S-Series Stand Alone (SSA) Switch Hardware Installation Guide

SSA S180 Class
SSA-T8028-0652
SSA-G8018-0652

9035039

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Table of Contents

About this Guide

This guide provides an overview, installation, troubleshooting, and optional rack mount rail kit installation instructions, and specifications for the Extreme Networks S-Series® Stand Alone (SSA) switch models:

- SSA-T8028-0652
- SSA-G8018-0652

Who Should Use this Guide

Warning

Electrical hazard: Only qualified personnel should perform installation procedures.

Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.

Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.

Risques d'électrocution: Seul un personnel qualifié doit effectuer les procédures d'installation.

This guide is intended for a network administrator who is responsible for installing and setting up the SSA switch.

How to Use This Guide

Read through this guide completely to familiarize yourself with its contents and to gain an understanding of the features and capabilities of the SSA switch. A general working knowledge of data communications networks is helpful when setting up the SSA switch.

For...	Refer to...
An overview of the SSA switch and its features	Introduction on page 8
Instructions for installing the SSA switch hardware and connecting the SSA switch to the network	Installation on page 11
Information on port, system, and power supply LEDs; how to replace fan modules and power supplies; and how to restart or shut down the SSA switch using the OFFLINE/RESET button	Troubleshooting on page 34
Specifications, environmental requirements, and physical properties of the SSA switch	Specifications on page 44
Details on how to clear either the persistent storage or the system password as troubleshooting tools	Clearing Persistent Storage or Resetting the System Password on page 47
Details on how to install the optional rack mount kit	Optional Rack Mount Rail Kit Installation on page 52
Details on how to install the optional wall mounting bracket	Installing the SSA-WALL-MOUNT Kit on page 67
Detailed compliance information for the SSA switch	Regulatory Compliance on page 76
Environmental guidelines such as operating temperature, airflow, inlet temperature, and dust mitigation and prevention	*Environmental Guidelines for ExtremeSwitching Products*

Text Conventions

The following tables list text conventions that are used throughout this guide.

Table 1: Notice Icons

Icon	Notice Type	Alerts you to...
	General Notice	Helpful tips and notices for using the product.
	Note	Important features or instructions.
	Caution	Risk of personal injury, system damage, or loss of data.
	Warning	Risk of severe personal injury.
	New	This command or section is new for this release.

Table 2: Text Conventions

Convention	Description
`Screen displays`	This typeface indicates command syntax, or represents information as it appears on the screen.
The words **enter** and **type**	When you see the word "enter" in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says "type."
[Key] names	Key names are written with brackets, such as **[Return]** or **[Esc]**. If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press **[Ctrl]**+**[Alt]**+**[Del]**
Words in italicized type	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.

Providing Feedback to Us

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 especially want to know about:

- Content errors or confusing or conflicting information.
- Ideas for improvements to our documentation so you can find the information you need faster.
- Broken links or usability issues.

If you would like to provide feedback to the Extreme Networks Information Development team about this document, please contact us using our short online feedback form. You can also email us directly at internalinfodev@extremenetworks.com.

Getting Help

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

- GTAC (Global Technical Assistance Center) for Immediate Support
  - **Phone:** 1-800-998-2408 (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
  - **Email:** support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- GTAC Knowledge — Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance.
- The Hub — A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.
- Support Portal — Manage cases, downloads, service contracts, product licensing, and training and certifications.

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

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) 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

Related Publications

S-, K-, and 7100-Series Documentation

- *S-, K-, and 7100 Series CLI Reference Guide*
- *S-, K-, and 7100 Series Configuration Guide*
- *Environmental Guidelines for ExtremeSwitching Products*

Other S-, K-, and 7100-Series documentation is available at: https://extranet.extremenetworks.com/. You must have a valid customer account to access this site.

1 Introduction

SSA-T8028-0652
SSA-G8018-0652
AC Power Supplies
Fans
Micro-USB Port
Management
Virtual Switch Bonding

This chapter provides an overview of the capabilities of the following Extreme Networks S-Series SSA models:

- SSA-T8028-0652
- SSA-G8018-0652

For information about firmware features of the SSA switch and how to configure them, refer to the *S-, K-, and 7100 Series Configuration Guide*.

SSA-T8028-0652

The SSA-T8028-0652 has forty-eight 10/100/1000BASE-T RJ45 ports and four 10GBASE-X SFP+ ports, as shown in Figure 1.

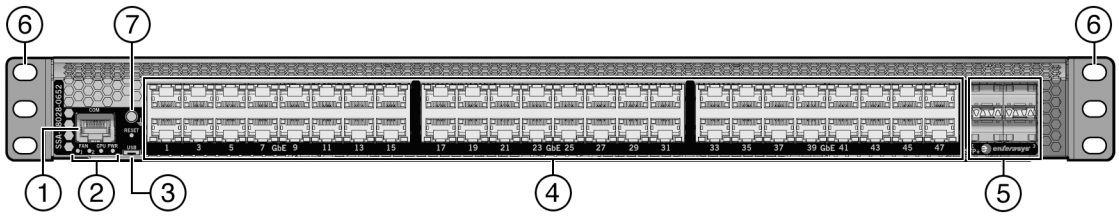


Figure 1: SSA-T8028-0652 I/O Port Panel

1 = COM port	5 = 10GBASE-X SFP+ ports
2 = System LEDs	6 = Mounting ears
3 = Micro-USB port	7 = Ground receptacle
4 = 10/100/1000BASE-T RJ45 ports	

Each of the 10/100/1000BASE-T RJ45 ports operates in full-duplex mode.

The SFP+ ports support a number of pluggable transceivers. For more information about the transceivers, see http://www.extremenetworks.com/product/transceivers/.

SSA-G8018-0652

The SSA-G8018-0652 has forty-eight 1000BASE-X SFP ports and four 10GBASE-X SFP+ ports, as shown in Figure 2.

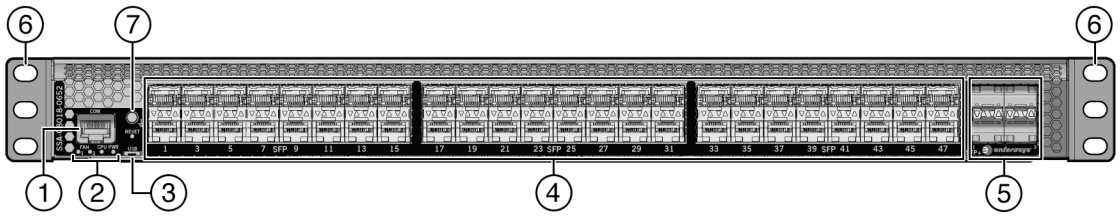


Figure 2: SSA-G8018-0652 I/O Port Panel

1 = COM port	5 = 10GBASE-X SFP+ ports
2 = System LEDs	6 = Mounting ears
3 = Micro-USB port	7 = Ground receptacle
4 = 1000BASE-X SFP ports	

Each of the 1000BASE-X SFP ports operates in full-duplex mode.

The SFP and SFP+ ports support a number of pluggable transceivers. For more information about the transceivers, see http://www.extremenetworks.com/product/transceivers/.

AC Power Supplies

Two 460 watt AC power supply models, ordered separately, are available for the SSA switch:

- SSA-FB-AC-PS-A—I/O port side air exhaust
- SSA-FB-AC-PS-B—I/O port side air intake

Each power supply option contains a single non-reversible fan. The two power supply options are differentiated by the direction of the power supply fan airflow. Power supply airflow must agree with the airflow direction of the installed fan modules.

The SSA AC power supplies automatically adjust to the input voltage and frequency, which allows for an input voltage of 100 to 240 VAC, and a frequency between 50 and 60 Hz. See the operating specifications in SSA Switch Specifications on page 44. No additional adjustments are necessary. For installations in North America, a 15 Amp power cord is required. See Powering Up the SSA Switch on page 25 for more details.

You can install up to two power supplies in the rear of the SSA chassis. All the power supply needs of the SSA switch can be met by installing a single power supply. If you choose to use two power supplies, system power redundancy is guaranteed if one supply is lost. Power supplies are hot swappable in redundant power supply mode.

For more information, see Installing the Power Supplies on page 23.

For information about the power supply LED, see Table 14 on page 38.

Fans

The SSA switch comes with two installed fan modules to cool the system. The direction of the fan module airflow is reversible. By default airflows from the I/O port side to the power supply side of the unit. If your SSA switch configuration requires power supply side to I/O port side airflow, see Reversing the Fan Module Airflow on page 15 for details about how to reverse the fan module airflow.

The SSA fan modules are both field replaceable and hot swappable. For information on how to replace SSA fan modules, see Replacing the SSA Fan Module on page 39.

Micro-USB Port

The micro-USB port is provided for local file transfer.

Management

You can manage the SSA switch either in-band or out-of-band.

In-band remote management is possible using the Extreme Networks' Extreme Management Center application or the command line interface (CLI) via Telnet.

Out-of-band management is provided through the RJ45 COM (Communication) port on the front panel using a PC, a VT terminal, or a VT terminal emulator. For more information, see Connecting Your SSA Switch to the Network on page 27.

Virtual Switch Bonding

For data center redundancy, you can configure two co-located SSA chassis to operate as a single logical chassis managed by one IP address. This is known as a virtual switch bonded chassis. We recommend connecting the chassis to each other by using at least two 10G ports on each SSA chassis.

For details on how to configure virtual switch bonding, see the *S-, K-, and 7100 Series Configuration Guide*.

2 Installation

Warning
Electrical hazard: Only qualified personnel should perform installation procedures.
Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.
Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.
Risques d'électrocution: Seul un personnel qualifié doit effectuer les procédures d'installation.

Warning
To prevent possible injury when installing your Extreme Networks switch product, avoid contacting the edges of I/O ports with your fingers.
Advertencia: Para evitar posibles lesiones durante la instalación de su producto interruptor Extreme Networks, evite tocar con los dedos los bordes de los puertos de entrada/salida.
Warnhinweis: Verletzungsgefahr beim Installieren des Extreme Networks Switch – berühren Sie die Ränder der E/A-Anschlüsse nicht mit den Fingern.
Avertissements: Afin d'éviter toute blessure possible lors de l'installation de votre commutateur Extreme Networks, évitez que vos doigts touchent les rebords des ports d'entrée et de sortie.

Use the following topics, in order, to install your product.

Required Tools

To install your equipment, you will need the following tools:

- ESD wrist strap (included with the SSA switch)
- Phillips screwdriver

Installation Site Requirements

Depending upon the cabling used, you need to provide 7.5 to 10 cm (3 to 4 in.) of clearance on the switch I/O port side of the SSA switch.

See *Environmental Guidelines for ExtremeSwitching Products* for environmental guidelines relating to the SSA switch installation.

The installation site must be within reach of the network cabling and must meet the requirements listed below:

- Appropriate grounded power receptacles must be located within 2 meters (7 feet) of the site.
- A temperature of between 5°C (41°F) and 40°C (104°F) must be maintained at the installation site with fluctuations of less than 10°C (18°F) per hour.

Caution

To ensure proper ventilation and prevent overheating, leave a minimum clearance space of 5.1 cm (2.0 in.) at the front and rear of the device.

Precaución: Para asegurar una buena ventilación y evitar que el sistema se sobrecaliente, deje un espacio mìnimo de 5.1 cm (2 pulgadas) con respecto el anverso y reverso del aparato.

Unpacking the SSA Switch

Unpack the SSA switch as follows:

1 Open the box and remove the packing material protecting the SSA switch.

Save the shipping box and materials in case the unit must be reshipped.

2 Remove and set aside the RJ45-to-DB9 converter, anti-static wrist strap, adhesive feet (for flat surface placement), and power cord retention clips.

The SSA switch *does not* include screws for attaching the SSA switch to rack posts.

3 Verify the contents of the carton as listed in Table 3.

Table 3: Contents of the SSA Switch Carton

Quantity	Item
1	SSA chassis
1	RJ45 management cable
1	RJ45-to-DB9 converter
1	Anti-static wrist strap
4	Adhesive rubber feet
2	Power cord retention clips
1	SSA Quick Reference

4 Inspect the SSA switch for any signs of physical damage.

If there are any signs of damage, do not install the SSA switch; instead, contact us.

Mounting the SSA Switch

Note

The SSA switch comes with integrated mounting ears that are adequate for most installations. For slide-in mounting, high vibration, or high shock installations, an optional rack mount kit (SSA-FB-MOUNTKIT) is available.

To install the SSA switch in a rack using the optional rack mount kit, follow the pre-installation discussion here – including: Power Supply Airflow and Switch Fan Module Airflow on page 14 and Reversing the Fan Module Airflow on page 15 – before proceeding to Optional Rack Mount Rail Kit Installation on page 52.

You can install a SSA switch on a flat surface or in a rack. For more information about flat surface installation, see Installing the SSA Switch on a Flat Surface on page 22.

There are four possible rack mounting configurations as shown in Figure 3, based upon whether:

- The switch I/O ports side or the power supply side of the device face front.
- The device is mounted flush with the rack posts or mid-mounted.

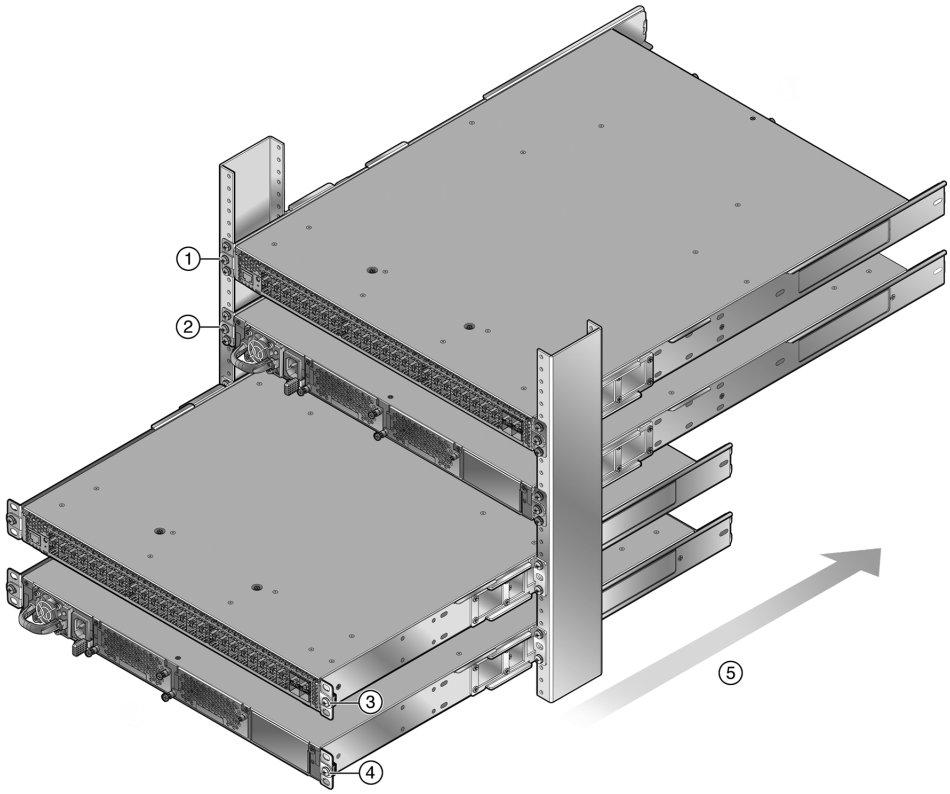


Figure 3: SSA Switch Rack Configurations

1 = Flush mounted with the switch I/O ports facing front (cool air side)	4 = Mid-mounting with the power supply facing front
2 = Flush mounted with the power supply facing front (cool air side)	5 = Airflow direction
3 = Mid-mounted with the switch I/O ports facing front	

Power Supply Airflow and Switch Fan Module Airflow

The power supply module has its own fan for cooling the power supply, and each of the two switch fan modules has two fans for cooling the switch circuitry. The airflow direction of all three modules must agree in order to properly cool the installed SSA system. In rack mount configurations the best practice is to mount all devices with a common cool air side and a common exhaust (hot air) side.

On the SSA switch, two airflow directions are supported:

- The I/O port side to the power supply side
- The power supply side to the I/O port side

Note

The power supplies are ordered separately from the switch unit, and you must specify the airflow direction when you order them. Power supply airflow direction is fixed and cannot be changed manually. If the ordered power supply has an airflow direction that does not work for your rack configuration, you must order another power supply that has the correct airflow direction (see Table 5 on page 14).

The SSA switch, as shipped from the factory, is set up for airflow direction from the I/O port side to the power supply side. If your installation requires that airflow direction be from the power supply side to the I/O port side, you must reverse the airflow of the switch fan module fans (see Reversing the Fan Module Airflow on page 15). Also, you must reverse the rack mount flanges (ears) (see Rack Mount Ear Positioning on page 17).

You can determine airflow direction of the switch fan modules by visually inspecting them for whether a white label or a fan blade is visible through the fan screen.

Before securing the SSA switch to the rack or installing the power supply into the SSA switch, unpack the power supply module (see Unpacking the Power Supplies on page 22) and visually verify that its airflow direction and that of the switch fan modules agree with the intended configuration as defined in Table 4 and Table 5 on page 14.

Table 4: Switch Fan Module Airflow Direction

Airflow Direction	Visual Indication
From I/O port side to power supply side	White label is visible on fan unit
From power supply side to I/O port side	Fan blade is visible on fan unit

The power supply airflow direction can also be verified using the power supply manufacturer's part number located on the power supply bottom label.

Table 5: Power Supply Airflow Based on Model Number

Model Number	Mfg. Part Number	Airflow Direction
SSA-FB-AC-PS-A	DS460S-3-003	From power supply side to I/O port side
SSA-FB-AC-PS-B	DS460S-3-002	From I/O port side to power supply side

Reversing the Fan Module Airflow

If the SSA switch rack configuration requires the airflow to be from the power supply side to the I/O port side, you must reverse the airflow in the switch fan modules for both switch fan module 1 and switch fan module 2.

To reverse the airflow in the fan modules, perform the steps in the following topics:

- Removing the Fan Module on page 15
- Reversing the Fan Unit on page 15
- Reinstalling the Fan Module on page 16

Removing the Fan Module

To remove the switch fan module, follow these steps:

1 Unscrew the two fan module captive screws as shown in Figure 4.
2 Slide the fan module forward until it is unplugged from the device.

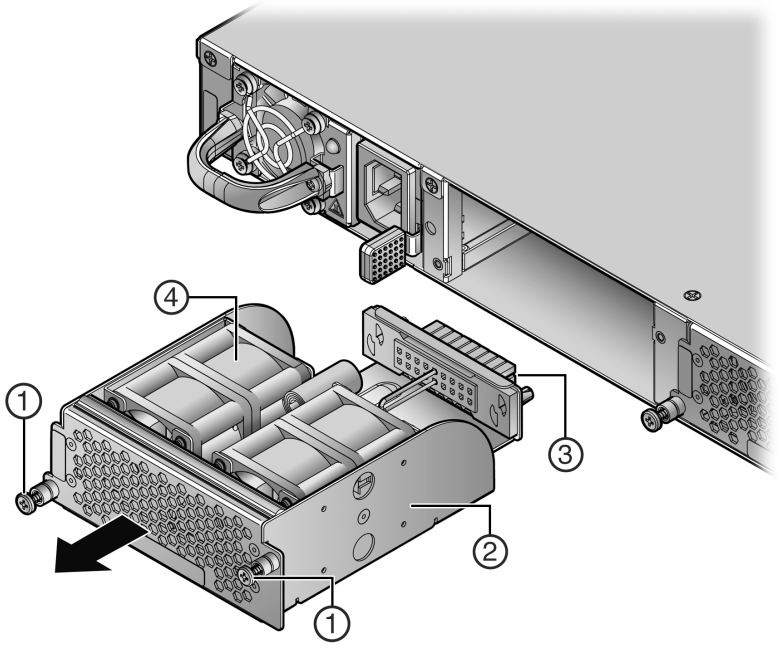


Figure 4: Removing the Switch Fan Module

1 = Fan module captive screws	3 = Fan module connector
2 = Switch Fan module	4 = Fan units

Reversing the Fan Unit

The switch fan module has a single reversible dual fan unit. When the fan unit is properly seated, the airflow indicator arrow is completely visible as shown in callout 1, Figure 5 on page 16. The airflow indicator arrow points in the direction the fan unit flows air through the fan module.

In the I/O port to power supply module (default) airflow configuration, the fan unit is visible (as shown in Figure 4 on page 15, callout 4).

When the fan unit is reversed, a metal plate covers the fan unit (as shown in Figure 5 on page 16).

To reverse the fan module airflow, follow these steps:

1 Hold the module in your hand.
2 Apply pressure to the edges of the fan units closer to the fan module connector to rotate the fan unit (thick black arrows in Figure 5).
3 Flip the fan unit 180 degrees until the airflow indicator is again completely visible and pointing away the fan module screen, as shown in callout 4, Figure 5.

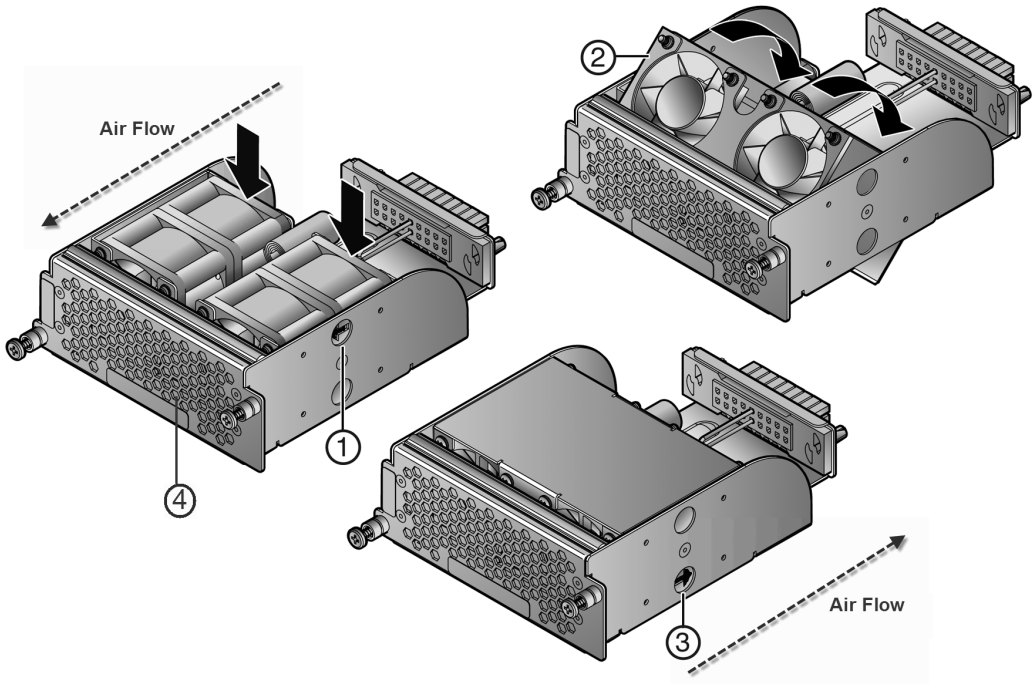


Figure 5: Reversing the Fan Module Airflow

1 = Airflow indicator arrow	3 = Airflow indicator arrow
2 = Fan unit in mid-reversal	4 = Fan screen

Callout 1 shows airflow from the I/O port side to the power supply side of the module.

Callout 3 shows airflow from the power supply side to the I/O port side of the module.

Reinstalling the Fan Module

To reinstall the fan module, follow these steps:

1 Align the fan module with the fan module opening.
2 Insert the module into the fan module opening, applying enough pressure that the fan module is flush with the device.
3 Secure the two fan module captive screws.

Rack Mount Ear Positioning

If you are installing the SSA switch using the SSA-FB-MOUNTKIT optional rack mount kit, proceed to Optional Rack Mount Rail Kit Installation on page 52.

When shipped from the factory, the SSA switch has rack mount ears attached to the edge of the side of the switch containing the I/O ports in a flush mount configuration, as shown in callout 1, Figure 3 on page 13. If you are mounting the switch using the factory positioning of the rack mount ears, go to Securing the SSA Switch to the Rack on page 20.

The rack mount ears can be repositioned providing three alternative mounting options, which are described in the following topics:

- Flush-Mount Configuration with Power Supply Facing Front on page 17
- Mid-Mount Configuration with I/O Ports Facing Front on page 18
- Mid-Mount Configuration with Power Supply Facing Front on page 19

Flush-Mount Configuration with Power Supply Facing Front

The flush-mount, power supply facing front, configuration is depicted in callout 2, Figure 3 on page 13. This SSA switch rack mount configuration requires the repositioning of the rack mount ears on both sides of the device.

To reposition the rack mount ears for this configuration, follow these steps:

1. Remove the screw by the three holed ear, as shown in Figure 6 on page 18 callout 1, and loosen the opposite screw, shown by callout 2.
2. Pivot the rack mount ear at the loosened screw, shown by callout 3, repositioning the rack mount ear so that the three-holed ear is flush with the switch I/O port side of the device.
3. Reinsert the front screw, shown by callout 4, and retighten the middle screw, shown by callout 5.

4 Repeat step 1 through step 3 on the other side of the chassis.

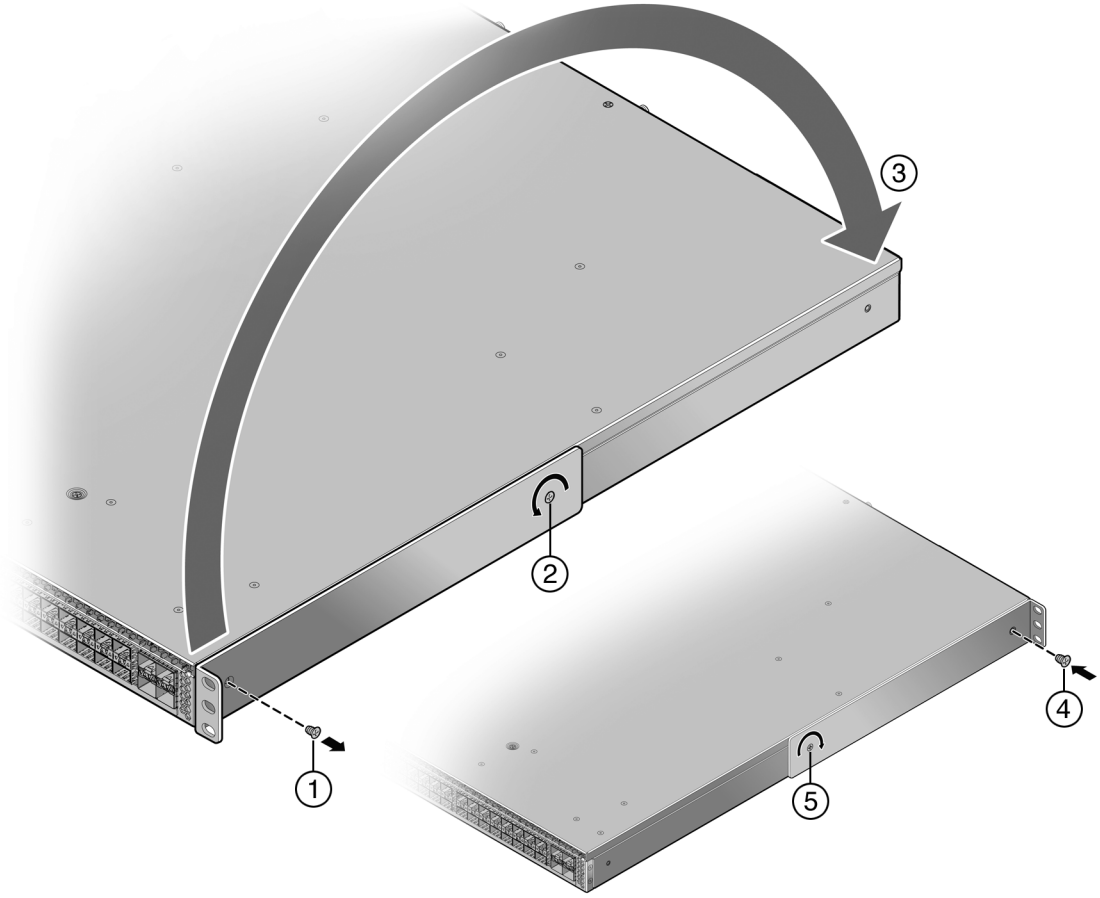


Figure 6: Flush Mount Power Supply Front Configuration

1 = Ear mount screw removal	4 = Ear mount screw insertion
2 = Rack mount ear pivot screw	5 = Pivot screw retightened
3 = Repositioning of rack mount ear	

Mid-Mount Configuration with I/O Ports Facing Front

The mid-mount, I/O ports facing front configuration is depicted in callout 3, Figure 3 on page 13. This rack mount configuration requires repositioning the rack mount ears on both sides of the device.

To reposition the rack mount ears for this configuration, follow these steps:

1 Unscrew the two rack mount ear screws as shown by callout 1, Figure 7 on page 19.
2 Reposition the rack mount ear, shown by callout 2, with the middle and power supply side screw holes.
3 Reinsert the two rack mount ear screws, shown by callout 3.

4 Repeat step 1 through step 3 on the other side of the chassis.

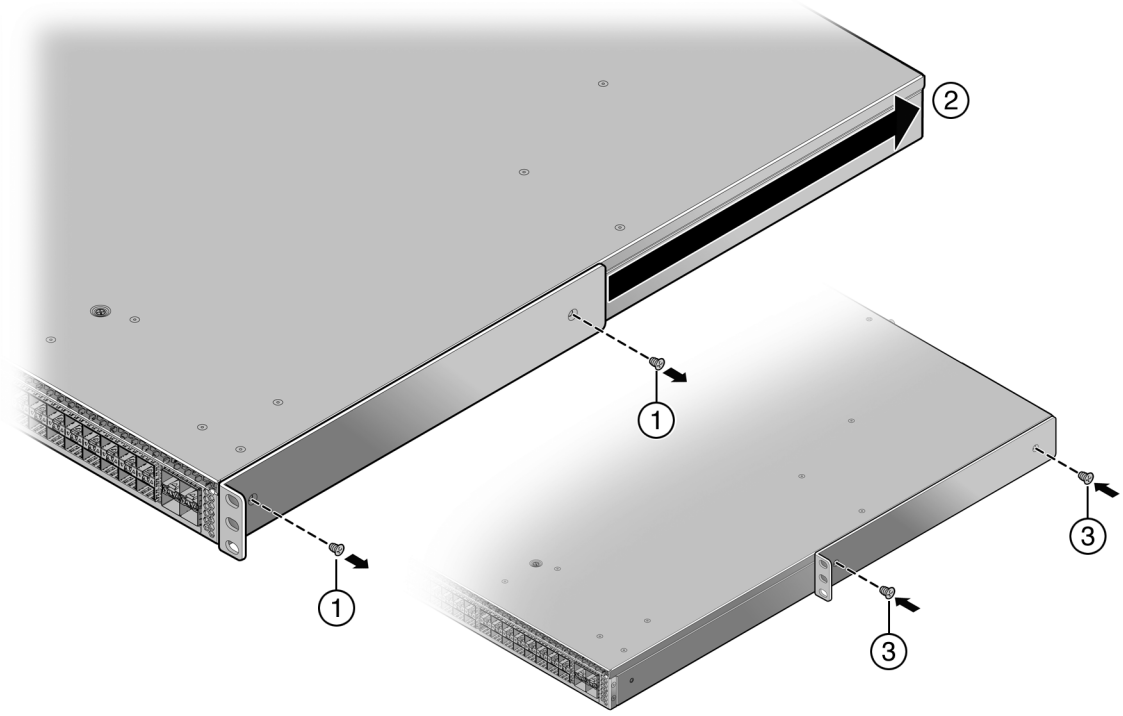


Figure 7: Mid-Mount I/O Ports Facing Front Configuration

1 = Ear mount screw removal	3 = Ear mount screw insertion
2 = Repositioning of rack mount ear	

Mid-Mount Configuration with Power Supply Facing Front

The mid-mount, power supply facing front, configuration is depicted in callout 4, Figure 3 on page 13. This rack mount configuration requires repositioning the rack mount ears on both sides of the device.

To reposition the rack mount ears for this configuration, follow these steps:

1 Unscrew the two rack mount ear screws as shown by callout 1, Figure 8 on page 20.
2 Reposition the rack mount ear towards the power supply end of the device, shown by callout 2 and the thick black arrow.

   The three-holed ear is now located in the middle of the device, facing the power supply side.
3 Reinsert the two rack mount ear screws, shown by callout 3.

4 Repeat step 1 through step 3 on the other side of the chassis.

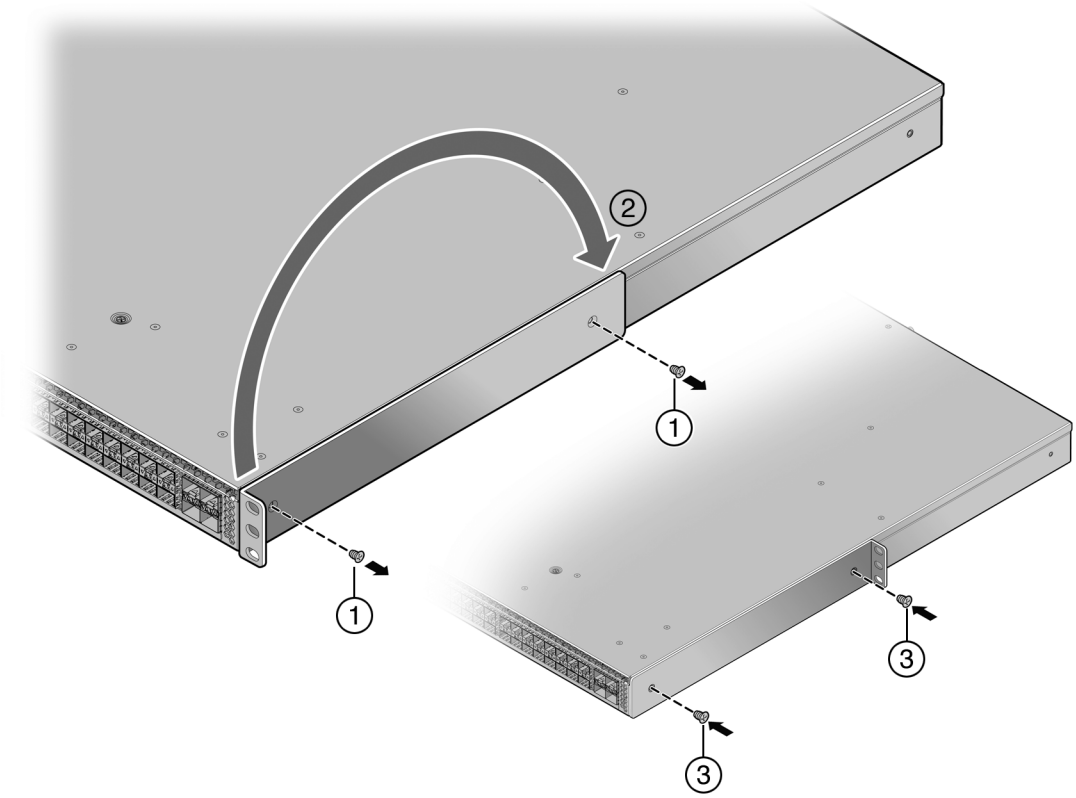


Figure 8: Mid-Mount Power Supply Front Configuration

1 = Ear mount screw removal	3 = Ear mount screw insertion
2 = Repositioning of rack mount ear	

Securing the SSA Switch to the Rack

Warning

Before rack-mounting the device, ensure that the rack can support it without compromising stability. Otherwise, personal injury and/or equipment damage may result.

Advertencia: Antes de montar el equipo en el rack, asegurarse que el rack puede soportar su peso sin comprometer su propia estabilidad, de otra forma, daño personal o del equipo puede ocurrir.

Warnhinweis: Überzeugen Sie sich vor dem Einbau des Gerätes in das Rack von dessen Stabilität, ansonsten könnten Personenschäden oder Schäden am Gerät die Folge sein.

Avertissements: Avant de monter l'appareil sur le bâti, assurez-vous que l'étagère peut en supporter le poids sans en compromettre la stabilité. Cela pourrait, dans le cas contraire, entraîner des blessures ou des dommages au matériel.

Note

- The rack mounting ear provides three holes for securing the SSA switch to the rack. Use at least two screws or fasteners appropriate to your rack on each side when securing the SSA switch to the rack.
- We recommend that power supplies be installed after the SSA switch has been secured to the rack to minimize weight that must be supported when installing rack screws

To secure the SSA switch to the rack, follow these steps:

1 Ensure that the rack mount ears are properly installed based upon the discussion in Rack Mount Ear Positioning on page 17.

2 Align the rack mount ear holes with the front rack post holes in either a flush (Figure 9) or mid-mount (Figure 10 on page 22) configuration.

3 Secure the SSA switch to each rack post with at least two screws or fasteners appropriate to the rack as shown in callout 1 of the appropriate figure (Figure 9 or Figure 10 on page 22).

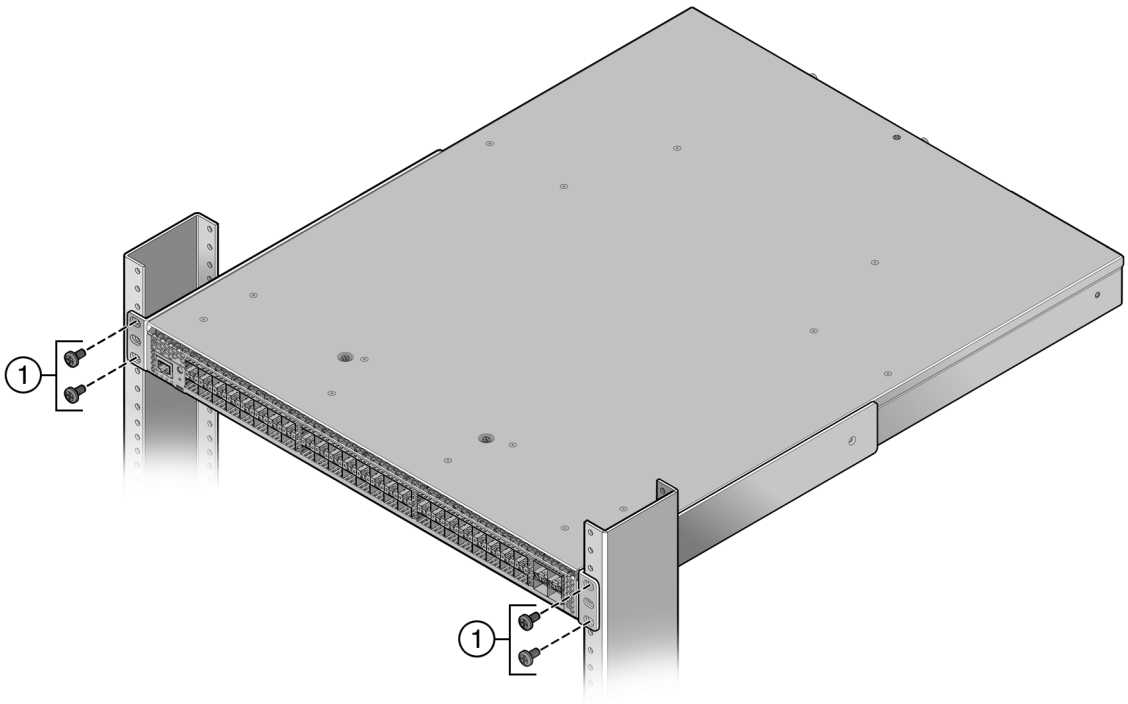


Figure 9: Securing the SSA Switch to the Rack in a Flush Mount Configuration

1 = 4 to 6 screws or fasteners appropriate to the rack

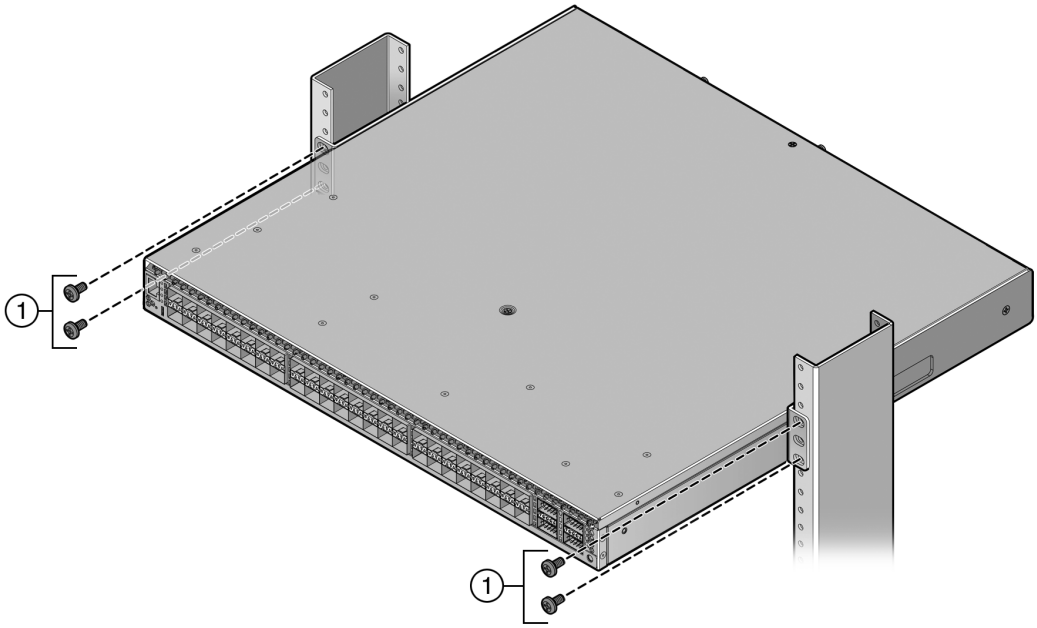


Figure 10: Securing the SSA Switch to the Rack in a Mid-Mount Configuration

1 = 4 to 6 screws or fasteners appropriate to the rack

You can now unpack and install the SSA power supplies. See Unpacking the Power Supplies on page 22.

Installing the SSA Switch on a Flat Surface

For flat surface installation, optionally attach the adhesive rubber feet to the bottom of the SSA switch.

To attach the rubber feet to the bottom of the SSA switch, follow these steps:

1 Place the SSA switch upside down on a sturdy, flat surface.
2 Remove the adhesive backing from the four rubber feet.
3 Adhere the rubber feet to the round, recessed areas on the bottom of the SSA switch.
4 Turn the SSA switch rightside up.

You can now unpack and install the SSA power supplies. See Unpacking the Power Supplies on page 22.

Unpacking the Power Supplies

The SSA-FB-AC-PS-A and SSA-FB-AC-PS-B power supply modules are shipped in boxes separate from the SSA switch.

To unpack a power supply, follow these steps:

1 Remove the power supply from the shipping box and slide the two foam end caps off the unit.

Save the shipping box and materials in case the unit must be reshipped.

2 Verify the contents of the box using Table 6.
3 Remove the power supply from its protective plastic bag.
4 Examine the power supply carefully, checking for damage.

   If there are any signs of damage, do not install the power supply; instead, contact us

Table 6: Contents of SSA Power Supply Carton

Item	Quantity
Power supply (SSA-FB-AC-PS-A or SSA-FB-AC-PS-B)	1
For USA shipments: NEMA Power Cord 6-20, C19, R/A, SHLD Type of power cord is dependent on country of installation.	1

Installing the Power Supplies

If you are installing only one power supply, you must put the power supply in the left power supply bay (labeled PS1). The SSA switch ships without a coverplate for the PS1 bay.

Note
For proper operation, the SSA switch must have a power supply in PS1 whenever the SSA switch is powered up.

To install the power supplies in the SSA switch, follow these steps:

1 Use appropriate antistatic protection when handling power supplies.
2 Visually verify that the power supply airflow direction agrees with the airflow direction of the installed fan module.

   For details, see Power Supply Airflow and Switch Fan Module Airflow on page 14.
3 Holding the power supply by the handle and bottom, align the power supply with the left power supply bay (labeled PS1).
4 Slide the power supply forward until it is plugged into the chassis connector and the lock tab clicks to the right.

   Pull on the power supply handle to ensure that the power supply is firmly in place. See Figure 11.

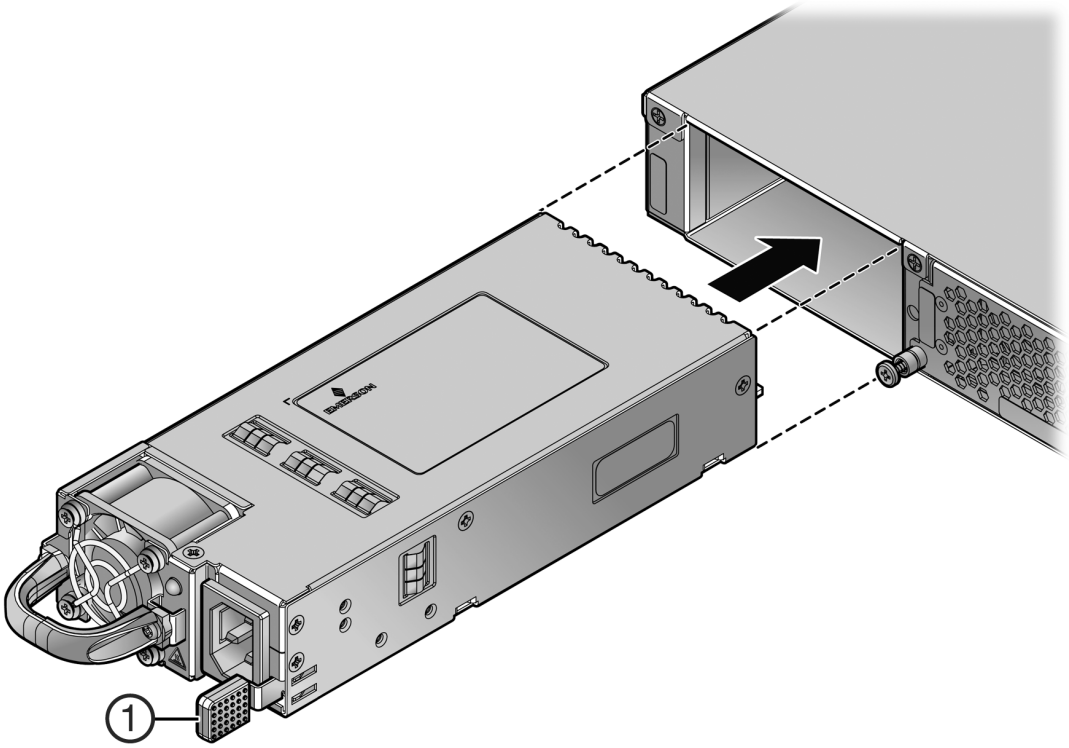


Figure 11: Installing a Power Supply

1 = Lock Tab

5 If you are installing a second power supply, remove the coverplate from the right power supply bay by unscrewing the screw that attaches the coverplate to the SSA switch and rotating the coverplate

out of its position from right to left before disengaging it from the chassis (see Figure 12). Reinstall the screw after the cover plate is removed.

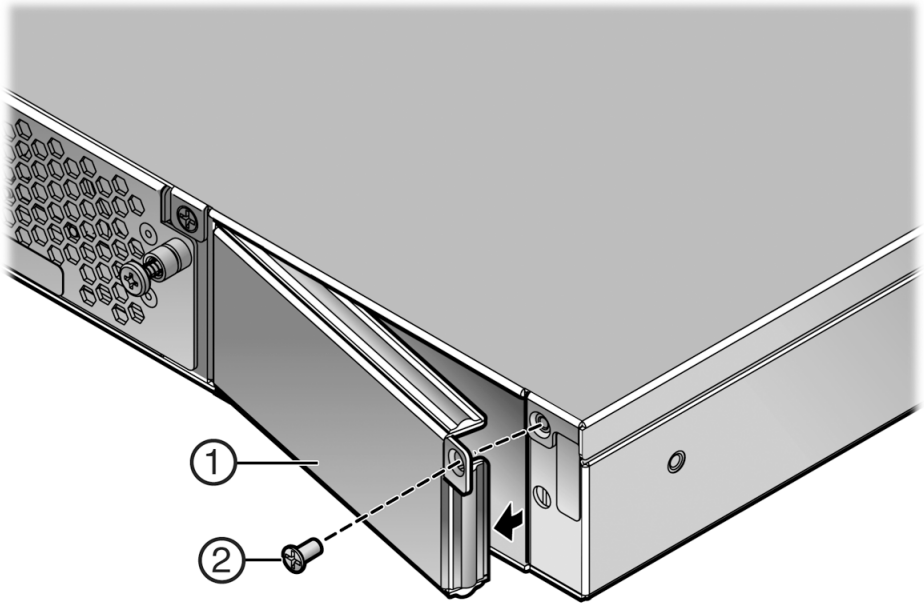


Figure 12: Removing the Power Supply Bay Coverplate

1 = Coverplate	2 = Coverplate screw

Keep the coverplate in case you need to revert to a single power supply configuration. If a power supply is not installed, the coverplate must be in place for proper airflow.

6 Repeat step 2 on page 23 through step 4 on page 23 to install the power supply in the right power supply bay.

Powering Up the SSA Switch

To connect the SSA switch to the power sources, follow these steps:

1 Plug a power cord into each power supply's AC power receptacle.

2 Plug the cord into a dedicated grounded AC outlet.

In the case of a two power supply configuration, to take advantage of redundancy capabilities, plug each power cord into a separate dedicated AC outlet.

The system PWR LED, located on the switch I/O port panel, turns ON (green) and the CPU LED turns red until the SSA switch completes its initialization.

It takes less than 30 seconds for the SSA switch to boot up.

Note

If the power-up sequence is interrupted on the SSA switch, it might run an extended diagnostics sequence that takes up to two minutes to complete.

When the initialization process is successful, the CPU LED turns green. If the CPU LED does not turn green, refer to Troubleshooting on page 34.

Installing the Power Cord Retention Clip Assembly

The SSA switch comes with two optional power cord retention clip assemblies. Power cord retention clips provide added security against the inadvertent removal of the power cord from the power supply AC receptacle.

To install the power cord retention clip assembly, follow these steps:

1. Holding the strap piece with the rough side facing away from the power supply, shown by callout 2 of Figure 13 on page 26, insert the strap piece into the hole to the right of the power cord receptacle, shown by callout 1.
2. Slide the power cable clamp, shown by callout 3, onto the strap piece with the tab on the clamp piece facing out.
3. Insert the power cord in the open clamp.
4. Close the clamp piece.

   To open the clamp piece, push down the clamp release tab, shown by callout 4.

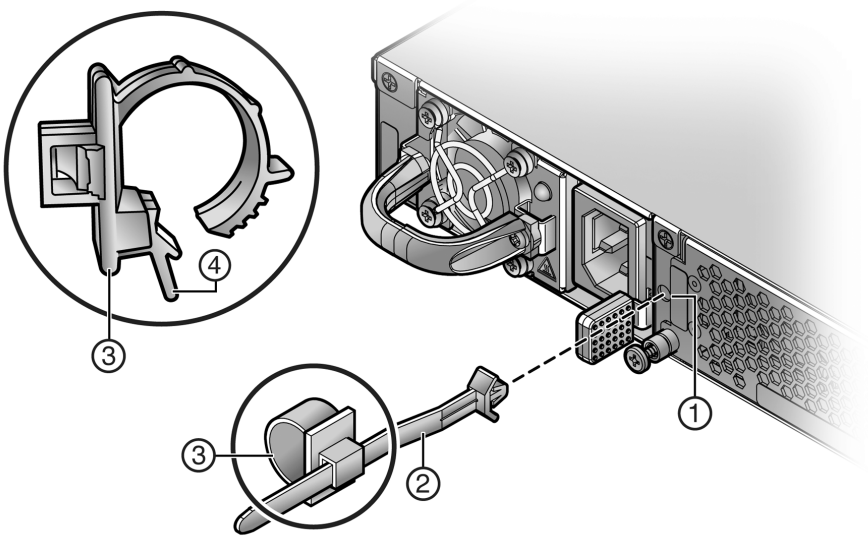


Figure 13: Installing the Power Cord Clip Assembly in the Power Supply

1 = Retention clip receptacle	3 = Power cable clamp
2 = Retention clip strap piece, smooth side facing power supply	4 = Clamp release tab

Connecting Your SSA Switch to the Network

This section provides the procedures for connecting Category 6 unshielded twisted pair (UTP) segments or SFP or SFP+ pluggable transceivers from the network or other devices to the SSA switch.

Note

If the SSA switch is being installed in a network using Link Aggregation, there are rules concerning the network cable and port configurations that must be followed for Link Aggregation to operate properly. Before connecting the cables, refer to the *S-, K-, and 7100 Series Configuration Guide* for configuration information. For details on how to obtain manuals, refer to Related Publications on page 7.

Connecting Category 6 UTP Ethernet Cables to the BASE-T Ports

The fixed RJ45 front panel connections of the SSA-T8028-0652 are 10/100/1000 Mbps ports. They have internal crossovers and support automatic-polarity sensing that eliminates the need for a crossover cable, regardless of whether the connection is to another network device or a workstation.

Note

All RJ45 front panel ports on the SSA-T8028-0652 support Category 6 Unshielded Twisted Pair (UTP) cabling with an impedance between 85 and 111 ohms.

1 Ensure that the far-end device connected to the other end of the segment is powered on.

2 Connect the far-end device's twisted pair segment into the appropriate BASE-T port connector on the SSA switch.

3 Verify that a link exists by checking that the port RX (Receive) LED is on (flashing amber, blinking green, or solid green).

   If the RX LED is off and the TX (Transmit) LED is not blinking amber, perform the following steps until the RX LED is on:

   a Verify that the proper cabling is being used: Category 6 UTP with an impedance between 85 and 111 ohms.

   b Verify that the device at the other end of the twisted pair segment is on and is properly connected to the segment.

   c Verify that the BASE-T connectors on the twisted pair segment have the proper pinouts.

   d Check the cable for continuity.

   If a link is not established, refer to Troubleshooting on page 34 for details.

4 Repeat step 1 on page 27 through step 3 until all connections have been made.

Connecting Pluggable Transceivers to the SFP and SFP+ Ports

This section describes how to install an SFP and SFP+ pluggable transceiver in appropriate SSA switch ports. See Figure 1 on page 8 and Figure 2 on page 9 for appropriate pluggable transceiver port locations for your SSA switch.

For supported SFP and SFP+ pluggable transceivers and their specifications, refer to the *S-Series Switches Optics Support* table in the *Extreme Hardware/Software Compatibility and Recommendation*

Matrices. You can also refer to the datasheet located at: http://www.extremenetworks.com/product/transceivers/.

To install and remove pluggable transceivers, refer to the following topics:

- Preparing to Install a Pluggable Transceiver on page 28
- Installing a Pluggable Transceiver on page 29
- Removing a Pluggable Transceiver on page 29

Warning

Fiber-optic pluggable transceivers use Class 1 lasers. Do not use optical instruments to view the laser output. The use of optical instruments to view laser output increases eye hazard. When viewing the output optical port, power must be removed from the network adapter.

Advertencia: Los transmisores receptores de fibra óptica SFP y SFP+ conectables utilizan sistemas de láser clase 1. No emplee instrumentos ópticos para ver la salida del láser. Hacerlo podrìa incrementar el riesgo de daño en los ojos. Cuando se revise el puerto óptico de salida, deberá cortarse la energìa del adaptador de red.

Warnhinweis: Faseroptische, steckbare Transceiver der Typen SFP und SFP+ verwenden Laser der Klasse 1. Zur Ansicht der Laserausgabe dürfen keine optischen Geräte verwendet werden, da hierdurch die Wahrscheinlichkeit einer Gefährdung der Augen erhöht wird. Vor der Inspektion des optischen Ausgangsanschlusses muss das Stromkabel des Netzwerkadapters herausgezogen werden.

Avertissements: Les émetteurs-récepteurs en fibre optique enfichables ne fonctionnent qu'avec des lasers de classe 1. N'utilisez aucun instrument d'optique pour observer la sortie du laser. L'utilisation d'instruments d'optique augmente les risques de blessure aux yeux. L'alimentation de l'adaptateur de réseau doit être coupée lorsque vous inspectez le port optique de sortie.

Caution

Carefully follow the instructions in this manual to avoid damaging the pluggable transceivers and SSA chassis.

The pluggable transceivers and SSA chassis are sensitive to static discharges. Use an antistatic wrist strap and observe all static precautions during this procedure. Failure to do so could result in damage to the SFP, the SFP+, and the SSA switch. Always leave the SFP or SFP + in the antistatic bag or an equivalent antistatic container when not installed.

Precaución: Siga las instrucciones del manual para no dañar el SFP, SFP+ ni el SSA, puesto que son muy sensible a las descargas de electricidad estática.

Utilice la pulsera antiestática y tome todas las precauciones necesarias durante este procedimiento. Si no lo hace, podrìa dañar el SFP, SFP+ o el SSA. Mientras no esté instalado, mantenga el SFP o SFP+ en su bolsa antiestática o en cualquier otro recipiente antiestático.

Preparing to Install a Pluggable Transceiver

Before installing a pluggable transceiver in your SSA switch, follow these steps:

1 Put on the antistatic wrist strap, shipped with the switch, and attach it to the ground receptacle on the switch I/O port side of the SSA switch.

Refer to the instructions in the anti-static wrist strap package. See Figure 14 for the location of the ground receptacle.

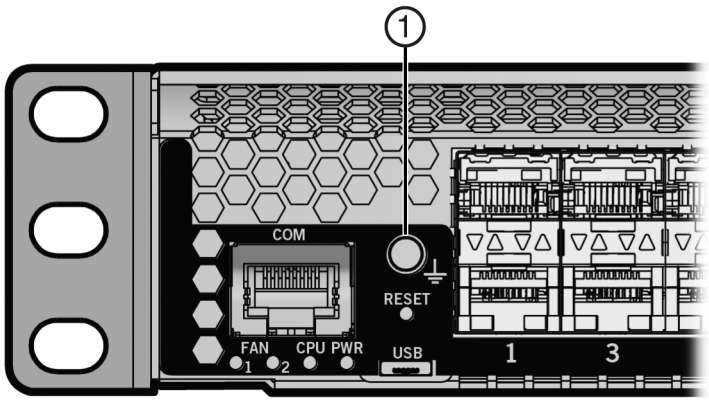


Figure 14: SSA Switch Ground Receptacle

1 = Ground receptacle

2 Remove the pluggable transceiver from the anti-static packaging.

If there is a protective dust cover on the pluggable transceiver, do not remove it at this time.

Installing a Pluggable Transceiver

To install an SFP or SFP+ pluggable transceiver in your SSA switch, follow these steps:

1 Hold the pluggable transceiver so that the connector will seat properly.
2 Carefully align the pluggable transceiver with the port.
3 Push the pluggable transceiver into the port until the pluggable transceiver clicks and locks into place.

Removing a Pluggable Transceiver

Caution

Do NOT remove an SFP or SFP+ pluggable transceiver from a slot without releasing the locking tab located under the front bottom end of the transceiver. This can damage the transceiver.

The transceiver and the SSA switch are sensitive to static discharges. Use an antistatic wrist strap and observe all static precautions during this procedure. Failure to do so could result in damage to the transceiver and the SSA switch. Always leave the transceiver in the antistatic bag or an equivalent antistatic container when it is not installed.

Precaución: NO quite el SFP o SFP+ de la ranura sin antes abrir la traba ubicada en la parte frontal del el SFP o SFP+.

Utilice la pulsera antiestática y tome todas las precauciones necesarias durante este procedimiento. Si no lo hace, podrìa dañar el SFP, SFP+ o el SSA. Mientras no esté instalado, mantenga el SFP o SFP+ en su bolsa antiestática o en cualquier otro recipiente antiestático.

To remove a pluggable transceiver from a port on your SSA switch, follow these steps:

1 Put on the antistatic wrist strap and attach it to the ground receptacle on the switch I/O port side of the SSA switch.

   Refer to the instructions in the anti-static wrist strap package. See Figure 14 on page 29 for the location of the ground receptacle.
2 Remove the cables connected to the pluggable transceiver.
3 Release the pluggable transceiver from the port.
4 Grasp the sides of the pluggable transceiver and pull it straight out of the port.

If you plan to store or ship the pluggable transceiver, insert it into its dust protector to protect its fiber-optic ports.

Connecting Two SSA Chassis for Virtual Switch Bonding

If you are configuring two SSA chassis for virtual switch bonding, we strongly recommend that you create a minimum of two VSB interconnections. VSB interconnect ports should be selected taking into consideration the optimization of bandwidth usage and redundancy.

For example, you could connect uplink ports 1 and 2 on SSA chassis 1 to uplink ports 1 and 2 on SSA chassis 2. See the *S-, K-, and 7100 Series Configuration Guide* for details about how to configure virtual switch bonding.

Connecting to a Local Management Console

Your SSA switch can access a local management console when you connect it to a PC or a VT series terminal using a UTP cable with RJ45 connectors and adapters.

Refer to the following topics for instructions and information about pinout assignments:

- Required Equipment for Connecting to a Management Console on page 30
- Connecting to a PC or Laptop on page 31
- Connecting to a VT Series Terminal on page 31
- Adapter Wiring and Signal Assignments on page 31

Required Equipment for Connecting to a Management Console

You will need some or all of following parts, depending on the connection type, to set up a connection between your SSA switch and a PC or a VT series terminal:

- UTP cable with RJ45 connectors (supplied with the SSA switch)
- RJ45-to-DB9 female adapter (supplied with the SSA switch)
- RJ45-to-DB25 female adapter (customer-supplied)

Using the UTP cable with RJ45 connectors and an RJ45-to-DB9 adapter, you can connect from the RJ45 COM port to a PC running a VT series emulation software package.

Using the UTP cable with RJ45 connectors and an optional RJ45-to-DB25 female adapter, you can connect from the RJ45 COM port to a VT series terminal or VT-type terminals running emulation programs for the VT series.

Connecting to a PC or Laptop

To connect a PC or laptop running VT terminal emulation to the SSA switch, follow these steps:

1 Connect the RJ45 connector at one end of the cable to the COM port on the SSA switch.
2 Plug the RJ45 connector at the other end of the cable into an RJ45-to-DB9 adapter.
3 Connect the RJ45-to-DB9 adapter to the communications port on the PC.
4 Configure the VT emulation package on your PC or laptop as shown in Completing the Installation on page 32, using the following settings:

Table 7: VT Settings

Parameter	Setting
Mode	7 Bit Control
Transmit	Transmit = 9600
Bits Parity	8 Bits, No Parity
Stop Bit	1 Stop Bit

When these parameters are set, the Local Management password screen displays. Refer to Completing the Installation on page 32 for further information.

Connecting to a VT Series Terminal

To connect a VT Series terminal to the COM port on the SSA switch, use a UTP cable with RJ45 connectors and an optional RJ45-to-DB25 female adapter.

Follow these steps:

1 Connect the RJ45 connector at one end of the cable to the COM port on the SSA switch.
2 Plug the RJ45 connector at the other end of the cable into the RJ45-to-DB25 female adapter.
3 Connect the RJ45-to-DB25 adapter to the port labeled COMM on the VT terminal.
4 Turn on the VT terminal and access the Setup directory.
5 Configure the VT terminal as shown in Table 8.

Table 8: VT Settings

Parameter	Setting
Mode	7 Bit Control
Transmit	Transmit = 9600
Bits Parity	8 Bits, No Parity
Stop Bit	1 Stop Bit

When these parameters are set, the Local Management password screen displays. Refer to Completing the Installation on page 32 for further information.

Adapter Wiring and Signal Assignments

The following tables show pinout assignments for connections between the COM port and a local management console.

Table 9: COM Port Adapter Wiring and Signal Diagram

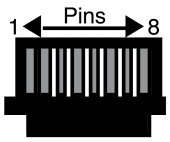
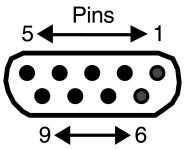
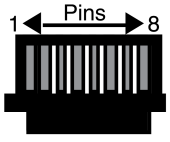
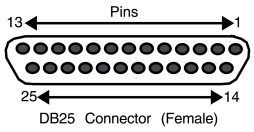
RJ45		DB9	
Pin	Conductor	Pin	Signal
1	Blue	2	Receive (RX)
4	Red	3	Transmit (TX)
5	Green	5	Ground (GRD)
2	Orange	7	Request to Send (RTS)
6	Yellow	8	Clear to Send (CTS)
 RJ45 Connector (Female)		 DB9 Connector (Female)	

Table 10: VT Series Port Adapter Wiring and Signal Diagram

RJ45		DB25	
Pin	Conductor	Pin	Signal
4	Red	2	Transmit (TX)
1	Blue	3	Receive (RX)
6	Yellow	5	Clear to Send (CTS)
5	Green	7	Ground (GRD)
2	Orange	20	Data Terminal Ready
 RJ45 Connector (Female)		 DB25 Connector (Female)	

Completing the Installation

After installing the SSA switch and connecting it to the network, access the command line interface (CLI) from your PC or terminal connection as described in the following steps.

Note

Use this procedure only for initial login and for logging in to a device that is not yet configured with administratively-supplied user and password settings.

By default, the SSA switch is configured with three user login accounts:

ro	Read-Only access
rw	Read-Write access
admin	Super-user access to all modifiable parameters

The default password for all three accounts is set to blank (null). For information on changing these default passwords, refer to the *S-, K-, and 7100 Series Configuration Guide*.

1 Connect a terminal to the local console port as described in Connecting to a Local Management Console on page 30.

The startup screen displays.

```
login: admin
Password:
SSA
Command Line Interface
Extreme Networks, Inc.
145 Rio Robles
San Jose, CA 95134 USA
Phone:  +1 800 998 2408
E-mail: support@extremenetworks.com
WWW:    http://www.extremenetworks.com
(c) Copyright Extreme Networks, Inc. 2016
Chassis Serial Number:      xxxxxxxxxxx
Chassis Firmware Revision:  xx.xx.xx.xxxxT
User admin last logged in WED SEP 14 16:12:42 2016
There have been 0 failed login attempts since then
SSA(su)->
```

2 At the login prompt, enter one of the following default user names:

- `ro` for Read-Only access
- `rw` for Read-Write access
- `admin` for Super User access. (This access level allows read-write access to all modifiable parameters, including user accounts.)

3 Press **Enter**.

4 The Password prompt displays. Leave this string blank and press **Enter**.

The device information and SSA switch prompt appear as shown in step 1 on page 33.

The SSA switch is now ready to be configured. The CLI commands enable you to initially set up and perform more involved management configurations.

For information about setting the IP address and configuring Telnet settings for remote access to SSA switch management, refer to the *S-, K-, and 7100 Series Configuration Guide*.

3 Troubleshooting

Use the topics in this chapter to perform basic troubleshooting for your SSA switch, to replace power supplies and fans, and to shut down the equipment.

LEDs

The SSA switch has port, system, and power supply LEDs.

Port LEDs

On the SSA switch, you can view the receive and transmit activity on the RX and TX LEDs for the RJ45, SFP, and SFP+ ports. See Figure 15 below and Figure 16 on page 35.

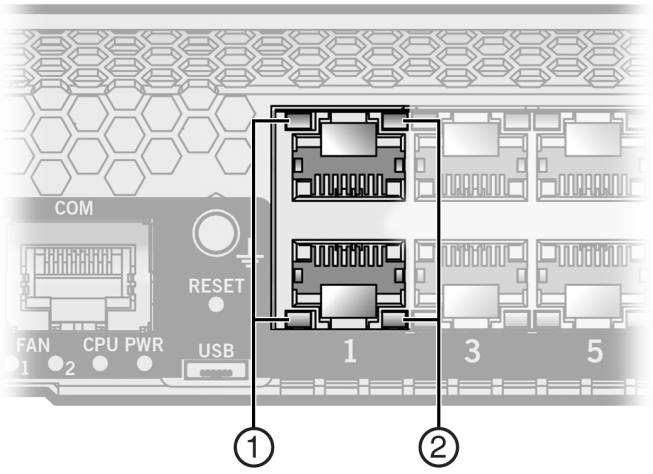


Figure 15: RJ45 Port LEDs

1 = RX LED	2 = TX LED

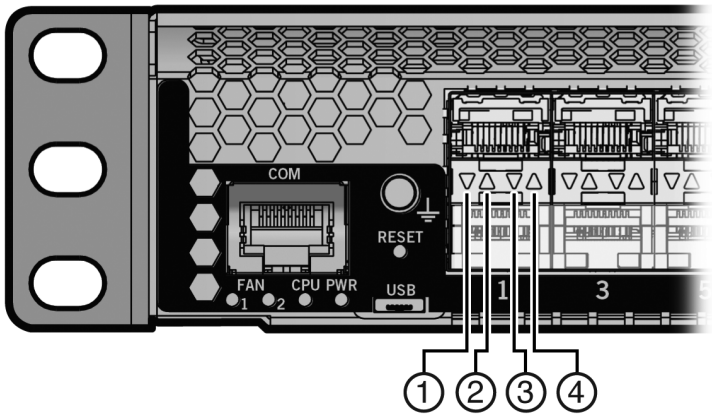


Figure 16: SFP and SFP+ Port LEDS

1 = RX LED for bottom port	3 = TX LED for bottom port
2 = RX LED for top port	4 = TX LED for top port

Note
Figure 16 on page 35 shows SFP ports. The LEDs are the same for both SFP and SFP+ ports.

Table 11 describes the LED indications for the RX and TX LEDs for the RJ45, SFP, and SFP+ ports and provides recommended actions.

Table 11: Port LEDs

LED	Color	State	Recommended Action
RX (Receive)	None	No link. No activity. Port enabled or disabled.	None
	Green	**Solid**: Link present, port enabled, no traffic is being received by the interface.	None
	Yellow	**Blinking**: Link present, port enabled, traffic is being received by the interface.	None
TX (Transmit)	None	Port enabled, but no activity.	If you know the port should be active and is not, contact us.
	Green	**Blinking**: Indicates data transmission activity. Flashing frequency indicates the data rate.	None
	Yellow	**Solid**: Fault or error (collision).	None, unless activity is high – in which case, check for network configuration problems or a defective device.

System LEDs

Figure 17 shows the system LEDs. The two left LEDs are separately labeled for fan modules 1 and 2.

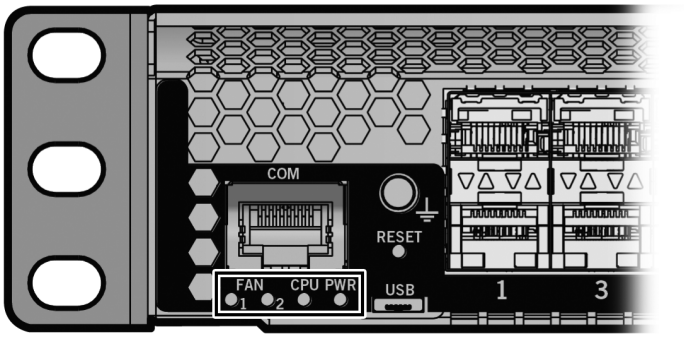


Figure 17: SSA switch System LEDs

Table 12 describes the LED indications for the system LEDs and provides recommended actions.

Table 12: System LEDs

LED	Color	State	Recommended Action
FAN 1 and 2	Off	Fans are off or booting up.	None
	Green	All fans are operating normally.	None
	Amber	One fan has failed.	Replace the failed fan. See Replacing the SSA Fan Module on page 39.
	Red	One or more of the following conditions has occurred: • Temperature is out of range. • The fan controller has failed. • Both fans have failed.	Use the `show system` CLI command to check the exact condition of the fans. If fans have failed, replace the fan module. See Replacing the SSA Fan Module on page 39.
CPU	Off	Power off.	Ensure that the chassis has adequate power.
	Amber	**Blinking**: Device in bootup process.	None
		Solid: Testing.	If the LED remains amber for several minutes, contact us for technical support.
	Green	**Blinking**: Image starts running.	None
		Solid: Functional.	None
	Red	**Solid**: Processor in reset.	None
	Green and Amber	**Blinking**: The SSA switch is in the process of shutting down.	None. This state is activated when the RESET button is pressed for less than one second to start an orderly shutdown.
	Amber and off	**Alternating** (67% on, 33% off): A shutdown is complete. The indication holds for 60 seconds and restarts automatically.	While in this state, you have 60 seconds before the SSA switch reboots.

Table 12: System LEDs (continued)

LED	Color	State	Recommended Action
	Blue	**Blinking**: Virtual Switch Bonding is enabled, but the devices are not bonded	None
		Solid: Virtual Switch Bonding is enabled, and the devices are bonded.	None
PWR	Off	The SSA switch is not receiving power from the power supplies.	Ensure that the power cords are plugged in and that power is available at the source. Contact us for technical support.
	Green	Functional. Indicates one of the following conditions: • A single power supply is present and operating normally. • Two power supplies are present and operating normally.	None
	Amber	One of the following conditions has occurred: • Two power supplies are present but only one is operating normally while the other is not connected. • Two power supplies are present but only one is operating normally while the other indicates a fault. • Both power supplies are faulty but the SSA switch is still receiving power. • Power supplies are operating in additive (non-redundant) mode. • Other internal fault.	Ensure that the power cords are plugged in and that power is available at the source. Contact us for technical support.

Note
The PWR LED status indication is based on power supplies being powered on.

Table 13 describes the CPU LED when the SSA switch is in a virtual switch bonding configuration.

Table 13: CPU LED in Virtual Switch Bonding (VSB) Configuration

Color	State
Green and Blue	**Blinking**: Image has started and found chassis bonding enabled.
Blue	**Solid**: Functional: binding is operational and ready to switch.
Blue	**Blinking**: Binding is not functional (non-operational).

Power Supply LED

The SSA-FB-AC-PS-A and SSA-FB-AC-PS-B power supplies have a single LED. Table 14 describes the different states of the power supply LED.

Table 14: Power Supply LED Status Definitions

LED Color	Status
Green	Sufficient power is available to the system.
Off	No AC power to the power supply or power supply malfunctioning.

Troubleshooting Checklist

If the SSA switch is not working properly, refer to Table 15 for a checklist of problems, possible causes, and recommended actions to resolve the problem.

Table 15: Troubleshooting Checklist

Problem	Possible Cause	Recommended Action
All LEDs are off	Loss of power.	Ensure that the SSA switch was installed properly according to the instructions in Installation on page 11, and that the chassis has power.
No Local Management Password screen	Incorrect terminal setup.	Refer to the *S-, K-, and 7100 Series Configuration Guide* for proper setup procedures.
	Improper console cable pinouts.	Refer to COM Port Pinout Assignments on page 45 for proper COM port pinouts.
	Corrupt firmware image or hardware fault.	If possible, try to download the image to the SSA switch again. Refer to Clearing Persistent Storage or Resetting the System Password on page 47 for instructions to clear NVRAM.
Cannot navigate beyond Password screen	Improper username/ password combination entered.	If you have forgotten the username or password, refer to Clearing Persistent Storage or Resetting the System Password on page 47 for instructions on how to clear the password, resetting it to the default value of null (blank), using either the boot loader `clearpassword` command or set mode switch method.
Cannot contact the SSA switch through in-band management	IP address is not assigned.	See the *S-, K-, and 7100 Series Configuration Guide*.
	Port is disabled.	Enable the port. See the *S-, K-, and 7100 Series Configuration Guide* for instructions to enable/disable ports.
	Host Port policy and/or management VLAN is not configured, or is configured incorrectly.	Verify that a management VLAN exists and that it is associated with the Host Port. Refer to the *S-, K-, and 7100 Series Configuration Guide* for information about Host Port and management VLAN configuration.
	No link to device.	Verify that all network connections between the network management station and the SSA switch are valid and operating. If the problem persists, contact us for technical support.

Table 15: Troubleshooting Checklist (continued)

Problem	Possible Cause	Recommended Action
One or more ports go into standby for no apparent reason	Loop condition detected.	Verify that Spanning Tree is enabled. Refer to the *S-, K-, and 7100 Series Configuration Guide* for instructions to set the type of STP. Review the network design and delete loops. If the problem persists, contact us for technical support.
User parameters (IP address, device and device name, etc.) were lost when the SSA power was cycled or the OFFLINE/ RESET button was pressed	The position of Mode switch 7, Persistent Data Reset, was changed either before cycling power or pressing the RESET button, causing the user-entered parameters to reset to factory default settings. Clear Persistent Data that was set through Local Management.	Reenter the lost parameters as necessary. Refer to the *S-, K-, and 7100 Series Configuration Guide* for instructions to configure the device. If the problem persists, contact us for technical support.

Replacing the SSA Fan Module

The SSA switch is cooled by two fan modules accessible from the power supply side of the unit. If the FAN LED and the output of the CLI `show system` command indicate that a fan module has failed, you must replace the failed fan module.

Note

SSA fan modules are hot-swappable. Do not uninstall a failed fan module until its replacement is available. All SSA switch components and cover plates must be installed to ensure proper airflow.

The replacement fan kit, SSA-FB-FAN, ordered separately, contains one replacement fan.

To replace a failed fan module, follow these steps:

1 Determine the location of the failed module using the label shown in Figure 18.

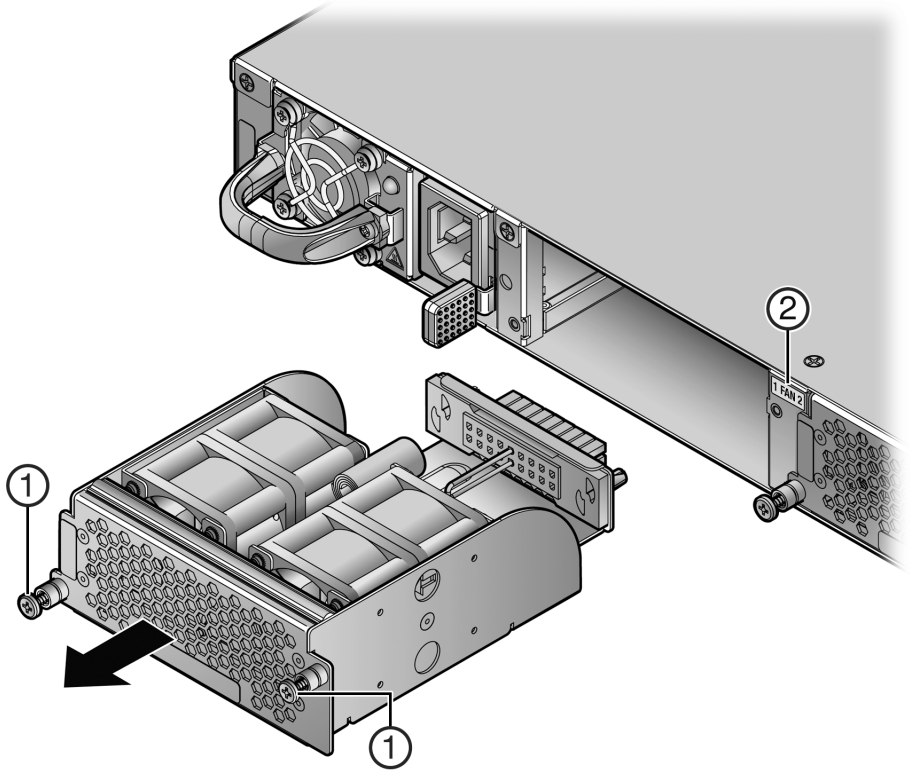


Figure 18: Removing the Fan Module

1 = Fan module screws	2 = Fan module location label

2 Unscrew the two captive screws of the failed fan module as shown in Figure 18.

3 Following the discussion in Power Supply Airflow and Switch Fan Module Airflow on page 14, ensure that the new fan module airflow direction agrees with the installed SSA switch configuration.

4 If a non-default airflow is required, see Reversing the Fan Module Airflow on page 15 for directions on how to reverse the fan unit direction.

5 When you have ensured that the fan module airflow is appropriate to your system configuration, slide the currently installed fan module forward until it is unplugged from the device as shown in Figure 18 on page 40.

6 Align the new fan module with the fan module opening.

7 Insert the module into the fan module opening, applying enough pressure that the fan module is flush with the device.

8 Secure the two fan module captive screws.

Removing a Power Supply

Do not remove the power supply in power supply bay PS1 until a replacement power supply is available.

To remove a power supply from the SSA switch, follow these steps:

1 Use appropriate antistatic protection when handling power supplies.
2 If a power cord retention clip is securing the power cord, push down on the retention clip clamp tab to open the clamp and disengage the power cord from the clamp.
3 Unplug the associated power cord from the AC inlet.
4 Remove the power supply by simultaneously pressing the power supply lock tab to the left, grasping the handle, and pulling the power supply straight out of the SSA switch.

See Figure 19.

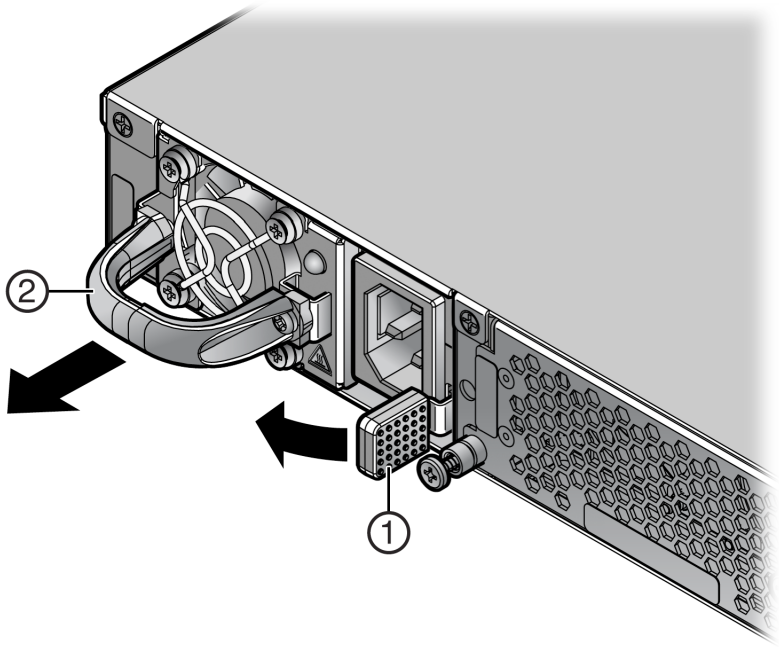


Figure 19: Removing the Power Supply

1 = Lock tab	2 = Power supply handle

5 If you are removing the power supply from power supply bay PS2, and you are not immediately installing another power supply, reinstall the coverplate that comes with the SSA switch over the empty PS2 power supply bay.

Caution

If you plan to operate the chassis with only one power supply, the power supply must be installed in the left power slot labeled PS1 and the coverplate must be in place in the right power slot to contain EMI radiation and ensure proper air circulation.

Precaución: Si desea trabajar sólo con una fuente de poder, no olvide colocar la tapa en el compartimiento de la fuente de poder que haya eliminado, para reducir la interferencia electromagnética y para asegurar una buena ventilación.

Shutting Down the SSA Switch Using the OFFLINE/RESET Button

You can shut down your SSA switch using the OFFLINE/RESET button, shown in Figure 20 on page 42, which is slightly recessed behind the SSA switch faceplate. There are two procedures for shutting down an SSA switch:

- Recommended Shutdown Procedure on page 42
- Last Resort Shutdown Procedure on page 42 (not recommended)

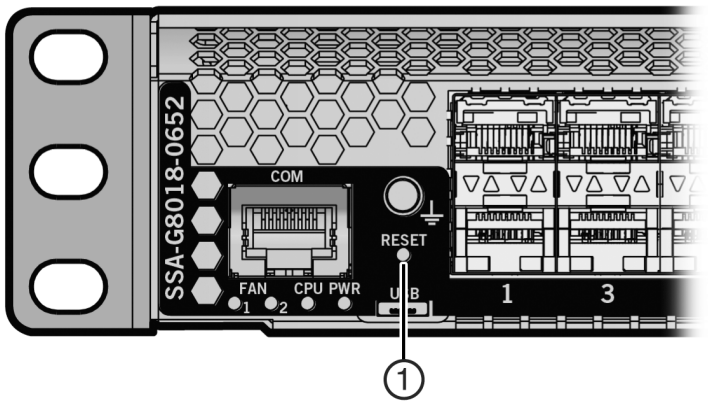


Figure 20: OFFLINE/RESET Button

1 = OFFLINE/RESET button

Recommended Shutdown Procedure

Before shutting off power to the SSA switch, press or tap on its OFFLINE/RESET button for less than one second.

The CPU LED changes from solid green to blinking between green and amber, indicating that the SSA switch is shutting down. At the end of the shutdown routine, the CPU LED changes to a sequence of 67% amber and 33% off, indicating the system is in a halt state. At this time it is safe to restart the SSA switch.

When you initiate a controlled shutdown with the OFFLINE/RESET button, you have 60 seconds from the time the CPU LED starts flashing amber/off until the device automatically restarts.

Last Resort Shutdown Procedure

Caution

This method of shutting down an SSA switch is not recommended except as a last resort, because all processes currently running on the SSA switch will be interrupted, resulting in loss of frames.

Precaución: No se recomienda utilizar este método para apagar los módulos SSA. Recurra a él sólo como último recurso, puesto que interrumpe todos los procesos del módulo en funcionamiento, lo que podrìa resultar pérdidas de frames.

If at all possible, use the process described in Recommended Shutdown Procedure on page 42 to shut down your SSA switch.

To reset an SSA switch without it performing an orderly shutdown routine, press and hold the OFFLINE/RESET button for approximately six seconds.

A Specifications

SSA Switch Specifications
Pluggable Transceiver Specifications
COM Port Pinout Assignments
Compliance

The following topics detail the specifications, environmental requirements, and physical properties for your equipment.

Extreme Networks reserves the right to change specifications at any time without notice.

SSA Switch Specifications

The following tables describe I/O ports, physical, electrical, and environmental specifications for the SSA switch.

Table 16: SSA-T8028-0652 Ports

Ports 1 through 48	48 10/100/1000BASE-T RJ45 ports
Uplink Ports 1 through 4	4 10Gb SFP+ ports

Table 17: SSA-G8018-0652 Ports

Ports 1 through 48	48 1000BASE-X SFP ports
Uplink Ports 1 through 4	4 10Gb SFP+ ports

Table 18: SSA Chassis: Physical Characteristics

Dimensions	4.37 cm H x 44.73cm W x 57.30 cm D 1.72" H x 17.61" W x 22.55" D
Approximate Weight	Gross: 14.6 kg (32.2 lb.)
Mean Time Between Failure (MTBF)	Refer to the Extreme Networks MBTF website

Table 19: SSA-FB-AC-PS-A and SSA-FB-AC-PS-B (Power Supplies)

Input Frequency	50 to 60 Hz
Input (Voltage/Current) at Output Power	100 to 240 VAC: 5.29 to 2.2A at 450 watts
Approximate Weight	0.86 kg (1.90 lb.)

Table 20: Environmental Characteristics

Operating Temperature	5°C to 40°C (41°F to 104°F)
Storage Temperature	-30°C to 73°C (-22°F to 164°F)
Operating Relative Humidity	5% to 95% (non-condensing)

Pluggable Transceiver Specifications

For SFP and SFP+ transceiver specifications, refer to the datasheet at: http://www.extremenetworks.com/product/transceivers/.

COM Port Pinout Assignments

The COM port is an RJ45 communications port for local access to local management. Refer to Table 21 for the COM port pin assignments.

Table 21: COM Port Pin Assignments

Pin	Signal Name	Input/Output
1	Transmit Data (XMT)	Output
2	Data Carrier Detect (DCD)	Output
3	Data Set Ready (DSR)	Input
4	Receive Data (RCV)	Input
5	Signal Ground (GND)	NA
6	Data Terminal Ready (DTR)	Output
7	Request to Send (RTS)	Input
8	Clear to Send (CTS)	NA

Compliance

The SSA switch meets the safety, electromagnetic compatibility (EMC), and environmental requirements listed in Table 22.

Table 22: Compliance Standards

Regulatory Compliance	Standard
Safety	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 (Low Voltage Directive)
Electromagnetic Compatibility (EMC)	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-22 (Class A). VCCI V-3. CNS 13438 (BSMI), 2004/108/EC (EMC Directive)
Environmental	2011/65/EU (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)

For more information, see Regulatory Compliance on page 76.

B Clearing Persistent Storage or Resetting the System Password

Clearing the Persistent Storage or Resetting the Password Using the Boot Loader
Clearing the System Storage or Resetting the Password Using the Mode Switches

When troubleshooting the SSA switch it might become necessary to clear the persistent storage in NVRAM or reset the system password. This can be done in either of two ways:

- Clearing the Persistent Storage or Resetting the Password Using the Boot Loader on page 47
- Clearing the System Storage or Resetting the Password Using the Mode Switches on page 48

Each method is described in the following topics.

Clearing the Persistent Storage or Resetting the Password Using the Boot Loader

Persistent storage can be cleared or the system password reset to factory default using the boot loader by connecting a terminal application to the serial (console) port. Serial console access to the boot loader has been successfully tested with the following applications:

- HyperTerminal
- TeraTerm

Other terminal applications might work but are not explicitly supported.

To clear the SSA switch persistent storage or to reset the system password to its factory default value, follow these steps:

1 With the console port connected, power up the device.

The following message displays:

```
Boot ROM Initialization, Version 01.00.02
Copyright (c) 2016 Extreme Networks, Inc.
SDRAM size: 1024 MB
Testing SDRAM....                       PASSED.
Loading Boot Image: 0x.00.yy...         DONE.
Uncompressing Boot Image...             DONE.
```

2 When the boot image is finished uncompressing, you receive a message indicating you have three seconds to access the bootloader menu by pressing any key.

Pressing a key displays the system image loader prompt:

```
###You have 3 seconds to access the bootloader menu###
Press any key to enter System Image Loader menu
PressAnyKey
[System Image Loader]:
```

3 Enter the `clearpw` command to clear the system password only, or enter `clearnvram` to clear all of persistent storage.

```
[System Image Loader]: clearpw
[System Image Loader]:
```

or

```
[System Image Loader]: clearnvram
[System Image Loader]:
```

4 Power the system off and back on to reboot the system using the factory defaults.

5 Enter `admin` at the username prompt.

6 Enter a carriage-return at the password prompt.

7 If you cleared the NVRAM, see the *Image Configuration and File Management* section of the *S-, K-, and 7100 Series Configuration Guide* for instructions on restoring a configuration.

Clearing the System Storage or Resetting the Password Using the Mode Switches

Warning
Electrical hazard: Only qualified personnel should perform installation procedures.

Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.

Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.

Risques d'électrocution: Seul un personnel qualifié doit effectuer les procédures d'installation.

Warning
Electrical hazard: Do not remove the cover from the SSA while power is applied to the unit. Hazardous voltages are present and could cause personal injury and/or damage the unit.

Do not power up the SSA again until the cover and screws are in place.

Riesgo Eléctrico: No debe de remover la tapa durente que este coneltado a la corriente, una descarga electrica le puede causar y probocarle daños, al igual que al aparato.

No enchufe a la corriente hasta que la tapa y los tornillos esten en su lugar.

Elektrischer Gefahrenhinweis: Entfernen sie nicht den Deckel des SSA, wenn dieser noch an die Stromzufuhr angeschossen ist, gefährliche Spannungen können Personen verletzten oder das Gerät beschädigen.

Schalten Sie den SSA nicht ein, bevor der Deckel das Gerät abdeckt und mit den Schrauben fixiert wurde.

Risques d'électrocution: Ne retirez pas le volet du commutateur lorsque l'appareil est sous tension. Des tensions dangereuses pourraient entraîner des blessures ou endommager l'élément.

Actionnez de nouveau le commutateur uniquement une fois que le volet et que toutes les vis sont bien en place.

Warning

This unit may have more than one power supply cord. Disconnect two power supply cords before servicing to avoid electric shock.

Advertencia: Esta unida puede tener mas de un cable de fuente de poder. Desconectar dos cables de fuentes de poder antes de dar servicio para prevenir riesgo eléctrico.

Warnhinweis: Dieses Gerät hat mehrere Netzanschlüße, trennen Sie vor den Wartungsarbeiten beide Netzanschlüsse vom Versorgungsnetz. zum Schutz vor elektrischen Schlägen.

Avertissements: Cet élément pourrait avoir plus d'un câble d'alimentation. Déconnectez tous les câbles d'alimentation avant d'effectuer les opérations de maintenance sur l'appareil afin de réduire les risques d'électrocution.

Caution

An antistatic wrist strap is required to perform the procedures in this appendix. Use the antistatic wrist strap to minimize ESD damage to the devices involved.

Precaución: Para llevar a cabo los procedimientos especificados en el apéndice deberá utilizar una pulsera antiestática. Esta pulsera sirve para minimizar los efectos de las descargas de electricidad estática.

Figure 21 shows the location of the mode switches and the switch settings for normal operation. These switches are set at the factory and rarely need to be changed. Switches are numbered 1 through 8 from left to right.

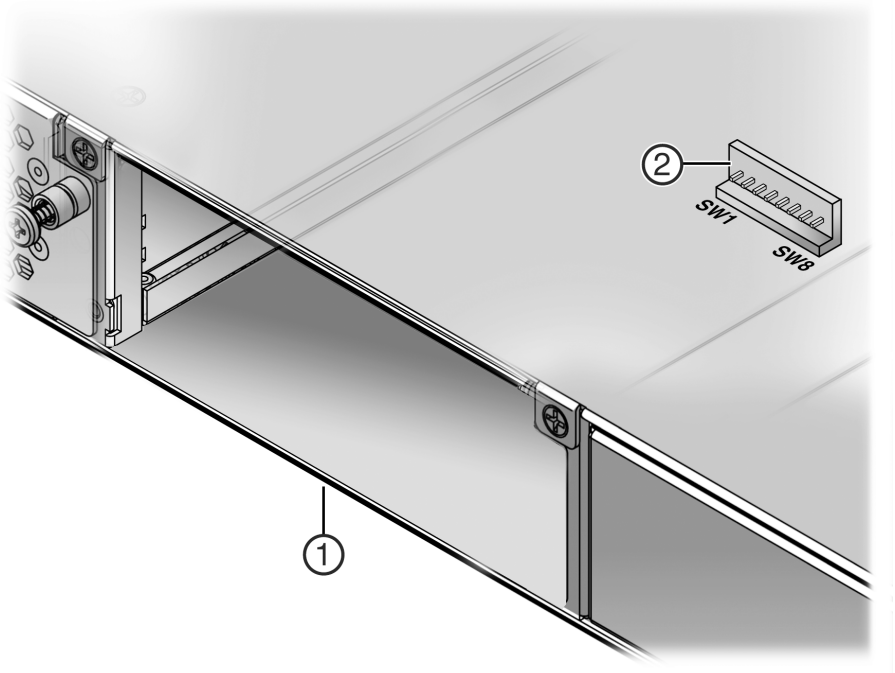


Figure 21: Mode Switch Locations

1 = Fan Module bay 2	2 = Mode switches

Switch definitions and positions are as follows:

- Switches 1– 6: For Extreme Networks use only.
- Switch 7: Clear Persistent Data. Changing the position of this switch from the up position to the down position clears persistent data on the next power-up of the SSA switch. All user-entered parameters, such as the IP address, system name, and so on, are reset to the factory default settings. After the system resets, you can either use the factory default settings or reenter your own parameters.
- Switch 8: Clear Admin Password. Changing the position of this switch from the up position to the down position clears the admin password and restores the factory default password on the next power-up of the system. After the SSA switch resets, you can either use the factory default settings or reenter your own password.

Note
Do not change the position of Switch 8 unless it is necessary to reset the admin password to its factory default setting.

Required Tools for Working with the Mode Switches

Use the following tools to adjust the mode switches on your SSA switch:

- ESD wrist strap
- Phillips screwdriver capable of extending 6 or more inches into the unit
- Flashlight (recommended)

Caution
An antistatic wrist strap is required to perform the procedures in this appendix. Use the antistatic wrist strap to minimize ESD damage to the devices involved.

Precaución: Para llevar a cabo los procedimientos especificados en el apéndice deberá utilizar una pulsera antiestática. Esta pulsera sirve para minimizar los efectos de las descargas de electricidad estática.

Setting the Mode Switches

To reset a mode switch on your SSA switch, follow these steps.

1 Power down the SSA switch.
2 Put on the ESD wrist strap and attach it to the ground receptacle on the switch I/O ports side of the SSA switch.
3 Remove fan module 2 from the SSA switch as described in step 1 on page 40 through step 5 on page 40.
4 Toggle the appropriate switch to the opposite position relative to its current state.

5 Reinstall fan module 2 as described in step 6 on page 40 through step 8 on page 40.

Note

Switches 7 and 8 are treated as one-time toggle switches. The system looks for a change in position since the last system reset. If the position of switch 7 has changed since the last reset, persistent storage will clear on the next reboot. If the position of switch 8 has changed since the last reset, the system password will reset to the default password on the next reboot.

C Optional Rack Mount Rail Kit Installation

This appendix describes the installation and use of the optional SSA Universal Rack Mount kit, model number SSA-FB-MOUNTKIT. This optional rack mounting kit provides for flexible mounting options in both four-post and two-post rack installations.

Warning
Electrical hazard: Only qualified personnel should perform installation procedures.
Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.
Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.
Risques d'électrocution: Seul un personnel qualifié doit effectuer les procédures d'installation.

Begin by reviewing Required Tools on page 52 and Installation Site Requirements on page 53. Then, check Contents of the Mounting Kit on page 53 to verify that your kit contains all of the required parts.

To perform the installation, follow these steps in order:

1 Remove the rack mount ears from the chassis.

See Removing the Rack Mount Ears from the SSA Switch on page 54.

2 Attach the adapter plates to the chassis.

See Installing the Adapter Plates on page 54.

3 Install the rail assemblies in either a four-post or two-post rack, and install the chassis in the rack..

See Four-Post Rack Mount Installation on page 56 or Two-Post Rack Mount Installation on page 59 .

Required Tools

Use the following tools to install the optional SSA Universal Rack Mount kit:

- ESD wrist strap (included with the SSA chassis)
- Phillips screwdriver

Installation Site Requirements

If you plan to cable your SSA switch with SFP+ pluggable transceivers, you might need to have 7.5 cm to 10 cm (3 to 4 in.) of clearance on the switch I/O port side of the SSA switch.

See *Environmental Guidelines for ExtremeSwitching Products* for environmental guidelines relating to the installation.

The installation site must be within reach of the network cabling and must meet the following requirements:

- Appropriate grounded power receptacles must be located within 2 m (7 ft) of the site.
- A temperature of between 5°C (41°F) and 40°C (104°F) must be maintained at the installation site with fluctuations of less than 10°C (18°F) per hour.

Caution

To ensure proper ventilation and prevent overheating, leave a minimum clearance space of 5.1 cm (2.0 in.) at the front and rear of the device.

Precaución: Para asegurar una buena ventilación y evitar que el sistema se sobrecaliente, deje un espacio mìnimo de 5.1 cm (2 pulgadas) con respecto el anverso y reverso del aparato.

Warning

Before rack-mounting the device, ensure that the rack can support it without compromising stability. Otherwise, personal injury and/or equipment damage may result.

Advertencia: Antes de montar el equipo en el rack, asegurarse que el rack puede soportar su peso sin comprometer su propia estabilidad, de otra forma, daño personal o del equipo puede ocurrir.

Warnhinweis: Überzeugen Sie sich vor dem Einbau des Gerätes in das Rack von dessen Stabilität, ansonsten könnten Personenschäden oder Schäden am Gerät die Folge sein.

Avertissements: Avant de monter l'appareil sur le bâti, assurez-vous que l'étagère peut en supporter le poids sans en compromettre la stabilité. Cela pourrait, dans le cas contraire, entraîner des blessures ou des dommages au matériel.

For more information about flat surface installation or rack installation using the mounting brackets installed on the SSA switch, see Installation on page 11.

Contents of the Mounting Kit

Table 23 lists the contents of the SSA-FB-MOUNTKIT mounting kit.

Table 23: Contents of SSA-FB-MOUNTKIT

Item	Quantity
Left and right rails and extensions assemblies	2
Adapter plates	2
Mid-Brackets	2
6-32 flat head screws	6

Table 23: Contents of SSA-FB-MOUNTKIT (continued)

Item	Quantity
10-32 pan head screws (black)	2
10-32 cage nuts	2

Note

The SSA-FB-MOUNTKIT mounting kit *does not* include rack screws. You must provide screws or fasteners appropriate to your rack for securing the rails and the SSA chassis in the equipment rack. Each procedure in this guide specifies the number of rack screws that you must provide.

Removing the Rack Mount Ears from the SSA Switch

Remove the rack mount ears from both sides of the SSA switch before continuing with the mounting kit installation. See Figure 22.

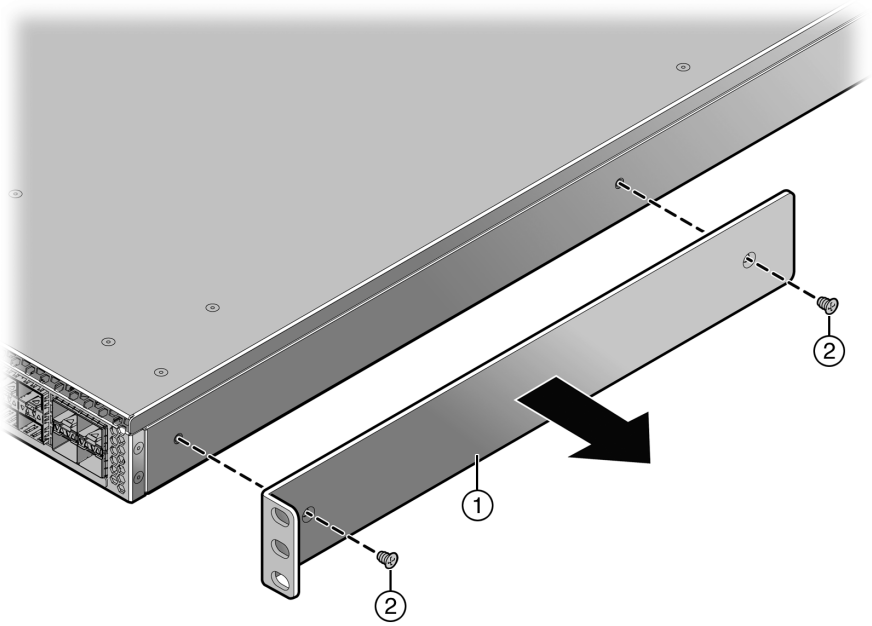


Figure 22: Removing the Rack Mount Ears

1 = Rack mount ear	2 = Rack mount ear screws

The removed rack mount ears and screws are not used in any mounting kit installation procedures.

Installing the Adapter Plates

Two adapter plates come with the mounting kit. Adapter plates are used to secure the chassis to:

- The rail and extension assemblies used in the four-post rack configuration (see Four-Post Rack Mount Installation on page 56).

- The rail and mid-bracket assemblies used in the two-post rack configuration (see Two-Post Rack Mount Installation on page 59).

The adapter plates can be installed in either a flush or a recessed configuration of up to 3.8 cm (1.5 in.).

The SSA switch can be configured for air intake on either the chassis switch I /O port side or the power supply side. Adapter plate installation must align the adapter plate ears with the air intake side of the chassis.

If you have not verified the power supply and fan module airflow for the chassis you are installing, see Power Supply Airflow and Switch Fan Module Airflow on page 14 for information on determining airflow direction for your chassis before installing the adapter plates.

If the current fan module airflow direction does not match the intended chassis airflow direction, see Reversing the Fan Module Airflow on page 15.

To install the adapter plates, follow these steps:

1 Place the adapter plates on each side of the chassis with the ear end toward the air intake side of the chassis, ear flange pointing away from the chassis.

Figure 23 shows the correct orientation for a chassis with airflow from switch I/O port side to power supply side.

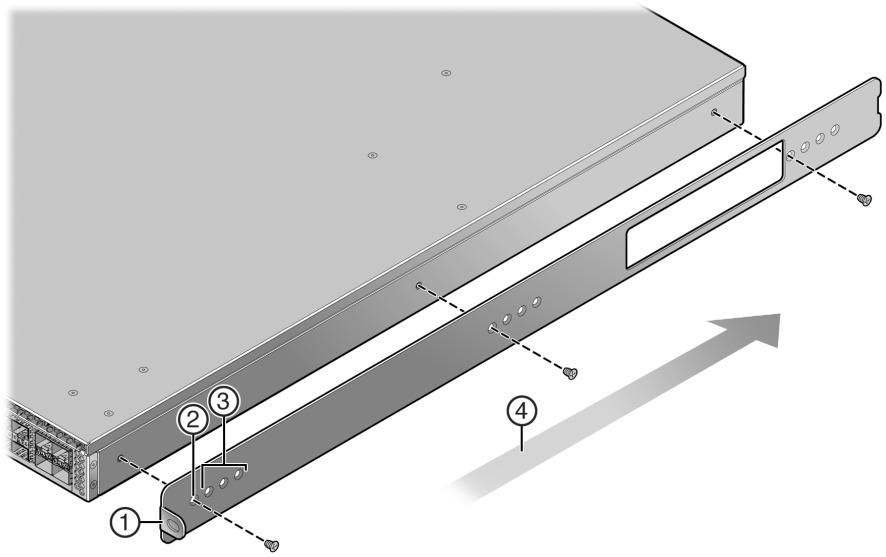


Figure 23: Installing the Adapter Plates

1 = Adapter plate (ear side)	3 = Recess mount adapter plate screw holes (1.5 in.)
2 = Flush mount adapter plate screw hole	4 = Airflow direction

2 Align either the flush mount adapter plate screw holes (Callout 2) or the appropriate recess mount adapter plate screw holes with the three chassis screw holes on each side of the chassis.

Callout 3 identifies the screw holes used to recess the chassis by .5, 1.0, or 1.5 inches.

Note

When recess mounting, use care that the installation does not result in openings above and below the chassis face at the inlet side that allow for hot air recirculation from the exhaust side of the rack or cabinet. This is especially the case for a cabinet with enclosed sides where the cold and hot aisles are meant to be isolated.

3 Insert and tighten three of the six 6-32 flat head screws that come with the mounting kit in three places on each side of the chassis.

You are ready to install the rails and put the chassis into the rack. Proceed to the appropriate topic: Four-Post Rack Mount Installation on page 56 or Two-Post Rack Mount Installation on page 59.

Four-Post Rack Mount Installation

The rack mount option kit supports the flush mount configuration for a four-post rack installation, with the option of recessing the chassis a maximum of 3.8 cm (1.5 in.). Both airflow directions are supported.

Figure 24 displays the four-post rack flush mount configuration for both airflow directions. The recessed chassis configurations (configured when installing the adapter plates, see Figure 23 on page 55) are not displayed.

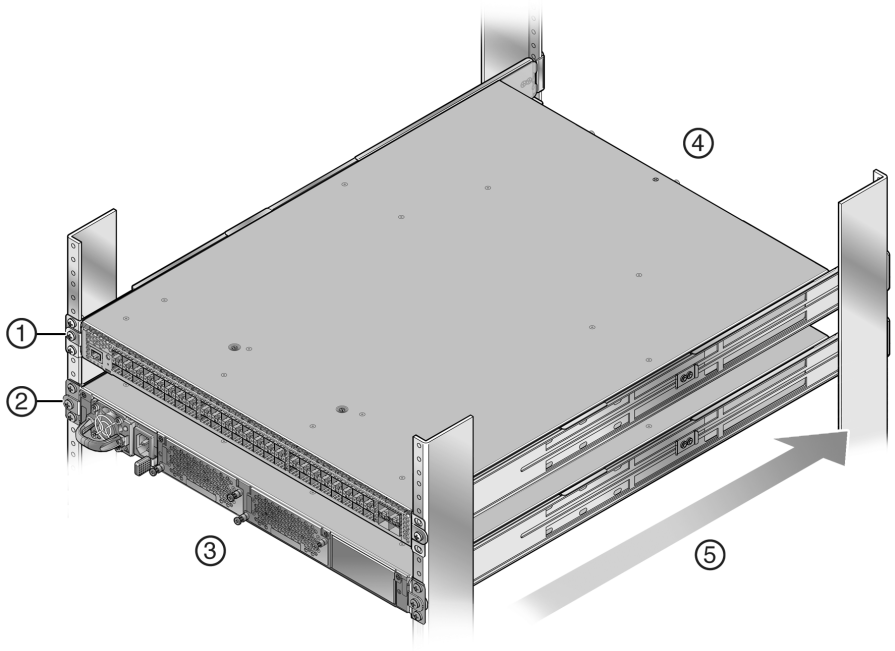


Figure 24: Four Post Rack Supported Configurations

1 = Flush mount, switch I/O port side to power supply side airflow	4 = Hot air exhaust side

2 = Flush mount, power supply side to switch I/O port side airflow	5 = Airflow direction
3 = Cool air intake side	

This section details the installation of the optional rack mount kit for a four-post rack and covers installing:

- The rack mount rail and extension assembly to the rack.
- The SSA switch to the rack mount rail and extension assembly.

The optional rack mount kit contains two pre-assembled rack mount rails with attached extensions. The length of each assembly is adjustable from 56 to 81 cm (22 to 30 in.). Each assembly is labeled either “right front” or “left front”. The front of the rack is always the cool air intake side. The rear of the rack is always the hot air exhaust side.

Installing the Rack Mount Rail with Attached Extension Assembly

Refer to Figure 25 as you perform the following procedure. You must supply eight rack screws to install the rack mount rails in the equipment rack.

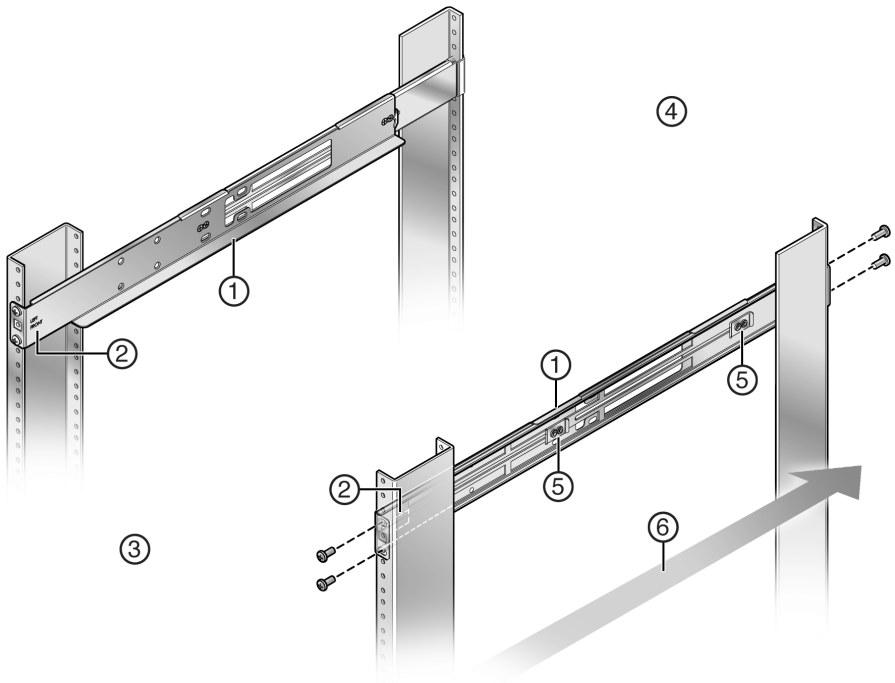


Figure 25: Installing the Rack Mount Rail with Extension Assemblies

1 = Rack mount rail with extension assembly	4 = Rack rear (hot air outlet)
2 = Right/left front assembly label location	5 = Rail assembly adjustment screws
3 = Rack front (cool air inlet)	6 = Airflow direction

To install the rack mount rail with extension assembly, follow these steps:

1 Adjust the length of the two assemblies (callout 1) to agree with the distance between the outer face of the vertical rack posts.

   The screws (callout 5) holding the assembly together may need to be loosened slightly to allow for the adjustment. Retighten any loosened screws after the adjustment has been made.

2 Install the side of the assembly labeled "right front" (callout 2) on the front (cool air inlet) right rack post.

   Secure the assembly to both the front and rear posts, using rack appropriate screws or fasteners that you supply.

   Do not use the middle hole when securing the assembly to the rack post. The middle hole is used to secure the adapter plate (previously installed on the chassis) to the assembly.

3 Repeat step 2 for the assembly labeled "left front."

Installing the Chassis to the Rail Assembly

Refer to Figure 26 as you perform the following procedure.

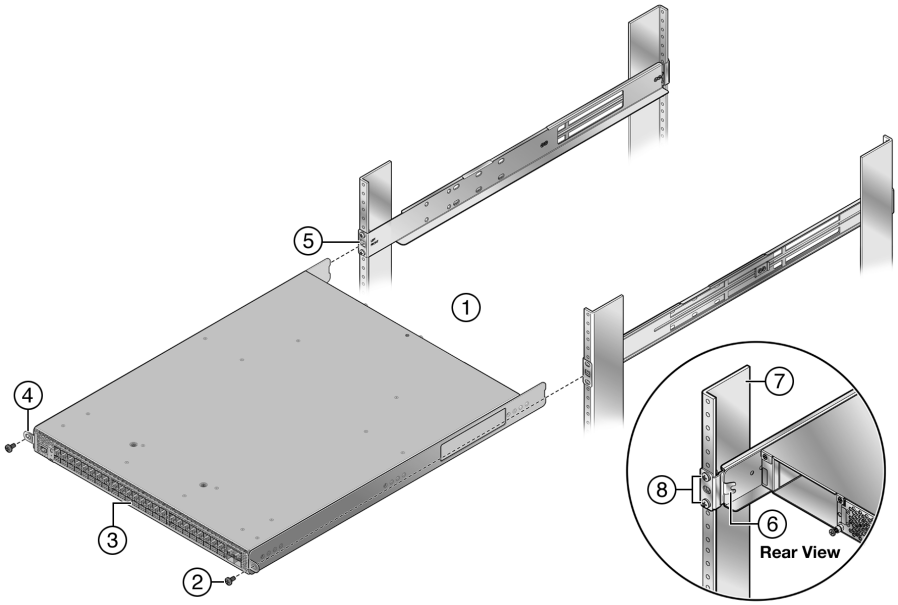


Figure 26: Installing the Chassis on to the Rack Mount Rail Assembly

1 = Rack front (cool air inlet)	5 = Rail assembly middle screw hole
2 = Rack specific screw (2)	6 = Rail assembly flange
3 = Chassis air intake side	7 = Rear rack post
4 = Adapter plate ear	8 = Rail assembly to rack screws

To install the chassis into the rail assembly, follow these steps:

1 Face the front (cool air) side of the rack (callout 1) with the air intake side of the chassis (callout 2) facing you.

2 Slide the chassis with the installed adapter plates onto the rack mount rails until the adapter plate ear (callout 3) meets the middle screw hole (callout 4) of the rack mount rail.

3 Secure the chassis with one screw or fastener appropriate to your rack in each of two adapter plate ear screw holes.

A flange (callout 6) toward the back of each rail assembly secures the back side of the chassis adapter plate in place. If needed, loosen the two screws (callout 8) that secure the rear of the rail assembly to the rack and adjust the rail assembly position for best fit or alignment. Retighten the two screws.

Two-Post Rack Mount Installation

The rack mount option kit supports two configurations for a two-post rack installation:

- A 3-inch or 7.25-inch post flush mount configuration
- A mid-mount configuration

The option of recessing the chassis up to 3.8 cm (1.5 in.) is also supported for each configuration (see Installing the Adapter Plates on page 54). Both airflow directions are supported.

Figure 27 displays the two-post rack flush mount and mid-mount configurations for supported airflow directions for a 3-inch post installation. The same configurations apply to a 7.25-inch post installation. The recessed chassis configurations are not displayed.

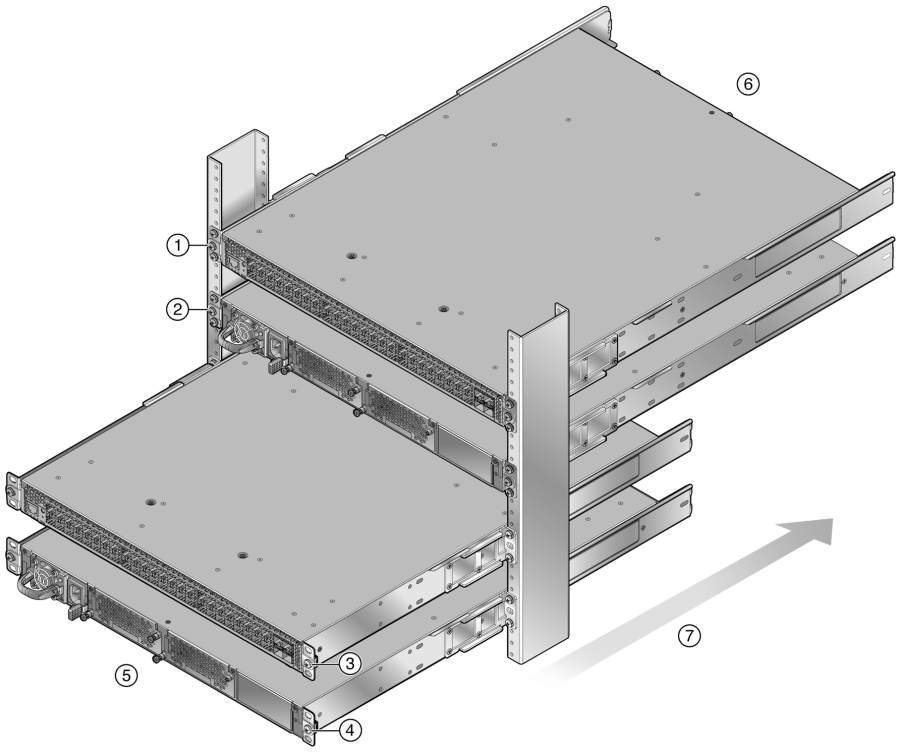


Figure 27: Two Post Rack Supported Configurations

1 = Flush mount, I/O port side to power supply side airflow	5 = Cool air intake side
2 = Flush mount, power supply side to I/O port side airflow	6 = Hot air exhaust side
3 = Mid-mount, I/O port side to power supply side airflow	7 = Airflow direction

4 = Mid-mount, power supply to I/O port side airflow

This section details the installation of the optional rack mount kit for a two-post rack, including:

- Preparing the rack mount rail assembly for a two-post rack installation, by removing the extension from the rail assembly and adding a mid-bracket to the rail
- Securing the rack mount rail and mid-bracket assembly to the rack post

The rack mount kit rail assembly is pre-assembled for a four-post rack installation. Before installing the rail to a two-post rack, perform the following tasks:

- Remove the extension from each rack mount kit rail with extension assembly as described in Removing the Extension from the Rack Mount Rail Assembly on page 60.
- Install a mid-bracket in either a flush or mid-mount configuration to each rail as described in Attaching the Mid-Bracket to the Rail on page 61.

Removing the Extension from the Rack Mount Rail Assembly

To remove the extension (callout 1) from the rack mount rail assembly, unscrew two screws from each of two assembly clips (callout 4) as shown in Figure 28.

Retain the four screws (callout 3) from both mount rail assemblies for securing the mid-bracket to the rail (callout 2). Both the extensions and the assembly clips are not used for a two-post rack installation.

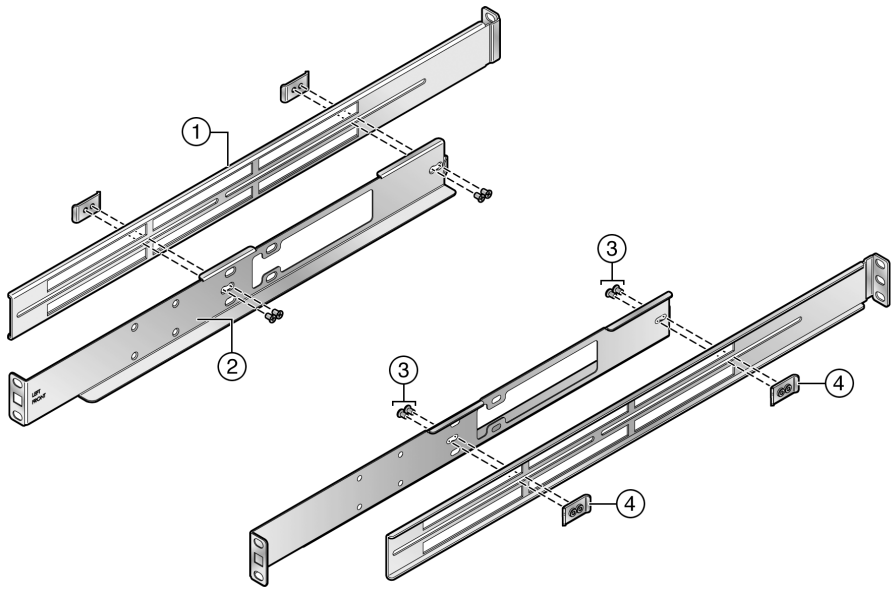


Figure 28: Removing the Extension from the Rack Mount Rail Assembly

1 = Rack mount rail assembly extension	3 = Rail assembly clip screws (4 per assembly)
2 = Rack mount rail	4 = Rail assembly clips (2 per assembly)

Attaching the Mid-Bracket to the Rail

Note
The rack post must have holes on both the front and rear flanges to properly secure the rack mount rail in either a 3-inch or 7.25-inch flush two-post rack configuration. The rack post must have holes on the front flange to secure the rack mount rail in a mid-mount two-post rack configuration.

The mid-bracket is used to secure the rack mount rail to the rear flange of the rack post in a flush mount configuration or to the front flange of the rack post in a mid-mount configuration.

You can position the mid-bracket on to the rail in the following configurations:

- 3 inches in from the rack mount rail ear for securing to the rear rack post flange in a 3-inch rack post flush mount configuration. See Figure 29 on page 62.
- 7.25 inches in from the rack mount rail ear for securing to the rear rack post flange in a 7.25-inch rack post flush mount configuration. See Figure 30 on page 62.
- 7.25 inches in from the rack mount rail ear for securing to the front rack post flange for a mid-mount configuration (the rear rack post flange is not used in a mid-mount configuration). See Figure 31 on page 63.

The two-post rack mount rail can be installed in both a flush mount or mid-mount configuration. In a flush mount configuration, the rack mount rail is secured to both the front and rear flange of either a 3-inch or 7.25-inch rack post.

Securing the Mid-Bracket (3-Inch Flush Mount Assembly)

Note
If you are installing the rack mount rail in a flush mount 7.25-inch rack post or a mid-mount configuration, proceed to Securing the Mid-Bracket (7.25-Inch Flush Mount or Mid-Mount Assembly) on page 62. Otherwise, continue here.

To secure the mid-bracket to the rail for a 3-inch post flush mount assembly, follow these steps:

1 Align the mid-bracket (callout 2) with the four rail holes closest to the rail ear (callout 3) for both rails.

See Figure 29.

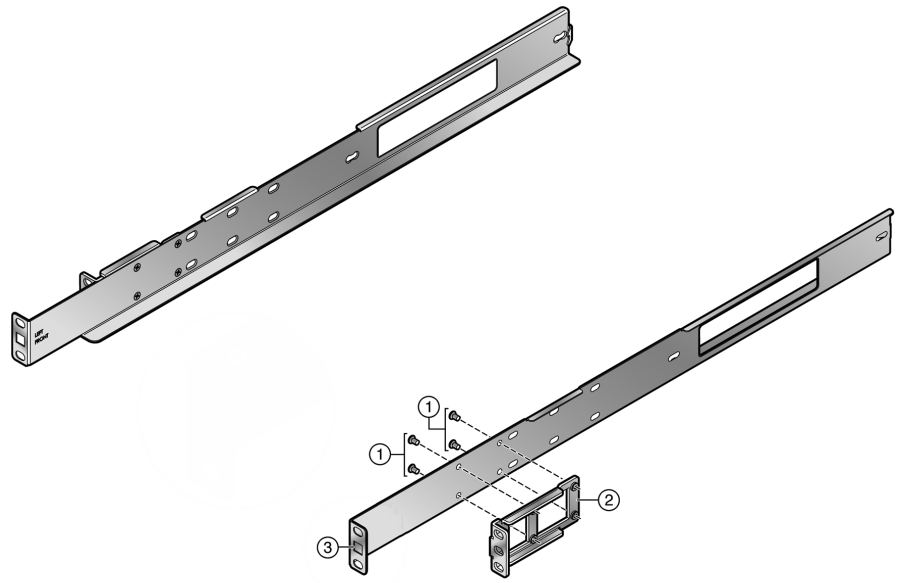


Figure 29: Securing the Mid-Bracket to the Rail (3-Inch Flush Mount)

1 = Four screws from extension rack assembly	3 = Rail ear
2 = Mid-bracket	

2 Insert and secure the four screws (callout 1) from the rack mount extension assembly for both rails.

Securing the Mid-Bracket (7.25-Inch Flush Mount or Mid-Mount Assembly)

Secure the mid-bracket to the rail for a 7.25-inch post flush mount or mid-mount assembly as shown in the following illustrations.

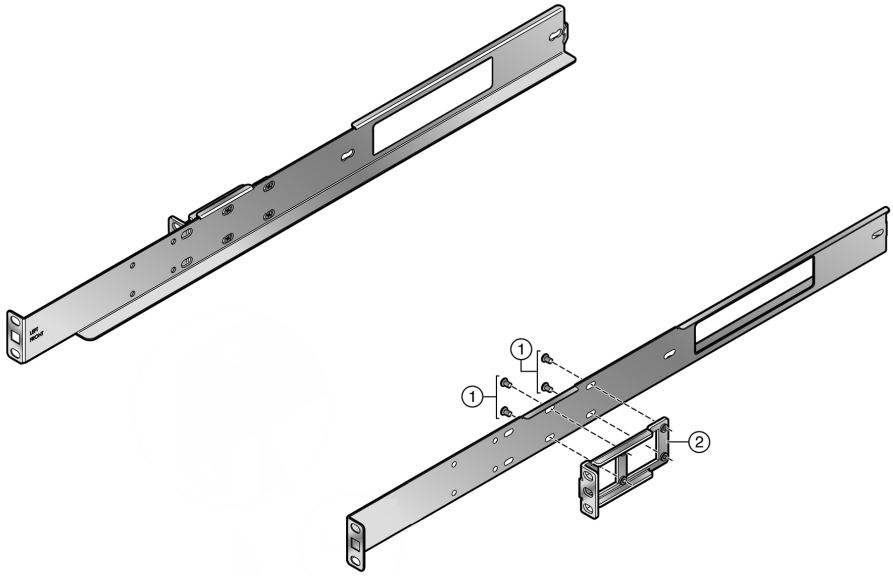


Figure 30: Securing the Mid-Bracket to the Rail (7.25-Inch Flush Mount)

1 = Four screws from extension rack assembly	2 = Mid-bracket

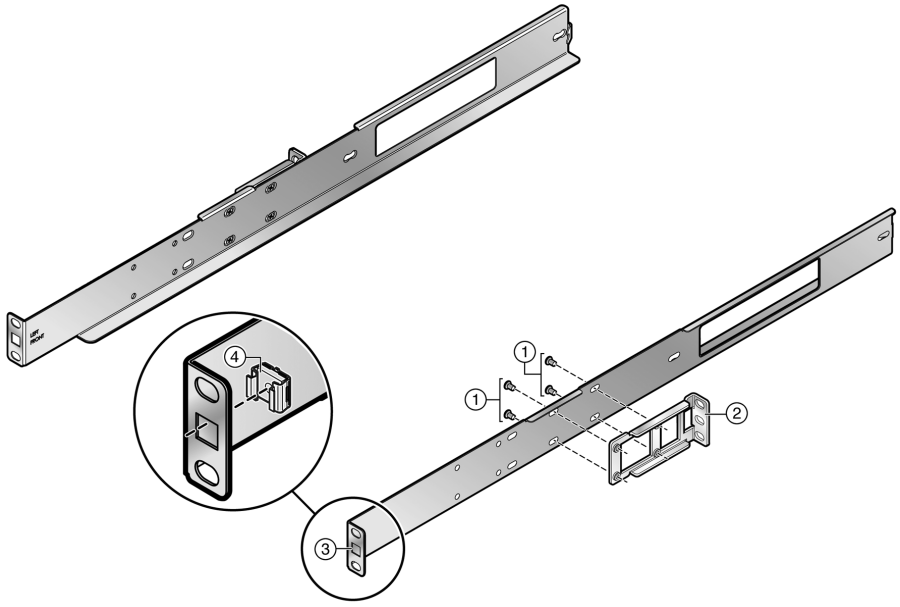


Figure 31: Securing the Mid-Bracket to the Rail (7.25-Inch Mid-Mount)

1 = Four screws from extension rack assembly	3 = Rail ear square opening
2 = Mid-bracket	4 = Cage nut

To secure the mid-bracket, follow these steps:

1 Align the mid-bracket (callout 2) with the four rail slots

See Figure 30 on page 62 for a flush mount assembly.

See Figure 31 on page 63 for a mid-mount assembly.

2 Insert and secure the four screws (callout 1) from the rack mount extension assembly, allowing some play to adjust the mid-bracket position within the slot space when securing the assembly to the rack post.

3 If the assembly will be used in a mid-mount configuration, insert a cage nut (callout 4 in Figure 31 on page 63) into the rail ear square opening (callout 3).

Two cage nuts are included with the SSA Universal Rack Mount kit.

4 Repeat these steps for the other rail.

Securing the Rail Assembly for a Two-Post Flush Mount Configuration

To secure the rail and mid-bracket assembly in a flush mount configuration, follow these steps:

1 Align the rail ear circular openings with outer front flange rack post openings, and align the mid-bracket ear openings with outer rear flange rack post openings.

See Figure 32.

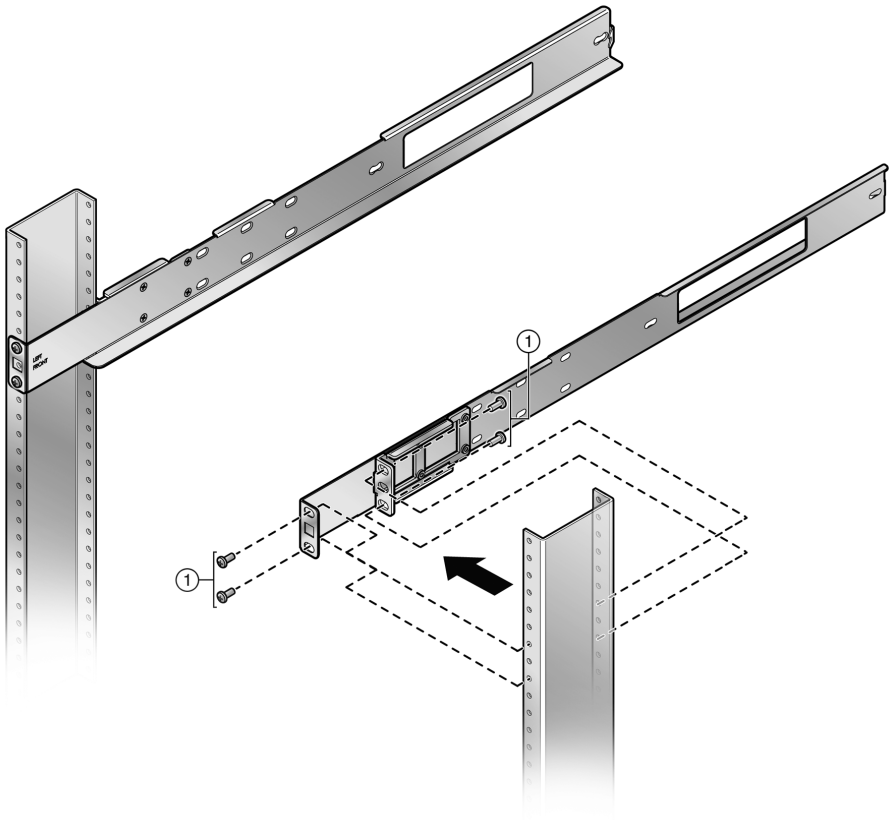


Figure 32: Securing a Flush Mount Rail Assembly

1 = Rack-appropriate screws of fasteners (8)

2 Secure each rail assembly with two screws or fasteners appropriate to the rack at both the rail ear and mid-bracket ear.

Securing the Rail Assembly for a Two-Post Mid-Mount Configuration

To secure the rail and mid-bracket assembly in a mid-mount configuration, follow these steps:

1 Ensure that a cage nut is installed in the rail ear square opening as described in Securing the Mid-Bracket (7.25-Inch Flush Mount or Mid-Mount Assembly) on page 62.

2 Align the mid-bracket ear openings with the outer front flange rack post openings.

See Figure 33.

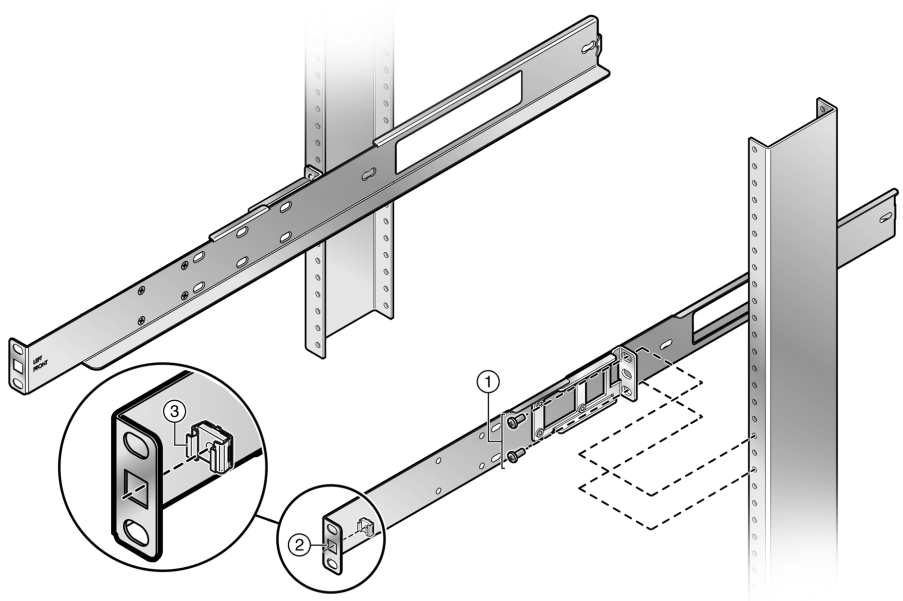


Figure 33: Securing Mid-Mount Rail Assembly

1 = Rack appropriate screws or fasteners (4)	3 = Cage nuts (2)
2 = Rail ear square opening	

3 Secure the rail assembly with two screws or fasteners appropriate to the rack at both the rail ear and mid-bracket ear.

Securing the SSA Switch to the Rack

To secure the SSA switch to the rack, follow these steps:

1 Slide the chassis onto the rail assembly until the chassis adapter plate ears meet the rail assembly ears.

See Figure 34.

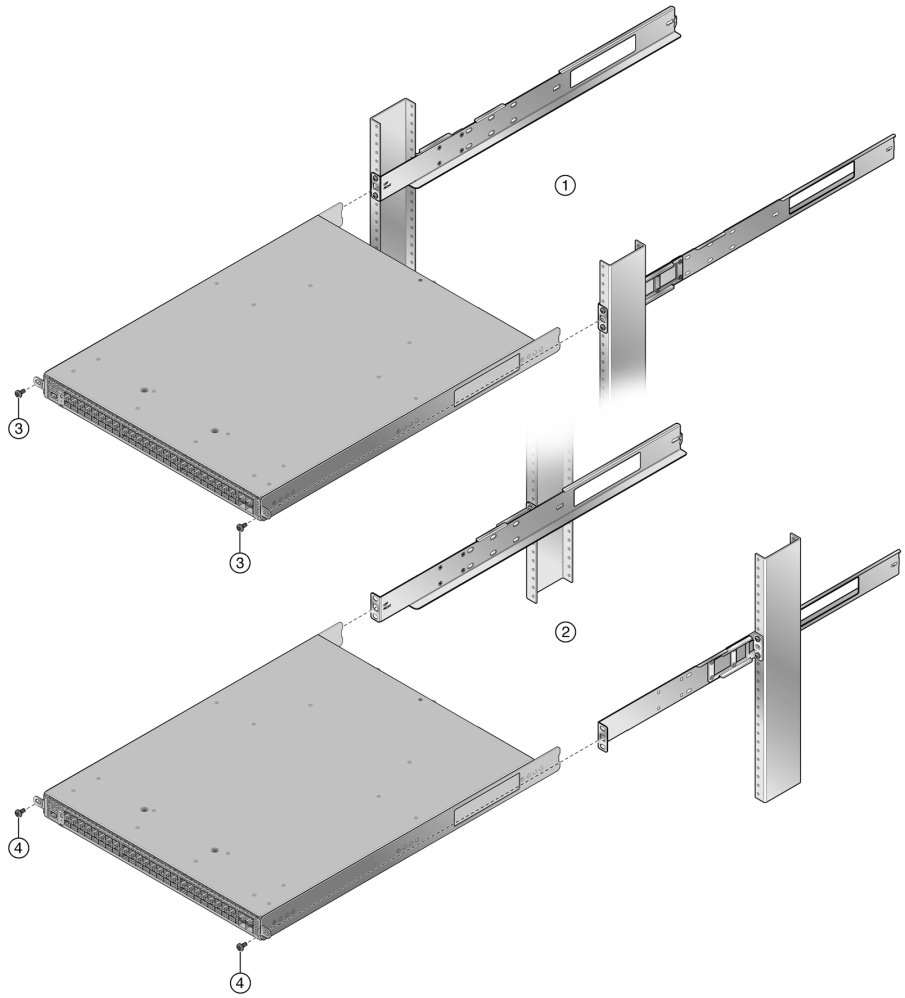


Figure 34: Securing the SSA switch to the Rack

1 = Flush mount configuration	3 = Rack-appropriate screws or fasteners (2)
2 = Mid-mount configuration	4 = Black 10-32 screws (2)

2 For a flush mount rail assembly configuration, secure each side of the chassis using a user-supplied screw or fastener appropriate to your rack.

3 For a mid-mount rail assembly configuration, secure each side of the chassis using a black, 10-32 screw that comes with the rack mount kit.

These screws are screwed into the cage nut installed in the square rail ear opening as described in step 3 on page 63.

D Installing the SSA-WALL-MOUNT Kit

This appendix provides instructions for installing the SSA on a wall using the optional SSA-WALL-MOUNT kit.

Warning
Electrical hazard: Only qualified personnel should perform installation procedures.
Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.
Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.
Risques d'électrocution: Seul un personnel qualifié doit effectuer les procédures d'installation.

Required Tools

Use the following tools to mount your SSA switch using the optional SSA-WALL-MOUNT kit:

- ESD wrist strap (included)
- Phillips screwdriver

Installation Site Requirements

Ensure that the installation site has a minimum of 15 cm (6 in.) of clear wall space at the top, bottom, left side, and right side of the mounting bracket. This minimum clearance allows for proper airflow, space for cabling the ports, and space for replacing power supplies.

Note
You must manage the port cables to ensure that the air vents are not blocked.

Contents of the SSA-WALL-MOUNT Kit

Table 24 lists the contents of the SSA-WALL-MOUNT kit.

Table 24: Contents of SSA-WALL-MOUNT Kit

Item	Quantity
Mounting bracket	1
10-32 x .5 inch pan head screws	2

Note

The SSA-WALL-MOUNT kit *does not* include hardware for installing the mounting bracket on a wall.

You must provide screws and wall anchors that are appropriate for the wall on which you are installing the mounting bracket. The screws and wall anchors you provide must be capable of supporting at least four times the combined weight of the SSA chassis and two power supplies. For example, the combined weight of an SSA chassis and two power supplies is 14.6 kg (32.2 lb.). The screws and wall anchors must be able to support at least 58.42 kg (128.8 lb.).

Preparing the Installation Site

The SSA-WALL-MOUNT mounting bracket can be attached to two different types of wall construction. Refer to the following topics for details.

- Hollow Wall Construction on page 68
- Concrete or Masonry Wall Construction on page 69

Before you drill any mounting holes:

- Ensure that walls are clear of plumbing and electrical lines.
- Use the SSA-WALL-MOUNT mounting bracket as a template to mark hole locations on the wall sheathing.

Hollow Wall Construction

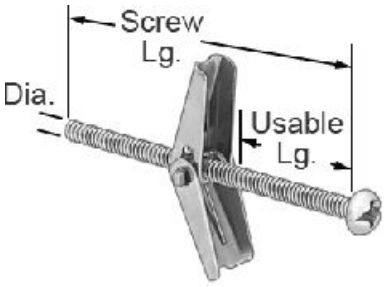
For hollow walls studded with metal or wood framing and sheathed with drywall, plaster, or plywood, use appropriate hollow wall fasteners in all four mounting locations through the sheathing material.

- Toggle Bolts
- Reusable Anchors on page 69
- Pan Head Steel Machine Screws on page 69

The four mounting locations on the SSA-WALL-MOUNT mounting bracket, which are located side to side on 47.18 cm (18.58 in.) centers, do not coincide with typical wall stud centers. Position the mounting bracket to avoid studs at the four mounting locations.

Toggle Bolts

Toggle bolts must be at least 3/16 inch. Each of the four toggle bolts used must be rated for 14.6 kg (32.2 lb.) minimum.



Typical drill size is ½ inch for the 3/16 inch toggle bolt. Follow the manufacturer's instructions.

Reusable Anchors

The minimum recommended size for reusable anchors is #10 size minimum. Each of the four reusable anchors must be rated for 14.6 kg (32.2 lb.) minimum and be the appropriate size for the sheathing thickness.

Typical drill size is 3/8 inch for the #10 reusable anchor. Follow the manufacturer's instructions.

Pan Head Steel Machine Screws

If the rear side of the sheathing is accessible, you can bolt the wall mount bracket to the wall sheathing using four #10-#12 pan head steel machine screws with fender washers and lock nuts behind the sheathing. The screws must be long enough to fully engage all threads on the nuts.

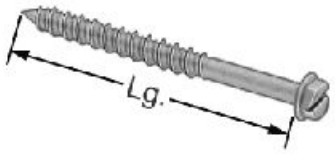
Concrete or Masonry Wall Construction

For concrete or masonry walls, use appropriate wall fasteners in all four mounting points.

- Concrete Screws
- Concrete Inserts on page 69

Concrete Screws

Concrete screws must be at least 3/16 inch. Each of the four screws must be rated for 14.6 kg (32.2 lb.) minimum.



Typical drill size is 5/32 inch for the 3/16 inch concrete screw. Follow the manufacturer's instructions, including the recommendation for drill depth.

Concrete Inserts

You can use concrete inserts, such as conical lead or flanged polypropylene, for installing the rack mount bracket in concrete. Each insert must be individually rated to support 14.6 kg (32.2 lb.) minimum.

Use sizes that support a #10 screw minimum.

Typical drill size is 5/16 inch for the #10 conical lead anchor for concrete.

Typical drill size is ¼ inch for the #10 flanged polypropylene anchor for concrete.

Follow the manufacturer's instructions, including the recommendation for drill depth for the insert that you are using.

Mounting the SSA Chassis on a Wall

After preparing the wall, follow these steps to mount the SSA chassis:

1 Using four customer-supplied screws and wall anchors, secure the mounting bracket to the wall. See Figure 35.

The screws and wall anchors that you provide must be capable of supporting at least four times the combined weight of the SSA chassis and two power supplies.

You must secure the mounting bracket to the wall in the orientation shown in Figure 35.

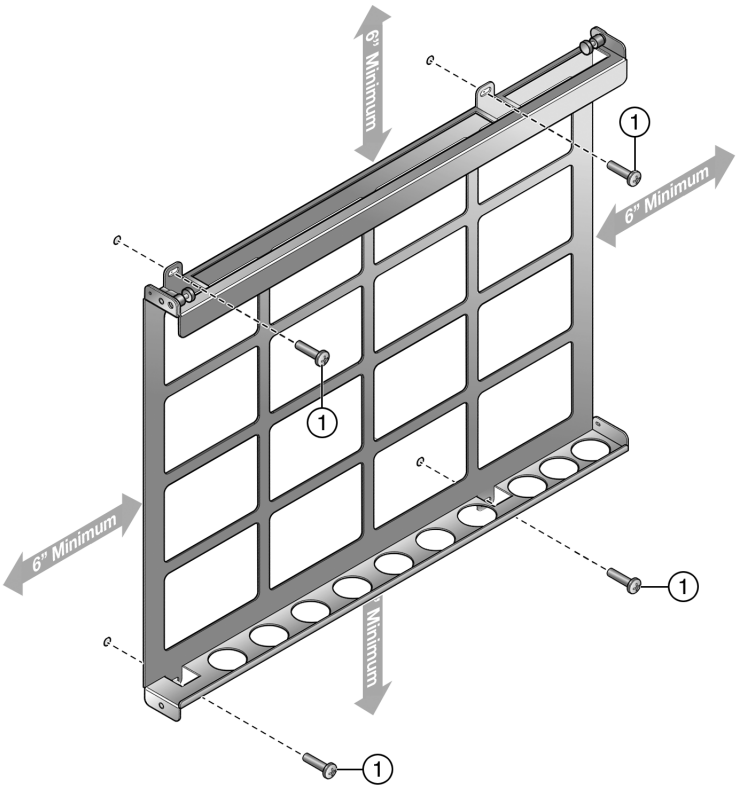


Figure 35: Securing the Wall Mounting Bracket to a Wall

1 = Customer-supplied screws

2 Open the gate on the top side of the mounting bracket as shown in Figure 36 on page 71.

a Pull the right and left plungers simultaneously to unlock the gate.

To lock the plungers in the open position, rotate the opened plungers counter-clockwise.

b Swing the gate into the open position.

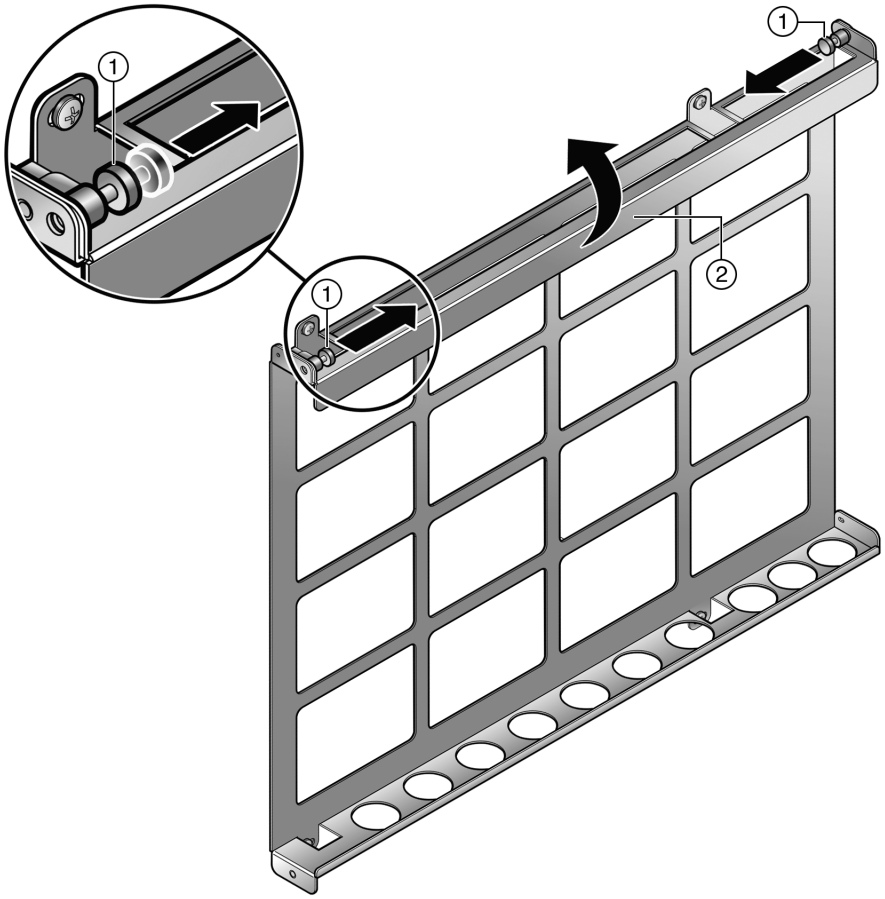


Figure 36: Opening the Gate

1 = Right and left plungers	2 = Gate

Figure 37 shows the gate in the open position.

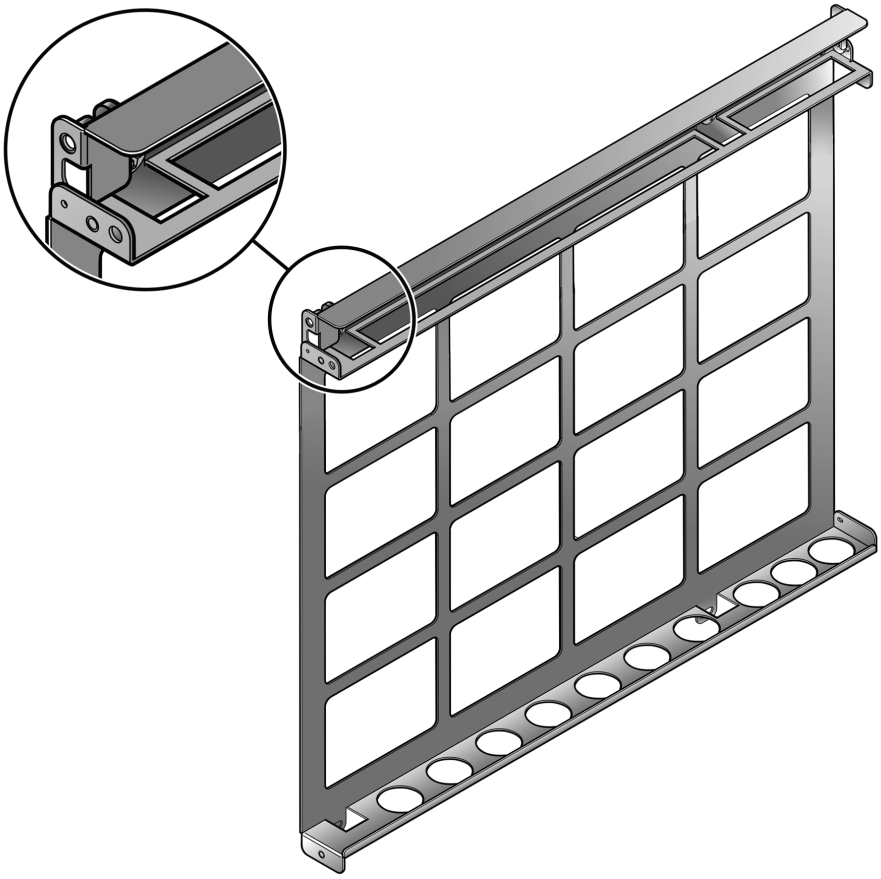


Figure 37: Mounting Bracket Gate in the Open Position

3 Holding the SSA switch with the I/O connectors facing left, slide the bottom side of the SSA chassis under the lip on the bottom side of the mounting bracket.

See Figure 38.

Note

You must install the SSA chassis in the orientation shown in Figure 38: I/O connectors facing left, top of the SSA switch facing out. No other orientation of the SSA chassis is supported.

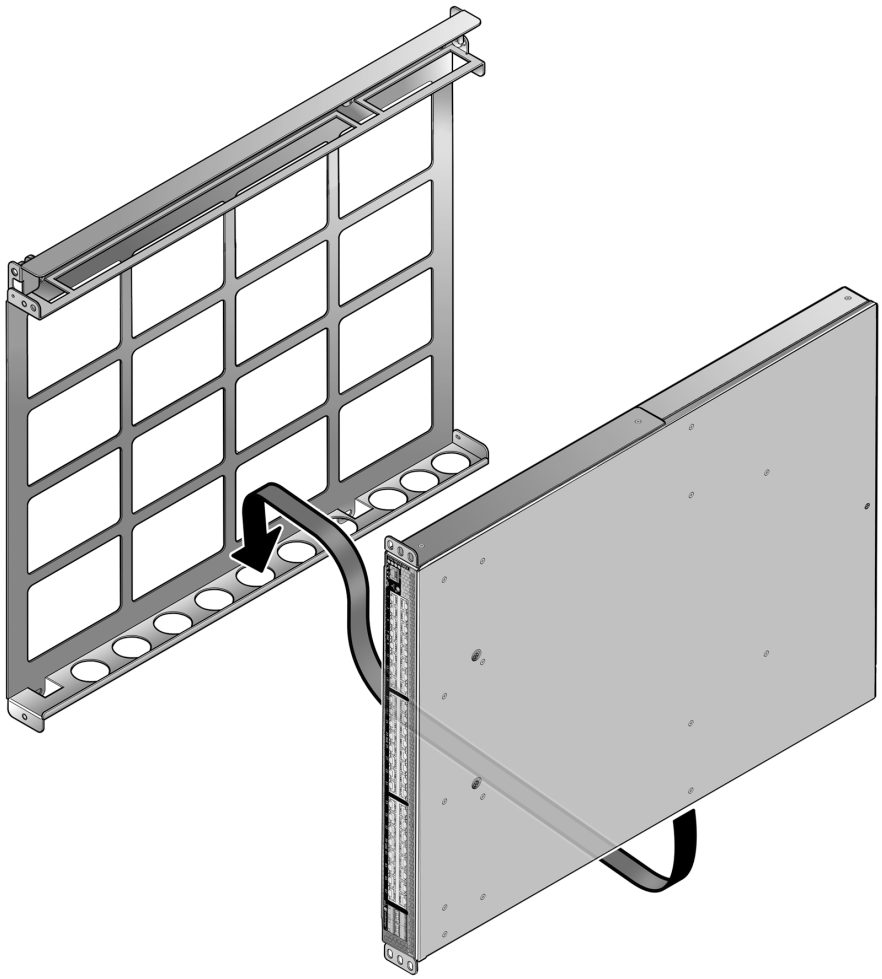


Figure 38: Installing the SSA in the Mounting Bracket

4 Insert the top side of the SSA chassis in the mounting bracket.

5 Close the gate to hold the SSA chassis in place.

See Figure 39.

Ensure that the plungers lock into place when you close the gate. If the plungers are in the open locked position, rotate the plungers clockwise until they unlock.

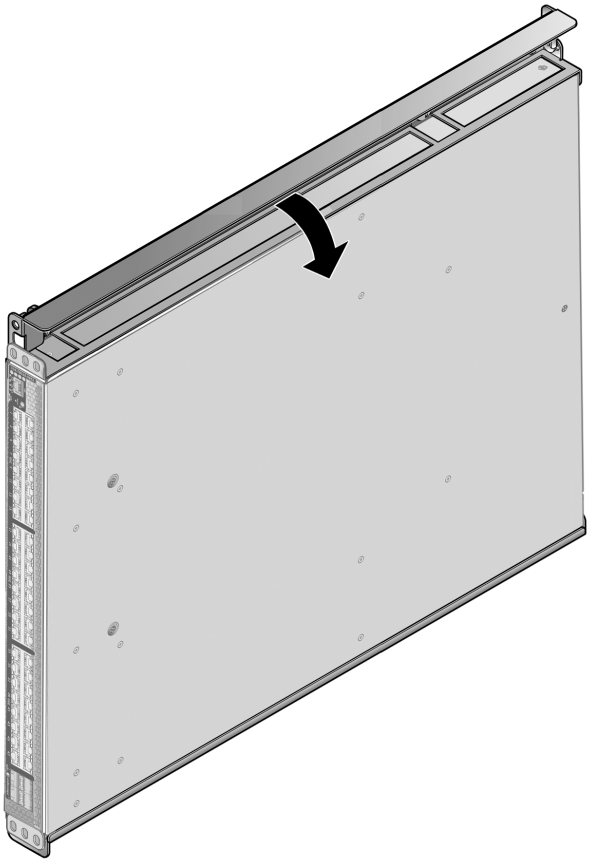


Figure 39: Closing the Gate

1 = Gate

6 Using the 10-32 screws included with the mounting bracket, secure the front of the SSA chassis to the left of the mounting bracket.

See Figure 40.

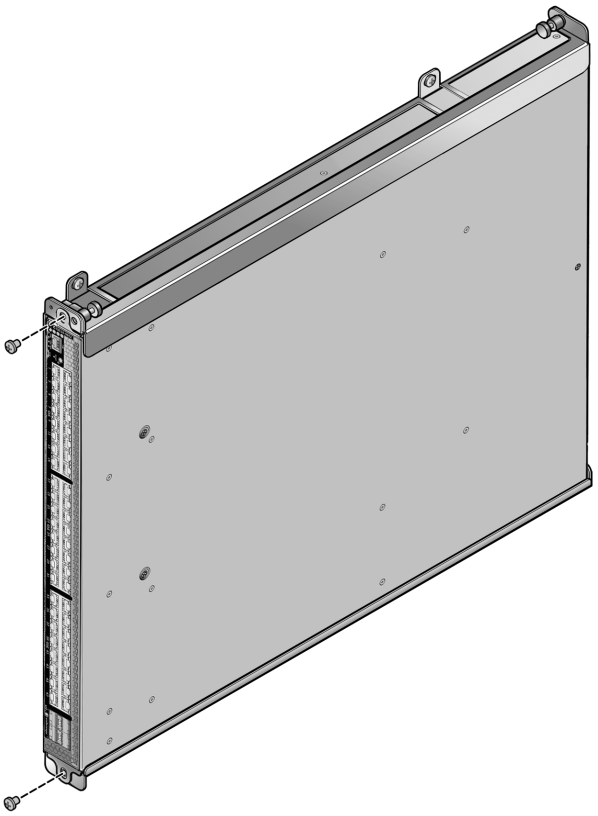


Figure 40: Securing the SSA Chassis to the Mounting Bracket

You can now cable the I/O ports and power up the SSA chassis as described in Installation on page 11.

E Regulatory Compliance

Safety Information
Declaration of Conformity

Warning

Electrical hazard: Only qualified personnel should perform installation procedures.

Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.

Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.

Risques d'électrocution: Seul un personnel qualifié doit effectuer les procédures d'installation.

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 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.

Clase A. Aviso de ITE

Warning
Advertencia: Este es un producto de Clase A. En un ambiente doméstico este producto puede causar interferencia de radio en cuyo caso puede ser requerido tomar medidas adecuadas.

Klasse A ITE Anmerkung

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

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。

AS/NZS CISPR 22

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 2002/96/EC 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 and that this product was placed on the European market after August 13, 2005, the date of enforcement for Directive 2002/96/EC.

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 Customer Support at +353 61 705500 (Ireland).

Battery Notice

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

Caution

There is an explosion risk if you replace the battery with the incorrect type. Dispose of expended battery in accordance with local disposal regulations.

Precaución: Hay riesgo de explosion si la bateria se reemplaza con el typo incorrecto. Deshágase de las baterìas gastadas de conformidad con las regulaciones de eliminación local.

产品说明书附件
Supplement to Product Instructions

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr^{6+})	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 (Metal Parts)	×	○	○	×	○	○
电路模块 (Circuit Modules)	×	○	○	×	○	○
电缆及电缆组件 (Cables & Cable Assemblies)	×	○	○	×	○	○
塑料和聚合物部件 (Plastic and Polymeric parts)	○	○	○	○	○	×
电路开关 (Circuit Breakers)	○	○	×	×	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。
Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T 11363-2006 standard.

×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006 标准规定的限量要求。
Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T 11363-2006 standard.

对销售之日的所售产品, 本表显示,
凯创供应链的电子信息产品可能包含这些物质。注意:在所售产品中可能会也可能不会含有所有所列的部件。
This table shows where these substances may be found in the supply chain of Enterasys' electronic information products, as of the date of sale of the enclosed product. Note that some of the component types listed above may or may not be a part of the enclosed product.

除非另外特别的标注, 此标志为针对所涉及产品的环保使用期标志. 某些零部件会有一个不同的环保使用期(例如, 电池单元模块)贴在其产品上.
此环保使用期限只适用于产品是在产品手册中所规定的条件下工作.
The Environmentally Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here, unless otherwise marked. Certain parts may have a different EFUP (for example, battery modules) and so are marked to reflect such. The Environmentally Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.

Safety Information

Class 1 Laser Transceivers

The single mode interface modules use Class 1 laser transceivers. Read the following safety information before installing or operating these modules.

The Class 1 laser transceivers use an optical feedback loop to maintain Class 1 operation limits. This control loop eliminates the need for maintenance checks or adjustments. The output is factory set, and does not allow any user adjustment. Class 1 Laser transceivers comply with the following safety standards:

- 21 CFR 1040.10 and 1040.11 U.S. Department of Health and Human Services (FDA).
- IEC Publication 825 (International Electrotechnical Commission).
- CENELEC EN 60825 (European Committee for Electrotechnical Standardization).

When operating within their performance limitations, laser transceiver output meets the Class 1 accessible emission limit of all three standards. Class 1 levels of laser radiation are not considered hazardous.

When the connector is in place, all laser radiation remains within the fiber. The maximum amount of radiant power exiting the fiber (under normal conditions) is -12.6 dBm or 55 x 10^{-6} watts.

Removing the optical connector from the transceiver allows laser radiation to emit directly from the optical port. The maximum radiance from the optical port (under worst case conditions) is 0.8 W cm^{-2} or 8 x 10^{3} W m^{2} sr-1.

Do not use optical instruments to view the laser output. The use of optical instruments to view laser output increases eye hazard. When viewing the output optical port, power must be removed from the network adapter.

Safety Compliance

Warning
Fiber Optic Port Safety

When using a fiber optic media expansion module, never look at the transmit laser while it is powered on. Also, never look directly at the fiber TX port and fiber cable ends when they are powered on.

Avertissment: Ports pour fibres optiques - sécurité sur le plan optique

Ne regardez jamais le laser tant qu'il est sous tension. Ne regardez jamais directement le port TX (Transmission) à fibres optiques et les embouts de câbles à fibres optiques tant qu'ils sont sous tension.

Warnhinweis: Faseroptikanschlüsse - Optische Sicherheit

Niemals ein Übertragungslaser betrachten, während dieses eingeschaltet ist. Niemals direkt auf den Faser-TX-Anschluß und auf die Faserkabelenden schauen, während diese eingeschaltet sind.

Declaration of Conformity

Application of Council Directive(s):	2004/108/EC 2006/95/EC
Manufacturer's Name:	Extreme Networks, Inc.
Manufacturer's Address:	145 Rio Robles San Jose, CA 95134 USA
European Representative Name:	Extreme Networks
European Representative Address:	Nexus House Newbury Business Park London Road Newbury Berkshire RG14 2PZ England

Conformance to Directive(s)/ Product Standards:	EC Directive 2004/108/EC EN55022:2006 A1:2007 EN 55024:1998 A1:2001 A2:2003 EN 61000-3-2:2006 A1:2009 A2:2009 EN 61000-3-3:2008 EC Directive 2006/95/EC EN 60950-1:2006 A1:2009 EN 60825-1:2007 EN 60825-2:2004 A1:2007 EC Directive 2011/65/EU
Equipment Type/Environment:	Information Technology Equipment, for use in a Commercial or Light Industrial Environment.

The object of the declaration described above is in conformity with 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.

Index

R

S

T

U

V

W