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

SSA S130 and S150 Class
SSA-T4068-0252
SSA-T1068-0652
SSA-T1068-0652A
SSA-G1018-0652

9035040

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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-T4068-0252
- SSA-T1068-0652 and SSA-T1068-0652A
- SSA-G1018-0652

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.

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. A general working knowledge of data communications networks is helpful when setting up the SSA.

For...	Refer to...
An overview of the SSA and its features	Introduction on page 8
Instructions for installing the SSA hardware and connecting the SSA to the network	Installation on page 13
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 using the OFFLINE/RESET button	Troubleshooting on page 36
Specifications, environmental requirements, and physical properties of the SSA	Specifications on page 56
Procedures for locating and resetting mode switches	Resetting Mode Switches on page 59
An overview of Power over Ethernet (PoE) technology and how it is implemented in relation to the S-Series devices	Power over Ethernet (PoE) for S-Series Devices on page 63
Details on how to install the optional wall mounting bracket	Installing the SSA-WALL-MOUNT Kit on page 80

For...	Refer to...
Detailed compliance information for the SSA	Regulatory Compliance on page 89
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:

- Global Technical Assistance Center (GTAC) 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 Return Material Authorization (RMA) 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-T4068-0252
SSA-T1068-0652 and SSA-T1068-0652A
SSA-G1018-0652
AC Power Supplies
Fans
Micro-USB Port
Power over Ethernet
Management
Virtual Switch Bonding

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

- SSA-T4068-0252
- SSA-T1068-0652 and SSA-T1068-0652A
- SSA-G1018-0652

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

SSA-T4068-0252

The SSA-T4068-0252 has forty-eight 10/100/1000BASE-T RJ45 ports and four 10GBASE-X SFP+ ports, as shown in Figure 1.

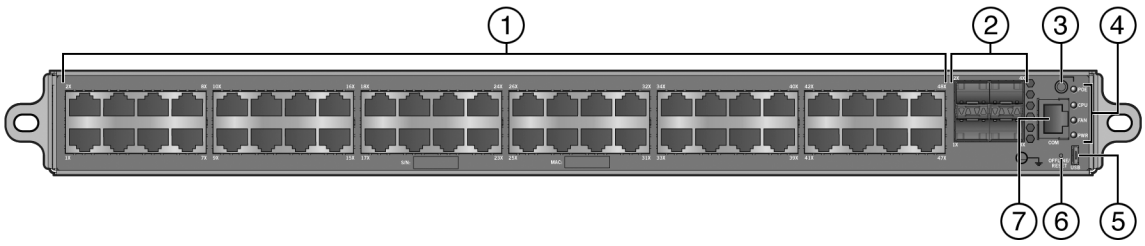


Figure 1: SSA-T4068-0252 Front Panel

1 = 10/100/1000BASE-T RJ45 ports	5 = Micro-USB debug port
2 = 10GBASE-X SFP+ ports	6 = OFFLINE/RESTART button
3 = PoE mode button	7 = COM port
4 = System LEDs	

Each of the 10/100/1000BASE-T ports, which support PoE (IEEE 802.3af and 802.3at), can operate in either half-duplex or full-duplex mode which can be determined by either auto-negotiation or manual

configuration. Depending on your power supply configuration, the SSA-T4068-0252 can provide PoE power for powered devices to a maximum of all 48 RJ45 ports simultaneously.

On the 10/100/1000BASE-T ports, the SSA-T4068-0252 allows a maximum of eight authenticated users per port, though you can remove this restriction through an upgrade license (S-EOS-PPC).

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

SSA-T1068-0652 and SSA-T1068-0652A

The SSA-T1068-0652 and SSA-T1068-0652A have forty-eight 10/100/1000BASE-T RJ45 ports and four 10GBASE-X SFP+ ports, as shown in Figure 2.

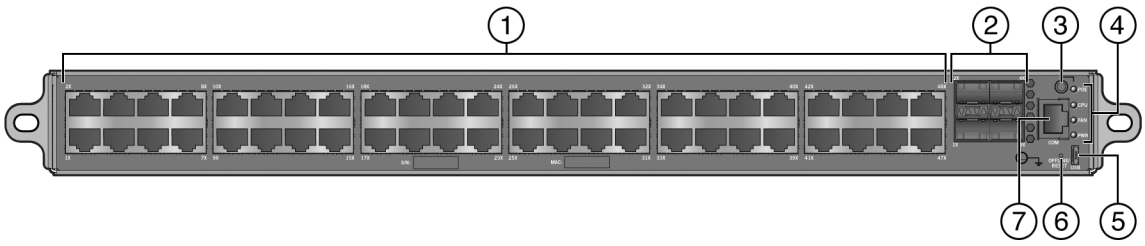


Figure 2: SSA-T1068-0652 and SSA-T1068-0652A Front Panel

1 = 10/100/1000BASE-T RJ45 ports	5 = Micro-USB debug port
2 = 10GBASE-X SFP+ ports	6 = OFFLINE/RESTART button
3 = PoE mode button	7 = COM port
4 = System LEDs	

Each of the 10/100/1000BASE-T ports, which support PoE (IEEE 802.3af and 802.3at), can operate in either half-duplex or full-duplex mode which can be determined by either auto-negotiation or manual configuration. The SSA-T1068-0652 and SSA-T1068-0652A can provide PoE power for powered devices on all 48 RJ45 ports simultaneously.

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

SSA-G1018-0652

The SSA-G1018-0652 has forty-eight 1000BASE-T SFP ports and four 10GBASE-X SFP+ ports, as shown in Figure 3.

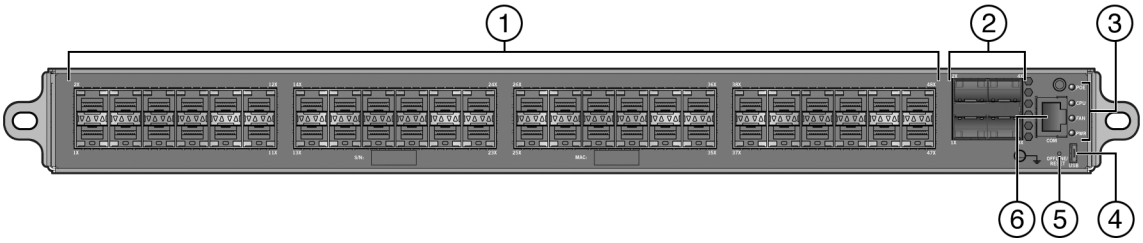


Figure 3: SSA-T1068-0652A Front Panel

1 = 1000BASE-T SFP ports	4 = Micro-USB debug port
2 = 10GBASE-X SFP+ ports	5 = OFFLINE/RESTART button
3 = System LEDs	6 = COM port

Each of the 1000BASE-T ports can operate in either half-duplex or full-duplex mode which can be determined by either auto-negotiation or manual configuration.

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

AC Power Supplies

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

- SSA-AC-PS-625W
- SSA-AC-PS-1000W

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 Specifications on page 56. No additional adjustments are necessary. For installations in North America, a 15 Amp power cord is required. See Powering Up the SSA on page 27 for more details.

You can install up to two power supplies in the rear of the SSA chassis. Two operational modes of power supply redundancy are supported:

- Redundant mode, in which the power made available to the system is equal to the maximum output of the lowest rated supply. If you choose to use two power supplies in a redundant power configuration, system power redundancy is guaranteed if one supply is lost. Power supplies are hot swappable in this operational mode.
- Non-redundant, or additive, mode, in which the combined output of both supplies is made available to the system. If you choose to use two power supplies in a non-redundant power configuration, the loss of a single supply may result in a system reset. Power supplies are not hot swappable in this operational mode.

The following power configurations are supported:

- Redundant
  - 625 watts (2 x 625)
  - 625 watts (625 + 1000)

  - 1000 watts (2 x 1000)
- Non-redundant (additive)
- 625 watts (1 x 625)
- 1000 watts (1 x 1000)
- 1250 watts (2 x 625)
- 1625 watts (1000 + 625)
- 2000 watts (2 x 1000)

For more information, see Powering Up the SSA on page 27.

For information about the power supply LEDs, see Table 13 on page 41.

Fans

The SSA uses thirteen individual 12V fans to cool the system. Though the SSA fans are field replaceable, they are not hot swappable. For information on how to replace SSA fans, see Replacing the SSA Fans on page 43.

Micro-USB Port

The micro-USB port is intended for debug purposes only.

Power over Ethernet

Three SSA models—SSA-T4068-0252, SSA-T1068-0652, and SSA-T1068-0652A—support both IEEE 802.3af and 802.3at Power over Ethernet (PoE) standards, with up to 1500 watts available for PoE. Depending on your power supply configuration, the SSA-T4068-0252, SSA-T1068-0652, and SSA-T1068-0652A can supply PoE power to powered devices on all 48 RJ45 ports simultaneously.

The red PoE button switches the RJ45 port LEDs to report PoE information. In PoE mode, the PWR LED changes to indicate the power supplies installed in the SSA. For more information, see Table 10 on page 38.

For an overview of PoE, see Power over Ethernet (PoE) for S-Series Devices on page 63.

Management

You can manage the SSA 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 to the Network on page 29.

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*.

Note

To configure virtual switch bonding, it might be necessary to purchase and apply an additional license on each chassis.

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)
- 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.

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

Unpack the SSA as follows:

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

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

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

Table 3: Contents of the SSA 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 for any signs of physical damage.

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

Mounting the SSA

You can install an SSA in any of three ways:

- On a desktop. For instructions, see Installing the SSA on a Desktop on page 24.
- On a wall, using the optional SSA-WALL-MOUNT kit. For instructions, see Installing the SSA-WALL-MOUNT Kit on page 80.
- In the following types of equipment racks:
  - Four-post, 48.26-centimeter (19-inch) rack (recommended) — See Rack Mounting the SSA in a Four-post Rack on page 16
  - Two-post rack (7-inch posts) — See Rack Mounting the SSA in a Two-post Rack (7-inch Posts) on page 19
  - Two-post rack (3-inch posts) — See Rack Mounting the SSA in a Two-post Rack (3-inch Posts) on page 22

Caution

If you are installing an SSA in a four-post or two-post rack, you must use the SSA rail kit to install the SSA in the rack. Do not attempt to secure the SSA directly to the rack using the small front mounting ears.

Precaución: Si instala un SSA en un estante de cuatro o de dos postes, debe usar el kit de rieles de SSA para realizar la instalación. No intente asegurar el SSA directamente en el estante usando las lengüetas de montaje delanteras pequeñas.

In each of the three rack types, you can, optionally, secure the rear of the SSA to tabs on the rails. For more information about securing the rear of the SSA, see Securing the SSA to the Rear of the Rails on page 23.

If you plan to cable your SSA with SFP or SFP+ pluggable transceivers, you may need to have 7.5 to 10 cm (3 to 4 in.) of clearance at the front of the SSA.

The installation site must be within reach of the network cabling and 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.

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.

Rack Mounting the SSA in a Four-post Rack

For a four-post rack installation, the SSA rail kit requires that the front to back spacing of the rack posts be within the range of 24.5 to 32.5 inches (62.3 to 82.5 cm).

In a four-post rack, the SSA is flush-mounted on the rails supplied in the SSA rail kit and secured to the front posts of the rack. You can optionally secure the rear of the SSA to the rails.

Note

If you plan to secure the rear of the SSA to the rails, you must remove the screw in the left rear corner of the SSA before you install the SSA in the rack. For more information, see Securing the SSA to the Rear of the Rails on page 23.

The SSA rail kit *does not* include screws for attaching the rails or the SSA to the rack posts.

Caution

If you are installing an SSA in a four-post or two-post rack, you must use the SSA rail kit to install the SSA in the rack. Do not attempt to secure the SSA directly to the rack using the small front mounting ears.

Precaución: Si instala un SSA en un estante de cuatro o de dos postes, debe usar el kit de rieles de SSA para realizar la instalación. No intente asegurar el SSA directamente en el estante usando las lengüetas de montaje delanteras pequeñas.

To install the SSA in a four-post rack, follow these steps.

1 Extend the right and left rails to fit the outside dimensions of the rack posts.

   The rails in the SSA rail kit are shipped with the rail extensions attached. If the rails do not slide easily, loosen the screws that secure the rail extensions to the main rails.

2 Position the right and left rails, which are labeled on the inside of each rail, in the rack with the bottom lip of the rail facing into the rack.

3 Attach each rail to the rack posts with two screws in the front and two screws in the back in the top and bottom screw holes.

See Figure 4. The SSA rail kit *does not* include screws for attaching the rails to the rack posts.

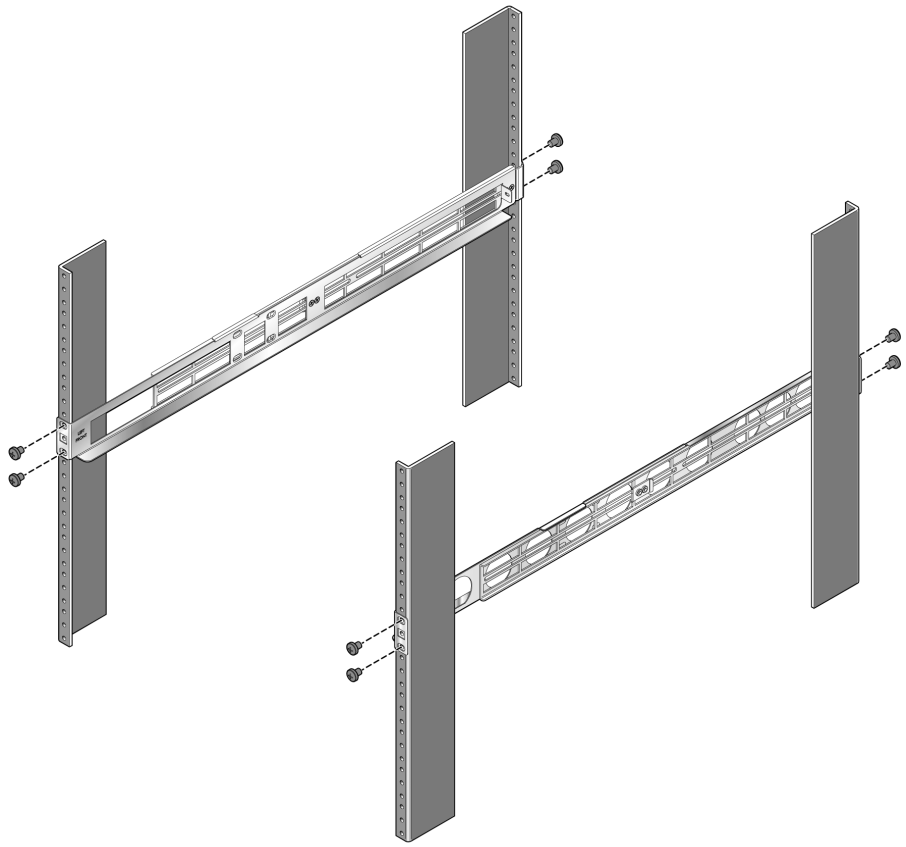


Figure 4: Attaching the Rails to a Four-post Rack

4 If necessary, tighten the screws that secure the rail extensions to the rails.

These screws must be tight before you place the SSA in the rails.

5 From the front of the rack, slide the SSA onto the rails until the mounting ears of the SSA are against the front posts of the rack.

6 Secure the front of the SSA to the rack by screwing the customer-supplied rack screws in the mounting ears on the right and left front of the SSA.

See Figure 5.

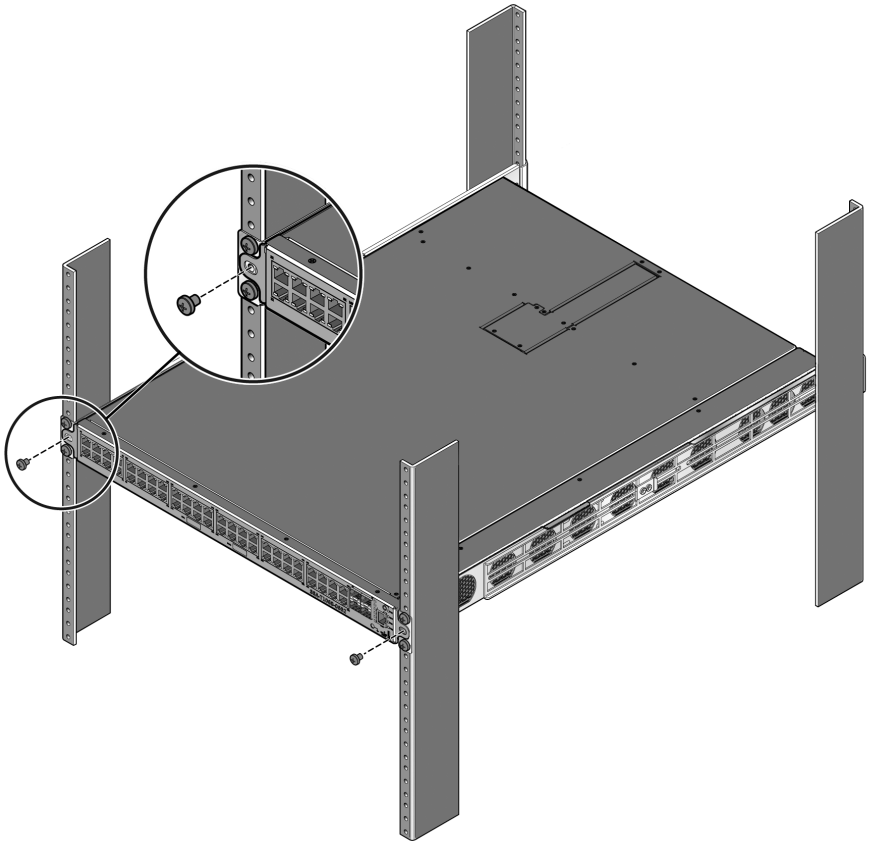


Figure 5: Securing the SSA in a Four-post Rack

7 Optional: Secure the rear of the SSA to the rails.

See Securing the SSA to the Rear of the Rails on page 23.

You can now unpack and install the SSA power supplies. See Unpacking the Power Supplies on page 25.

Rack Mounting the SSA in a Two-post Rack (7-inch Posts)

In a two-post rack with 7-inch posts, the SSA is flush-mounted in the rack and secured in the SSA rails to the front and rear of the posts. In this procedure, you need to modify the rails by removing the rail extensions and attaching the mounting brackets, which are supplied in the rail kit.

Caution

If you are installing an SSA in a four-post or two-post rack, you must use the SSA rail kit to install the SSA in the rack. Do not attempt to secure the SSA directly to the rack using the small front mounting ears.

Precaución: Si instala un SSA en un estante de cuatro o de dos postes, debe usar el kit de rieles de SSA para realizar la instalación. No intente asegurar el SSA directamente en el estante usando las lengüetas de montaje delanteras pequeñas.

Note

If you plan to secure the rear of the SSA to the rails, you must remove the screw in the left rear corner of the SSA BEFORE you install the SSA in the rack. For more information, see Securing the SSA to the Rear of the Rails on page 23.

The SSA rail kit *does not* include screws for attaching the mounting brackets to the rack posts.

To rack mount the SSA in a two-post rack with 7-inch posts, follow these steps:

1 Remove the extensions from each rail by unscrewing the rail clamps.

See Figure 6.

The rail extensions and rail clamps are not used to install an SSA in a two-post rack. Save the eight 6-32 screws to be used in the next step.

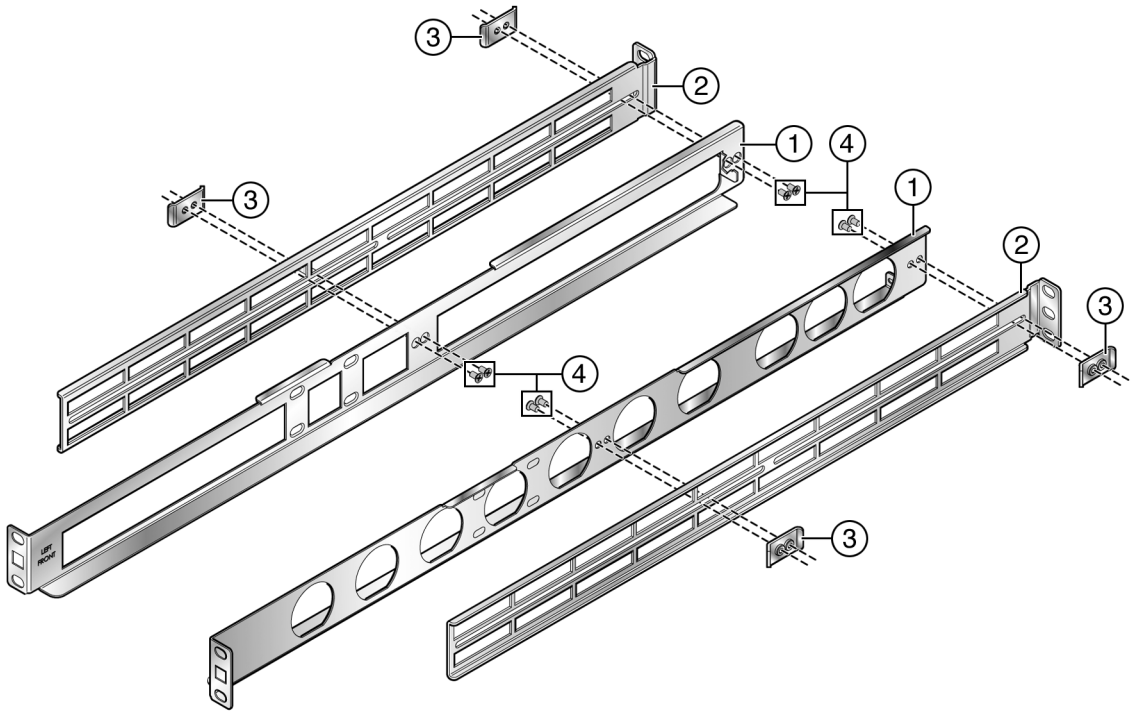


Figure 6: Removing the Rail Extensions

1 = Rails (used in this procedure)	3 = Rail clamps (not used in this procedure)
2 = Rail extensions (not used in this procedure)	4 = 6-32 screws (used in this procedure)

2 Attach a mounting bracket, included in the SSA rail kit, to the outside of each rail using the 6-32 screws you removed in step 1.

See Figure 7.

Use four 6-32 screws to attach each mounting bracket. Leave the 6-32 screws loose to position the mounting brackets properly against the rack posts.

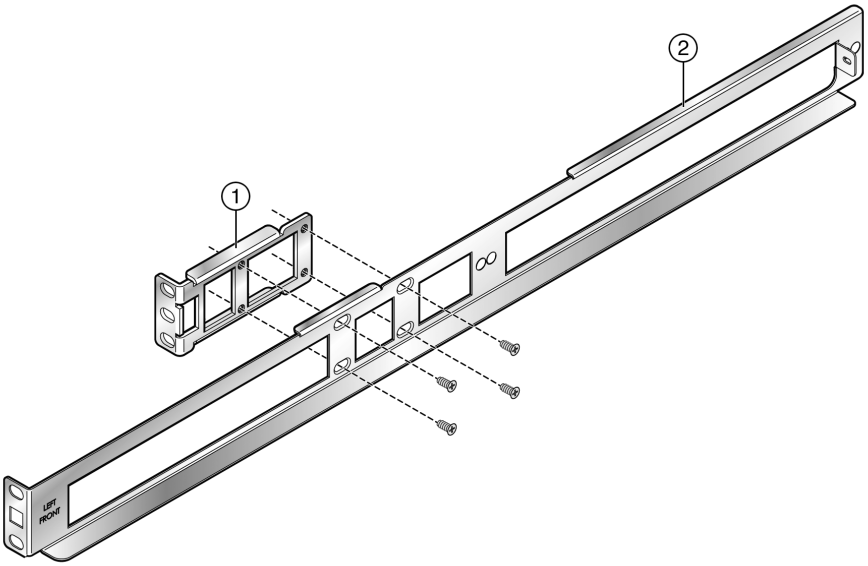


Figure 7: Attaching the Mounting Brackets to the Rails (Left Rail Example)

1 = Mounting bracket	2 = Rail

3 Position the right and left rails, which are labeled on the inside of each rail, in the rack with the bottom lip of the rail facing into the rack.

The front mounting ears of the rails should be flush against the front screw holes of the rack posts. The mounting brackets should be flush against the rear screw holes of the rack posts. See Figure 8.

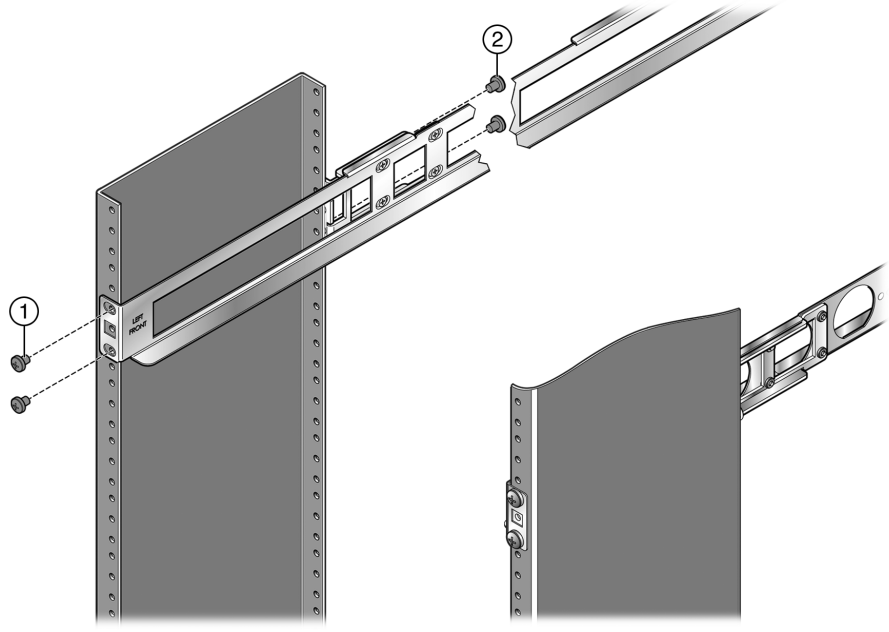


Figure 8: Positioning and Attaching the Rails to the 7-inch Posts

1 = Securing the left rail to the front of the 7-inch post	2 = Securing the left mounting bracket to the rear of the 7-inch post

4 Attach the rails to the rack posts.

See Figure 8.

a Secure the front of the rail to the front of the rack post with customer-supplied screws in the top and bottom screw holes.

b Secure the mounting bracket to the back of the rack post with customer-supplied screws in the top and bottom screw holes.

The SSA rail kit *does not* include screws for attaching the rails and mounting brackets to the rack posts.

5 Tighten the 6-32 screws that secure the mounting brackets to the rails.

6 Slide the SSA onto the rails until the front of the SSA is against the front of the rack posts.

7 Secure the front of the SSA to the rack by screwing the customer-supplied rack screws in the mounting ears on the right and left front of the SSA.

8 Optional: Secure the rear of the SSA to the rails.

See Securing the SSA to the Rear of the Rails on page 23.

You can now unpack and install the SSA power supplies. See Unpacking the Power Supplies on page 25.

Rack Mounting the SSA in a Two-post Rack (3-inch Posts)

Caution

If you are installing an SSA in a four-post or two-post rack, you must use the SSA rail kit to install the SSA in the rack. Do not attempt to secure the SSA directly to the rack using the small front mounting ears.

Precaución: Si instala un SSA en un estante de cuatro o de dos postes, debe usar el kit de rieles de SSA para realizar la instalación. No intente asegurar el SSA directamente en el estante usando las lengüetas de montaje delanteras pequeñas.

In a two-post rack with 3-inch posts, three mid-mount positions are possible. See Figure 9 for possible mounting positions, as shown on the right post. We recommend the top mid-mount position as the best of the three options.

Note

If you plan to secure the rear of the SSA to the rails, you must remove the screw in the left rear corner of the SSA before you install the SSA in the rack. For more information, see Securing the SSA to the Rear of the Rails on page 23.

The SSA rail kit *does not* include screws for attaching the rails or the SSA to the rack posts.

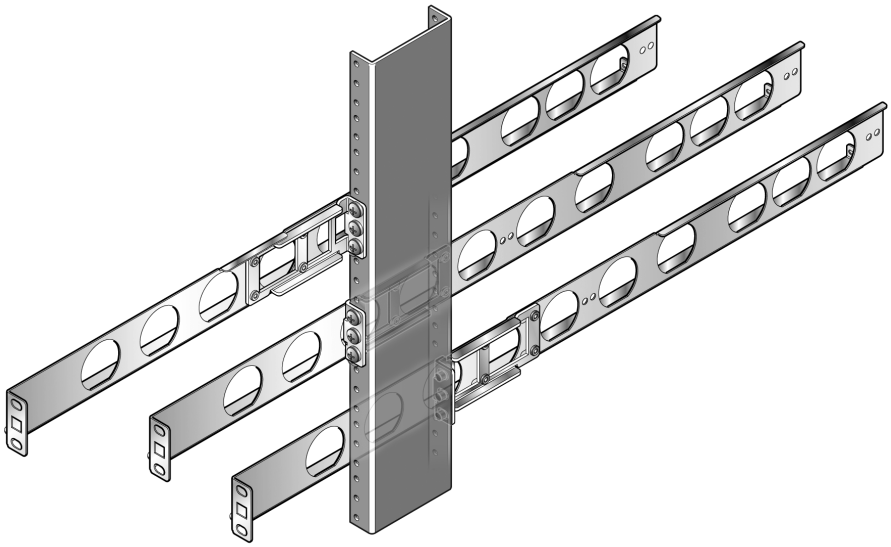


Figure 9: Installation Positions in a Two-post Rack (3-inch Posts)

To rack mount the SSA in a two-post rack with 3-inch posts, follow these steps:

1 Remove the extensions from each rack rail by unscrewing the rail clamps.

See Figure 6 on page 20.

2 Using the eight 6-32 screws removed in step 1, attach the mounting bracket to each rail (four screws for each mounting bracket) in the appropriate orientation for the mounting option that you have chosen.

See Figure 9 on page 23.

3 Secure the mounting brackets to the rack posts with three customer-supplied screws in each mounting bracket.

Depending on the mounting option, you must secure the mounting brackets to either the front or back of the rack posts. See Figure 9 on page 23.

The SSA rail kit *does not* include screws for attaching the mounting brackets to the rack posts.

4 Snap the 10-32 cage nuts, included in the SSA rail kit, into the square screw holes on the front mounting ears of the rails.

5 Slide the SSA onto the rails until the front of the SSA is against the mounting ears of the rails.

6 Secure the front of the SSA to the rails by screwing the 10-32 screws, included in the SSA rail kit, into the mounting ears on the right and left front of the SSA.

7 Optional: Secure the rear of the SSA to the rails.

See Securing the SSA to the Rear of the Rails on page 23.

You can now unpack and install the SSA power supplies. See Unpacking the Power Supplies on page 25.

Securing the SSA to the Rear of the Rails

The optional procedure of securing the SSA to the rear of the SSA rails applies to all rack installation scenarios (four-post rack, 7-inch two-post rack, and 3-inch two-post rack). Securing the rear of the SSA is recommended only if you are shipping the rack in which the SSA is installed.

- If you plan to secure the left rear corner of the SSA, you must remove the screw from the left rear corner of the SSA before installing the SSA in the rack.

  See Figure 10.

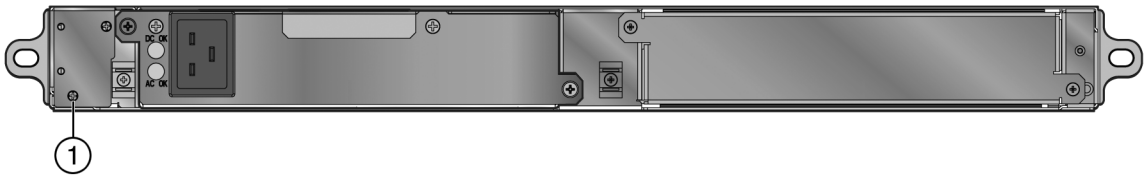


Figure 10: Screw to Remove if You Plan to Secure the Left Rear of the SSA

1 = Remove this screw before installing the SSA in the rack

- To secure the rear of the SSA to the rails, screw the 2-56 screws, included in the SSA rail kit, into the screw tabs on the right and left rail.

  See Figure 11.

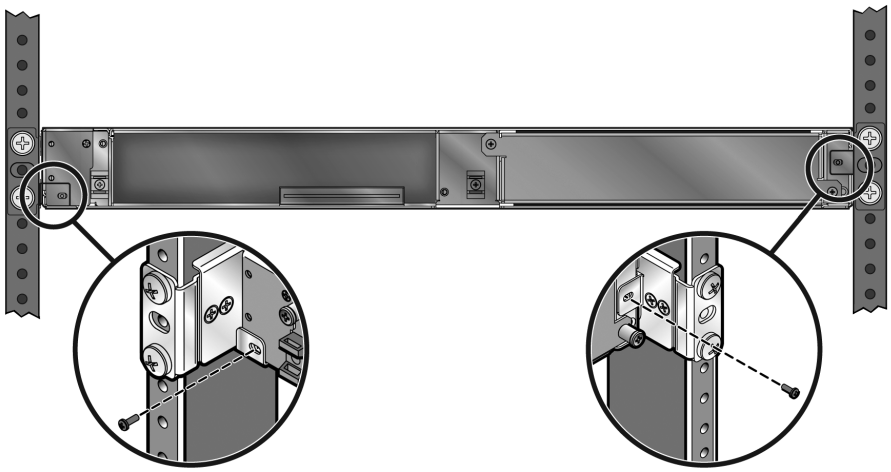


Figure 11: Securing the Rear of the SSA (Four-post Rack Example)

Installing the SSA on a Desktop

For desktop installation, you must attach the adhesive rubber feet to the bottom of the SSA.

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

1 Place the SSA 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.
4 Turn the SSA rightside up.

You can now unpack and install the SSA power supplies. See Unpacking the Power Supplies on page 25.

Unpacking the Power Supplies

The SSA-AC-PS-625W and SSA-AC-PS-1000W power supply modules are shipped in boxes separate from the SSA.

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 4.

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 4: Contents of SSA Power Supply Carton

Item	Quantity
Power supply (SSA-AC-PS-625W or SSA-AC-PS-1000W)	1
For USA shipments: NEMA Power Cord 6-20, C19, R/A, SHLD Type of power cord is dependent on country of installation.	1
NOTICE Card	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 ships without a coverplate for the PS1 bay.

Note

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

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

1 Before handling a power supply, put on the antistatic wrist strap and attach it to the ground receptacle on the front of the SSA.

Refer to the instructions in the anti-static wrist strap package. See Figure 12 for the location of the ground receptacle.

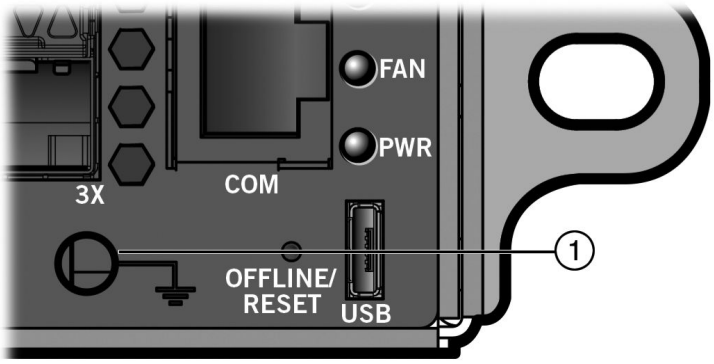


Figure 12: SSA Ground Receptacle

1 = Ground receptacle

2 Visually verify that the power supply airflow direction agrees with the airflow direction of the installed fan module.

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 is completely inside the bay.

Pull on the power supply handle to ensure that the power supply is firmly in place. See Figure 13.

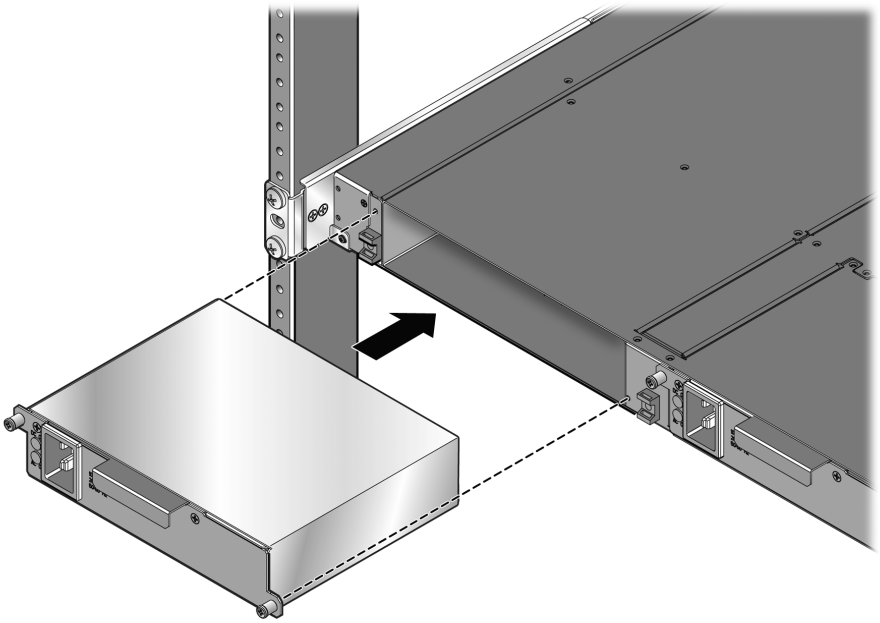


Figure 13: Installing a Power Supply

5 If you are installing a second power supply, remove the coverplate from the right power supply bay by unscrewing the screws that attach the coverplate to the SSA.

Keep the coverplate in case you need to remove the power supply.

6 Repeat step 2 on page 26 through step 4 to install the power supply in the right power supply bay.

7 Tighten the captive screws of the power supplies.

Powering Up the SSA

To connect the SSA 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 as shown in Figure 14.

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.

3 Optional: Secure each power cord to the SSA by tying the power cords to the plastic brackets, adjacent to the power supply bays, with customer-supplied zip ties.

See Figure 14.

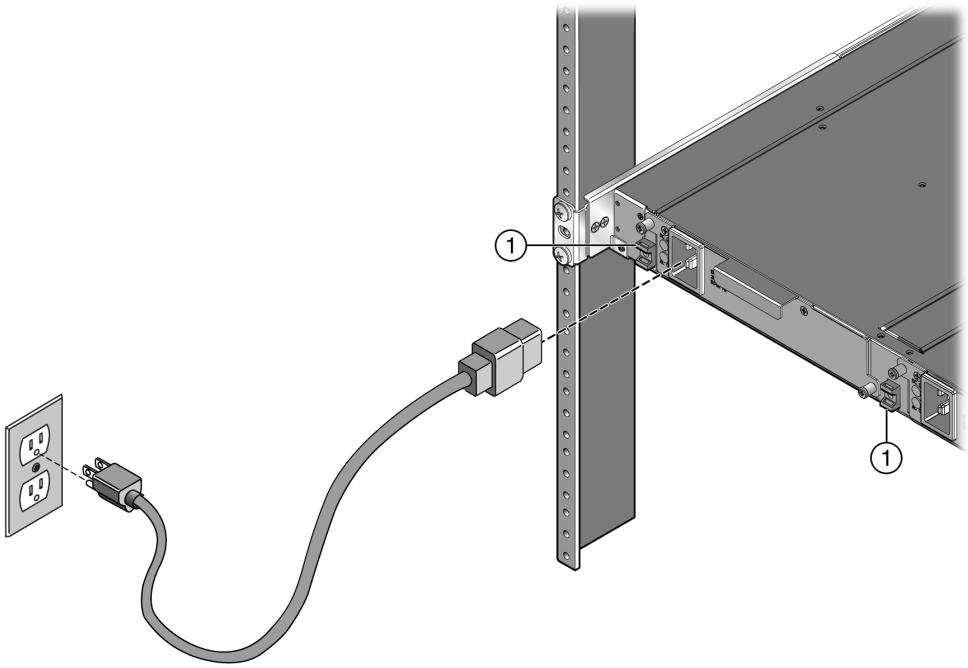


Figure 14: Connecting Power to the SSA

1 = Plastic brackets for securing AC power cords to the SSA

The PWR LED, located on the front panel, turns ON (green) and the CPU LED turns red until the SSA completes its initialization.

When the initialization process is successful, the CPU LED turns green. If the CPU LED does not turn green, refer to Troubleshooting on page 36.

Removing a Power Supply

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

1 Before handling a power supply, put on the antistatic wrist strap and attach it to the ground receptacle on the front of the SSA.

Refer to the instructions in the anti-static wrist strap package. See Figure 15 for the location of the ground receptacle.

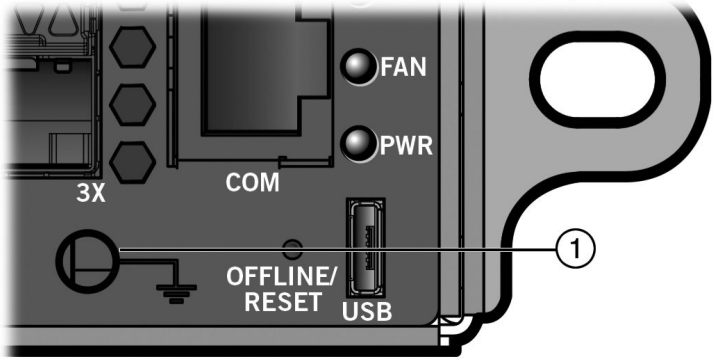


Figure 15: SSA Ground Receptacle

1 = Ground receptacle

2 Unplug the associated power cord from the AC outlet.
3 Remove the zip tie, if present, that secures the associated power cord to the SSA.
4 Unplug the associated power cord from the AC inlet.
5 Unscrew the captive screws to release the power supply from the SSA.
6 Remove the power supply by grasping the handle and pulling it straight out of the SSA.
7 If you are not immediately installing another power supply, fasten a coverplate over the empty 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.

Connecting Your SSA to the Network

This section provides the procedures for connecting Category 5 unshielded twisted pair (UTP) segments or SFP and SFP+ pluggable transceivers from the network or other devices to the SSA.

Note

If the SSA 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 5 UTP Ethernet Cables to the RJ45 Ports

The fixed RJ45 front panel connections of the SSA-T4068-0252, SSA-T1068-0652, and SSA-T1068-0652A are 10/100/1000 Mbps ports. They have internal crossovers and support automatic-polarity sensing which 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-T4068-0252, SSA-T1068-0652, and SSA-T1068-0652A support Category 5 Unshielded Twisted Pair (UTP) cabling with an impedance between 85 and 111 ohms. You can use Category 3 cable only for 10 Mbps connections.

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 SSA RJ45 port connector.
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 5 UTP with an impedance between 85 and 111 ohms.

      If the port is to operate at 100 Mbps or 1000Mbps, you must use Category 5 cabling.

   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 RJ45 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 36 for details.
4. Repeat step 1 on page 29 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 ports.

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 30
- Installing a Pluggable Transceiver on page 31
- Removing a Pluggable Transceiver on page 31

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. 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, 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.

Refer to the instructions in the anti-static wrist strap package. See Figure 16 for the location of the ground receptacle.

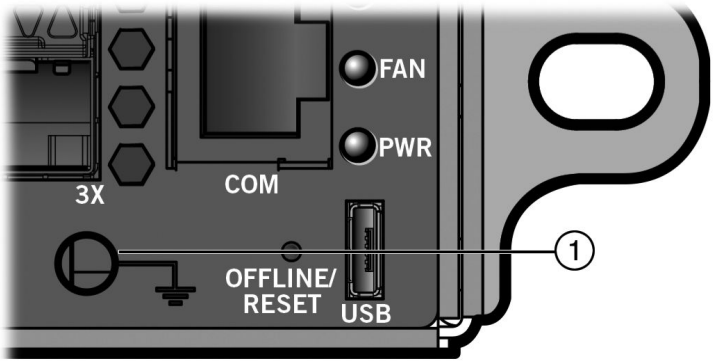


Figure 16: SSA Switch Ground Receptacle

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, 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 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. 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, 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.
Refer to the instructions in the anti-static wrist strap package. See Figure 16 on page 31 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 ports 49 and 50 on SSA 1 to ports 49 and 50 on SSA 2.

Connecting to a Local Management Console

Your SSA 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 32
- Connecting to a PC or Laptop on page 32
- Connecting to a VT Series Terminal on page 33
- Adapter Wiring and Signal Assignments on page 33

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 and a PC or a VT series terminal:

- UTP cable with RJ45 connectors (supplied with the SSA)
- RJ45-to-DB9 female adapter (supplied with the SSA)
- 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, follow these steps:

1 Connect the RJ45 connector at one end of the cable to the COM port on the SSA.
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 34, using the following settings:

Table 5: 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 34 for further information.

Connecting to a VT Series Terminal

To connect a VT Series terminal to the COM port on the SSA, 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.
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 6.

Table 6: 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 34 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 7: COM Port Adapter Wiring and Signal Diagram

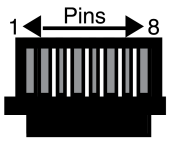
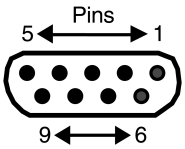
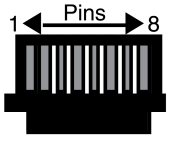
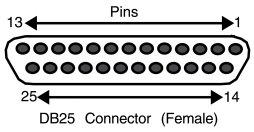
RJ45		DB9	
Pin	Conductor	Pin	Signal
1	Blue	2	Receive (RX)
4	Red	3	Transmit (TX)
5	Green	5	Ground (GRD)
2	Orange	7	Request to Send (RTS)
6	Yellow	8	Clear to Send (CTS)
 RJ45 Connector (Female)		 DB9 Connector (Female)	

Table 8: 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 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 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 32.

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 prompt appear as shown in step 1 on page 35.

The SSA 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 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, to replace power supplies and fans, and to shut down the equipment.

LEDs

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

Port LEDs

On the SSA, you can view the receive and transmit activity on the RX and TX LEDs for the RJ45, SFP, and SFP+ ports. See Figure 17 below and Figure 18 on page 37.

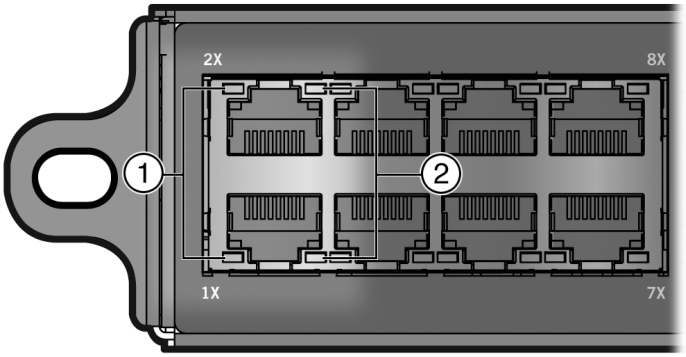


Figure 17: RJ45 Port LEDs

1 = RX LED	2 = TX LED

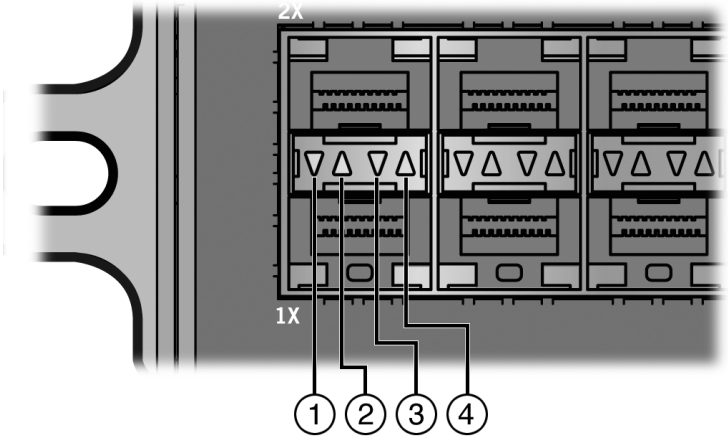


Figure 18: SFP and SFP+ Port LEDS

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 18 on page 37 shows SFP ports. The LEDs are the same for both SFP and SFP+ ports.

Table 9 describes the LED indications for the RX and TX LEDs for the RJ45, SFP, and SFP+ ports and provides recommended actions.

Table 9: 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.

Table 10 describes the LED indications for the RX and TX LEDs when the RJ45 ports are in PoE mode. You can switch the RJ45 ports between PoE mode and RX/TX mode by pressing the red POE button in the upper right corner of the SSA. The POE LED, described in Table 11 on page 39, indicates whether the RJ45 port LEDs are in PoE mode or RX/TX mode.

Table 10: RJ45 Port LEDs—PoE Mode

RX LED Color	TX LED Color	State
Green	None	There is a connection to the powered device (PD), and there is 48 VDC at the RJ45 connector.
None	Yellow	Port is off due to overload: attached PD exceeded maximum load.
Yellow	None	Port is off due to PoE power management.
None	None	Port is off for another reason.

System LEDs

Figure 19 shows the system LEDs.

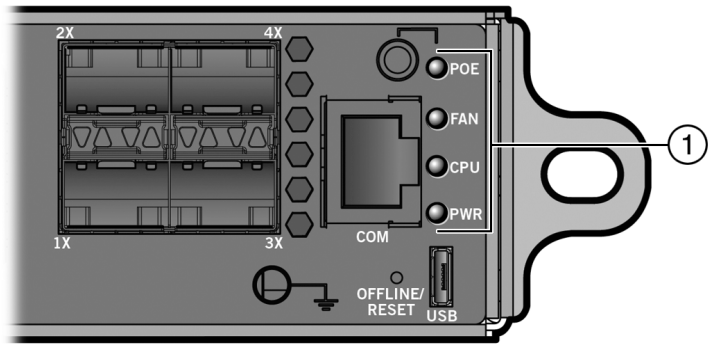


Figure 19: SSA System LEDs

1 = SSA system LEDs

Table 11 describes the LED indications for the system LEDs and provides recommended actions.

Table 11: System LEDs

LED	Color	State	Recommended Action
POE	Green	The RJ45 port LEDs are in PoE mode. See Table 10 on page 38. You can switch to or from PoE mode by pressing the red POE button next to the POE LED. In PoE mode, the PWR LED indicates the numbers and types of power supplies installed.	None
	None	The RJ45 port LEDs are in RX/TX mode. See Table 9 on page 37. You can switch to or from RX/TX mode by pressing the red POE button next to the POE LED.	None
FAN	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 Fans on page 43.
	Red	One or more of the following conditions has occurred: • Temperature is out of range. • The fan controller has failed. • Two or more fans have failed.	Check the CLI to determine the exact condition of the fans. Use the `show system` command. If fans have failed, replace the fans. See Replacing the SSA Fans on page 43.
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 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 reboots.

Table 11: System LEDs (continued)

LED	Color	State	Recommended Action
PWR	Off	The SSA is not receiving power from the power supplies.	Ensure that the power cords are plugged in and 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 power is available at the source. Contact us for technical support.
	Blue	Solid: Indicates, in PoE mode, that two 625W power supplies are installed.	None
	Blue/ Green	Indicates, in PoE mode, that one 625W power supply is installed.	None
	White	Solid: Indicates, in PoE mode, that two 1000W power supplies are installed.	None
	White/ Green	Indicates, in PoE mode, that one 1000W power supply is installed.	None
	Blue/ White	Indicates, in PoE mode, that 625W and 1000W power supplies are installed.	None

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

Table 12 describes the CPU LED when the SSA is in a virtual switch bonding configuration.

Table 12: 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 LEDs

There are two LEDs on both the SSA-AC-PS-625W and SSA-AC-PS-1000W power supplies:

- The DC OK LED indicates the operational status of outgoing power.
- The AC OK LED indicates that incoming AC line voltage is sufficient or has fallen below operational limits.

Table 13 describes the different states of the power supply LEDs.

Table 13: Power Supply LED Status Definitions

LED	LED Color	Status
AC OK	Green	Sufficient AC power supply (influx).
	Off	Power supply malfunctioning.
DC OK	Green	Power supply successfully providing 48 VDC to the system.
	Off	Power supply malfunctioning.

Troubleshooting Checklist

If the SSA is not working properly, refer to Table 14 for a checklist of problems, possible causes, and recommended actions to resolve the problem.

Table 14: Troubleshooting Checklist

Problem	Possible Cause	Recommended Action
All LEDs are off	Loss of power.	Ensure that the SSA was installed properly according to the instructions in Installation on page 13, 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 57 for proper COM port pinouts.
	Corrupt firmware image or hardware fault.	If possible, try to download the image to the SSA again. Refer to Resetting Mode Switches on page 59 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 Resetting Mode Switches on page 59 for instructions on how to set the mode switch to reset the username/password combination to the default values.

Table 14: Troubleshooting Checklist (continued)

Problem	Possible Cause	Recommended Action
Cannot contact the SSA 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 are valid and operating. If the problem persists, contact us for technical support.
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 Fans

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.

The SSA is cooled by thirteen individual 12V fans. If the FAN LED and the output of the CLI `show system` command indicate that a fan has failed, you must replace the failed fan.

The thirteen SSA fans are divided into three groups (see Figure 20):

- Fans F1-F7, which are located on the right side of the SSA. Each F1-F7 fan's connector is adjacent to the fan. See Replacing Fans F1-F7 on page 44.
- Fans F8-F10, which, like fans F1-F7, are located on the side of the SSA. However, fans F8-F10 do not have adjacent connectors—they are located behind fan F7. See Replacing Fans F8-F10 on page 48.
- Fans F11-F13, which are located in the rear of the SSA, between the power supply bays. Like fans F8-F10, fans F11-F13 do not have adjacent connectors. See Replacing Fans F11-F13 on page 50.

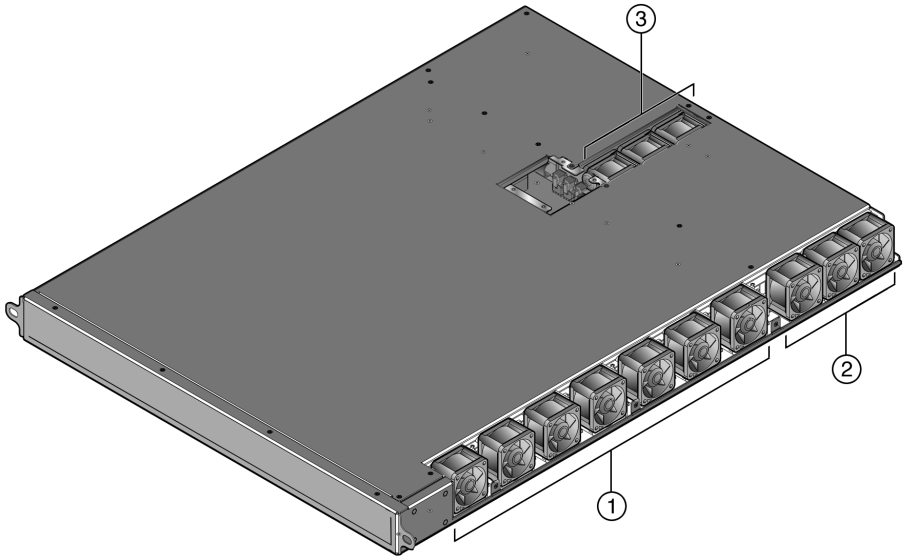


Figure 20: SSA Fan Locations

1 = Fans F1-F7	2 = Fans F8-F10	3= Fans F11-F13

Before replacing any of the SSA fans, you must first power down the SSA and, if installed in an equipment rack, remove the SSA from the rack.

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

Replacing Fans F1-F7

To replace an F1-F7 fan, follow these steps:

1 Put on the ESD wrist strap and attach it to the ground receptacle on the front of the SSA.

2 Remove the side panel from the SSA by unscrewing the eight zinc (silver) screws from the side panel.

See Figure 21.

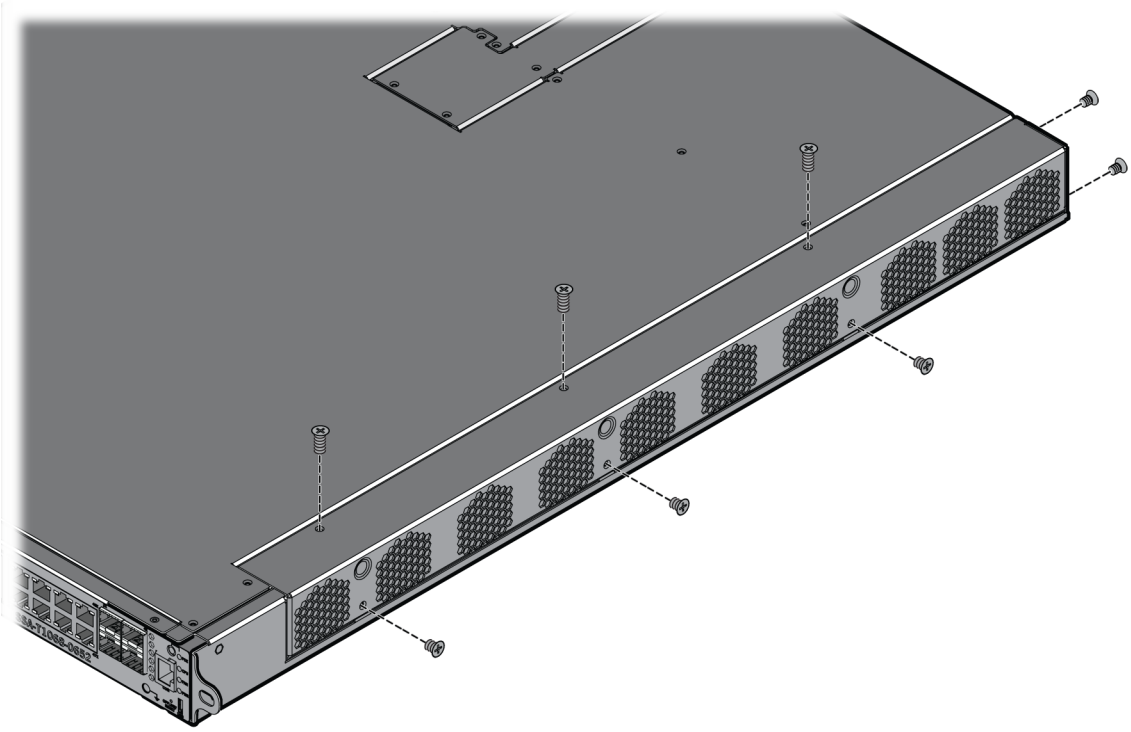


Figure 21: Removing the Side Panel of the SSA

3 Set the side panel upside down to view the label on the inside of the side panel that indicates the position of each fan.

See Figure 22.

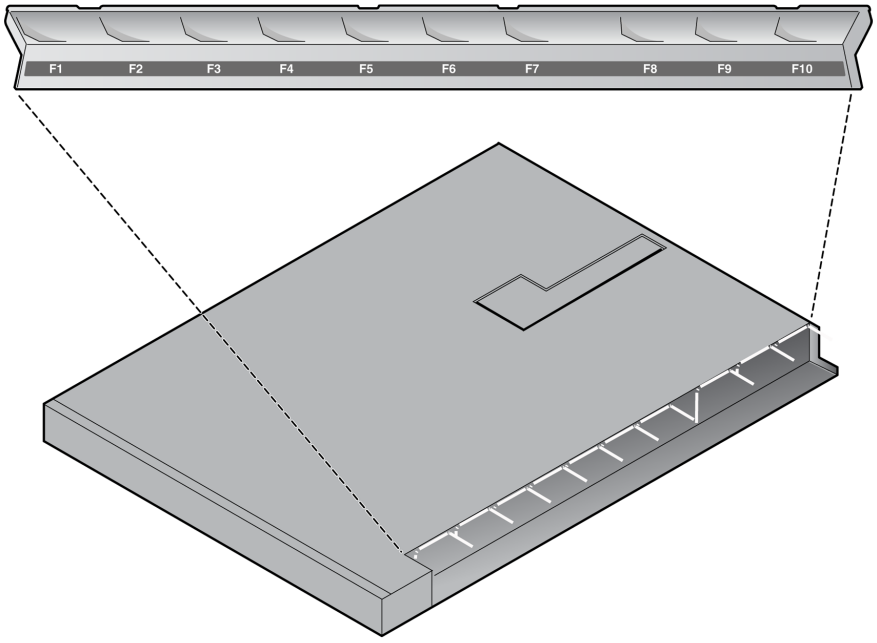


Figure 22: Underside of the SSA Side Panel

4 Remove the failed fan from its position in the SSA.

5 Disconnect the failed fan from its connector, located to the right of the fan.

See Figure 23.

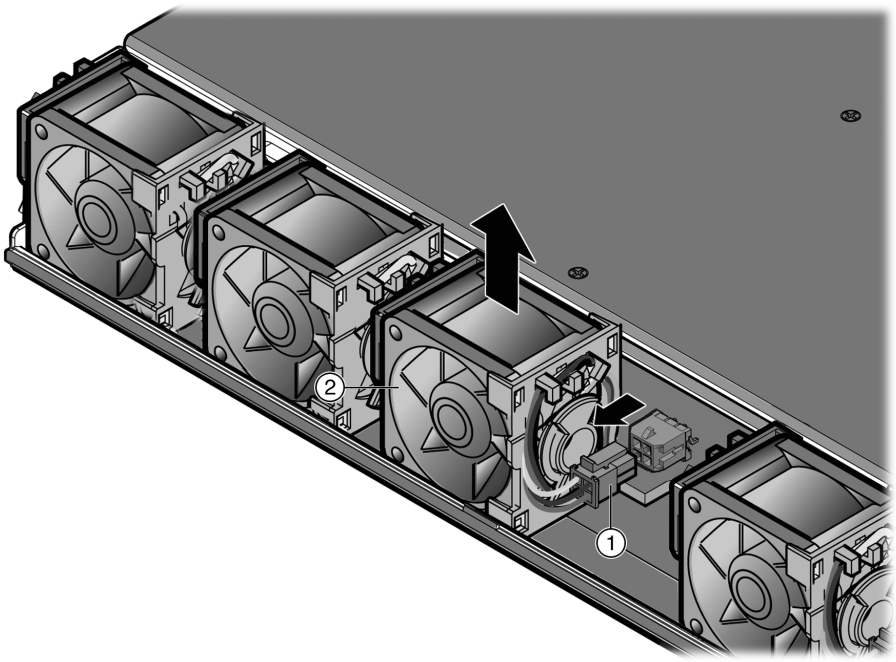


Figure 23: Disconnecting an F1-F7 Fan (Fan F3 Example)

1 = Fan F3 connector	2 = Fan F3

6 To ensure proper airflow, connect the new fan to the chassis connector with the label side of the replacement fan facing into the SSA and the cable clip on the right.

See Figure 24.

Do not remove the cable clip on fans F1-F7. See Figure 25 on page 49, which shows the cable clip.

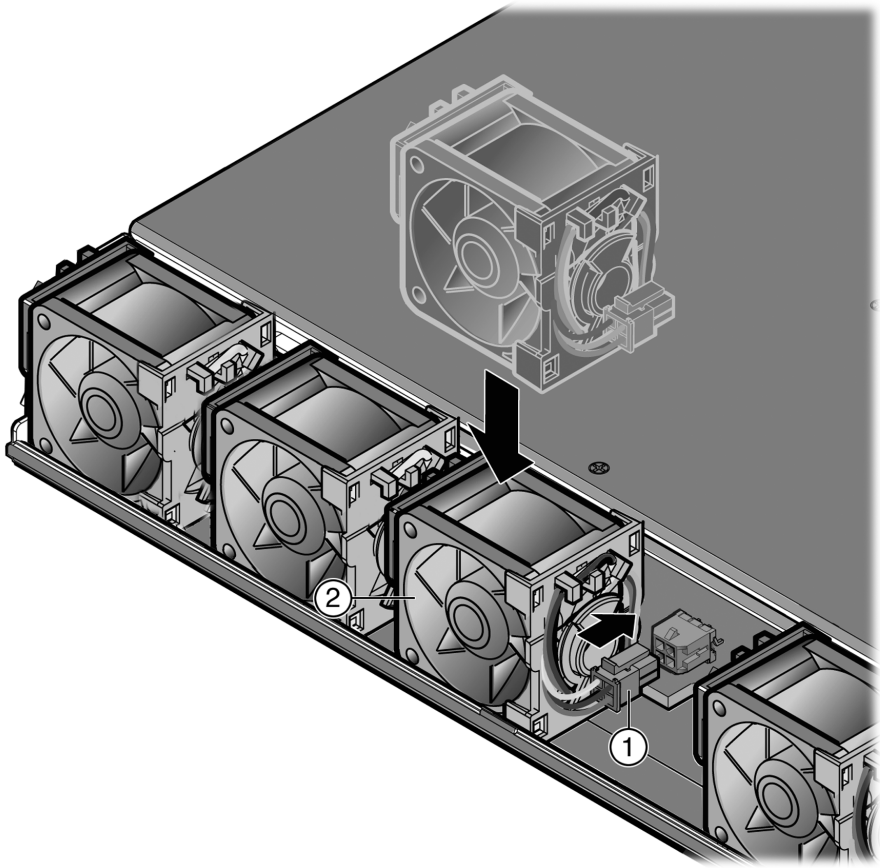


Figure 24: Connecting an F1-F7 Fan (Fan F3 Example)

1 = Fan F3 connector	2 = Fan F3 (label facing into the SSA)

7 Place the fan in the chassis next to the connector.

See Figure 24.

8 Reinstall the side panel of the SSA.

You can now reinstall the SSA in the equipment rack.

Replacing Fans F8-F10

To replace an F8-F10 fan, follow these steps:

1 Put on the ESD wrist strap and attach it to the ground receptacle on the front of the SSA.

2 Remove the side panel from the SSA by unscrewing the eight zinc (silver) screws from the side panel.

See Figure 21 on page 45.

3 Set the side panel upside down to view the label on the inside of the side panel that indicates the position of each fan.

See Figure 22 on page 46.

4 Disconnect and remove fan F7 to access the F8-F10 bank of connectors, located behind fan F7.

See Figure 26 on page 50, which shows the connectors for the F8-F10 fans.

5 Lift the failed fan out of the chassis.

6 Disconnect the failed fan from the appropriate connector.

- F8 connector: left connector
- F9 connector: middle connector
- F10 connector: right connector

7 Unwind the replacement fan's cables.

8 Remove the cable clip from the replacement fan. You may discard the cable clip.

See Figure 25.

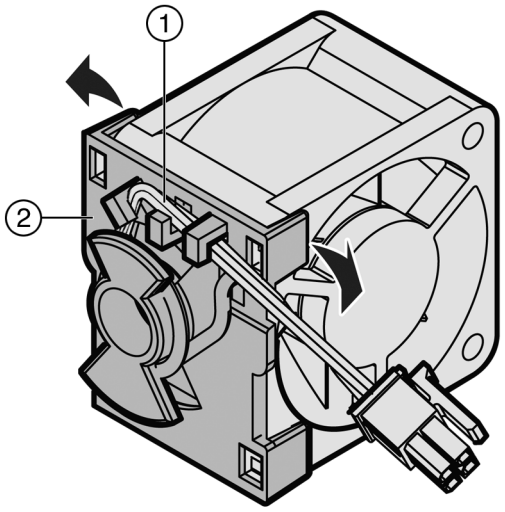


Figure 25: Removing a Fan's Cable Clip

1 = Fan cables	2 = Cable clip

9 With the label side of the replacement fan facing into the SSA and the cable on the left, connect the replacement fan to the chassis connector.

See Figure 26.

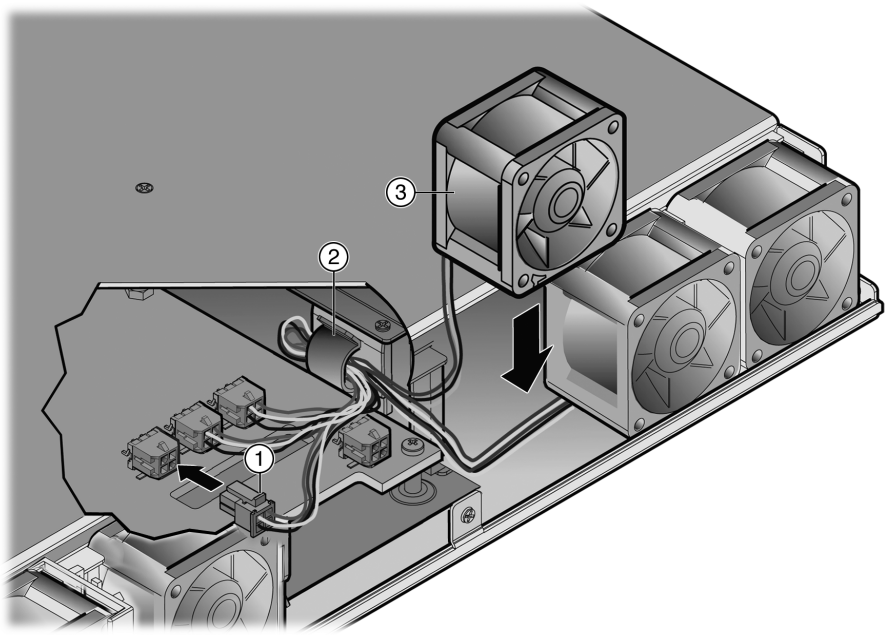


Figure 26: Connecting an F8-F10 Fan (Fan F8 Example)

1 = Fan F8 connector	3 = Fan F8
2 = F8-F10 cable management clip	

10 Feed the excess fan cable into the cable management clip.

See Figure 26 on page 50.

11 Position the cables of the F8-F10 fans on the floor of the SSA.

12 Position the F8-F10 fans on top of their cables.

13 Reinstall fan F7.

14 Reinstall the side panel of the SSA.

You can now reinstall the SSA in the equipment rack.

Replacing Fans F11-F13

To replace an F11-F13 fan, follow these steps:

1 Put on the ESD wrist strap and attach it to the ground receptacle on the front of the SSA.

2 Remove the rear panel of the SSA by unscrewing the four zinc (silver) screws from the rear panel. See Figure 27.

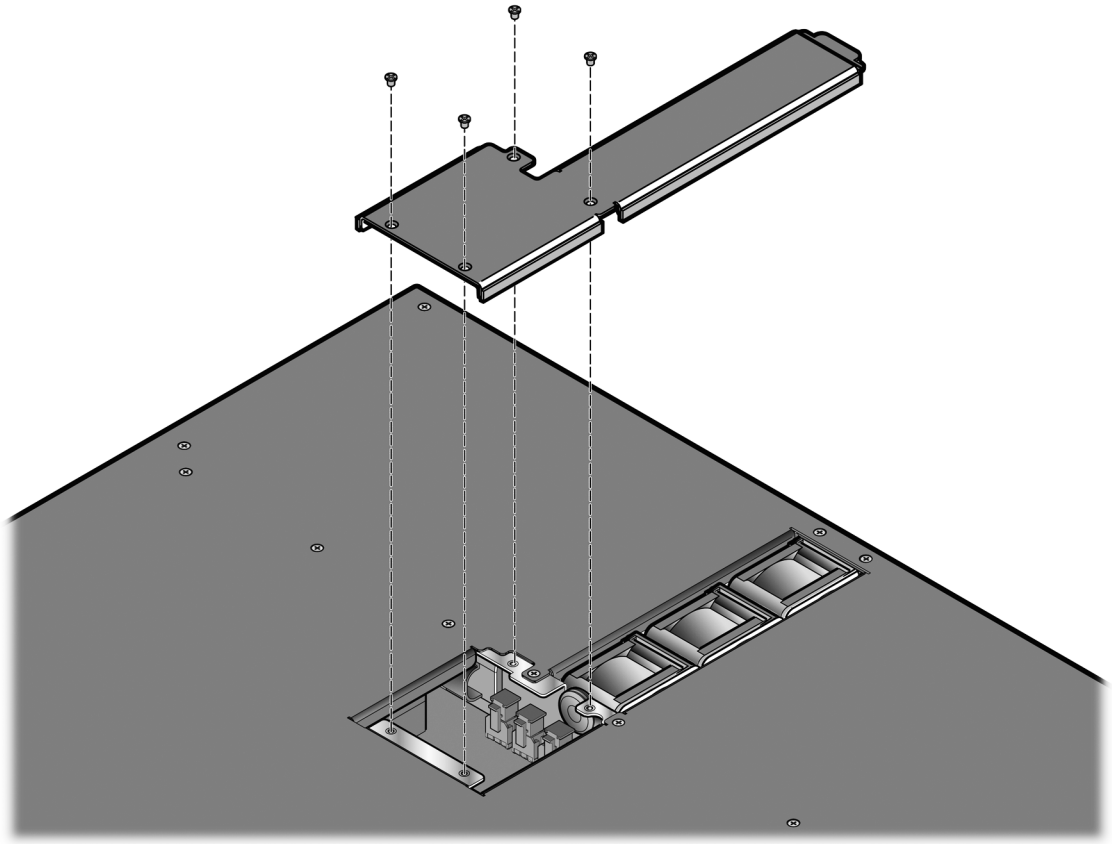


Figure 27: Removing the Rear Panel

3 Set the side panel upside down to view the label on the inside of the rear panel that indicates the position of each fan.

See Figure 28.

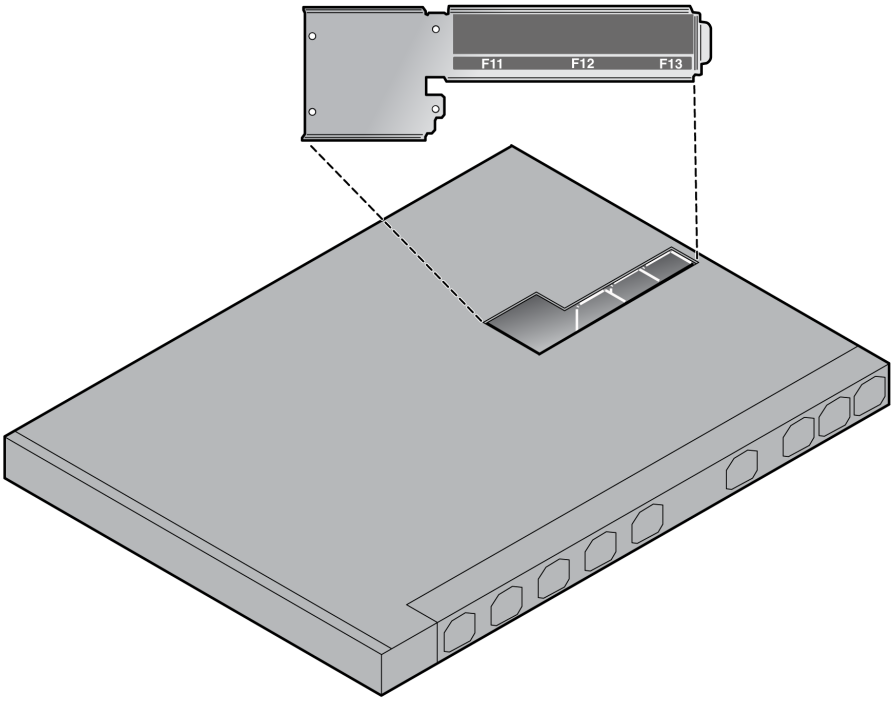


Figure 28: Underside of the SSA Rear Panel

4 Remove the failed fan from the SSA.

a Lift the failed fan out the SSA.

See Figure 29.

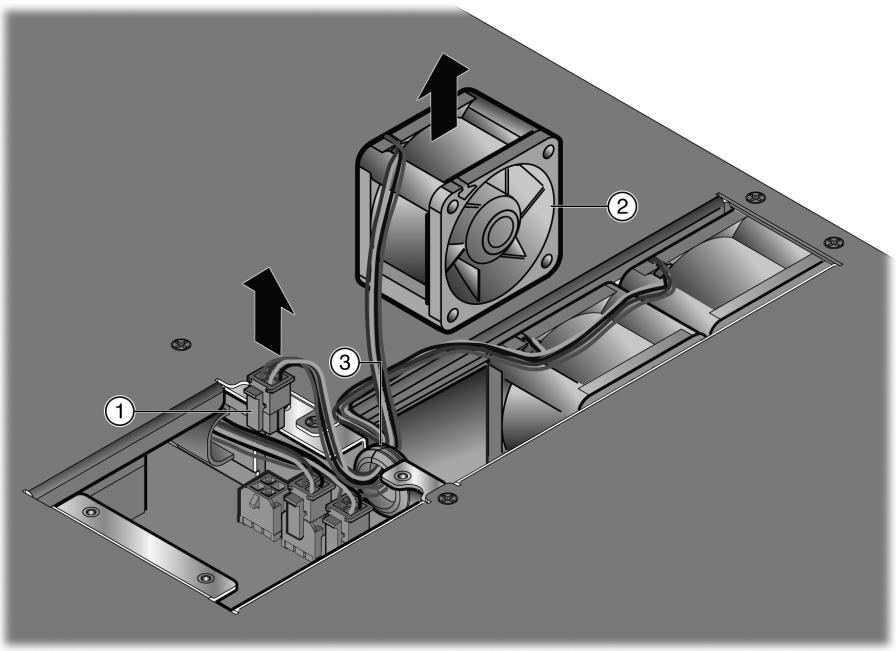


Figure 29: Disconnecting an F11-F13 Fan (Fan F11 Example)

1 = Fan F11 connector	3 = Rubber grommet
2 = Fan F11	

b Remove the failed fan's cables from the rubber grommet.

You might have to lift the rubber grommet out of the chassis to remove the failed fan's cables from the grommet. The grommet is slit.

c Disconnect the fan from the appropriate connector.

The bank of F11-F13 connectors is located next to fan F11, on the other side of the sheet metal wall that separates the power supply bays from the rest of the SSA. If you are facing toward the back of the SSA, the F11-F13 connectors are arranged as follows:

- F11 connector: left connector
- F12 connector: middle connector
- F13 connector: right connector

5 Unwind the replacement fan's cables.

6 Remove the cable clip from the replacement fan.

See Figure 25 on page 49.

You may discard the cable clip.

7 With the label side of the replacement fan facing into the second power supply bay (labeled PS2) and the cable on the left, slip the fan cable into the rubber grommet and connect the cable to the chassis connector.

See Figure 30.

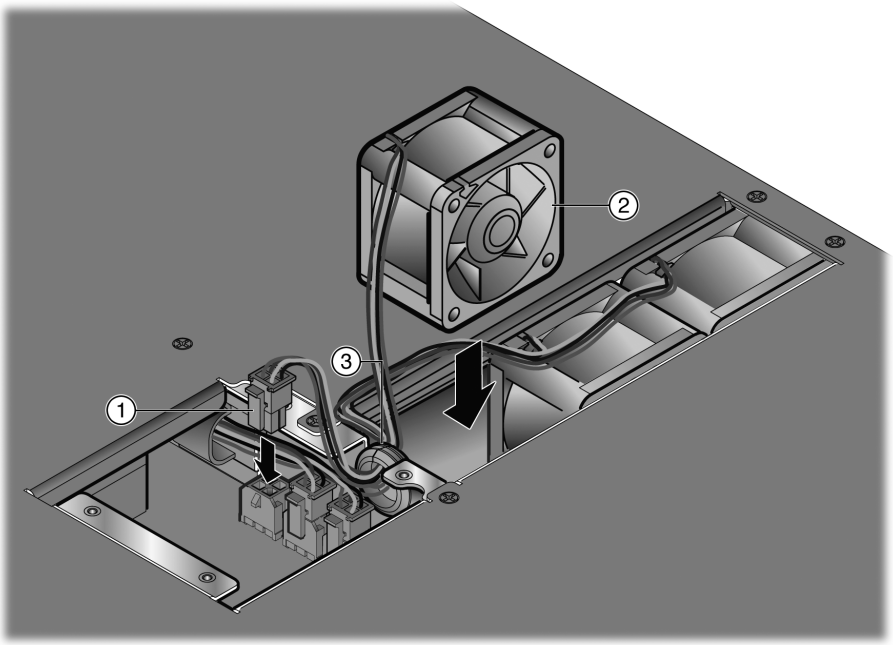


Figure 30: Connecting an F11-F13 Fan (Fan F11 Example)

1 = Fan F11 connector	3 = Rubber grommet
2 = Fan F11	

8 Position the fan in the SSA.

9 Position the cables of the F11-F13 fans on top of the fans, ensuring that the cables are not in a position that would cause the cables to be pinched by the rear panel.

10 Reinstall the rear panel of the SSA.

You can now reinstall the SSA in the equipment rack.

Shutting Down the SSA Using the OFFLINE/RESET Button

You can shut down your SSA using the OFFLINE/RESET button, shown in Figure 31 on page 55, which is slightly recessed behind the SSA faceplate. There are two procedures for shutting down an SSA:

- Recommended Shutdown Procedure on page 55
- Last Resort Shutdown Procedure on page 55 (not recommended)

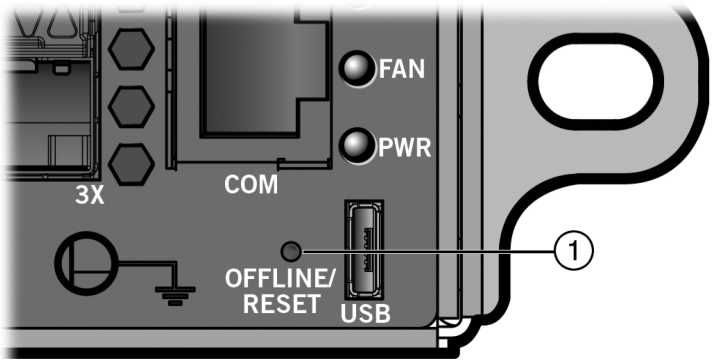


Figure 31: OFFLINE/RESET Button

1 = OFFLINE/RESET button

Recommended Shutdown Procedure

Before shutting off power to the SSA, 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 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.

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 is not recommended except as a last resort, because all processes currently running on the SSA 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 55 to shut down your SSA.

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

A Specifications

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 Specifications

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

Table 15: SSA-T4068-0252 Ports

Ports 1 through 48	48 10/100/1000BASE-T RJ45 ports
Ports 49 through 52	4 10GBASE-X SFP+ ports

Table 16: SSA-T1068-0652 Ports

Ports 1 through 48	48 10/100/1000BASE-T RJ45 ports
Ports 49 through 52	4 10GBASE-X SFP+ ports

Table 17: SSA-T1068-0652A Ports

Ports 1 through 48	48 10/100/1000BASE-T RJ45 ports
Ports 49 through 52	4 10GBASE-X SFP+ ports

Table 18: SSA-G1018-0652 Ports

Ports 1 through 48	48 1000BASE-T SFP ports
Ports 49 through 52	4 10GBASE-X SFP+ ports

Table 19: SSA Chassis: Physical Characteristics

Dimensions	4.44 cm H x 44.70 cm W x 59.43 cm D 1.75” H x 17.60” W x 23.40” D
Approximate Weight	Gross: 11.79 kg (26 lb.)
Mean Time Between Failure (MTBF)	Refer to the Extreme Networks MBTF website

Table 20: SSA-AC-PS-1000W

Input Frequency	50 to 60 Hz
Input (Voltage/Current) at Output Power	100 to 125 VAC: 12 A at 1000 watts 200 to 240 VAC: 7 A at 1200 watts
Approximate Weight	1.41 kg (3.1 lb.)

Table 21: SSA-AC-PS-625W

Input Frequency	50 to 60 Hz
Input (Voltage/Current) at Output Power	100 to 240 VAC: 8 A at 625 watts
Approximate Weight	1.22 kg (2.7 lb.)

Table 22: 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 23 for the COM port pin assignments.

Table 23: 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 meets the safety, electromagnetic compatibility (EMC), and environmental requirements listed in Table 24.

Table 24: 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 89.

B Resetting Mode Switches

Required Tools
Setting 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 32 shows the locations of the mode switches and the switch settings for normal operation. These switches are set at the factory and rarely need to be changed.

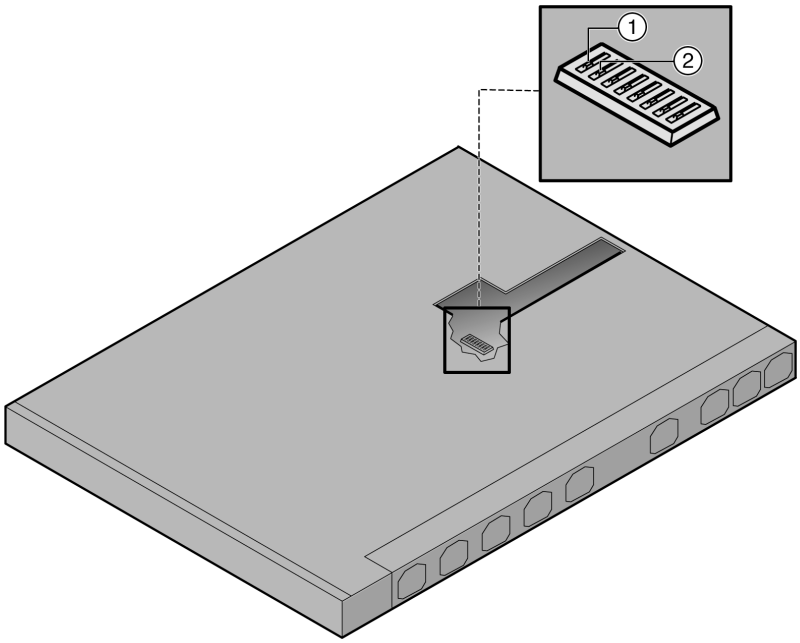


Figure 32: Mode Switch Locations

1 = Switch 8	2 = Switch 7

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 clears Persistent Data on the next power-up of the SSA. All user-entered parameters, such as the IP address, system name, and so on, are reset to the factory default settings. When 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 clears the admin password, and restores the factory default password on the next power-up of the system. Once the SSA 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

Use the following tools to perform the procedure for resetting mode switches:

- ESD wrist strap
- Phillips screwdriver

Caution
Read the appropriate sections to be fully aware of the consequences when changing switch settings.

Only qualified personnel should change switch settings.

Precaución: Si desea modificar la configuración del interruptor, lea las secciones correspondientes para saber cuál será el resultado de hacerlo.

Estas modificaciones a la configuración sólo debe realizarlas personal calificado.

Setting the Mode Switches

To set the mode switches, follow these steps:

1 Power down the SSA.
2 Put on the ESD wrist strap and attach it to the ground receptacle on the front of the SSA.

3 Remove the rear panel of the SSA by unscrewing the four zinc (silver) screws from the rear panel. See Figure 33.

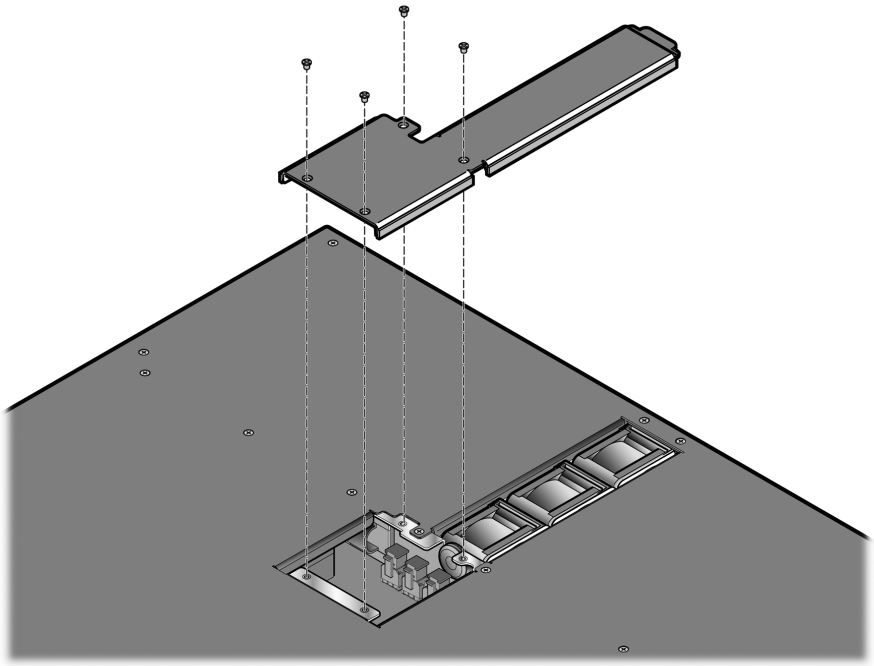


Figure 33: Removing the Rear Panel

4 Reset the appropriate switch.
5 Replace the rear panel of the SSA.

C Power over Ethernet (PoE) for S-Series Devices

This appendix provides an overview of Power over Ethernet (PoE) technology and how it is implemented in relation to the S-Series devices.

Overview of PoE for S-Series Devices

Power over Ethernet (PoE) refers to the ability to provide operational power through the same Ethernet cabling to a PD (powered device) connected to a data network. Modern Ethernet implementations employ differential signals over twisted pair cables. This requires a minimum of two twisted pairs for a single physical link. Both ends of the cable are isolated with transformers blocking any DC or common mode voltage on the signal pair. PoE exploits this fact by using two twisted pairs as the two conductors to supply a direct current. One pair carries the power supply current and the other pair provides a path for the return current. While several proprietary legacy implementations of PoE have been deployed by LAN equipment vendors, in 2003 the IEEE published the IEEE 802.3af-2003 specification, which is part of the 802.3 suite of standards.

The S-Series devices that support PoE are fully compliant with the IEEE 802.3af and 802.3at standards. They support the standard resistor-based detection method, as well as AC disconnect capability.

Each PD has a PDC (Powered Device Classification) that is transmitted to the SSA for power management purposes. Table 25 lists the classifications and the associated power ranges.

Table 25: Powered Device Classifications

Class	Usage	PD Maximum Power Range Usage
0	Default	0.44 to 12.95 Watts
1	Optional	0.44 to 3.84 Watts
2	Optional	3.84 to 6.49 Watts
3	Optional	6.49 to 12.95 Watts
4	Reserved	12.95 to 25.50 watts

Proprietary PD Detection

S-Series devices support a subset of the currently deployed proprietary PoE methods. This includes support for Cisco PDs, including a proprietary capacitor based detection scheme.

PoE Port Status LEDs

The PoE port status of each 10/100/1000 Mbps RJ45 port is indicated by the two-color RX and TX LED display for each port. To observe the PoE port status indications, you must switch the SSA from the default RX/TX status mode to the PoE Port status mode using the red PoE button.

A description of the switch operation and information for using the LED indications are found in Port LEDs on page 36.

Allocation of PoE Power to Devices

The S-Series firmware determines the power available in the SSA for PoE based on power supply status and power supply redundancy mode. The system calculates and reserves the correct amount of power required by the SSA and then makes the balance of power available for PoE. When any change is made to the power supply status or redundancy mode, the firmware recalculates the power available for PoE.

The power available for PoE is distributed based on the configured allocation mode:

- Automatic mode (default), in which available power is distributed evenly. Any change in available power, due to a change in power supply status or redundancy mode, will trigger an automatic redistribution of power.
- Manual mode, in which the power budget is manually configured, using either CLI commands or the MIBs. The wattage configured cannot exceed the total power available on the switch for PoE.

  The configured wattage assignment is used to calculate the total available PoE power. If the total available PoE power changes, available power will be redistributed based on the calculated percentages.

If the PoE power needed or requested exceeds the power available, the system generates an SNMP trap to notify the system manager.

For more information on configuring allocation mode, see the *S-, K-, and 7100 Series CLI Reference Guide*.

Power Distribution when a Power Supply Is Removed or Added

When a power supply is removed, the SSA responds to the decrease in available power by doing the following:

1 Detecting the power supply removal and recalculating available power.
2 Subtracting the power capacity for its base system from available power.
3 Distributing remaining power equally for PoE.
4 Dropping support to PoE devices as necessary to stay within the programmed maximum power.

When a power supply is added, the SSA responds to the increase in available power by doing the following:

1 Detecting the power supply addition and recalculating available power.
2 Subtracting the power capacity for its base system from available power.
3 Distributing remaining power equally for PoE.

Management of PoE Power to PDs

You can configure the way in which the SSA makes power available to attached powered devices (PDs):

- Real-time mode (default), in which the PoE controller calculates the power needed by a PD based on the actual power consumption of the attached devices.
- Class mode, in which the PoE controller manages power based on the IEEE 802.3at definition of the class limits advertised by the attached devices. In this mode, the maximum amount of power required by a device in the advertised class is reserved for the port, regardless of the actual amount of power being used by the device.

For more information about configuring power management mode, see the *S-, K-, and 7100 Series CLI Reference Guide*.

D 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 66 and Installation Site Requirements on page 67. Then, check Contents of the Mounting Kit on page 67 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 on page 68.

2 Attach the adapter plates to the chassis.

See Installing the Adapter Plates on page 68.

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 70 or Two-Post Rack Mount Installation on page 72 .

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 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.

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, see Installation on page 13.

Contents of the Mounting Kit

Table 26 lists the contents of the SSA-FB-MOUNTKIT mounting kit.

Table 26: 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 26: 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

Remove the rack mount ears from both sides of the SSA before continuing with the mounting kit installation. See Figure 34.

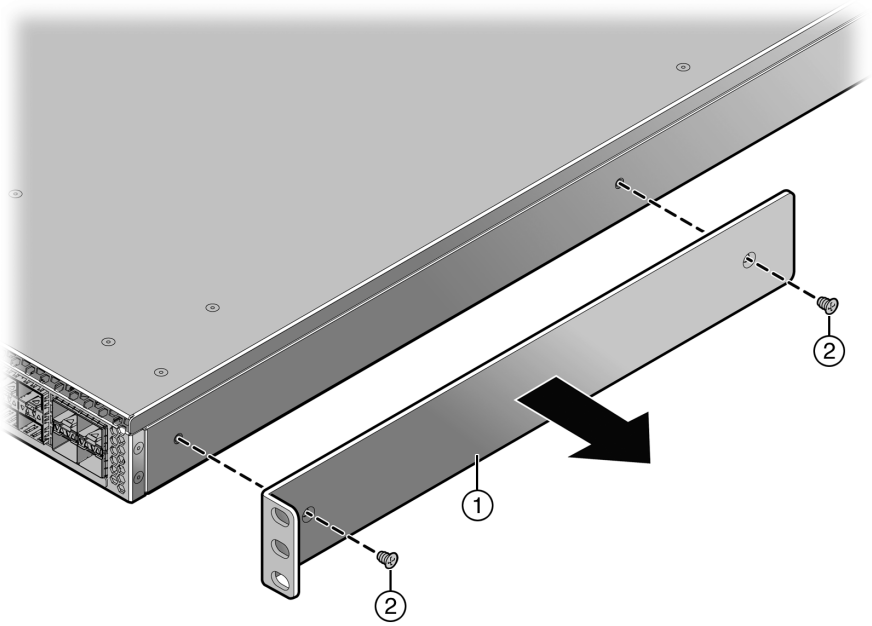


Figure 34: Removing the Rack Mount Ears

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 70).

- The rail and mid-bracket assemblies used in the two-post rack configuration (see Two-Post Rack Mount Installation on page 72).

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 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.

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

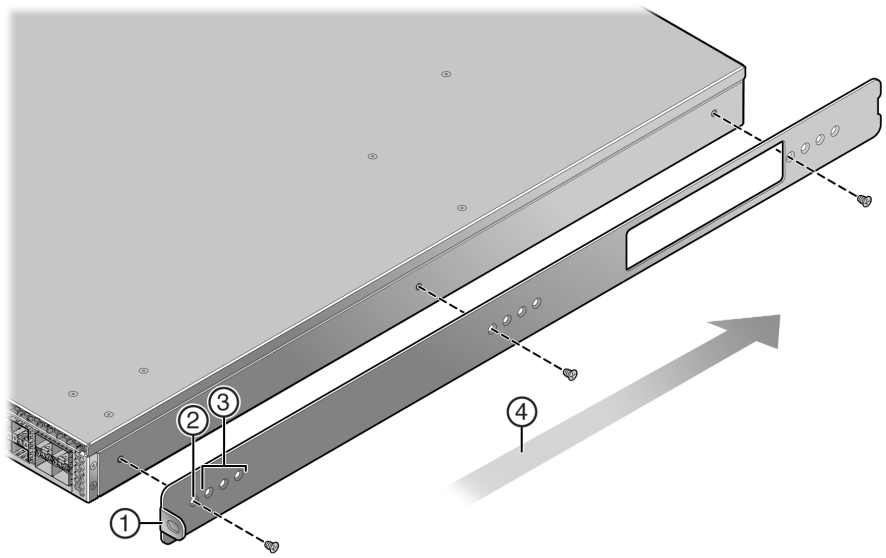


Figure 35: Installing the Adapter Plates

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 70 or Two-Post Rack Mount Installation on page 72.

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 36 displays the four-post rack flush mount configuration for both airflow directions. The recessed chassis configurations (configured when installing the adapter plates, see Figure 35 on page 69) are not displayed.

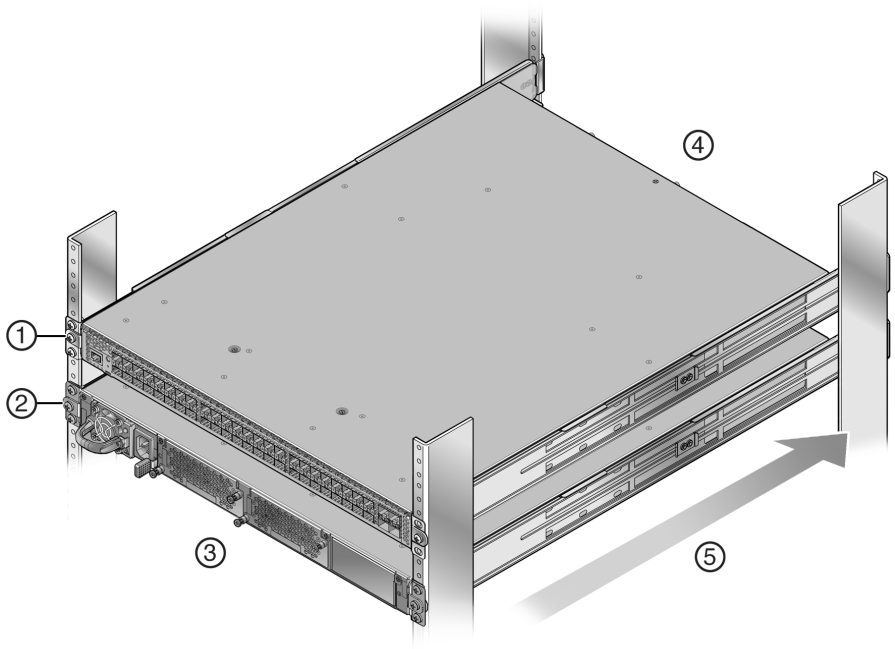


Figure 36: Four Post Rack Supported Configurations

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

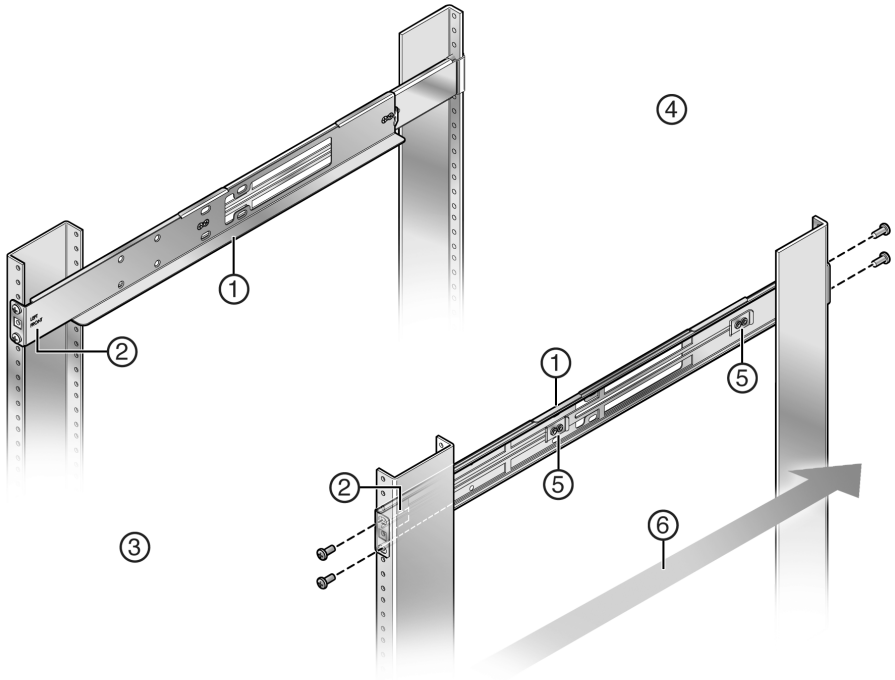


Figure 37: Installing the Rack Mount Rail with Extension Assemblies

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 38 as you perform the following procedure.

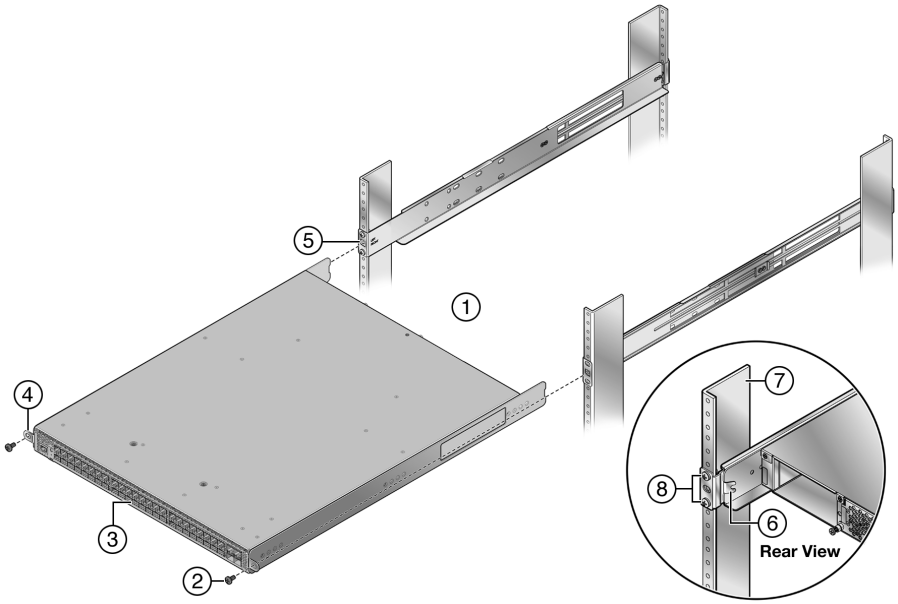


Figure 38: Installing the Chassis on to the Rack Mount Rail Assembly

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 68). Both airflow directions are supported.

Figure 39 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.

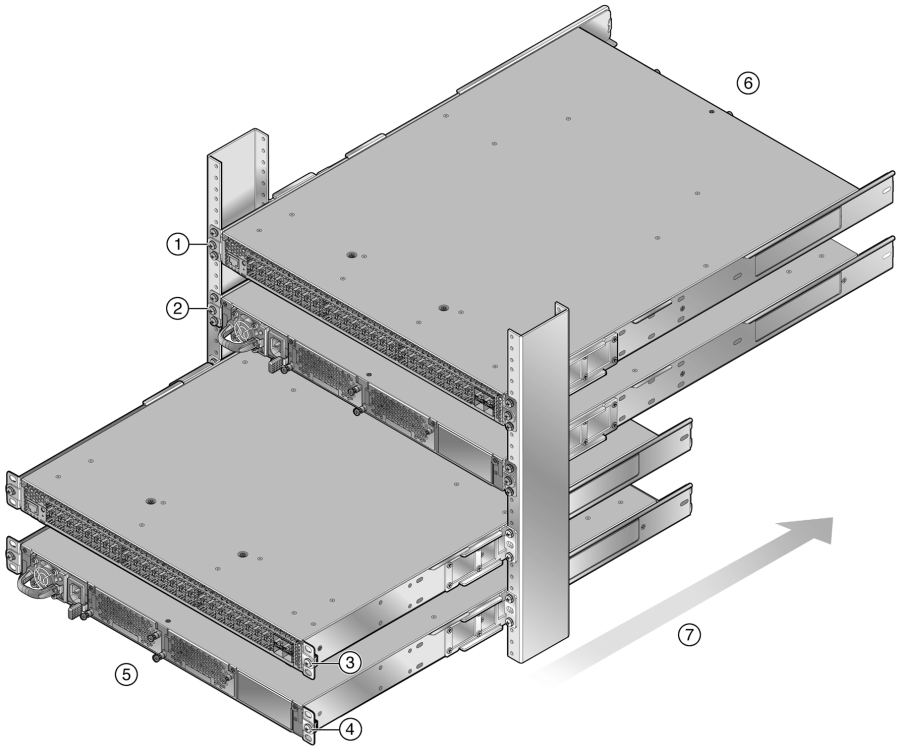


Figure 39: Two Post Rack Supported Configurations

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 74.
- 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 74.

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 40.

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.

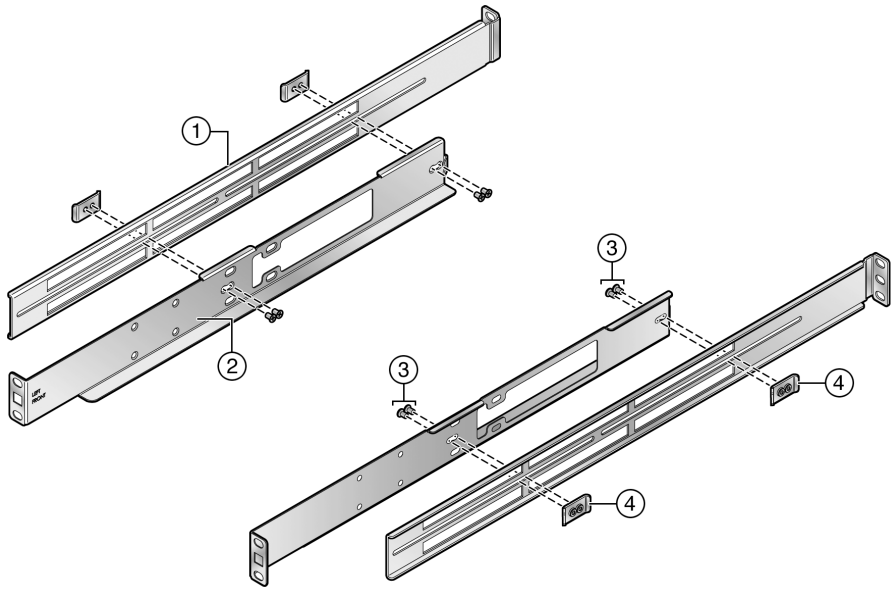


Figure 40: Removing the Extension from the Rack Mount Rail Assembly

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 41 on page 75.
- 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 42 on page 76.

- 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 43 on page 76.

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 75. 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 41.

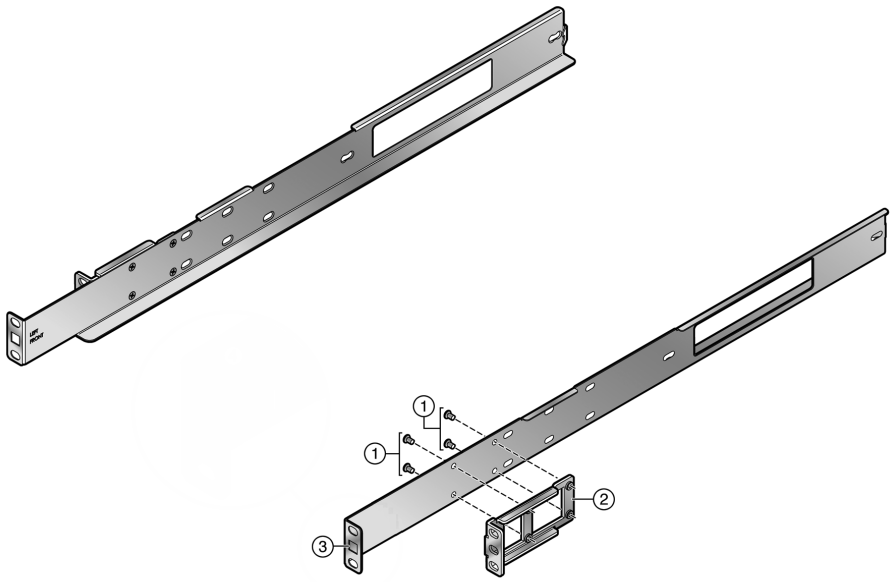


Figure 41: Securing the Mid-Bracket to the Rail (3-Inch Flush Mount)

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.

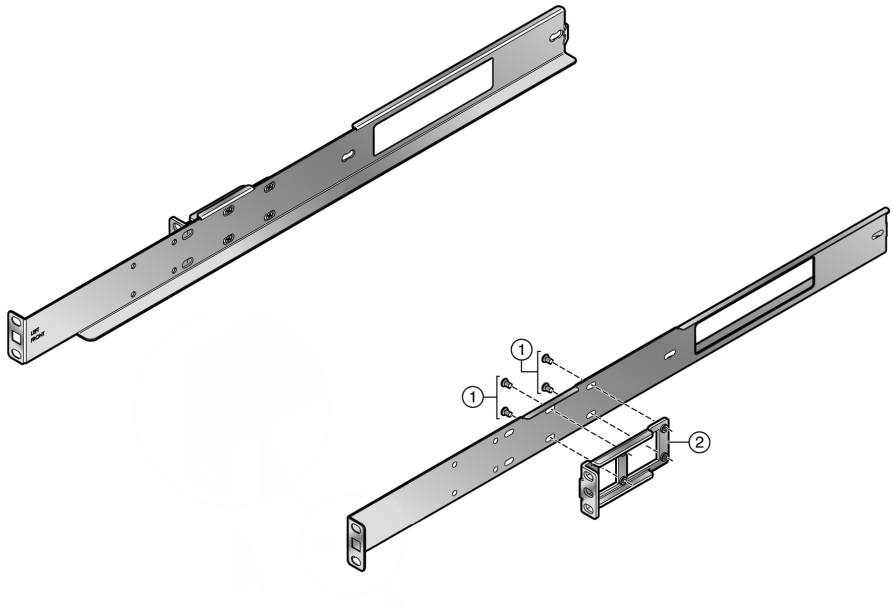


Figure 42: Securing the Mid-Bracket to the Rail (7.25-Inch Flush Mount)

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

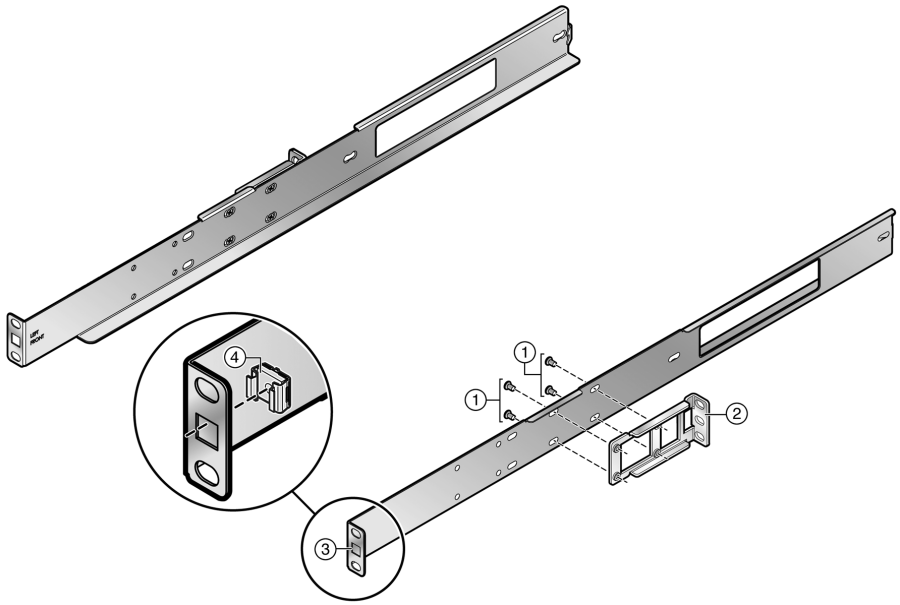


Figure 43: Securing the Mid-Bracket to the Rail (7.25-Inch Mid-Mount)

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 42 on page 76 for a flush mount assembly.

See Figure 43 on page 76 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 43 on page 76) 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 44.

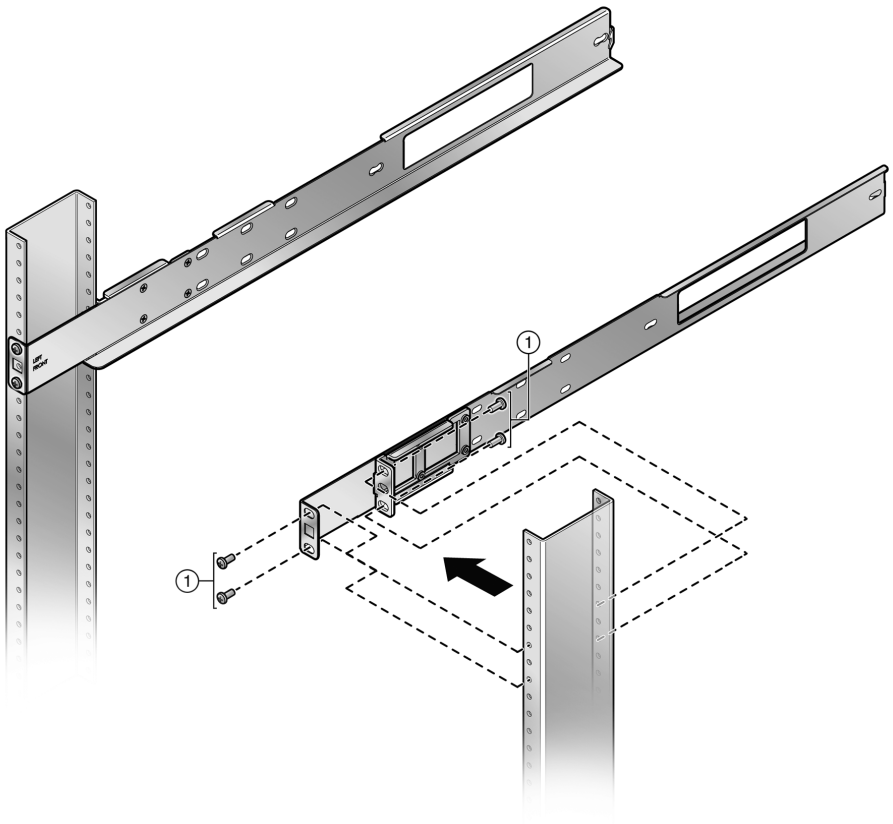


Figure 44: Securing a Flush Mount Rail Assembly

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 75.

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

See Figure 45.

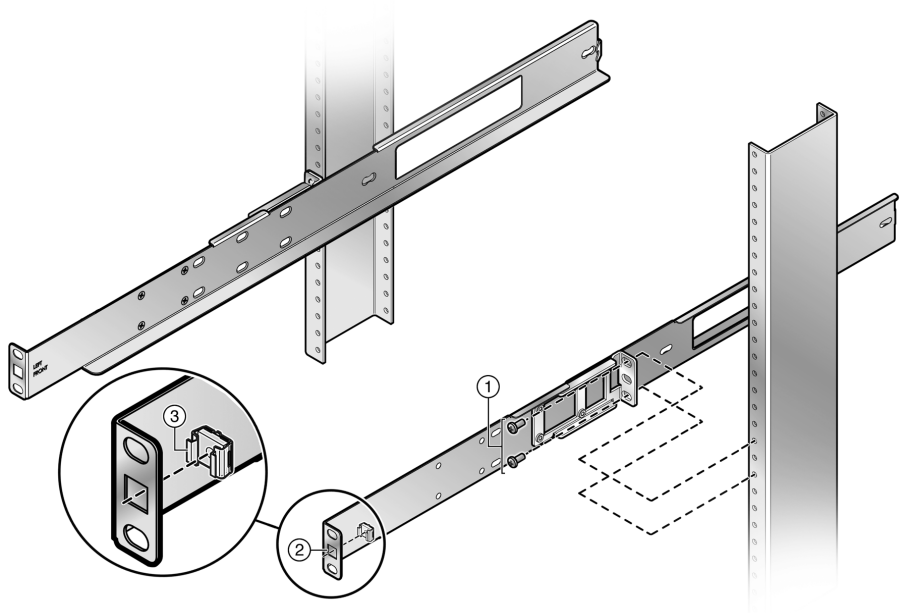


Figure 45: Securing Mid-Mount Rail Assembly

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 to the Rack

To secure the SSA 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 46.

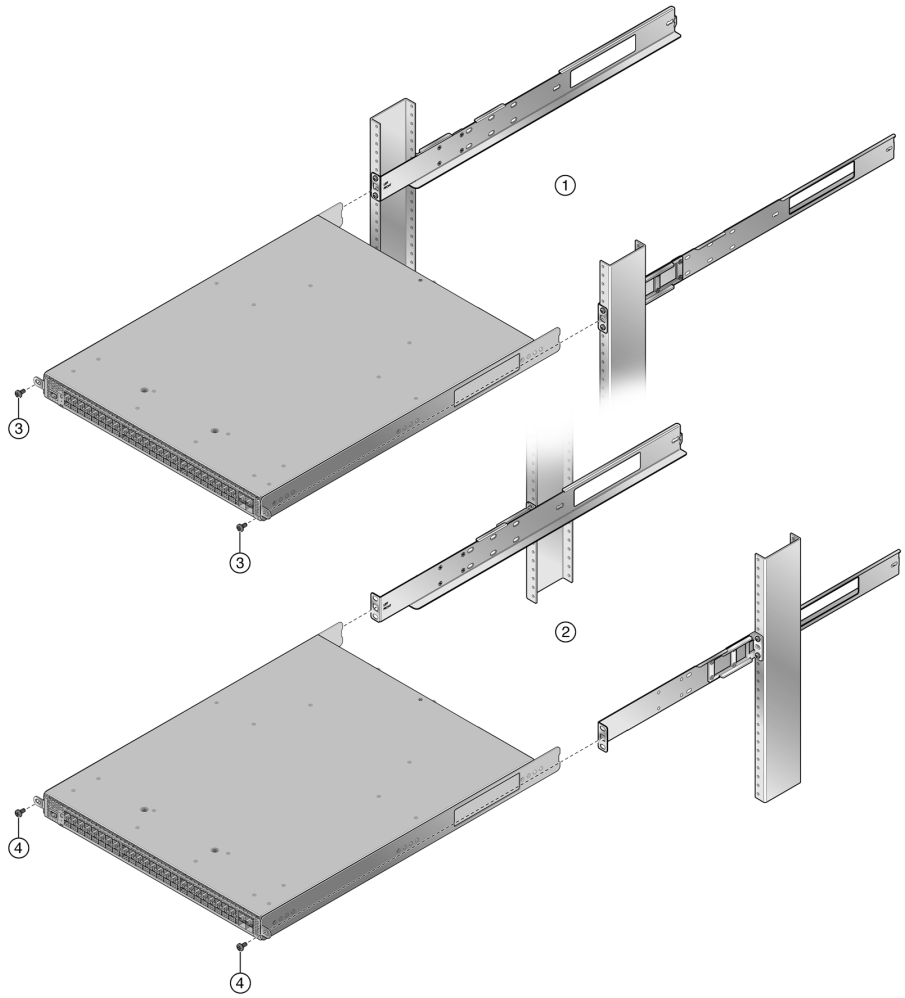


Figure 46: Securing the SSA to the Rack

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 77.

E 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 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 27 lists the contents of the SSA-WALL-MOUNT kit.

Table 27: 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 81
- Concrete or Masonry Wall Construction on page 82

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

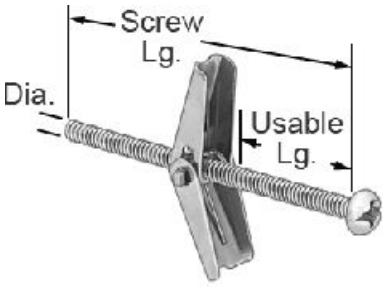
For hollow walls studded with metal or wood framing and sheathed with drywall, plaster, or plywood, use appropriate hollow wall fasteners in all four mounting locations through the sheathing material.

- Toggle Bolts
- Reusable Anchors on page 82
- Pan Head Steel Machine Screws on page 82

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.

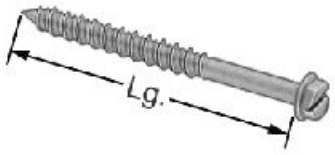
Concrete or Masonry Wall Construction

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

- Concrete Screws
- Concrete Inserts on page 82

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 47.

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 47.

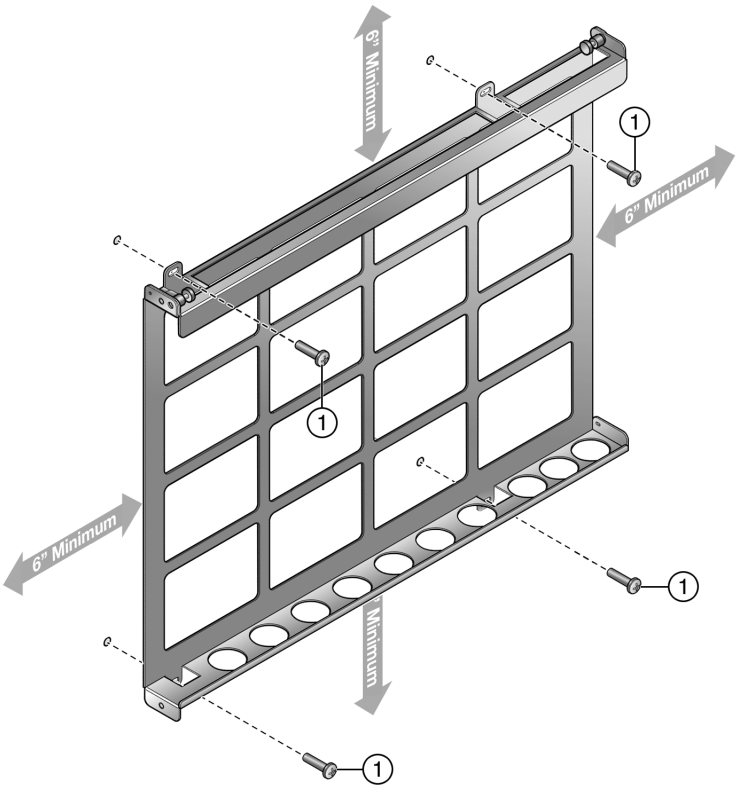


Figure 47: Securing the Wall Mounting Bracket to a Wall

1 = Customer-supplied screws

2 Open the gate on the top side of the mounting bracket as shown in Figure 48 on page 84.

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.

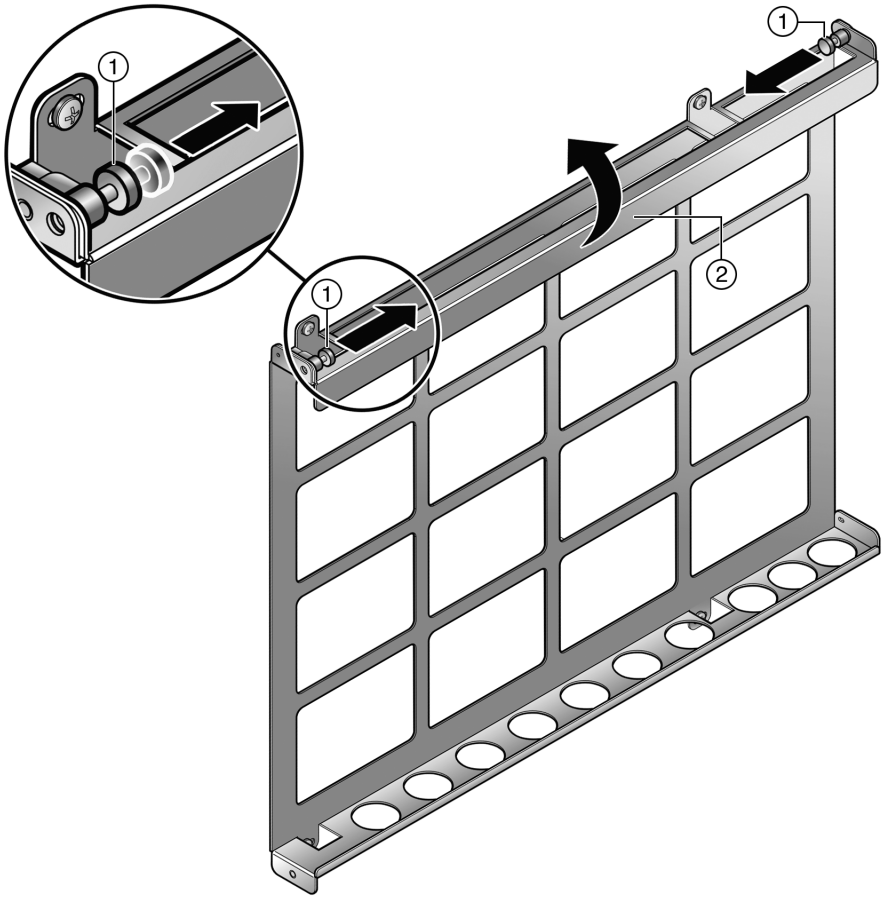


Figure 48: Opening the Gate

1 = Right and left plungers	2 = Gate

Figure 49 shows the gate in the open position.

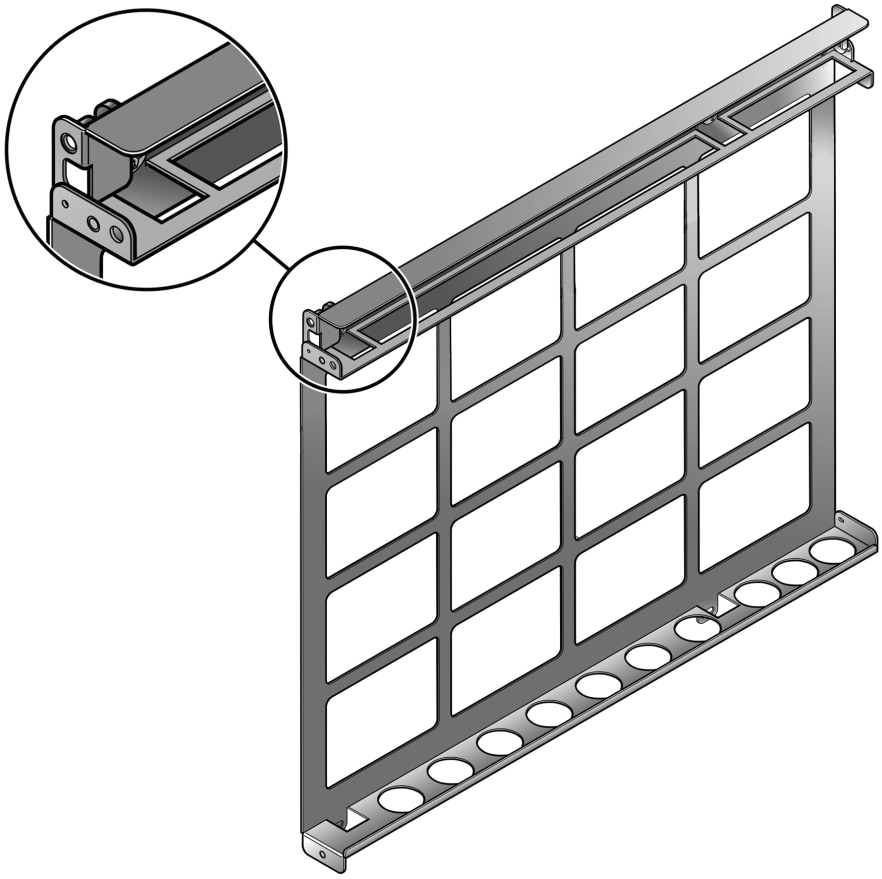


Figure 49: Mounting Bracket Gate in the Open Position

3 Holding the SSA 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 50.

Note
You must install the SSA chassis in the orientation shown in Figure 50: I/O connectors facing left, top of the SSA facing out. No other orientation of the SSA chassis is supported.

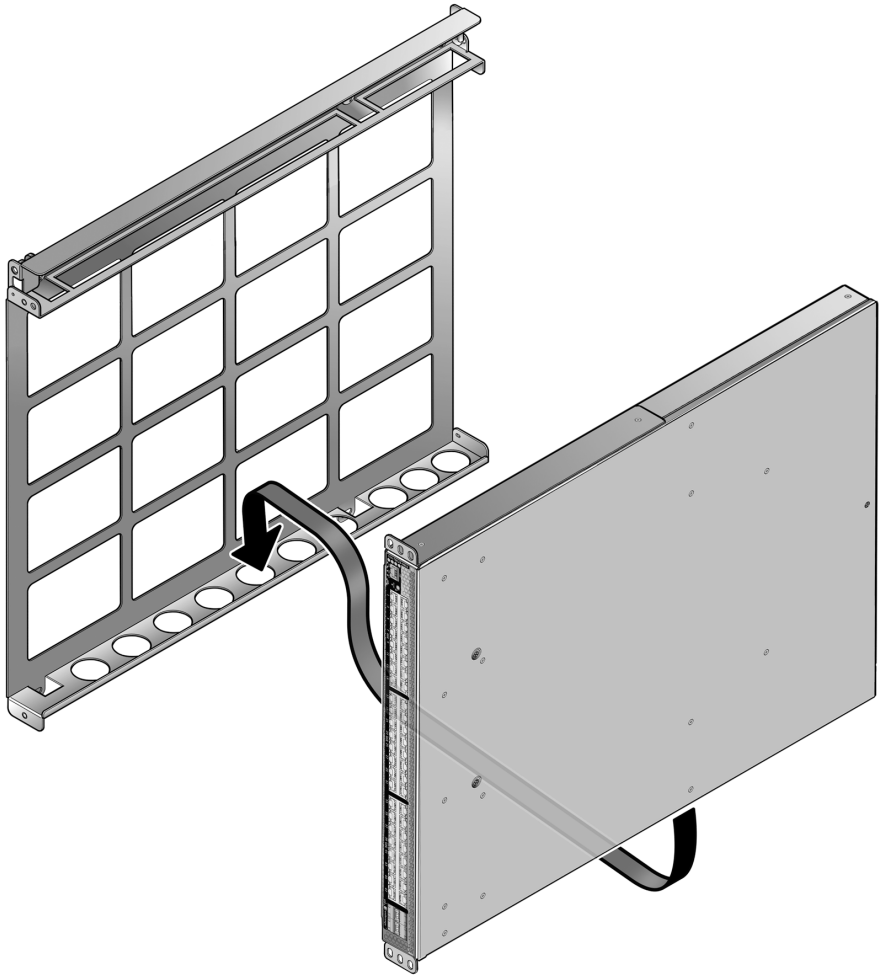


Figure 50: Installing the SSA in the Mounting Bracket

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 51.

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.

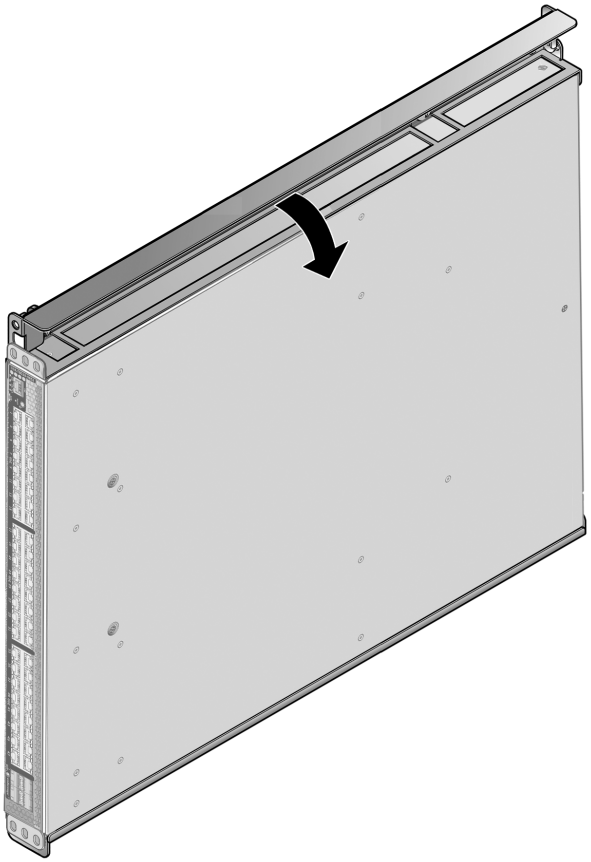


Figure 51: Closing the Gate

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 52.

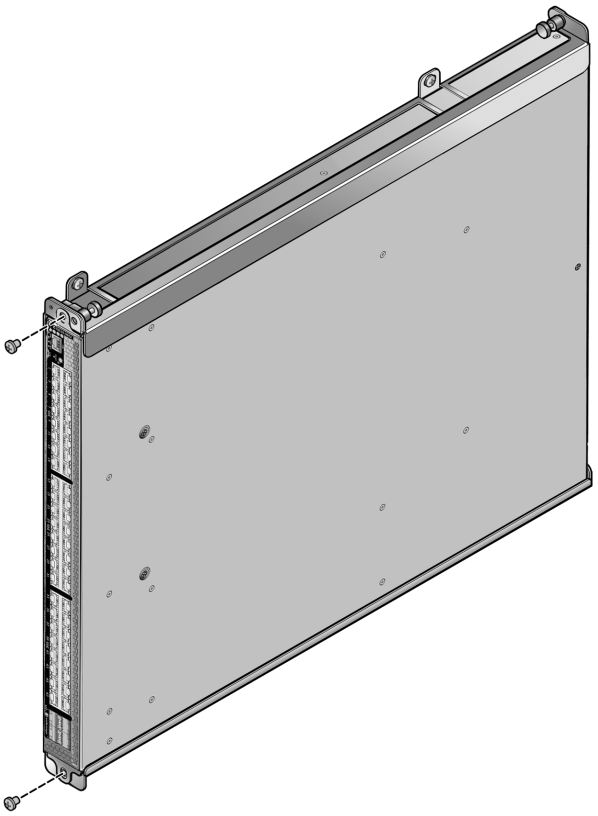


Figure 52: Securing the SSA Chassis to the Mounting Bracket

You can now cable the I/O ports and power up the SSA chassis as described in Installation on page 13.

F 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