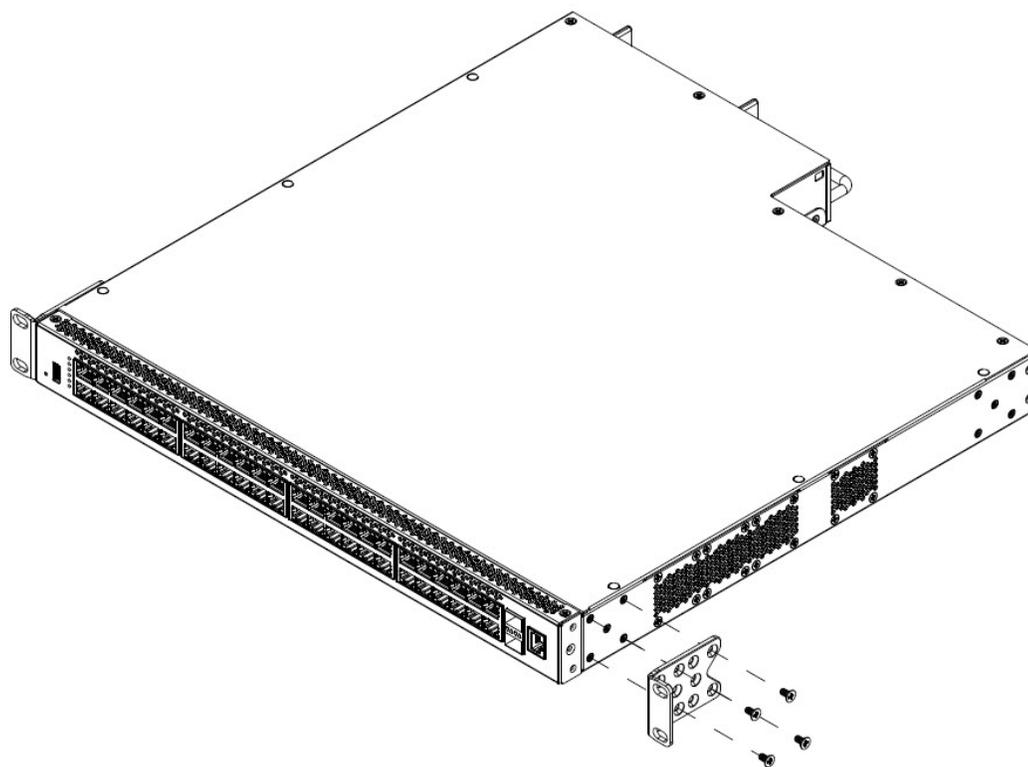
We do not supply the bolts used to secure the switch to the rack. Ensure you obtain the appropriate bolts to secure the switch to your specific rack before you begin.

#### Caution:

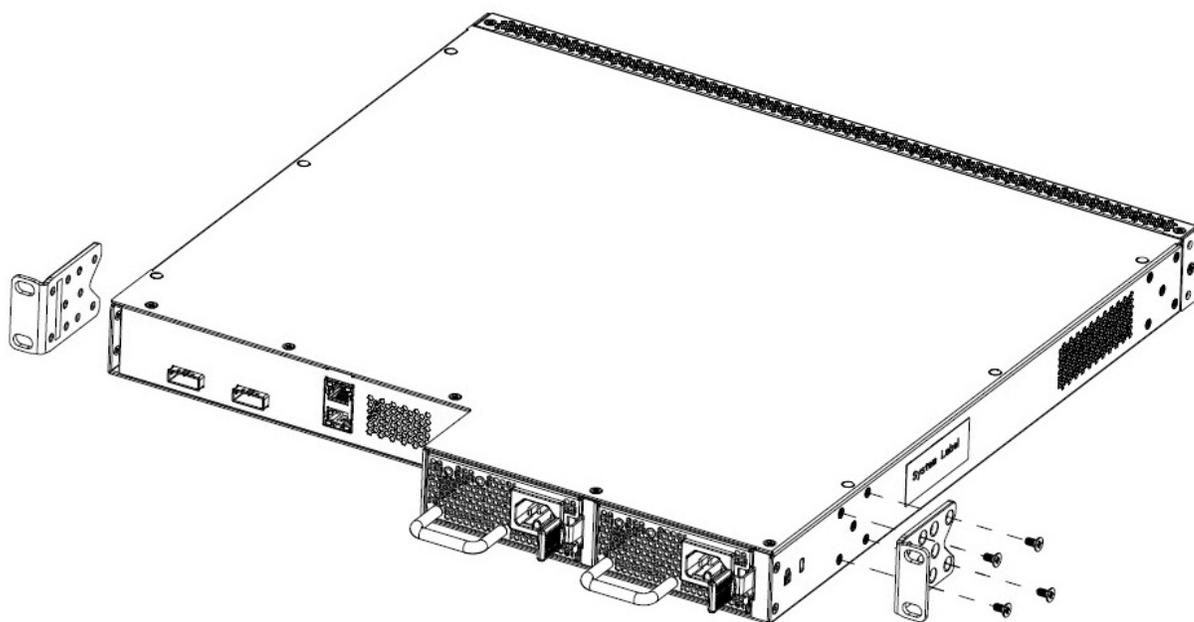
When you mount the device in a rack, do not stack units directly on top of one another. You must secure each unit to the rack with the appropriate mounting brackets. Mounting brackets cannot support multiple units. For a translation of this statement, see [Translation of safety messages](#) on page 51.

### Procedure

1. Ensure power is disconnected from the switch.
2. Attach a bracket to each side of the switch with the included screws.  
Attach the brackets in the best position for your specific equipment rack.

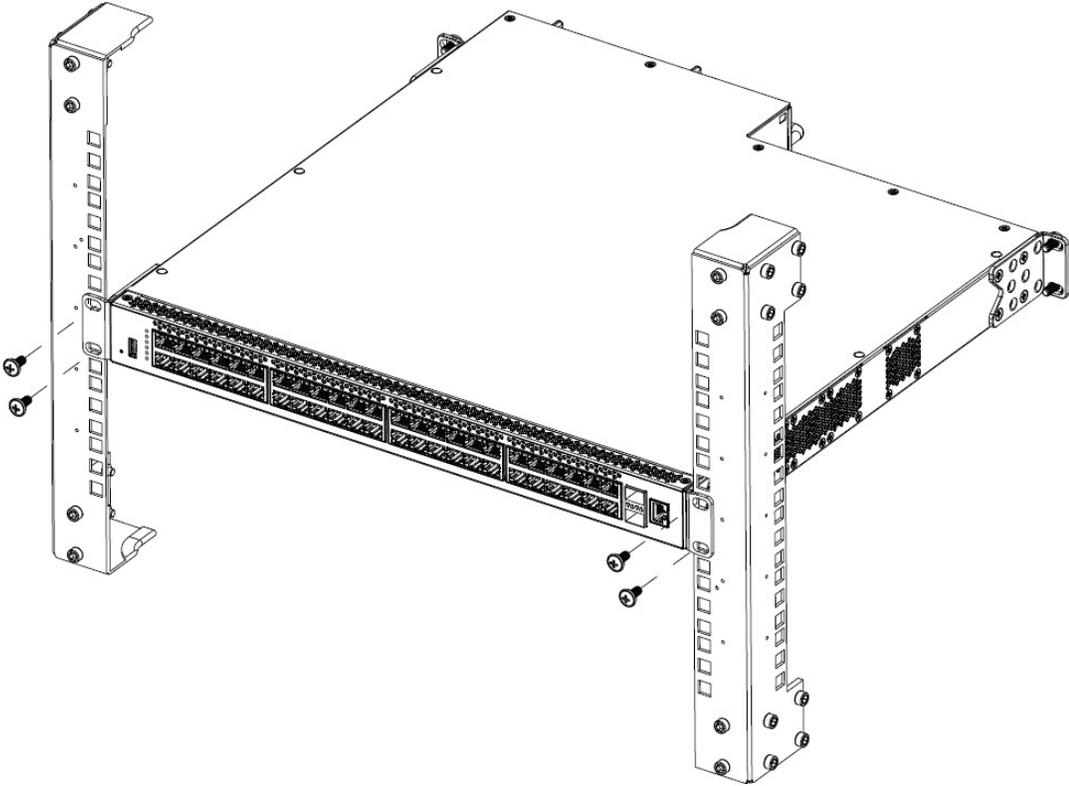


**Figure 4: Front-mounted rack bracket installation**



**Figure 5: Rear-mounted rack bracket installation**

3. Slide the switch into the rack.
4. Insert and tighten the rack mount screws.



**Figure 6: Front-mounted rack installation**

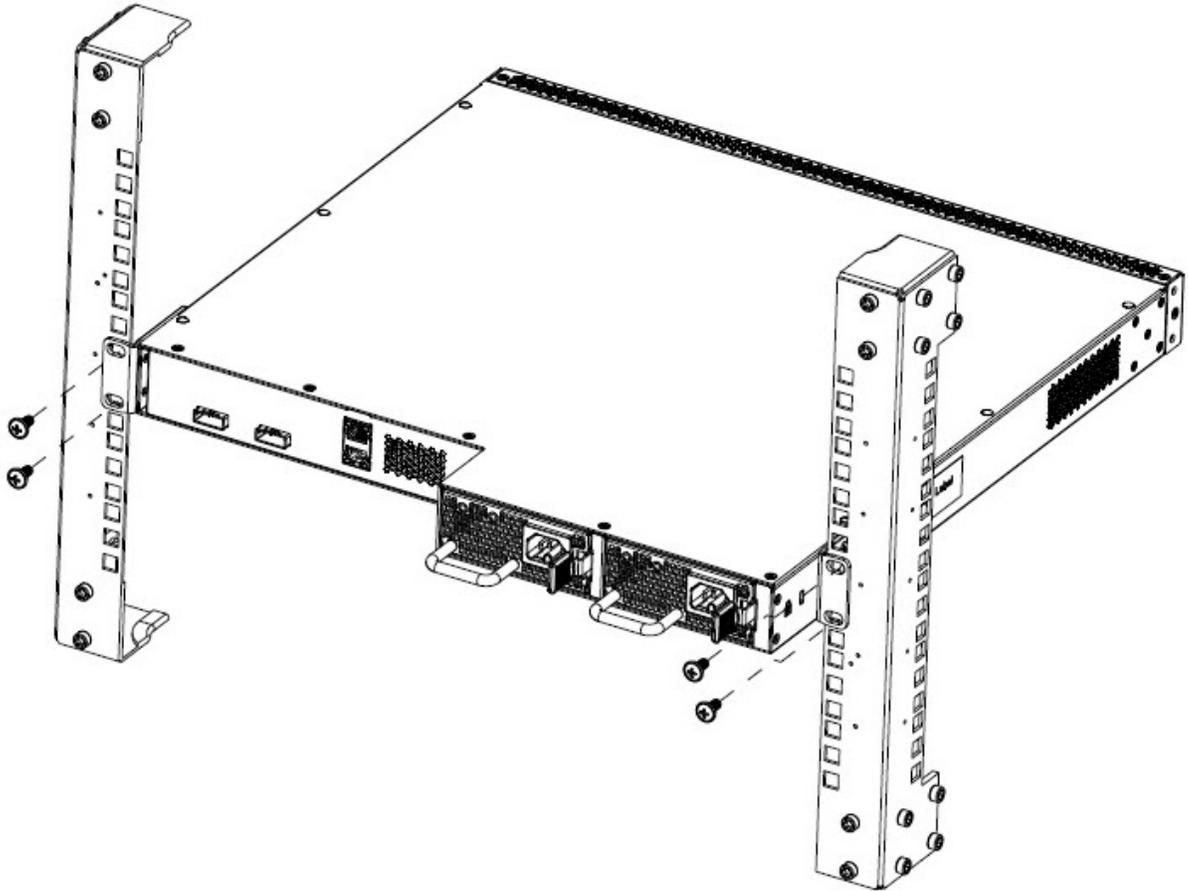


Figure 7: Rear-mounted rack bracket installation

---

## Installing Optional Four-Post Rack-Mount Brackets

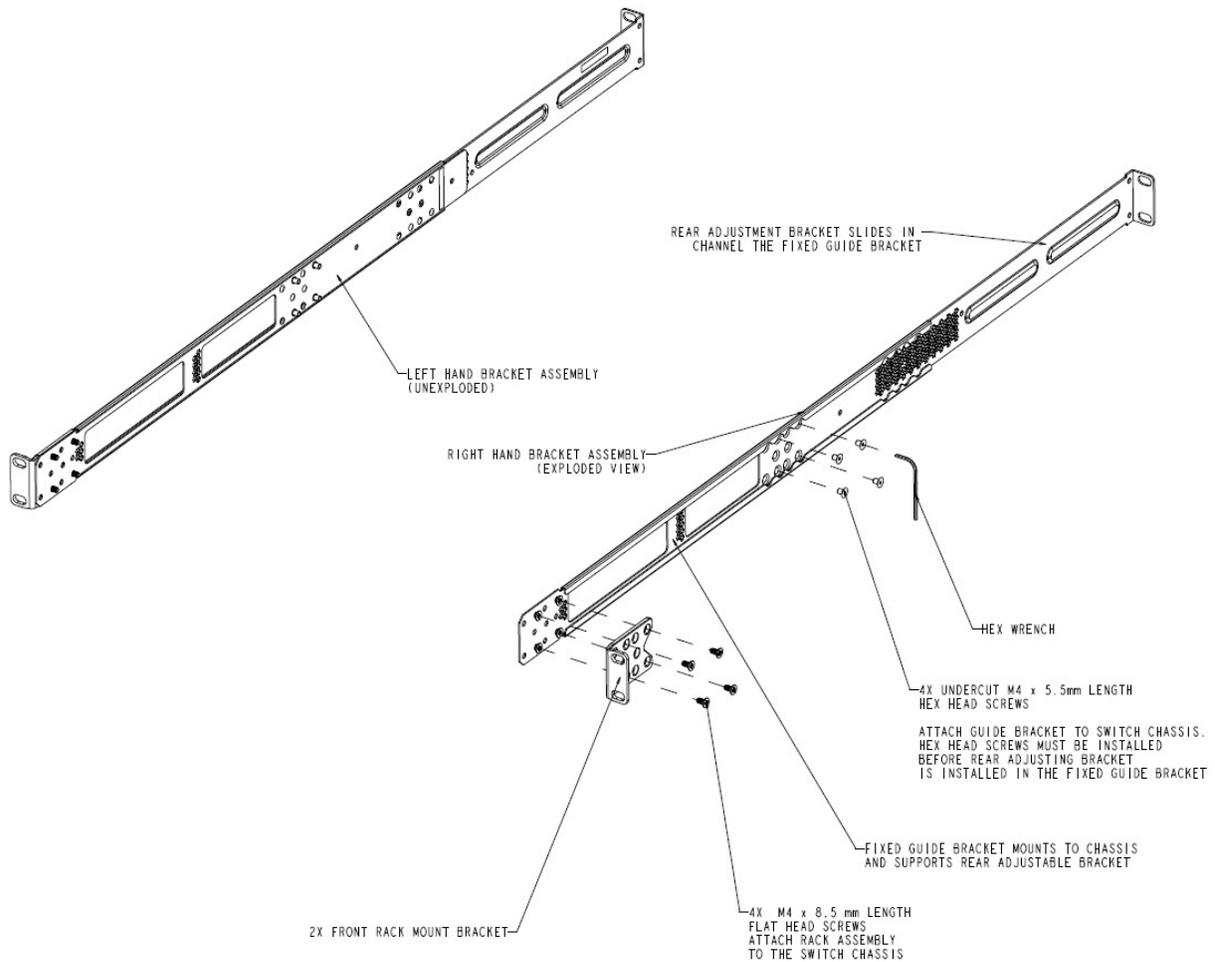
Perform this procedure to assemble and install the four-post rack-mount bracket kit.

### Before you begin

Ensure to check for the following:

- Four-post server rack-mount kit.
- Verify that you have all the screws and brackets to assemble and install the four-post rack mount kit.
- Tools:
  - Phillips screwdriver to attach brackets to the switch and the switch to the rack.
  - Hex wrench to assemble and attach the optional four-post rack-mount brackets.

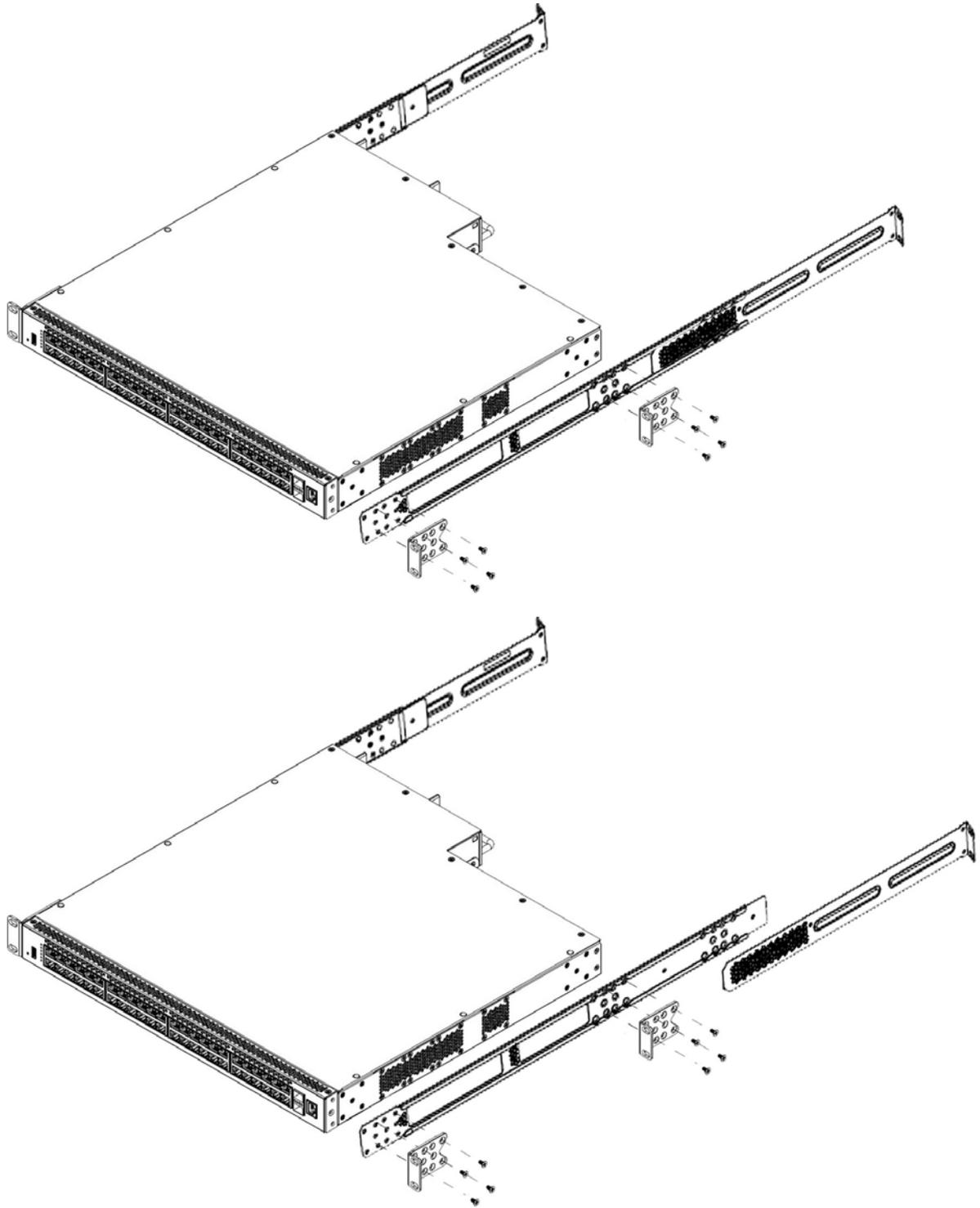
- Rack requirements:
  - Appropriate rack space to accommodate 1U switch height is 1.7 inches (44 millimeters).
  - Four-post rack bolted to floor and braced if necessary.
  - Four post-rack must be grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 ohm of resistance from the rack to the grounding electrode.



**Figure 8: Four-post rack-mount kit assembly**

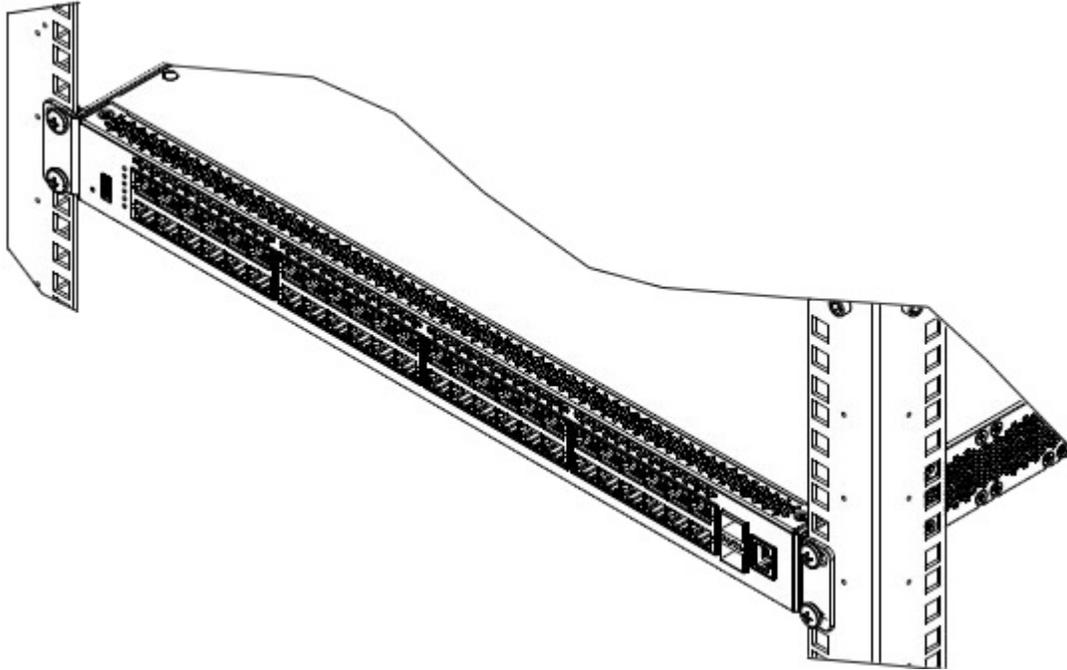
**Procedure**

1. Attach a front bracket to each guide bracket with four 8.5 mm length flat head machine screws.
2. Attach the guide brackets to the switch chassis.



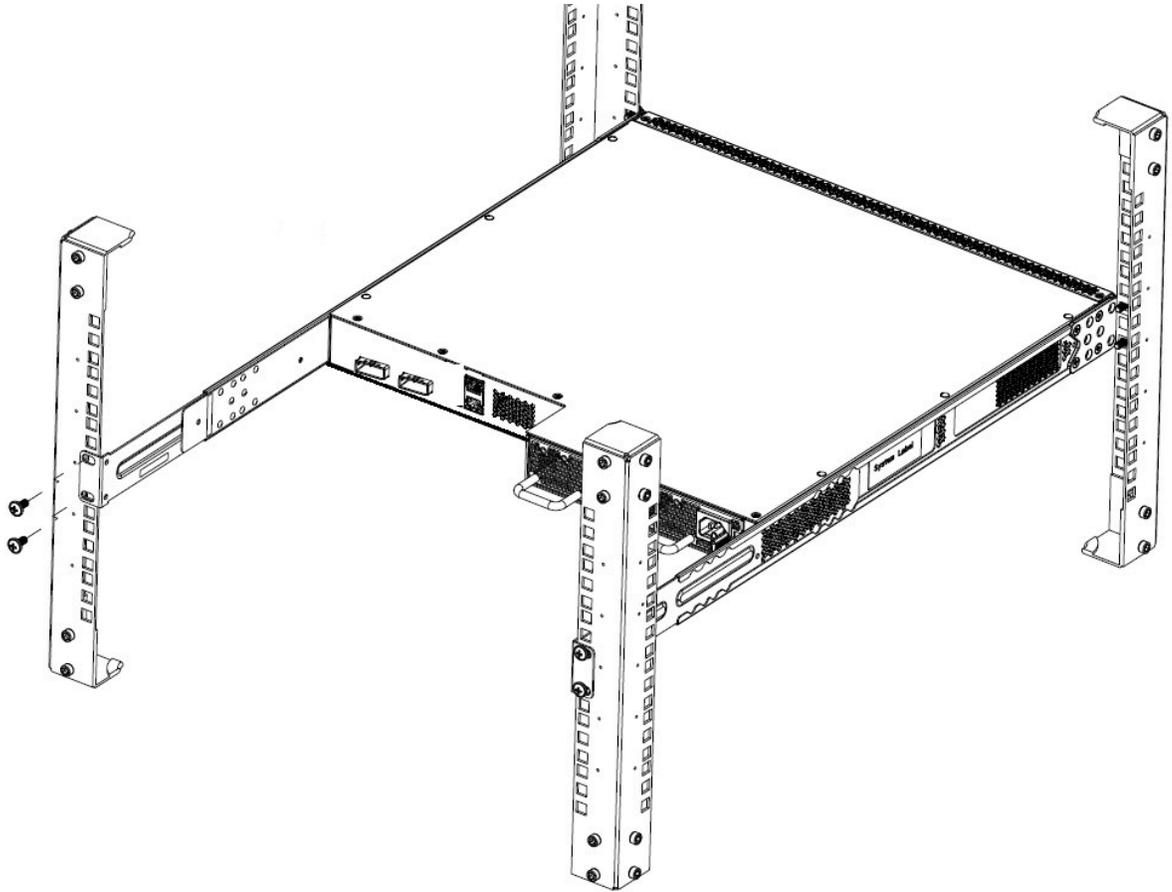
- a. Use four M4 x 5.5 mm undercut flat-head hex machine screws to attach the rear of each guide bracket to the switch chassis.
- b. Verify that the rear screws sit flush in the guide brackets.

- c. Test fit the rear mounting brackets in the guide brackets and verify that the rear brackets can slide in the channels. Remove the rear brackets.
3. Install the switch into the equipment rack, temporarily using only the front rack mounts and screws.



**Figure 9: Install switch in rack using front rack mounts**

4. Attach the rear mounting brackets and secure the switch to the rear rack posts.
  - a. Slide a rear mounting bracket into each guide bracket channel until flush with the rear rack posts.
  - b. Secure the rear mounting brackets to the switch chassis with the pan-head screws.



**Figure 10: Attach rear mounting brackets**

You can proceed with the installation by connecting power and network connections to the switch.

---

## Installing the Secondary Power Supply

### About this task

Your switch supports a combination of two field replaceable power supplies. You can install a secondary power supply to provide redundancy, and load sharing.

### Before you begin

Verify switch compatibility with the power supply. For more information, see [Power supply specifications](#) on page 20.

### Electrostatic alert:

To prevent damage from electrostatic discharge, always wear an antistatic wrist strap connected to an ESD jack when performing maintenance on a switch. Ensure that the wrist strap makes contact with your skin.

## Procedure

1. Insert each power supply into a rear power supply slot.  
If a blanking plate covers the required power-supply slot, remove the plate before inserting the power supply.
2. Verify that each fan tray is fully seated in the slot and secure each fan tray with two thumb screws.

**\* Note:**

The switch chassis can prevent an incorrect installation of a power supply. If you insert a power supply upside down, it may not get inserted fully and the thumb screws will not engage.

---

## Connecting a Transceiver to the Switch or Stack

The following sections describe small form factor pluggable (SFP) transceivers.

---

## Installing SFP Transceivers

### About this task

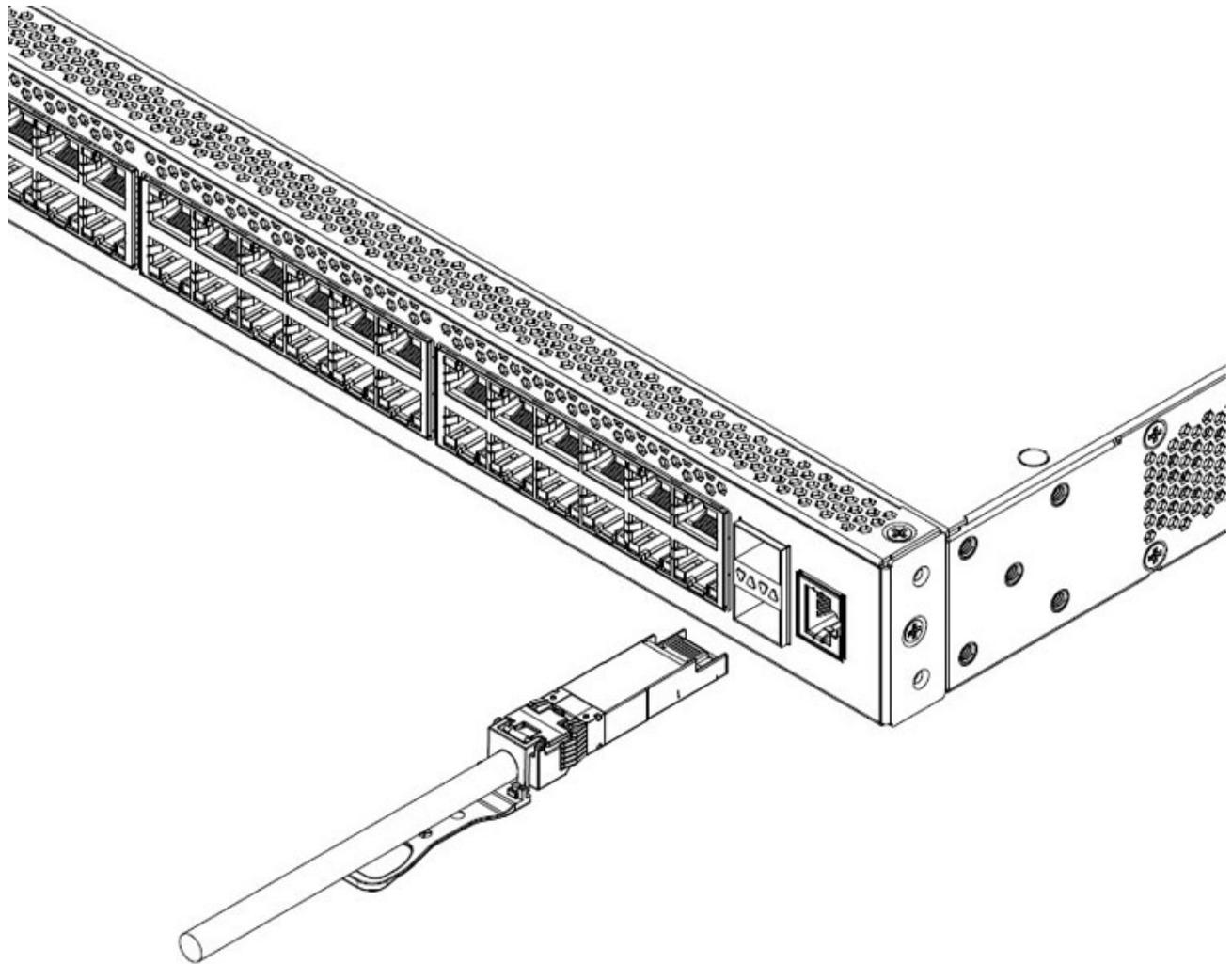
This procedure describes the steps used to install transceivers.

### Procedure

1. Remove the transceiver from the protective packaging.
2. Verify that the transceiver is the correct model for the network configuration.
3. Grasp the transceiver between the thumb and forefinger.
4. Insert the transceiver into the proper module on the switch. Apply a light pressure to the transceiver until it clicks and locks into position in the module.
5. Remove the dust cover from the transceiver optical bores.

### Example

The following graphic shows an SFP transceiver.

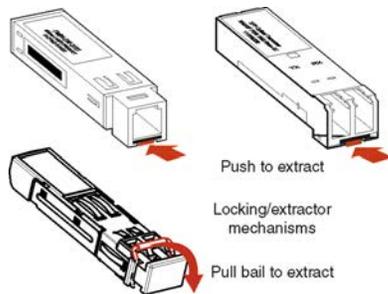


---

## Removing SFP Transceivers

Remove SFP transceivers by performing this procedure.

1. Disconnect the network fiber cable from the transceiver.
2. Use the locking mechanism on the transceiver to release it. The locking mechanism varies from model to model as illustrated below.



3. Slide the transceiver from the module slot.
4. If the transceiver does not slide easily from the module slot, use a gentle side-to-side rocking motion while firmly pulling the transceiver from the slot.
5. Attach a dust cover over the fiber-optic bores and store the transceiver in a safe place until you need it.

**! Important:**

Discard transceivers in accordance with the proper laws and regulations.

---

## Supported Optical Devices

Use optical devices to achieve high-bit-rate communications and long transmission distances. The following section describes the supported optical devices on the switches.

**! Important:**

We recommend that you use the SFP and SFP+ transceivers documented in this document as they have been through extensive qualification and testing. Extreme Networks will not be responsible for issues related to third party transceivers.

### Small Form-Factor Pluggable (SFP) Transceivers

SFPs are hot-swappable input and output enhancement components designed to allow gigabit Ethernet ports to link with other gigabit Ethernet ports over various media types.

You can use various SFP (1 Gbps) and SFP+ (10 Gbps) to attain different line rates and reaches. The following table describes the SFPs including the reach provided by various SFPs.

**! Important:**

The attainable cable length can vary depending on the quality of the fiber-optic cable used.

For more information about transceiver use and designation, see [Extreme Networks Pluggable Transceivers Installation Guide](#).

### Small Form-Factor Pluggable plus Transceivers

SFP+ transceivers are hot-swappable input and output enhancement components that allow 10 gigabit connections. All SFP+ transceivers use Lucent connectors (LC) to provide precision keying and low interface losses.

For more information about transceiver use and designation, see [Extreme Networks Pluggable Transceivers Installation Guide](#).

## Optical Power Considerations

When you connect the device to collocated equipment, ensure that enough optical attenuation exists to avoid overloading the receivers of each device. You must consider the minimum attenuation requirement based on the specifications of third-party equipment.

For more information about transceiver use and designation, see [Extreme Networks Pluggable Transceivers Installation Guide](#).

## Locating End of Sale Notices

To view the End of Sale notices, go to the Extreme Networks Website at <https://extremeportal.force.com/>.

---

## Cable Requirements

The following table describes the cables required for ERS 4900 Series.

**Table 15: Stacking cables**

Description	Material code
Stacking cable 0.5 m	700511668
Stacking cable 1.5 m	700511669
Stacking cable 3.0 m	700511670
Stacking cable 5.0 m	700511671

---

## Console port adapters

The following cables are used for installing the switch into a network.

**Table 16: Console port adaptors**

Name	Short Description	Material code
RJ-45/DB-9 Console Cable	1.5m cable with DB-9 Female for terminal/PC on one end and RJ-45 for device console port connectivity on the other.	AL2011022-E6
Blue DB-9 Male to RJ-45 Console Connector	Converts DB-9 of AL2011013-E6 console cable to RJ-45, a Category 5 RJ-45 straight cable	AL2011021-E6

*Table continues...*

Name	Short Description	Material code
	can then connect to RJ-45 console port.	
Red DB-9 Female to RJ-45 Adaptor	Converts DB-9 MALE to RJ-45 serial port. The adaptor can be used for PC or device with DB-9 MALE console port. Also, can be used with Category 5 RJ-45 straight cable to provide console connection.	AL2011020-E6

## Stacking

The switch provides fail-safe stackability. You can connect up to eight ERS 4900 devices in a stack to provide uninterrupted connectivity for up to 400 ports. You can manage the stack as a single unit.

## Stack Connector

The stack connector is a component of the switch back panel and consists of the Unit Select switch, Cascade Down connector, and Cascade Up connector. The stack connector is illustrated in the following diagram.

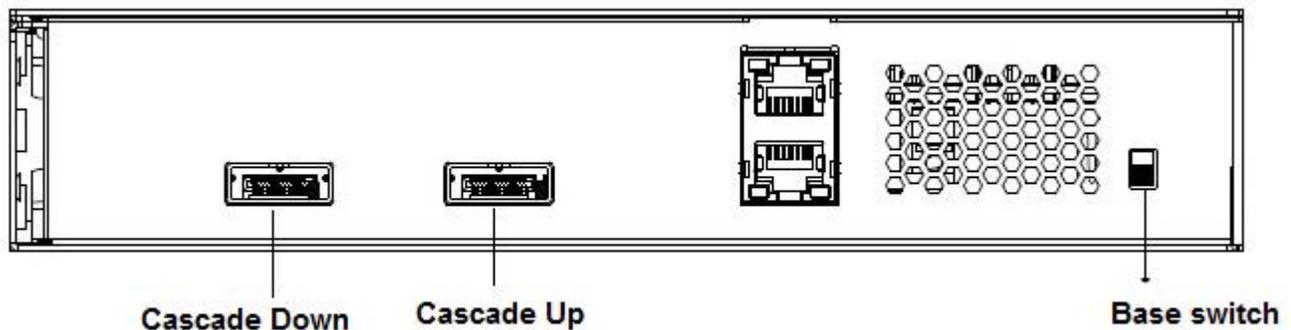


Figure 11: Stack Connector

## Unit Select Switch

Use the Unit Select switch to designate a switch in the stack as the base unit. Slide the Unit Select switch DOWN to designate a switch as the base unit. You can designate only one switch in a stack as the base unit; that is, with the switch in the base unit position. For all other switches in the stack, the Unit Select switch must be positioned UP.

The base unit designation for a switch appears on the front panel LED display. See [Switch LED state indicators](#) on page 46.

## Cascade Down Connector

Use the Cascade Down connector to connect a switch to the next unit in the stack through a cascade cable. Connect the other end of the Cascade Down cable to the Cascade Up connector of the next switch in the stack. A return cable from the Cascade Down connector of another unit to the Cascade Up connector of the first unit completes the stack connection.

### ! Important:

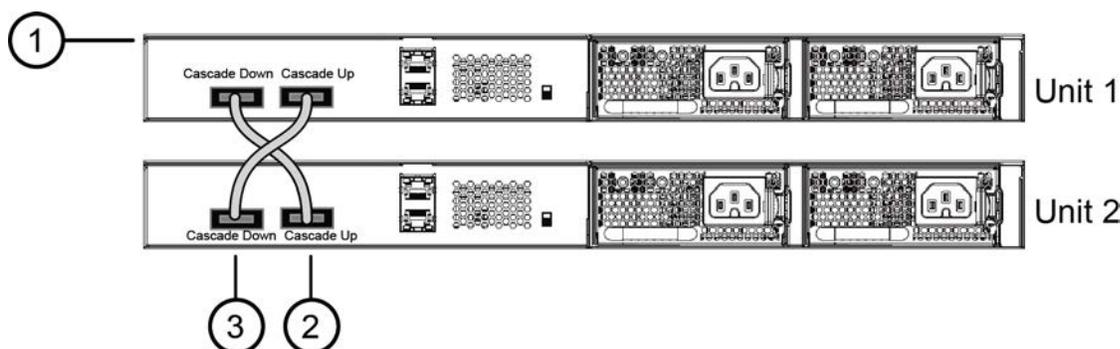
To create a stack connection, order the appropriate switch cascade cables to ensure fail-safe stacking. A 1.5 foot stacking cable is included with the switch. For stacking three or more units (maximum eight units per stack), order the cables as applicable.

## Cascade Up Connector

The Cascade Up connector provides an attachment point that accepts a cascade cable connection from another unit in the stack. A return cable from the Cascade Down connector of one switch to the Cascade Up connector of an adjacent switch completes the stack connection. The following figure illustrates a typical crossover connection configuration. Failure to use this configuration can result in loss of connectivity.

### ! Important:

In the Unit 1, set the Base unit select switch position to *Base*.



1. Base Unit
2. Cascade Cable (connected from Base Unit Cascade Down connector to Unit 2 Cascade Up connector)
3. Cascade Cable (connected from Unit 2 Cascade Down connector to Base Unit Cascade Up Connector)

## Initial Installation Unit Number Assignment

When you install the stack, the software automatically determines the physical order of all units in the stack according to the position of the base unit within the stack. Thereafter, the individual units maintain their original unit numbering, even if you change the position of one or more units in the stack.

For example, when you initially power the stack, the base unit becomes unit 1 and the unit that the base unit connects to (across the Cascade Down cable) becomes unit 2. The next unit is designated as unit 3, this continues until the maximum stack configuration (up to eight units) is reached. If

another unit in the stack is designated as the base unit, the new base unit keeps its originally designated unit number in the stack.

## Stack MAC Address

When a switch participates in a stack configuration, stack initialization automatically assigns a stack MAC address. The stack MAC address is the base unit MAC address plus 1. If another unit in the stack is assigned as the base unit, the new stack MAC address is the MAC address of the new base unit plus 1. The original stack IP address still applies to the new base unit.

## Temporary Base Unit

If an assigned base unit fails, the next unit in the stack order automatically becomes the new temporary base unit. The LED display on the front panel of the temporary base unit changes to a steady amber state to indicate the change. When this happens, use the Unit Select switch to designate the temporary base unit as the base unit until you repair or replace the failed base unit.

You must designate a base unit because the automatic failover is only a temporary safeguard and, if the original unit rejoins the stack, it does not resume base unit status. Also, if the stack configuration loses power, the temporary base unit does not resume base unit status when power is restored.

### **!** Important:

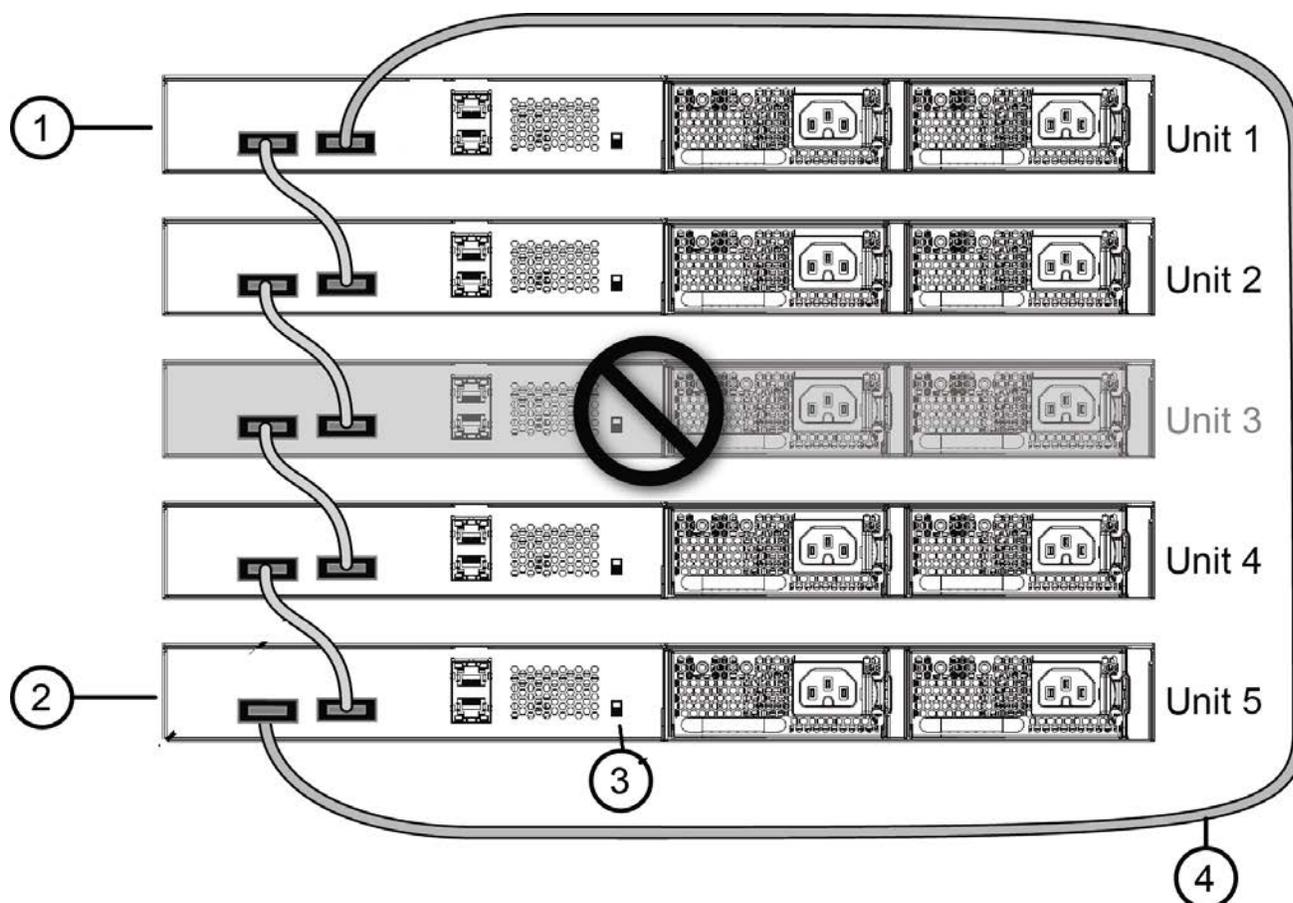
If the temporary base unit is not assigned as the new base unit, and the temporary base unit fails, the next unit in the stack order becomes the temporary base unit. This process continues after successive failures until only two units are left in the stack.

## Redundant Cascade Stacking

You can stack up to eight units into a dual-path cascade stack. If any single unit fails, or if a cable is accidentally disconnected, other units in the stack remain operational.

In addition to increasing bandwidth, the software uses the cables to provide two paths between units. If one path is interrupted, the data travels over the remaining path at half the normal inter-switch bandwidth.

The following figure shows a typical example of a stack configuration reacting to a failed connection in the stack configuration.



1. Base Unit
2. Last Unit
3. Unit selector switch
4. Cascade Cable

In the example, the following occur:

- Unit 3 becomes nonoperational due to a unit failure, cable disconnection, or a loss of power.
- Units 2 and 4, directly upstream and downstream from Unit 3, sense the loss of link signals from unit 3. The software directs all the data to traverse the remaining path.
- The Cascade Down LED for Unit 2 and the Cascade Up LED for Unit 4 turn amber to indicate an error.
- The remaining stack units remain connected and continue to operate.

## Connecting Switches in a Stack

### About this task

Connect a switch to the next unit in the stack through a cascade cable. The stack parameters are associated with the base unit, the physical stack order depends on the base unit position and

whether you configure the stack cascade up (stack up) or cascade down (stack down). This designation depends on the stack cabling arrangement.

**\* Note:**

Cascade Down configuration is recommended because many network management software packages assume a cascade down (stack down) configuration.

**Before you begin**

Order the appropriate ERS 4900 Series cascade cables to ensure fail-safe stacking. For more information, see [Cable requirements](#) on page 37.

**Procedure**

1. Ensure that all switches for the stack are rack mounted.
2. Slide the Unit Select switches on the back of the units to the appropriate position, depending on whether they are a base unit or non-base unit:
  - Base Unit (Unit 1)- Slide the Unit Select switch DOWN
  - Non-Base Unit (Units 2-8)- Slide the Unit Select switch UP

**\* Note:**

The Base Unit Select switch defaults to be in the Non-Base position. Only one switch in the stack must have the Base Unit Select switch set to the Base position.

3. Connect stacking cables as required for a Cascade Up (stack up) or Cascade Down (stack down) configuration.

See [Stack configurations](#) on page 42 for cable connection reference.

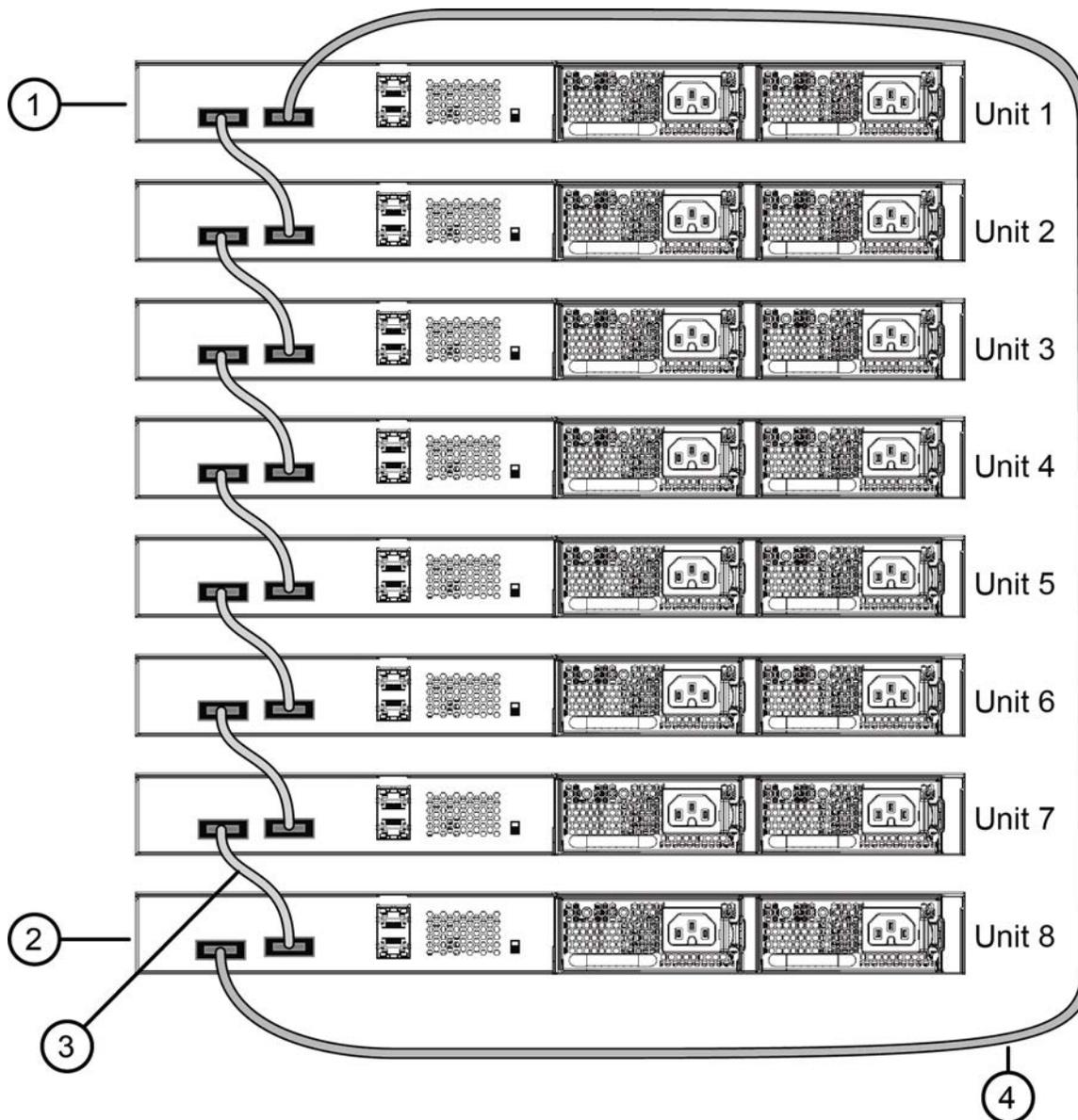
---

## Stack Configurations

Stack parameters are associated with the base unit, the physical stack order depends on the base unit position and whether you configure the stack cascade up (stack up) or cascade down (stack down). The designation depends on the stack cabling arrangement.

### Cascade Down

In a cascade down configuration, the base unit is located at the top of the stack. The system automatically numbers the physical units based on the designated base unit (unit 1). The cable connected to the Cascade Down connector of the base unit terminates in the Cascade Up connector on the next unit in the stack, which is located below the base unit. This next unit is designated unit 2. The stack is wired downward through the units and the system continues to number in this manner throughout the stack. In this configuration, the base unit discovers the stack in a cascade down (stack down) direction.



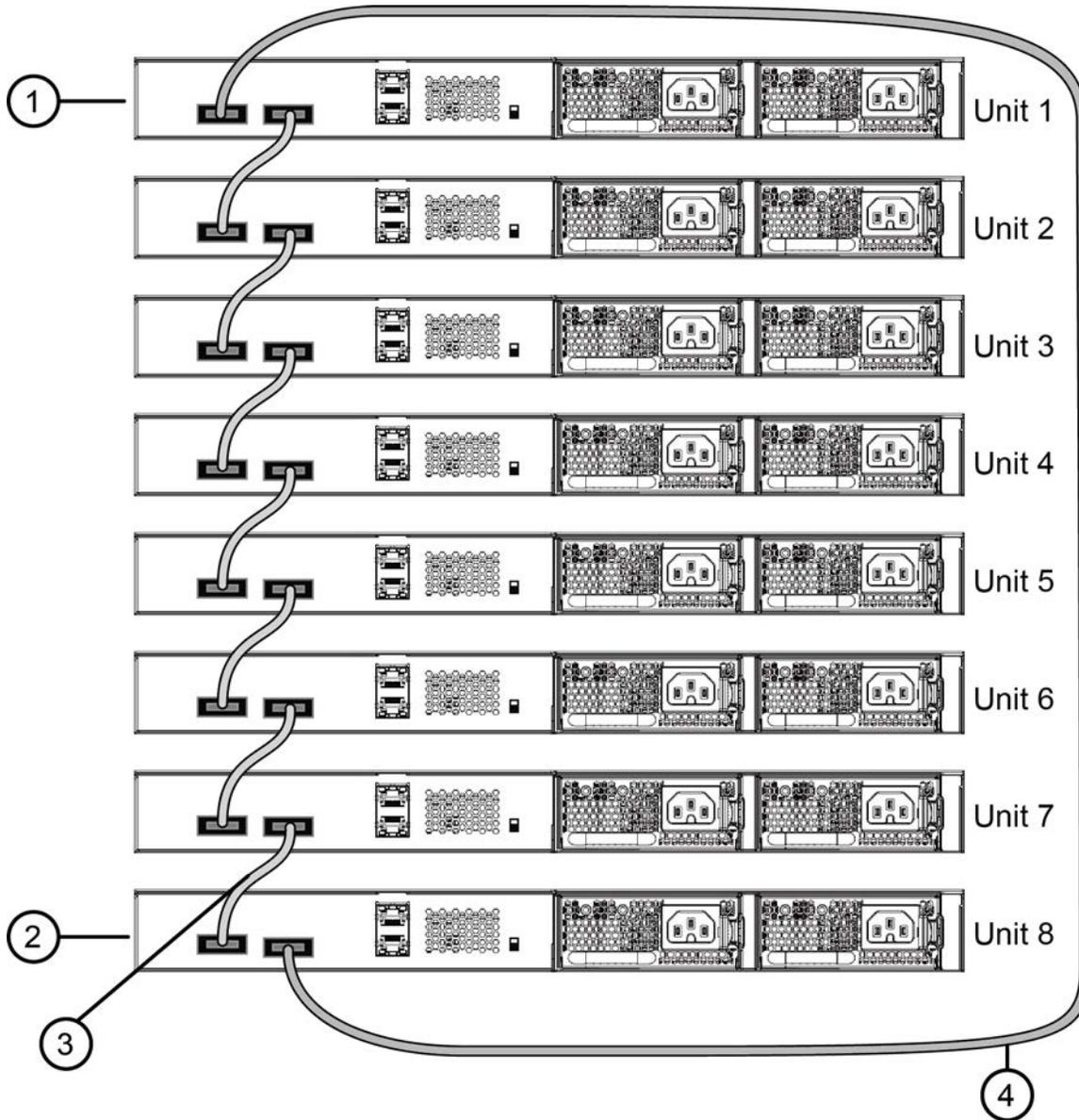
1. Base Unit
2. Last Unit
3. Cascade or Stack Cable
4. Cascade/Stack Cable (Return cable to make stack resilient. Use longer Stack Cable if required)

**Figure 12: Cascade Down (Stack Down) configuration**

## Cascade Up

In a cascade up (stack up) configuration, the base unit is physically the bottom unit in the stack. The cable connected to the Cascade Up connector of the base unit terminates in the Cascade Down connector of the last unit physically at the top of the stack. The stack is wired upward through the

units and the system continues to number in this manner throughout the stack. In this configuration, the base unit discovers the stack in a cascade up (stack up) direction.



- 1. Base Unit
- 2. Last Unit
- 3. Cascade or Stack Cable
- 4. Cascade/Stack Cable (Return cable to make stack resilient. Use longer Stack Cable if required)

**Figure 13: Cascade Up (Stack Up) configuration**

---

## Replacing or Adding a Stack Unit

Use the following procedure to replace a failed stack unit or insert a new unit into a stack.

### Important:

Automatic Unit Replacement (AUR) for both configuration and software is enabled for all switch platforms and software releases. This means that the agent code image, on a replacement unit, is automatically upgraded or downgraded to match the software running on the stack. In addition, when a like-for-like replacement of a failed unit occurs, any port-specific configuration is restored.

### Procedure

1. Remove the failed switch from the stack.
2. Obtain a like-for-like replacement switch.
3. With the new unit turned off, physically insert the new unit in the stack and reconnect the stack cables.
4. Turn on the new unit. Depending on the software load on the replacement switch, it can automatically restart one or two times before joining the stack as a fully operational member.
5. Check the log file on the stack to ensure that the replacement unit correctly joined the stack. The log file displays AUR information messages.

If you replace the base unit, remember that the stack has elected a temporary base unit and the new unit does not automatically assume the base unit status. Configure the new unit as the base unit, using the Unit Select switch, and reset the Unit Select switches of the other stack members to nonbase units.

---

## Removing a Stack Unit

If you remove a unit from the stack (to operate in standalone mode), the following switch configuration settings revert to those configured before the unit became a member of the stack:

- IP address
- Web, Telnet, and SNMP passwords
- SNMP community strings

---

## Checking Light Emitting Diode on the Switch

The figures and tables in the following sections describe the LEDs on the switch. The tables describe LED operation for a switch that finishes the power-on self-test.

## Switch LED State Indicators

The following table describes the main switch LED state indications provided by LED color and fluctuation cues.

**Table 17: Switch LED state indicators**

Label	Color and Status	Description
PWR	Green (solid)	The switch is receiving power either from the primary or secondary power supply.
	Off	The switch is not receiving power and not operating.
Status	Green (solid)	<ul style="list-style-type: none"> <li>• <b>During start-up:</b> The power-on self-test (POST) is complete and the switch is operating normally.</li> <li>• <b>After start-up:</b> The switch is running the agent code successfully.</li> </ul>
	Green (blinking)	The switch is loading the agent software code.
	Amber (solid)	The switch encountered an error when running the diagnostic software. (See note)
	Amber (blinking)	The switch is booting and running diagnostic software. Normal activity during boot process. (See note)
	Off	The switch failed the power-on self-test (POST) or failed to load the agent code.
Up / Down	Green (solid)	The switch formed a neighbor with the adjacent switch over Stack up/down cables.
	Green (blinking)	The switch formed a partial neighbor with the adjacent switch over Stack up/down cables. Check the switch logs.
	Amber (solid)	The switch detects Stack up/down cables are present and connected to an adjacent switch, but adjacency did not complete. Check the switch logs.
	Off	No Stack up/down connection is present, or the switch is in stand-alone mode.
Base	Green (solid)	The switch is operating as the base unit for the stack.
	Green (blinking)	The switch joined the stack and Automatic Unit Replacement is running to upgrade the diagnostics, agent, or configuration file.
	Amber (solid)	The switch is operating as the temporary base unit for the stack.
	Amber (blinking)	Problem with election of a base unit for the stack. Either no switch has the base unit switch on, or multiple units have the base unit switch on.
	Amber (fast flashing)	The switch was not allowed to join the stack. Check the switch logs.
	Off	The switch is not the base unit or temporary base unit, or the switch is operating in stand-alone mode.

## Port LED State Indicators

This section describes the port LED state indicators by color and fluctuation cues.

The following list describes the three port LEDs:

- Activity indicates the level of activity on the link.
- Link indicates the presence of an Ethernet link.
- Speed indicates the port speed (for example, 10 Mb/s, 100 Mb/s, 1000 Mb/s).

**Table 18: RJ-45 Port LED state indicators**

Label	Color and Status	Description
Speed/PoE	Green, Pulse Green—Green	The port is set to operate at 1000 Mb/s and PoE is delivered on the PoE model port.
	Green, Steady	The port is set to operate at 1000 Mb/s and no PoE power is delivered on the port, on non-PoE or PoE models without a PoE consumer attached to the port.
	Amber, Pulse Amber—Amber	The port is set to operate at 100 Mb/s and PoE is delivered on the PoE model ports.
	Amber, Steady	The port is set to operate at 1000 Mb/s and no PoE power is delivered on non-PoE switch ports or PoE switches without a PoE consumer attached to the port.
	Amber, Green Pulse	The port is experiencing a PoE error.
	Off	When the Link/Activity LED is green and the Speed LED is off, the port is set to operate at 10 Mb/s.
Link / Activity	Green, Steady	The link established but no data activity exists.
	Green, Blink	The link is established and data activity exists (the blink rate indicates the level of activity).
	Green, Slow Blink	The software disabled the port.
	Amber, Steady	Port not used.
	Amber, Blink	Not applicable.
	Off	The port has no link or activity.

**Table 19: SFP transceiver Port LED state indicators**

Label	Color and Status	Description
In Use	Green, Blink	Not applicable.
	Green, Steady	The SFP port and the transmit port are active.
	Amber, Blink	Not applicable.
	Amber, Steady	SFP Installed—TX Port Inactive

*Table continues...*

Label	Color and Status	Description
	Off	No SFP transceiver is present.
Link / Activity	Green, Blink	Activity exists on the port.
	Green, Slow Blink	Software disabled this port.
	Green, Steady	The link is operating normally.
	Off	No link exists.

**Table 20: SFP+ Port LED state indicators**

Label	Color and Status	Description
TX / RX	Green, Steady	SFP+ detected and link established
	Green, Flashing	SFP+ established and transmit/receive activity detected.
	Amber, Steady	SFP detected and link established
	Amber, Flashing	SFP established and transmit/receive activity detected.
	Amber, Blinking	TX and RX blink together slowly to indicate a disabled port.
	Off	No SFP or SFP+ connection detected.

 **Note:**

If you link two ports explicitly set for different speeds (for example one configured as 10BaseT and the other as 100BaseTX) the port link LED may indicate a link, but the switch does not establish a link. Connect ports using the same set speed or use auto-negotiation on each switch.

# Chapter 6: Installation Reference

This section provides reference information for the ERS 4900 Series.

---

## Console Port Pin Assignments

The following table describes the console port pin assignments.

**Table 21: RJ-45 Console port pin assignments**

Connector	Pin Number	Signal
 <p>1 2 3 4 5 6 7 8</p>	1	Ready to send (RTS) — optional
	2	Data terminal ready (DTR) — optional, can swap or link with pin 8
	3	Transmit data (TXD) — mandatory
	4	Carrier detect (DCD) — optional
	5	Ground (GND) — mandatory
	6	Receive data (RXD) — mandatory
	7	Data set ready (DSR) — optional
	8	Clear to send (CTS) — optional, can swap or link with pin 1

---

## RJ-45 Connector Pin Assignments for PoE Switches

The following table describes the Power over Ethernet, and Power over Ethernet Plus RJ-45 connector pin assignments in ERS 4950GTS-PWR+ and ERS 4926GTS-PWR+.

**Table 22: PWR+ RJ-45 connector pin assignments**

Connector	Pin Number	Signal	Description
	1	RX+/power-	Receive Data+/power-
	2	RX-/power-	Receive Data-/power-
	3	TX+/power+	Transmit Data+/power+
	4	Not applicable	Not applicable
	5	Not applicable	Not applicable
	6	TX-/power+	Transmit Data-/power+
	7	Not applicable	Not applicable
	8	Not applicable	Not applicable

# Chapter 7: Translations of safety Messages

This module contains translations of the safety messages found in the ERS 4900 Series documentation suite.

---

## Safety Messages

 **Caution:**

When mounting this device in a rack, do not stack units directly on top of one another in the rack. Each unit must be secured to the rack with appropriate mounting brackets. Mounting brackets are not designed to support multiple units.

 **Important:**

**Achtung:** Wenn diese Einheit in einem Rack montiert wird, muß ein gewisser Abstand zur nächsten Einheit gelassen werden. Jede Einheit muß mit geeignetem Befestigungsmaterial gesichert werden. Das Befestigungsmaterial ist nicht für die gleichzeitige Befestigung mehrerer Einheiten geeignet.

 **Important:**

Si vous installez le module dans une baie, ne l'empilez pas directement sur un autre. Chaque module doit être fixé à sa propre baie à l'aide des supports de montage appropriés. Ces supports ne sont pas conçus pour résister à plusieurs modules.

 **Important:**

**Precaución:** Cuando monte este dispositivo en un bastidor, no apile las unidades directamente una encima de otra. Cada unidad debe fijarse en el bastidor con las abrazaderas de montaje adecuadas. Las abrazaderas de montaje no están diseñadas para sostener varias unidades.

 **Important:**

Se il dispositivo viene installato in un rack, non impilare le unità direttamente una sull'altra. Ogni unità deve essere fissata al rack con le staffe di montaggio appropriate. Le staffe di montaggio non sono state progettate per supportare più unità.



**警告:** 在机架中安装此设备时, 请勿将多个部件叠放在机架中。必须用合适的安装托架将各个部件固定在机架中。安装托架无法支撑多个部件。



**注意:** この装置をラックに設置する場合は、ラック内のユニットを直接積み重ねないようにしてください。各ユニットは専用の取り付けブラケットでラックに固定する必要があります。取り付けブラケットは複数のユニットを支えるようには設計されていません。



**注意:** 在機箱中掛載此裝置時，請不要直接在機箱中的另一個裝置上直接堆放裝置。每一裝置都必須使用適當的掛載托架以固定在機架中。掛載托架不能用來支撐多個裝置。

 **Caution:**

If you are not installing a module in the slot, be sure to keep the metal cover plate in place over the slot. Removing the cover plate impedes airflow and proper cooling of the unit.

 **Important:**

**Achtung:** Wenn Sie kein Modul im Schacht verwenden, muß die Metallabdeckung über dem Schacht montiert sein. Eine Entfernung der Abdeckung führt zu einer Verschlechterung der Luftzirkulation und damit zu einer nicht ausreichenden Kühlung der Einheit.

 **Important:**

Si vous n'installez pas le module dans une baie, veillez à laisser la plaque métallique sur la baie. Si vous la retirez, l'aération du module ne peut pas s'effectuer correctement.

 **Important:**

**Precaution:** Si no instala ningún módulo en la ranura, asegúrese de mantener la placa de la cubierta de metal en la misma. Si la retira, impedirá que el aire circule y la unidad se refrigere adecuadamente.

 **Important:**

**Attenzione:** Se nello slot non vengono installati moduli, assicurarsi di mantenere la piastra di copertura metallica in sede sopra lo slot. La rimozione della piastra impedisce la ventilazione e il corretto raffreddamento dell'unità.



**注意:** この装置をラックに設置する場合は、ラック内のユニットを直接積み重ねないようにしてください。各ユニットは専用の取り付けブラケットでラックに固定する必要があります。取り付けブラケットは複数のユニットを支えるようには設計されていません。



**注意:** スロットにモジュールを取り付けない場合は、スロットにある金属製のカバープレートが外れないように注意してください。カバープレートを動かすと気流が妨げられ、適切なユニット冷却が行われなくなります。



**警告:** 如果您不打算在该插槽中安装任何模块，请务必使金属盖板正确地盖住该插槽。如果取下盖板，将妨碍通风及部件散热。



**注意：**如果您未在插槽中安裝模組，請確定金屬殼板正確地蓋在插槽上。移除殼板會阻礙空氣流通以及裝置的適當冷卻度。



**警告：**若要關閉此裝置的電源，拔掉插頭是唯一的方法。為了因應緊急狀況，請將電源線連接到可以快速插拔的地方。

 **Warning:**

Disconnecting the AC power cord is the only way to turn off AC power to this device. Always connect the AC power cord in a location that can be reached quickly and safely in case of an emergency.

 **Important:**

**Warnung:** Das Gerät kann nur durch Ziehen des Netzsteckers ausgeschaltet werden. Schließen Sie das Netzkabel an einer Steckdose an, die in Notfällen schnell und sicher zugänglich ist.

 **Important:**

**Avertissement:** Pour mettre le module hors tension, vous devez impérativement déconnecter le cordon d'alimentation. En outre, vous devez dégager un espace minimal dans la zone de câblage pour pouvoir y accéder facilement en cas d'urgence.



**警告：**断开交流电源线是切断本设备的交流电源的唯一方法。交流电源线一定要连接到在紧急时刻可以快速安全地接触到的位置。

 **Important:**

**Advertencia:** Para apagar el dispositivo debe desenchufar el cable. Conecte siempre el cable de alimentación a una toma segura y de fácil acceso por si se produjera alguna situación de emergencia.

 **Important:**

**Avviso:** L'unico modo per disattivare questo dispositivo consiste nello scollegare il cavo di alimentazione. Collegare sempre il cavo di alimentazione ad una presa che sia facilmente e rapidamente accessibile in caso di emergenza.

 **Danger:**

Use only power cords that have a grounding path. Without a proper ground, a person who touches the switch is in danger of receiving an electrical shock. Lack of a grounding path to the switch may result in excessive emissions.

 **Important:**

**Vorsicht:** Verwenden Sie nur Netzkabel mit Schutzerdung. Ohne ordnungsgemäße Schutzerdung besteht für Personen, die den Switch berühren, die Gefahr eines elektrischen Schlages. Eine nichtvorhandene Schutzerdung kann zu sehr starken Abstrahlungen führen.

 **Danger:**

N'utilisez que des cordons d'alimentation équipés de trajet de mise à la terre. Sans mise à la terre adaptée, vous risquez de recevoir une décharge électrique en touchant le commutateur. Par ailleurs, l'absence de trajet de mise à la terre peut générer des émissions excessives.

 **Important:**

Peligro: Utilice únicamente cables de alimentación con toma de tierra. De lo contrario, al tocar el interruptor puede recibir una descarga eléctrica. Si no hay un circuito de toma de tierra en el enchufe, puede producirse un exceso de emisiones.

 **Important:**

**Pericolo:** Utilizzare esclusivamente cavi di alimentazione dotati di un percorso per la messa a terra. Senza un'adeguata messa a terra, chiunque tocchi lo switch corre il rischio di ricevere una scossa elettrica. L'assenza di un percorso per la messa a terra verso lo switch può comportare un eccesso di emissioni.



**危険:** 接地経路を持つ電源コードを必ず使用するようになしてください。適切な接地がない状態でスイッチに触ると、感電する危険性があります。また、スイッチへの接地経路がないと、過度な放電を引き起こす可能性があります。



**危险:** 请仅使用接地的电源线。如果电源线不接地或接地不当，接触交换机的人员可能会受到电击。如果交换机不接地，则可能导致放电过量。

# Appendix A: Regulatory information and safety precautions

Read the information in this section to learn about regulatory conformities and compliances.

---

## Federal Communications Commission (FCC) Notice

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

 **Note:**

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 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 uses, generates, and can radiate radio frequency energy and if not installed in accordance with the operator's manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

**WARNING:** Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

---

## Industry Canada Notice

This digital apparatus does not exceed the class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

---

## Class A ITE Notice

 **Warning:**

This equipment is compliant with Class A of CISPR 32. In a residential environment, this equipment may cause radio interference.

---

## Klasse A ITE Anmerkung

**WARNHINWEIS:** Dieses Produkt zählt zur Klasse A ( Industriebereich ). In Wohnbereichen kann es hierdurch zu Funkstörungen kommen, daher sollten angemessene Vorkehrungen zum Schutz getroffen werden.

---

## Product Safety

This product complies with the following: UL 60950-1, FDA 21 CFR 1040.10 and 1040.11, CAN/CSA-C22.2 No. 60950-1, EN 60950-1, EN 60825-1, EN 60825-2, IEC 60950-1, 2006/95/EC.

---

## Produktsicherheit

Dieses Produkt entspricht den folgenden Richtlinien: UL 60950-1, FDA 21 CFR 1040.10 and 1040.11, CAN/CSA-C22.2 No. 60950-1, EN 60950-1, EN 60825-1, EN 60825-2, IEC 60950-1, 2006/95/EC.

---

## Korea EMC Statement

이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

---

## Electromagnetic Compatibility (EMC)

This product complies with the following: FCC 47 CFR Part 15 (Class A), ICES-003 (Class A), EN 55032 (Class A), EN 55024, EN 61000-3-2, EN 61000-3-3, AS/NZS CISPR 32 (Class A), VCCI V-3, 2004/108/EC (EMC Directive)

---

## Elektro-magnetische Kompatibilität (EMC)

Dieses Produkt entspricht den folgenden Richtlinien: FCC 47 CFR Part 15 (Class A), ICES-003 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, EN 61000-3-3, AS/NZS CISPR 32 (Class A), VCCI V-3, 2004/108/EC (EMC Directive)

---

## VCCI Notice

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 disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

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。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

---

## BSMI EMC Statement — Taiwan

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.

### 警告使用者：

此為甲類資訊技術設備，於居住環境中使用時，可能會造成射頻擾動，

在此種情況下，使用者會被要求採取某些適當的對策。

---

## CCC EMC Statement — China

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.

警告: 此为 A 级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对干扰采取切实可行的措施。

---

## Battery Warning — Taiwan

### 警告

如果更換不正確之電池型式會有爆炸的風險，  
請依製造商說明書處理用過之電池。

---

## Battery Notice

### Warning:

This product contains a battery used to maintain product information. If the battery should need replacement it must be replaced by Service Personnel. Please contact Technical Support for assistance.

Risk of explosion if battery is replaced by an incorrect type. Dispose of expended battery in accordance with local disposal regulations.

**Avertissements:** Ce produit renferme une pile servant à conserver les renseignements sur le produit. Le cas échéant, faites remplacer la pile par le personnel du service de réparation. Veuillez communiquer avec l'assistance technique pour du soutien.

Il y a risque d'explosion si la pile est remplacée par un type de pile incorrect. Éliminez les piles usées en conformité aux règlements locaux d'élimination des piles.

---

## Restriction of Hazardous Substances

For the latest information about the presence of substances defined by the RoHS (Restriction of Hazardous Substances) directive in Taiwan (Republic of China) and China, see <http://www.extremenetworks.com/support/documentation/restriction-hazardous-substances/>.

---

## Hazardous Substances

This product complies with the requirements of Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

---

## European Waste Electrical and Electronic Equipment (WEEE) Notice



In accordance with Directive 2012/19/EU of the European Parliament on waste electrical and electronic equipment (WEEE):

1. The symbol above indicates that separate collection of electrical and electronic equipment is required.
2. When this product has reached the end of its serviceable life, it cannot be disposed of as unsorted municipal waste. It must be collected and treated separately.
3. It has been determined by the European Parliament that there are potential negative effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment.
4. It is the users' responsibility to utilize the available collection system to ensure WEEE is properly treated. For information about the available collection system, please contact Extreme Networks Customer Support at +353 61 705500 (Ireland).

## Safety

Compliant with IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013, EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013, UL 62950-1, 2nd Ed. 2011, CSA C22.2 No. 60950-1-07, 2nd Ed. 2011