



Installing Optional SSMs

This chapter provides information about installing optional SSMs (Security Services Modules) and their components. You only need to use the procedures in this chapter if you purchased an optional SSM but it is not yet installed.

This chapter includes the following sections:

- [Cisco 4GE SSM, page 3-1](#)
- [Cisco AIP SSM and CSC SSM, page 3-8](#)
- [What to Do Next, page 3-10](#)

Cisco 4GE SSM

The 4GE Security Services Module (SSM) has eight Ethernet ports: four 10/100/1000 Mbps, copper, RJ-45 ports or four optional 1000 Mbps, Small Form-Factor Pluggable (SFP) fiber ports.

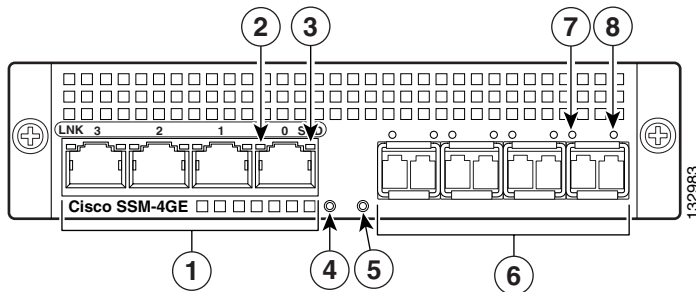
This section describes how to install and replace the Cisco 4GE SSM in the adaptive security appliance. This section includes the following topics:

- [4GE SSM Components, page 3-2](#)
- [Installing the Cisco 4GE SSM, page 3-3](#)
- [Installing the SFP Modules, page 3-4](#)

4GE SSM Components

Figure 3-1 lists the Cisco 4GE SSM ports and LEDs.

Figure 3-1 Cisco 4GE SSM Ports and LEDs



1	RJ-45 ports	5	Status LED
2	RJ-45 Link LED	6	SFP ports
3	RJ-45 Speed LED	7	SFP Link LED
4	Power LED	8	SFP Speed LED



Note

Figure 3-1 shows SFP modules installed in the port slots. You must order and install the SFP modules if you want to use this feature. For more information on SFP ports and modules, see the “Installing the SFP Modules” section on page 3-4.

Table 3-1 describes the Cisco 4GE SSM LEDs.

Table 3-1 Cisco 4GE SSM LEDs

	LED	Color	State	Description
2, 7	LINK	Green	Solid	There is an Ethernet link.
			Flashing	There is Ethernet activity.

Table 3-1 Cisco 4GE SSM LEDs (continued)

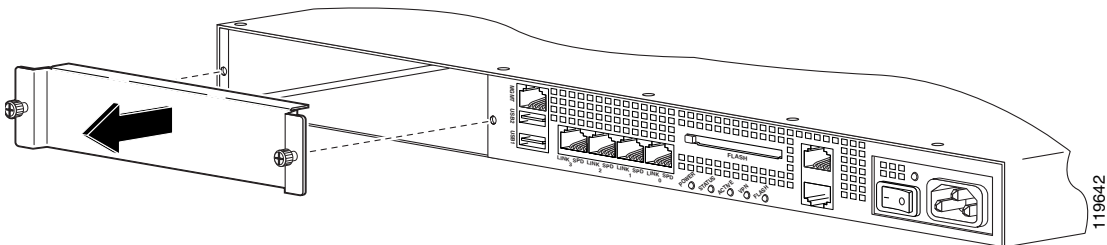
	LED	Color	State	Description
3, 8	SPEED	Off	10 MB	There is no network activity.
		Green	100 MB	There is network activity at 100 Mbps.
		Amber	1000 MB (GigE)	There is network activity at 1000 Mbps.
4	POWER	Green	On	The system has power.
5	STATUS	Green	Flashing	The system is booting.
		Green	Solid	The system booted correctly.
		Amber	Solid	The system diagnostics failed.

Installing the Cisco 4GE SSM

To install a new Cisco 4GE SSM for the first time, perform the following steps:

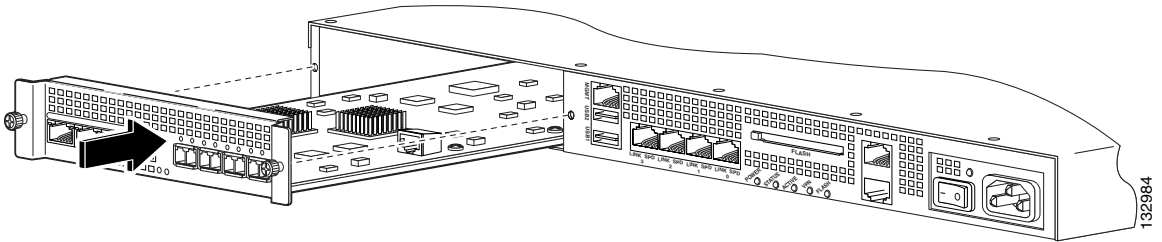
- Step 1** Power off the adaptive security appliance.
- Step 2** Locate the grounding strap from the accessory kit and fasten it to your wrist so that it contacts your bare skin. Attach the other end to the chassis.
- Step 3** Remove the two screws (as shown in [Figure 3-2](#)) at the left rear end of the chassis, and remove the slot cover.

Figure 3-2 Removing the Screws from the Slot Cover



Step 4 Insert the Cisco 4GE SSM through the slot opening as shown in [Figure 3-3](#).

Figure 3-3 Inserting the Cisco 4GE SSM into the Slot



- Step 5** Attach the screws to secure the Cisco 4GE SSM to the chassis.
- Step 6** Power on the adaptive security appliance.
- Step 7** Check the LEDs. If the Cisco 4GE SSM is installed properly the STATUS LED flashes during boot up and is solid when operational.
- Step 8** Connect one end of the RJ-45 cable to the port and the other end of the cable to your network devices. For more information, see “[Chapter 4, “Connecting Interface Cables.”](#)”

Installing the SFP Modules

The SFP (Small Form-Factor Pluggable) is a hot-swappable input/output device that plugs into the SFP ports. The following SFP module types are supported:

- Long wavelength/long haul 1000BASE-LX/LH (GLC-LH-SM=)
- Short wavelength 1000BASE-SX (GLC-SX-MM=)

This section describes how to install and remove the SFP modules in the adaptive security appliance to provide optical Gigabit Ethernet connectivity. This section contains the following topics:

- [SFP Module, page 3-5](#)
- [Installing the SFP Module, page 3-6](#)

SFP Module

The adaptive security appliance uses a field-replaceable SFP module to establish Gigabit connections.



Note

If you install an SFP module after the switch has powered on, you must reload the adaptive security appliance to enable the SFP module.

[Table 3-2](#) lists the SFP modules that are supported by the adaptive security appliance.

Table 3-2 Supported SFP Modules

SFP Module	Type of Connection	Cisco Part Number
1000BASE-LX/LH	Fiber-optic	GLC-LH-SM=
1000BASE-SX	Fiber-optic	GLC-SX-MM=

The 1000BASE-LX/LH and 1000BASE-SX SFP modules are used to establish fiber-optic connections. Use fiber-optic cables with LC connectors to connect to an SFP module. The SFP modules support 850 to 1550 nm nominal wavelengths. The cables must not exceed the required cable length for reliable communications. [Table 3-3](#) lists the cable length requirements.

Table 3-3 Cabling Requirements for Fiber-Optic SFP Modules

SFP Module	62.5/125 micron Multimode 850 nm Fiber	50/125 micron Multimode 850 nm Fiber	62.5/125 micron Multimode 1310 nm Fiber	50/125 micron Multimode 1310 nm Fiber	9/125 micron Single-mode 1310 nm Fiber
LX/LH	—	—	550 m at 500 Mhz-km	550 m at 400 Mhz-km	10 km
SX	275 m at 200 Mhz-km	550 m at 500 Mhz-km	—	—	—

Use only Cisco-certified SFP modules on the adaptive security appliance. Each SFP module has an internal serial EEPROM that is encoded with security information. This encoding provides a way for Cisco to identify and validate that the SFP module meets the requirements for the adaptive security appliance.

**Note**

Only SFP modules certified by Cisco are supported on the adaptive security appliance.

**Caution**

Protect your SFP modules by inserting clean dust plugs into the SFPs after the cables are extracted from them. Be sure to clean the optic surfaces of the fiber cables before you plug them back in the optical bores of another SFP module. Avoid getting dust and other contaminants into the optical bores of your SFP modules: The optics do not work correctly when obstructed with dust.

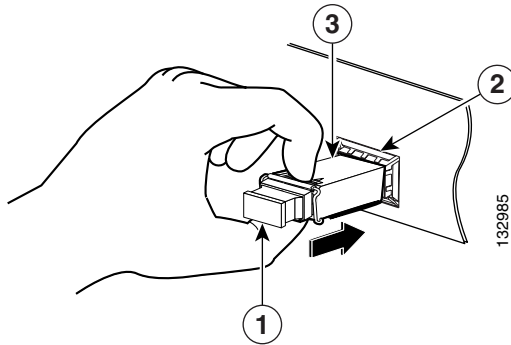
**Warning**

Because invisible laser radiation may be emitted from the aperture of the port when no cable is connected, avoid exposure to laser radiation and do not stare into open apertures. Statement 70

Installing the SFP Module

To install the SFP module in the Cisco 4GE SSM, perform the following steps:

- Step 1** Line up the SFP module with the port and slide the SFP module into the port slot until it locks into position as shown in [Figure 3-4](#).

Figure 3-4 Installing an SFP Module

1	Optical port plug	3	SFP module
2	SFP port slot		

**Caution**

Do not remove the optical port plugs from the SFP until you are ready to connect the cables.

Step 2

Remove the Optical port plug; then connect the network cable to the SFP module. Connect the other end of the cable to your network. For more information on connecting the cables, see [Chapter 4, “Connecting Interface Cables.”](#)

**Caution**

The latching mechanism used on many SFPs locks them into place when cables are connected. Do not pull on the cabling in an attempt to remove the SFP.

Cisco AIP SSM and CSC SSM

The ASA 5500 series adaptive security appliance supports the AIP SSM (Advanced Inspection and Prevention Security Services Module) and the CSC SSM (Content Security Control Security Services Module), also referred to as the intelligent SSM.

The AIP SSM runs advanced IPS software that provides security inspection. There are two models of the AIP SSM: the AIP SSM 10 and the AIP SSM 20. Both types look identical, but the AIP SSM 20 has a faster processor and more memory than the AIP SSM 10. Only one module (the AIP SSM 10 or the AIP SSM 20) can populate the slot at a time.

[Table 3-4](#) lists the memory specifications for the AIP SSM 10 and the AIP SSM 20.

Table 3-4 SSM Memory Specifications

SSM	CPU	DRAM
AIP SSM 10	2.0 GHz Celeron	1.0 GB
AIP SSM 20	2.4 GHz Pentium 4	2.0 GB

For more information on the AIP SSM, see the *Cisco Security Appliance Command Line Configuration Guide*.

The CSC SSM runs Content Security and Control software. The CSC SSM provides protection against viruses, spyware, spam, and other unwanted traffic. For more information on the CSC SSM, see the *Cisco Security Appliance Command Line Configuration Guide*.

This section describes how to install and replace the SSM in the adaptive security appliance. [Figure 3-5](#) lists the SSM LEDs.

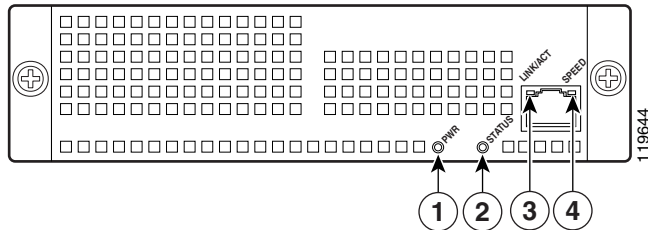
Figure 3-5 SSM LEDs

Table 3-5 describes the SSM LEDs.

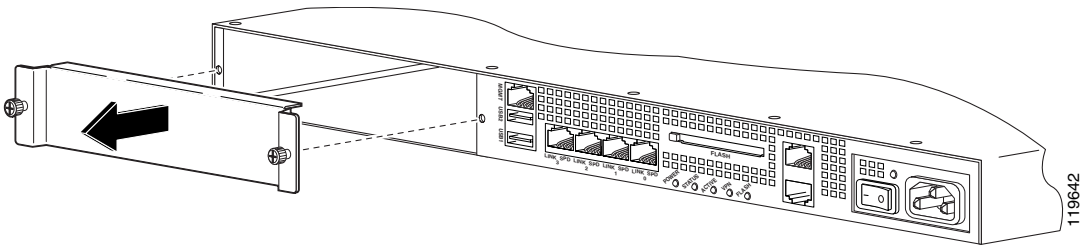
Table 3-5 SSM LEDs

	LED	Color	State	Description
1	PWR	Green	On	The system has power.
2	STATUS	Green	Flashing	The system is booting.
			Solid	The system has passed power-up diagnostics.
3	LINK/ACT	Green	Solid	There is an Ethernet link.
			Flashing	There is Ethernet activity.
4	SPEED	Green	100 MB	There is network activity.
			1000 MB (GigE)	There is network activity.

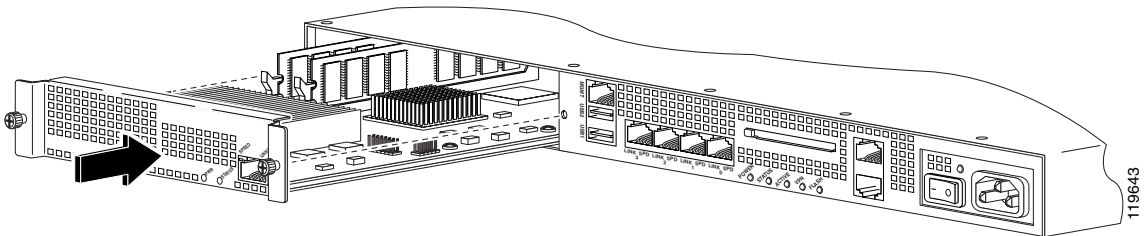
Installing an SSM

To install a new SSM, perform the following steps:

- Step 1** Power off the adaptive security appliance.
- Step 2** Locate the grounding strap from the accessory kit and fasten it to your wrist so that it contacts your bare skin. Attach the other end to the chassis.
- Step 3** Remove the two screws (as shown in Figure 3-6) at the left rear end of the chassis, and remove the slot cover.

Figure 3-6 Removing the Screws from the Slot Cover

Step 4 Insert the SSM into the slot opening as shown in [Figure 3-7](#).

Figure 3-7 Inserting the SSM into the Slot

Step 5 Attach the screws to secure the SSM to the chassis.

Step 6 Power on the adaptive security appliance. Check the LEDs. If the SSM is installed properly the POWER LED is solid green and the STATUS LED flashes green.

Step 7 Connect one end of the RJ-45 cable to the port and the other end of the cable to your network devices.

What to Do Next

Continue with [Chapter 4, “Connecting Interface Cables.”](#)