Cisco Catalyst 9600 Series Supervisor Engine Installation Note

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Overview of Cisco Catalyst 9600 Series Supervisor Engines

This document describes the features of supported Cisco Catalyst 9600 Series Supervisor Engines and provides information about how to remove or replace a supervisor engine (module) in a chassis.

Table 1: Supported Supervisor Engines

Product ID	Description
C9600-SUP-1	Cisco Catalyst 9600 Series Supervisor Engine 1
C9600X-SUP-2	Cisco Catalyst 9600 Series Supervisor Engine 2

Table 2: Chassis Compatibility Information

Compatibility Information	C9600-SUP-1	C9600X-SUP-2
Chassis compatibility	Supported on Cisco Catalyst 9600 Series 6 Slot Chassis (C9606R).	
Minimum software requirements	Cisco IOS XE Gibraltar 16.11.1 and later releases. See the *Release Notes for Cisco Catalyst 9600 Series Switches* document for the latest software release requirements.	Cisco IOS XE 17.7.1 and later releases.
Chassis slot restrictions	C9606R: Slots 3 and 4 only (redundant supervisor engines supported). The primary supervisor engine can be installed in either slot.	
Bandwidth per slot	2.4 Tbps full-duplex per slot	6.4 Tbps full-duplex per slot
Memory	Dynamic Random-Access Memory (DRAM): 16 GB	Dynamic Random-Access Memory (DRAM): 32 GB
	Onboard flash: 16 GB	Onboard flash: 16 GB

Compatibility Information	C9600-SUP-1	C9600X-SUP-2
Line Card compatibility	• C9600-LC-40YL4CD • C9600-LC-24C • C9600-LC-48YL • C9600-LC-48TX • C9600-LC-48S	• C9600-LC-40YL4CD • C9600-LC-24C • C9600-LC-48YL • C9600-LC-48TX

Features of Cisco Catalyst 9600 Series Supervisor Engine 1 (C9600-SUP-1)

The following figure shows the front view of a Cisco Catalyst 9600 Series Supervisor Engine 1 (C9600-SUP-1), with the major features identified.

Figure 1: Front Panel of Cisco Catalyst 9600 Series Supervisor Engine 1

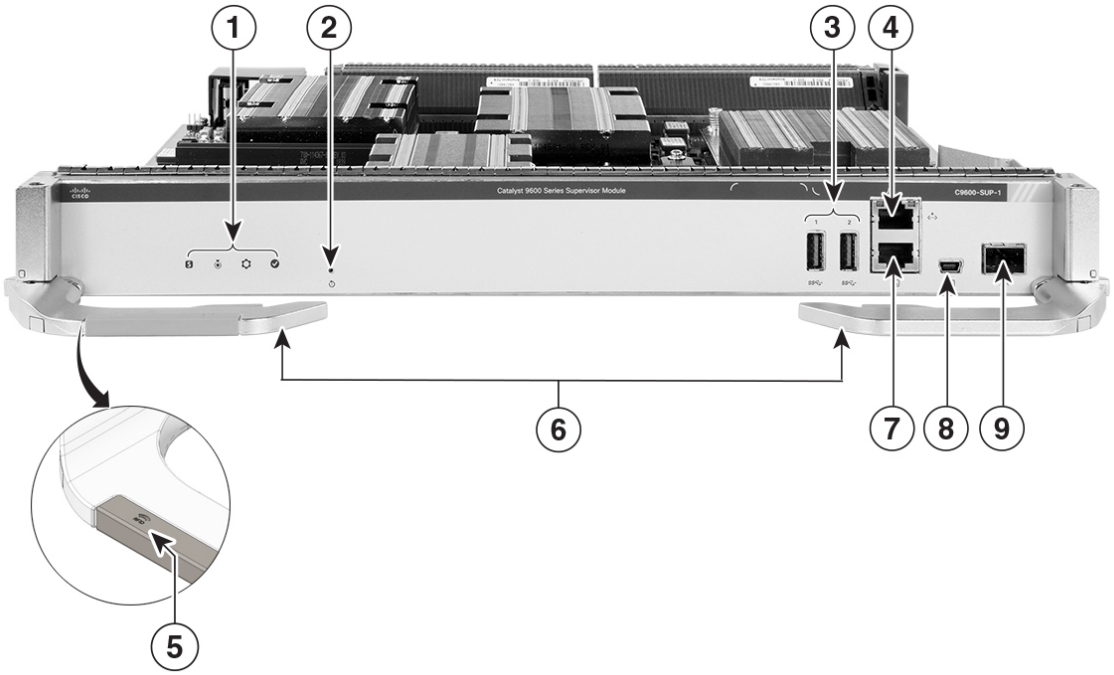


Table 3: Front Panel Components

1	Supervisor engine LEDs	6	Ejector levers
2	Reset button	7	RJ-45 console port
3	USB 3.0 Type A ports	8	USB mini Type B console port
4	RJ-45 Ethernet management port	9	10 G SFP+ management port

5	RFID embedded on the left ejector lever	-	-

Table 4: Ports and LEDs Available in a Cisco Catalyst 9600 Series Supervisor Engine 1

Feature	Icon	Description
USB 3.0 Type A port		The supervisor engine provides two USB 3.0 Type A ports for external storage and dongles. It supports USB versions 3.0, 2.0, 1.1, and 1.0. See USB 3.0 Type A Port, on page 5
USB mini Type B console port		This USB port is used as a console port, allowing attachment to PCs that are not equipped with an RS-232 interface. See Console Ports, on page 6.
10/100/1000 Ethernet Management port (RJ-45 connector)		The Ethernet management port is a Layer 3 host port to which you can connect a PC. By default, the Ethernet management port is enabled. You can use the Ethernet management port for network management. See Management Ports, on page 6
Console port (RJ-45 connector)		This is an RS232 serial or console port for system management. See Console Ports, on page 6
Blue beacon LED		The blue beacon LED on the front panel of the supervisor engine that allows easy identification of the device .
Reset button		The reset switch is used to reset and restart a supervisor engine. See Reset Button, on page 7
10G SFP+ management port		The supervisor engine has one 10G SFP+ management port. This port requires either small form-factor pluggable (SFP) or SFP+ transceivers. See Management Ports, on page 6
SATA SSD module slot	-	The supervisor module has an M.2 SATA connector that supports SSD local storage for container-based application hosting. This is an optional feature.
Model number	-	Supervisor engine model number.
Supervisor slot indicator	-	The fan tray front panel indicates the supervisor slots in a chassis.

Features of Cisco Catalyst 9600 Series Supervisor Engine 2 (C9600X-SUP-2)

The following figure shows the front view of a Cisco Catalyst 9600 Series Supervisor Engine 2 (C9600X-SUP-2), with the major features identified.

Figure 2: Front Panel of Cisco Catalyst 9600 Series Supervisor Engine 2

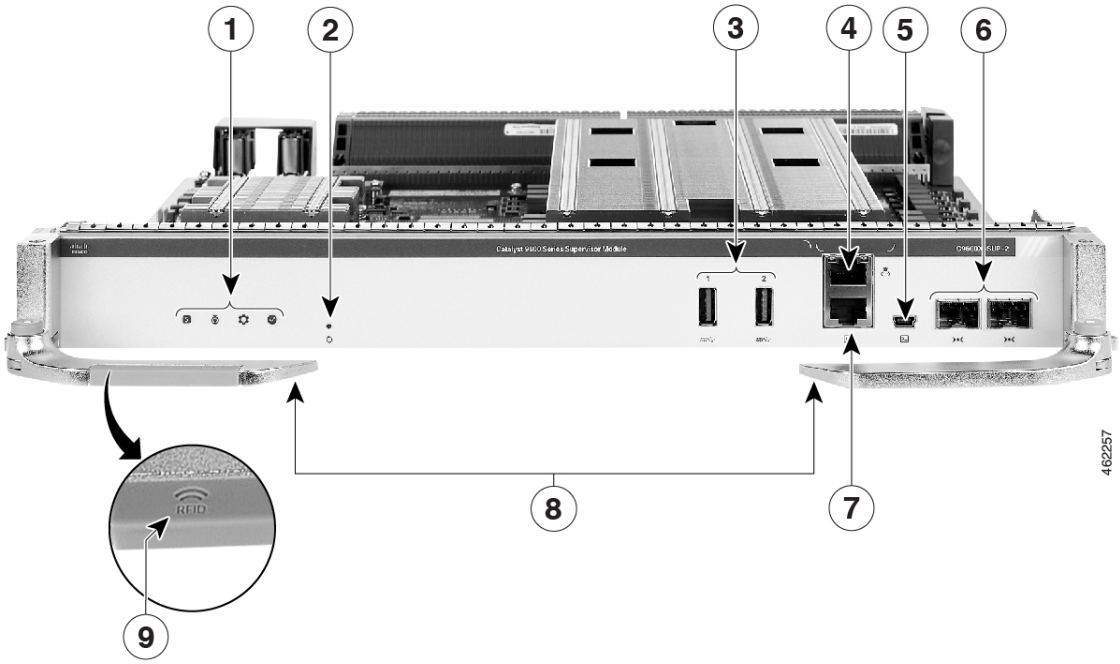


Table 5: Front Panel Components

1	Supervisor engine LEDs	6	10G SFP+ management ports
2	Reset button	7	RJ-45 console port
3	USB 3.0 Type A ports	8	Ejector levers
4	RJ-45 Ethernet management port	9	RFID embedded on the left ejector lever
5	USB mini Type B console port	-	-

Table 6: Ports and LEDs Available in Cisco Catalyst 9600 Series Supervisor Engine 2

Feature	Icon	Description
USB 3.0 Type A port		The supervisor engine provides two USB 3.0 Type A ports for external storage and dongles. It supports USB versions 3.0, 2.0, 1.1, and 1.0. See USB 3.0 Type A Port, on page 5
USB mini Type B console port		This USB port is used as a console port, allowing attachment to PCs that are not equipped with an RS-232 interface. See Console Ports, on page 6.

Feature	Icon	Description
10/100/1000 Ethernet Management port (RJ-45 connector)		The Ethernet management port is a Layer 3 host port to which you can connect a PC. By default, the Ethernet management port is enabled. You can use the Ethernet management port for network management. See Management Ports, on page 6
Console port (RJ-45 connector)		This is an RS232 serial or console port for system management. See Console Ports, on page 6
Blue beacon LED		The blue beacon LED on the front panel of the supervisor engine that allows easy identification of the device .
Reset button		The reset switch is used to reset and restart a supervisor engine. See Reset Button, on page 7
10G SFP+ management ports		The supervisor engine has two 10G SFP+ management ports. One port is used for management and the other port can be used to connect to any port on the line cards. These two ports only support 10G SFP+ transceivers. See Management Ports, on page 6
Model number	-	Supervisor engine model number.
Supervisor slot indicator	-	The fan tray front panel indicates the supervisor slots in a chassis.

Front Panel Components

The following sections describe the front panel components:

USB 3.0 Type A Port

The USB 3.0 Type A port provides access to external USB flash devices (also known as thumb drives or USB keys). The port supports Cisco USB flash drives with capacities from 64MB to 16GB. USB devices with port densities of 64 MB, 128 MB, 256 MB, 1 GB, 4 GB, 8 GB, and 16 GB are supported. The port provides 2.5 W of power to the device connected to the port.

Cisco IOS software provides standard file system access to the flash device, such as read, write, erase, and copy, as well as the ability to format the flash device with a FAT file system.

Observe these guidelines when using USB flash drives:

- There must be at least one partition on the USB flash drive. If the drive has more than one partition, only the first partition is visible in the system (Cisco IOS).
- If you partition the flash drive, we recommend that you use a Linux system to perform this task. This ensures that the first partition is a usable partition when connected to the switch.

  Using a Windows or MacBook machine utility to perform this task may result in two partitions on the drive by default (partition for system information + actual usable partition). When such a flash drive is

connected to the switch, the system displays only the first system information partition, and not the actual usable partition.

Console Ports

The supervisor module provides two types of console ports on the supervisor module front panel:

- RJ45 console port: This port provides universal asynchronous receiver/transmitter (UART) support to access the route processor with a serial console running at 9600 baud rate with 8 bits for data, no parity bit, and 1 stop bit.
- Mini USB 2.0 Type B console port: This port functions as a second console connection to the route processor. The USB console port connection uses a mini USB 2.0 cable. The USB console interface speed is the same as the RJ45 console interface speed.

Only one of the consoles is active at a time. When a USB host (PC) is plugged into the USB console port, the hardware automatically switches over to use the USB console. Only a PC that has the necessary USB console device driver causes the USB console to become active. Plugging in a PC that does not have the USB console driver support does not cause a switchover. When the USB cable is removed, or the PC deactivates the USB connection, or a host is not detected on the USB console, the hardware automatically switches to the RJ45 console interface.

The console port allows you to perform the following functions:

- Configure the switch from the CLI
- Monitor network statistics and errors
- Configure SNMP agent parameters

Management Ports

The Supervisor Module provides two types of management ports, 10/100/1000BASE-T RJ-45 port and 10G SFP+ port. The RJ-45 and SFP+ management ports provide out-of-band (OOB) Ethernet network connectivity, which enables you to use the CLI to manage the switch using its IP address. A management port supports TFTP image downloading, network management, SNMP, Telnet, and SSH connections.

- SFP+ management port: This port is a fiber port that is referred to as TenGigabitEthernet<*slot*>/0/<*port*>. The C9600-SUP-1 module has one SFP+ port that supports 1G and 10G speeds. The C9600X-SUP-2 module has two SFP+ ports in which only one port is used for management. The SFP+ ports on C9600X-SUP-2 support only 10G speed.
- Ethernet management port: This port is a copper Ethernet port that is referred to as GigabitEthernet0/0(Gi0/0) port. The Ethernet management port supports speed upto 10/100/1000 Mbps and is set to auto-negotiate.

You can use one of these ports depending on the cable and connectors that you are using to connect the management interface to the network. Use only one of these management ports; the switch does not support the use of both management ports. By default, the Ethernet management port is enabled.

Use the management port instead of the console port for network management. A switch cannot route packets from a management port to a network port, and from a network port to a management port. To obtain this, the management interface is automatically placed in a separate routing domain (or VRF domain), called Mgmt-vrf. The devices support out-of-band (OOB) management through Mgmt-vrf, which is used to segment management traffic from the global routing table of the switch.

When managing a switch, connect the PC to the management port of the supervisor engine.

Reset Button

A recessed access button is available on the front panel of the supervisor module to reset and restart the module. Using a pin, press and hold the button inwards for 5 seconds to reset and restart the module.

Supervisor Engine LEDs

Figure 3: Cisco Catalyst 9600 Series Supervisor Engine LEDs

The model of Supervisor Engine used in the following illustration is C9600-SUP-1.

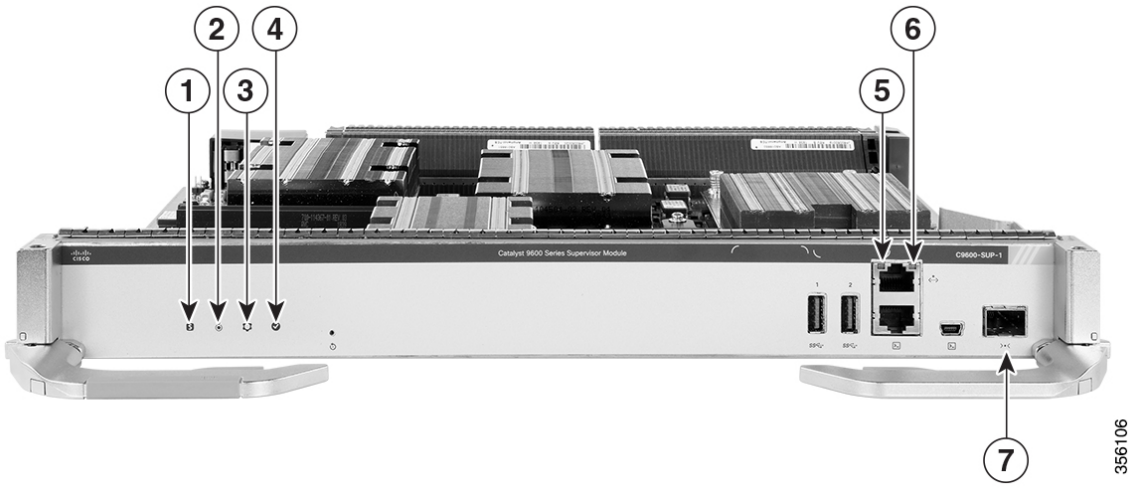


Table 7: Front Panel Components

1	Status LED	5	Ethernet Management Link Activity LED
2	Blue Beacon LED	6	Ethernet Management Link Status LED
3	System LED	7	SFP+ Management Port LED **Note** Note that there are two SFP+ management port LEDs on C9600X-SUP-2.
4	Active LED	-	-

Table 8: LEDs and their Corresponding Status

LED Type	LED Position or Color	Meaning
Status	Green	Indicates that all the diagnostic tests have passed after image booting.
	Amber	Indicates a major environmental warning.
	Red	Indicates a fault in the module due to a parity error, failed diagnostic tests, or hardware failure.
	Off	Indicates that the supervisor module is disabled or is not powered up.
Blue Beacon	Solid blue	Identifies the supervisor module receiving the beacon signal.
System	Green	Indicates that the environmental monitors are normal.
	Amber	Indicates a minor fault such as partial power supply or fan failure.
	Red	Indicates a major fault, for example, situations where the temperature of the supervisor module exceeds the critical threshold.
Active	Green	Indicates that the supervisor module is operational and is functioning as the active supervisor (in redundant supervisor module configurations).
	Amber	Indicates one of the following: • Supervisor module is in ROMmon mode • Supervisor module is functioning as the standby supervisor (in redundant supervisor module configurations)
	Blinking Amber	Indicates Graceful Insertion and Removal (GIR) of the module.
Management Port Link Activity LED	Blinking green	Indicates link activity.
	Green	Indicates that the port is up, but there is no link activity.
	Amber	Indicates that the port is administratively shut down.
	Off	Indicates that the port is not connected or is down.

LED Type	LED Position or Color	Meaning
 Management Port Link Status LED	Green	Indicates that the port and the link are active.
	Off	Indicates that the port is not connected or is down.
>.< SFP+ Management Port LED	Green	Indicates that the ports are active.
	Amber	Indicates that the port is administratively shut down.
	Off	Indicates one of the following: • Supervisor module is in ROMmon mode • Transceiver module is not inserted

Preparing for Installation and Removal of a Supervisor Engine

Safety Warnings

Safety warnings appear throughout this publication in procedures that may harm you if you perform them incorrectly. A warning symbol precedes each warning statement. The warnings below are general warnings that are applicable to the entire publication.



Warning IMPORTANT SAFETY INSTRUCTIONS

Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Read the installation instructions before using, installing, or connecting the system to the power source. Use the statement number at the beginning of each warning statement to locate its translation in the translated safety warnings for this device.

SAVE THESE INSTRUCTIONS



Note You are strongly advised to read the safety instruction before using the product.

https://www.cisco.com/web/JP/techdoc/pldoc/pldoc.html

When installing the product, use the provided or designated connection cables/power cables/AC adapters.

〈製品使用における安全上の注意〉

www.cisco.com/web/JP/techdoc/index.html

接続ケーブル、電源コードセット、**AC**アダプタ、バッテリなどの部品は、必ず添付品または指定品をご使用ください。添付品・指定品以外をご使用になると故障や動作不良、火災の原因となります。また、電源コードセットは弊社が指定する製品以外の電気機器には使用できないためご注意ください。

Warning To reduce the risk of electric shock, connect the chassis of this equipment to permanent earth ground during normal use.

Warning This product is a Class 1 laser product.

Warning This unit is intended for installation in restricted access areas. Only skilled, instructed, or qualified personnel can access a restricted access area.

Warning Blank faceplates and cover panels serve three important functions: they reduce the risk of electric shock and fire, they contain electromagnetic interference (EMI) that might disrupt other equipment, and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

Warning To reduce the risk of bodily injury, mount the chassis on a rack that is permanently affixed to the building.

Warning Invisible laser radiation is present. Do not expose to users of telescopic optics. This applies to Class 1/1M laser products.



Warning Invisible laser radiation may be emitted from the end of the unterminated fiber cable or connector. Do not view directly with optical instruments. Viewing the laser output with certain optical instruments, for example, eye loupes, magnifiers, and microscopes, within a distance of 100 mm, may pose an eye hazard.

Warning Only a skilled person should be allowed to install, replace, or service this equipment. See statement 1089 for the definition of a skilled person.

Warning To reduce risk of electric shock or fire, installation of the equipment must comply with local and national electrical codes.

Note An instructed person is someone who has been instructed and trained by a skilled person and takes the necessary precautions when working with equipment.

A skilled person or qualified personnel is someone who has training or experience in the equipment technology and understands potential hazards when working with equipment.

Warning Only an instructed person or skilled person should be allowed to install, replace, or service this equipment. See statement 1089 for the definition of an instructed or skilled person.

Warning High touch/leakage current—Permanently connected protective earth ground is essential before connecting to the system power supply.

Warning Ultimate disposal of this product should be handled according to all national laws and regulations.

Preventing ESD Damage

ESD damage might occur when modules or other FRUs are improperly handled, resulting in intermittent or complete failure of the modules or FRUs. Modules consist of printed circuit boards that are fixed in metal carriers. EMI shielding and connectors are integral components of a carrier. Although the metal carrier helps to protect the board from ESD, always use an ESD-grounding strap when handling modules. To prevent ESD damage, follow these guidelines:

- Always use an ESD wrist or ankle strap and ensure that it makes good skin contact.
- Connect the equipment end of the strap to an unfinished chassis surface.

- When installing a component, use an available ejector lever to properly seat the bus connectors in the backplane or midplane. These devices prevent accidental removal, provide proper grounding for the system, and help to ensure that bus connectors are properly seated.
- When removing a component, use an available ejector lever to release the bus connectors from the backplane or midplane.
- Handle carriers by available handles or edges only; avoid touching the printed circuit boards or connectors.
- Place a removed component board-side-up on an antistatic surface or in a static-shielding container. If you plan to return the component to the factory, immediately place it in a static-shielding container.
- Avoid contact between the printed circuit boards and clothing. The wrist strap only protects components from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- Never attempt to remove the printed circuit board from the metal carrier.

Tools Required

You will need these tools to install or remove supervisor engines and line cards:

- Your own ESD-prevention equipment or the disposable grounding wrist strap included with all upgrade kits, FRUs, and spares.
- Antistatic mat or antistatic bag

Installing and Removing Supervisor Engines

The following sections provide information about how to install or remove a supervisor engine.

Installing a Supervisor Engine

Warning Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing. **Statement 1034**

Caution To prevent ESD damage, handle supervisor engines by the carrier edges only.

Before you begin

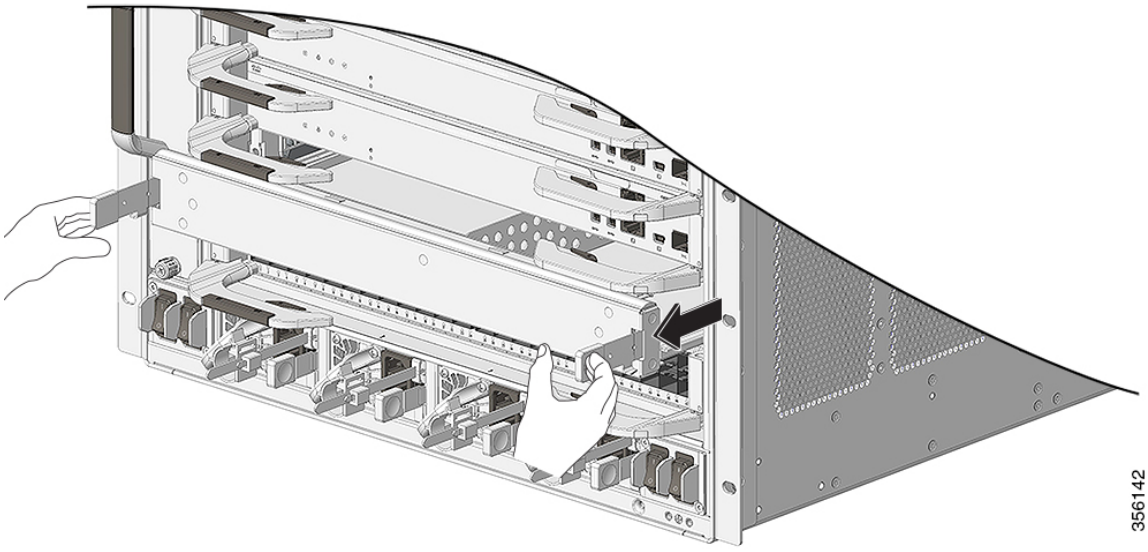
- Verify that both the supervisor modules in a redundant configuration are of the same type. You cannot use C9600X-SUP-2 and C9600-SUP-1 modules together in a chassis.
- Verify chassis slot restrictions.
- Ensure that you have enough clearance to accommodate the interface equipment that you will connect directly to the supervisor engine ports.

Procedure

Step 1 Take the necessary precautions to prevent ESD damage. Wear a grounded ESD wrist strap while handling the modules, and keep them in ESD-protective bags when they are not installed in a chassis.

Step 2 Remove the slot blank cover (C9606-SLOT-BLANK=) if present, by squeezing the release handles towards each other (with your thumb and index fingers) and slide the cover out of the bay. Save it for future use.

Figure 4: Removing the Slot Blank



Step 3 Remove the new supervisor engine from the shipping packaging. Handle the module using only the module's metal tray or the front panel. Do not touch the printed circuit board or the connector pins.

Step 4 Pivot the left and the right ejector levers away from the front of the module and hold them while sliding the module into the slot.

Step 5 Hold the supervisor engine's front panel with one hand and place your other hand under the carrier to support the module.

Step 6 Position the new module in the slot. Make sure that you align the sides of the module with the slot guides on each side of the chassis slot.

Note
Ensure that you have opened the levers to its maximum permissible angle.

Figure 5: Positioning a C9600-SUP-1 in the Slot

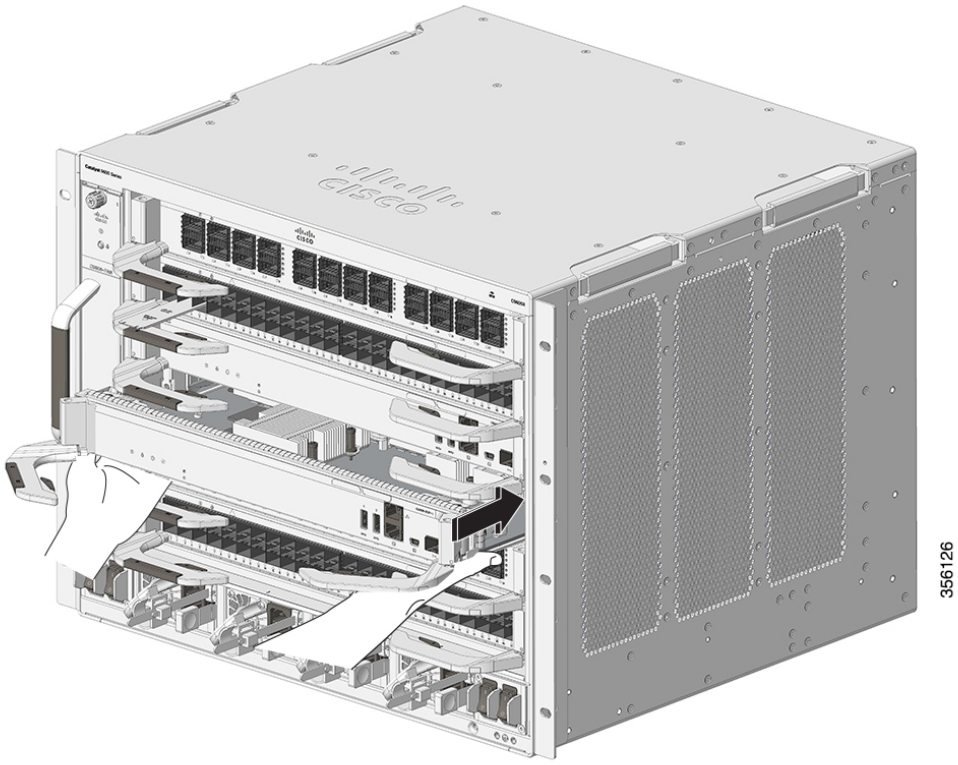
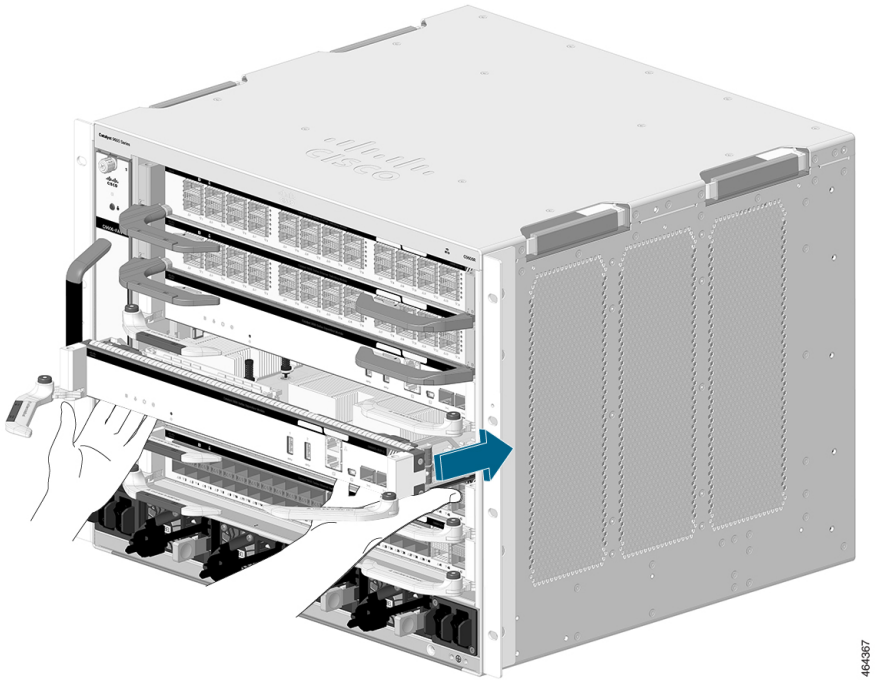


Figure 6: Positioning a C9600X-SUP-2 in the Slot



Step 7 Carefully slide the supervisor engine into the slot. Pivot both the ejector levers inward simultaneously.

Note
Note that the ejector levers on C9600-SUP-1 and C9600X-SUP-2 are different. Make sure you follow the instructions carefully before proceeding with the installation.

Figure 7: C9600-SUP-1 - Pivoting the Ejectors Levers Inward

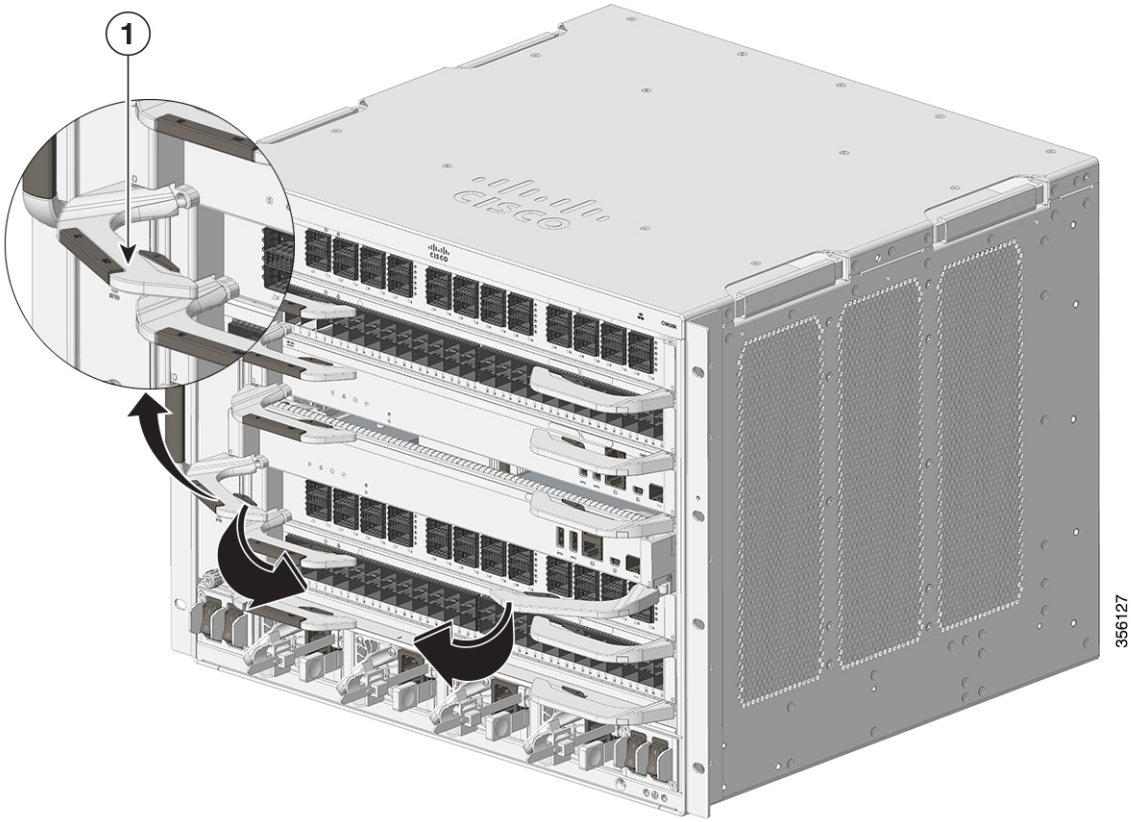
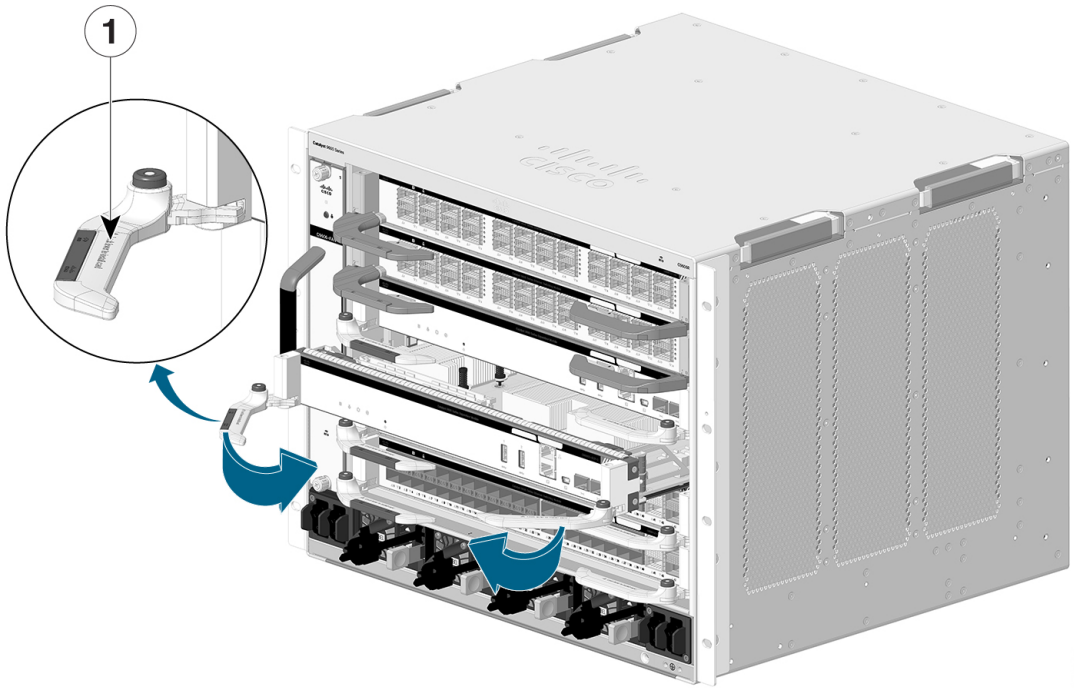


Figure 8: C9600X-SUP-2 - Pivoting the Ejectors Levers Inward



1	Ejector levers to be pivoted inward after the supervisor engine slides in all the way.

Note
Do not need press the buttons on the ejector lever while installing the module. When you press the button, the ejector lever is released and lets you rotate the lever outwards in any angle. However, the module will still be firmly seated in the chassis.

When installed correctly:

- The ejector catch pins on both the ejector levers engage the chassis sides.
- The ejector levers are fully closed when they are flush with the module faceplate.

Figure 9: C9600-SUP-1 in Installed Position

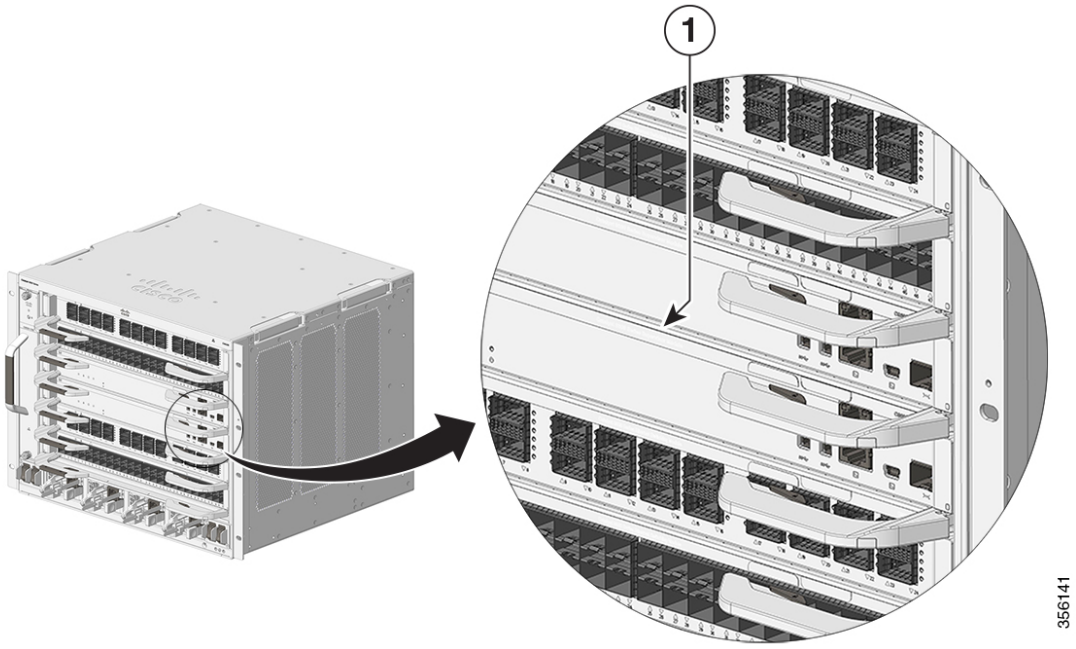
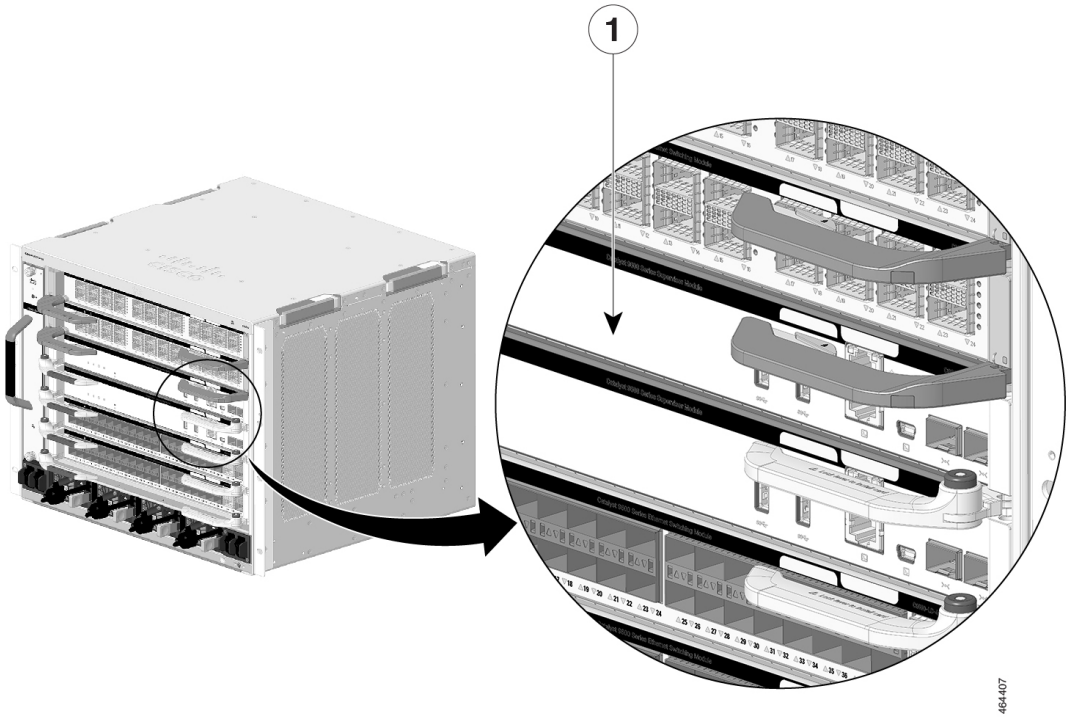


Figure 10: C9600X-SUP-2 in Installed Position



1	Fully seated supervisor engine with edges flush with the chassis.

Step 8 Check the status of the module:

a) Verify that the supervisor engine status LED is lit.

b) Periodically check the status LED.

If the status LED changes from amber to green, it means that the supervisor engine has completed the boot process successfully, and is now online.

If the status LED remains amber or turns red, it means that the supervisor engine has not completed the boot process successfully, and may have encountered an error.

c) When the switch is online, enter the **show module** command. Verify that the system acknowledges the new supervisor engine and that the module status is **OK**.

d) If the module is not operational, reseat it. If the module is still not operational, contact your Cisco customer service representative.

What to do next

Install blank slot cover (C9606-SLOT-BLANK) in empty slots, if any, to maintain consistent air flow through the switch chassis.

Removing a Supervisor Engine

Warning Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing. **Statement 1034**

Warning Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments. **Statement 1051**

Caution To prevent ESD damage, handle the supervisor engine by the carrier edges only.

Before you begin

- You will need a slot blank cover (C9606-SLOT-BLANK) if the slot is to remain empty.
- Install dust plugs into the transceiver's optical bores if the module is equipped with removable optical transceivers. This prevents possible dust contamination, which can affect port performance.
- Take necessary precautions to prevent ESD damage. Wear a grounded ESD wrist strap while handling the modules.

Procedure

Step 1 Grasp the left and right ejector levers and slightly push the two module ejector levers in and towards the faceplate.

Figure 11: C9600-SUP-1 - Pushing the Ejector Levers Slightly Inward

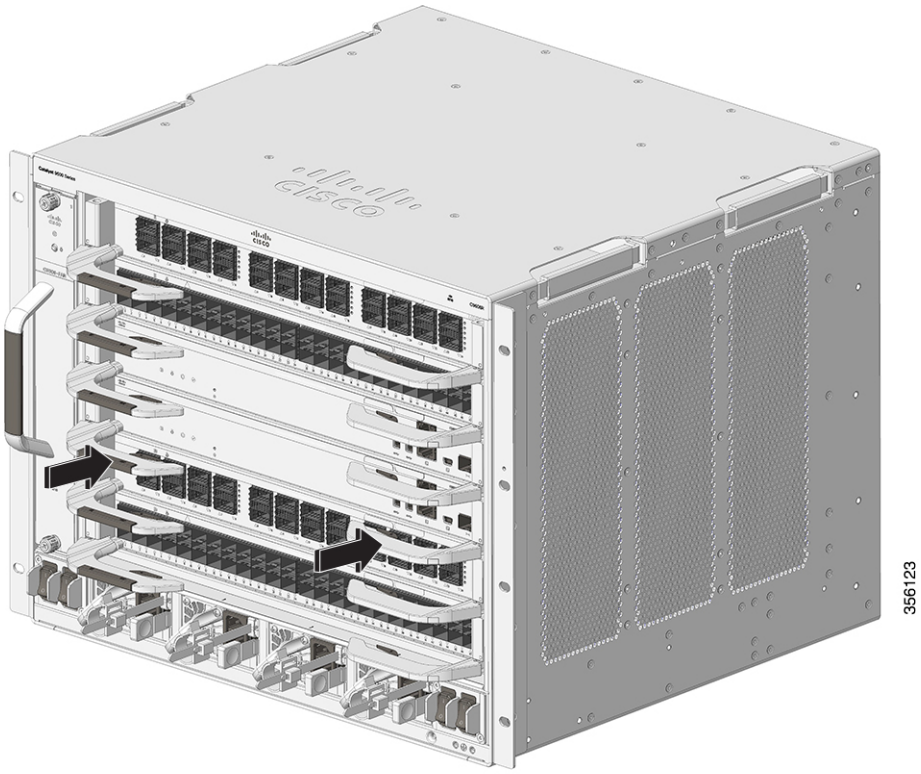
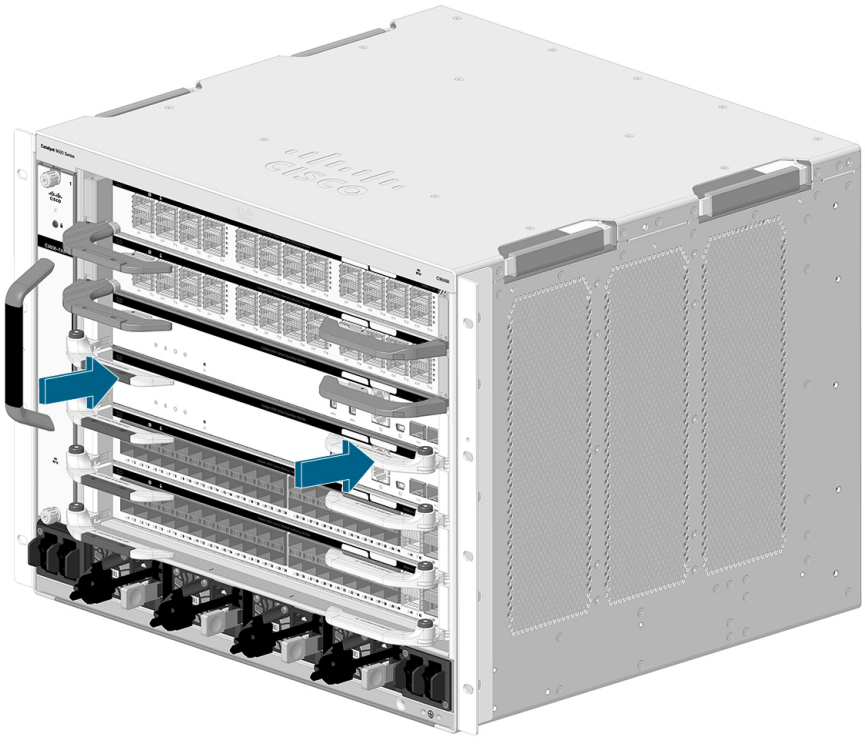


Figure 12: C9600X-SUP-2 - Pushing the Ejector Levers Slightly Inward

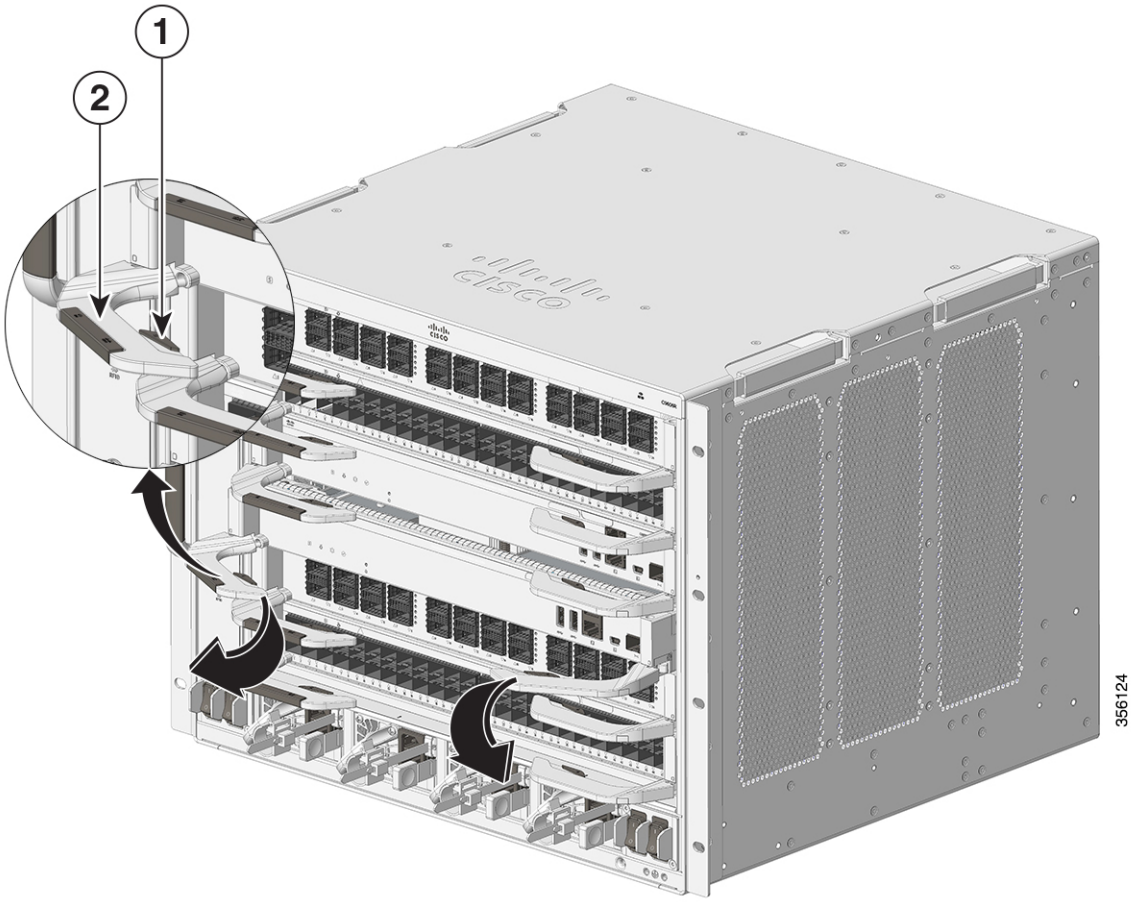


Step 2 (Applicable only for C9600-SUP-1) Press the ejector buttons on the ejector levers of the module to release the levers from the module.

Note
Make sure you push the ejector levers slightly inward before you rotate the levers outward. Failing to do so will deform the injector catch pins on the levers.

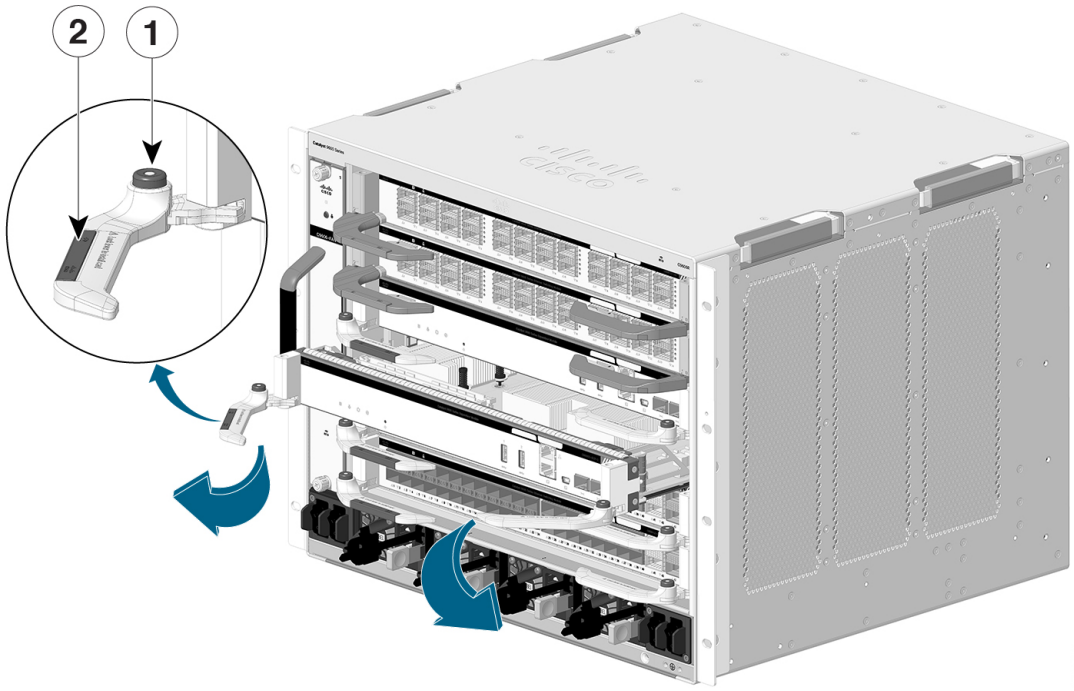
Step 3 Grasp the left and right ejector levers and simultaneously rotate the levers outward to disengage the supervisor engine from the backplane connector.

Figure 13: C9600-SUP-1 - Pivoting the Ejector Levers Outward



1	Button on the ejector lever to be pressed before pivoting the levers outward	2	Ejector levers

Figure 14: C9600X-SUP-2 - Pivoting the Ejector Levers Outward



1	Button on the ejector lever. **Note** Do not press the buttons on the ejector lever when pivoting the lever.	2	Ejector levers

Step 4 Grasp the front panel of the supervisor engine with one hand and place your other hand under the carrier to support and guide it out of the slot. Do not touch the printed circuit boards or connector pins.

Step 5 Carefully slide the supervisor engine straight out of the slot, keeping your other hand under the carrier to guide it.

Figure 15: Removing C9600-SUP-1 from the Slot

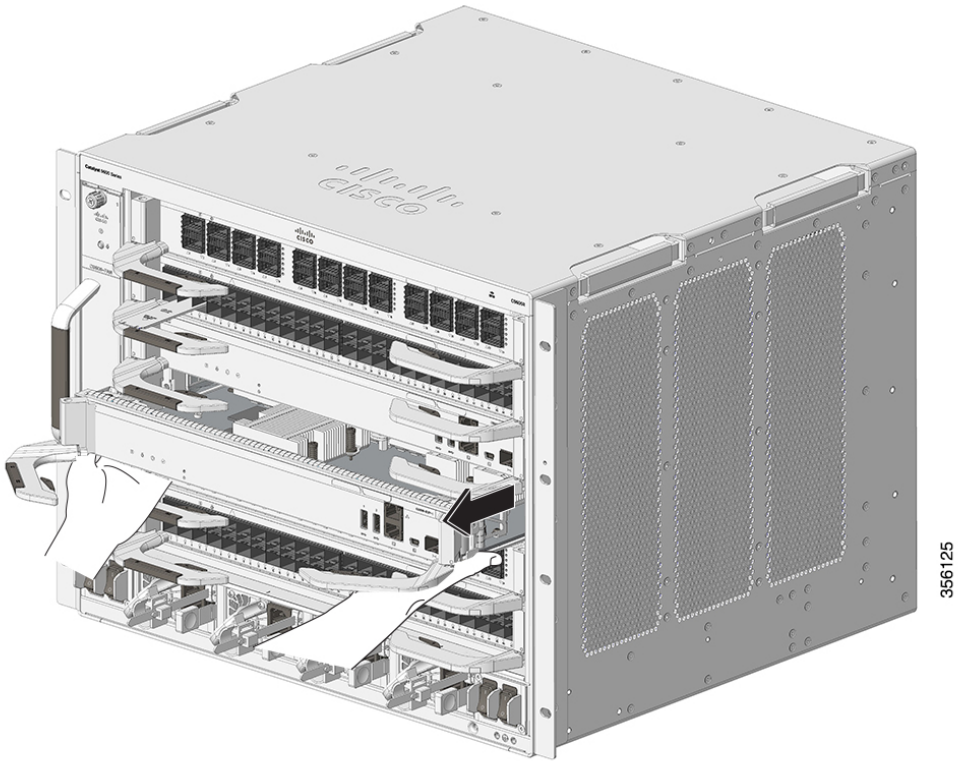
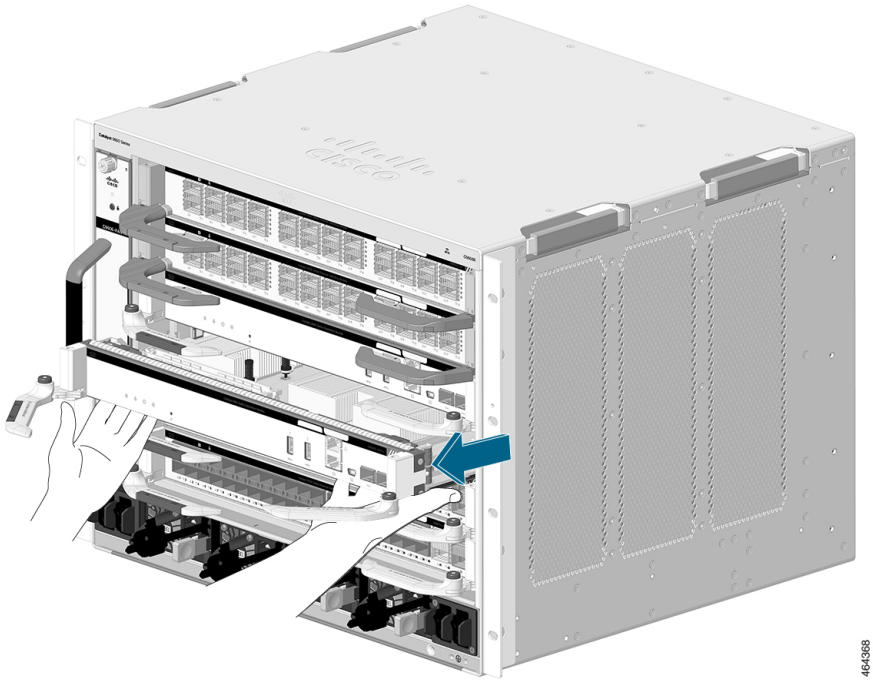


Figure 16: Removing C9600X-SUP-2 from the Slot



Step 6 Place the supervisor engine on an antistatic mat or in an antistatic bag.

Step 7 Install a replacement supervisor engine after a 15-second wait. Alternatively, if the chassis slot should remain empty, install a blank slot cover (C9606-SLOT-BLANK).

Blanks should only be removed when installing a module and must be replaced if a module is ever removed. A syslog message is generated every 5 minutes when an empty slot is detected. You must insert a module or a slot blank to avoid chassis overheating.

Warning
Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place. **Statement 1029**

Installing and Removing SATA SSD Modules

The following sections provide information about how to install and remove a SATA SSD module.

Removing an M.2 SATA SSD Module

This task describes how to remove a SATA SSD module from the supervisor engine.

Before you begin

You should have powered down the system.

Procedure

Step 1 Take the necessary precautions to prevent ESD damage. Wear a grounded ESD wrist strap while handling the modules, and keep them in ESD-protective bags when they are not installed in a chassis.

Step 2 Follow the procedure as described in Removing a Supervisor Engine, on page 19, to remove the supervisor engine from the chassis.

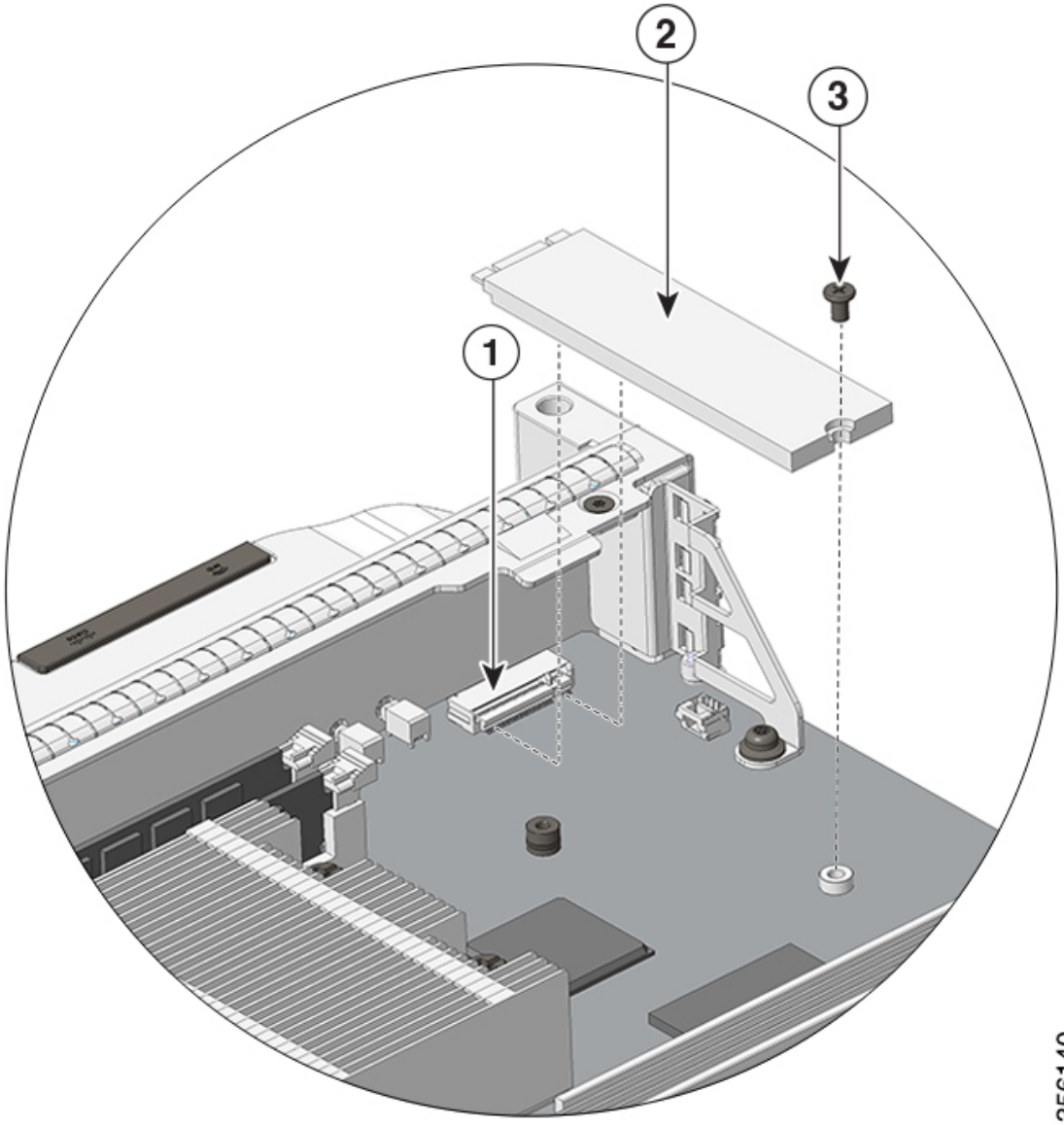
Step 3 Handle the supervisor engine by the carrier edges and place it on an antistatic mat.

Step 4 Loosen and remove the mounting screw on the SATA SSD module.

Step 5 Slide the SATA SSD module out of the connector.

Figure 17: Removing a SATA SSD Module

The illustration used in the document is of C9600-SUP-1 module. In C9600X-SUP-2 module, the mating connector is perpendicular to the front panel of the supervisor module.



1	Mating connector	3	Mounting screws
2	SATA SSD module	-	-

Installing an M.2 SATA SSD Module

This task describes how to install a new SATA SSD module.

Before you begin

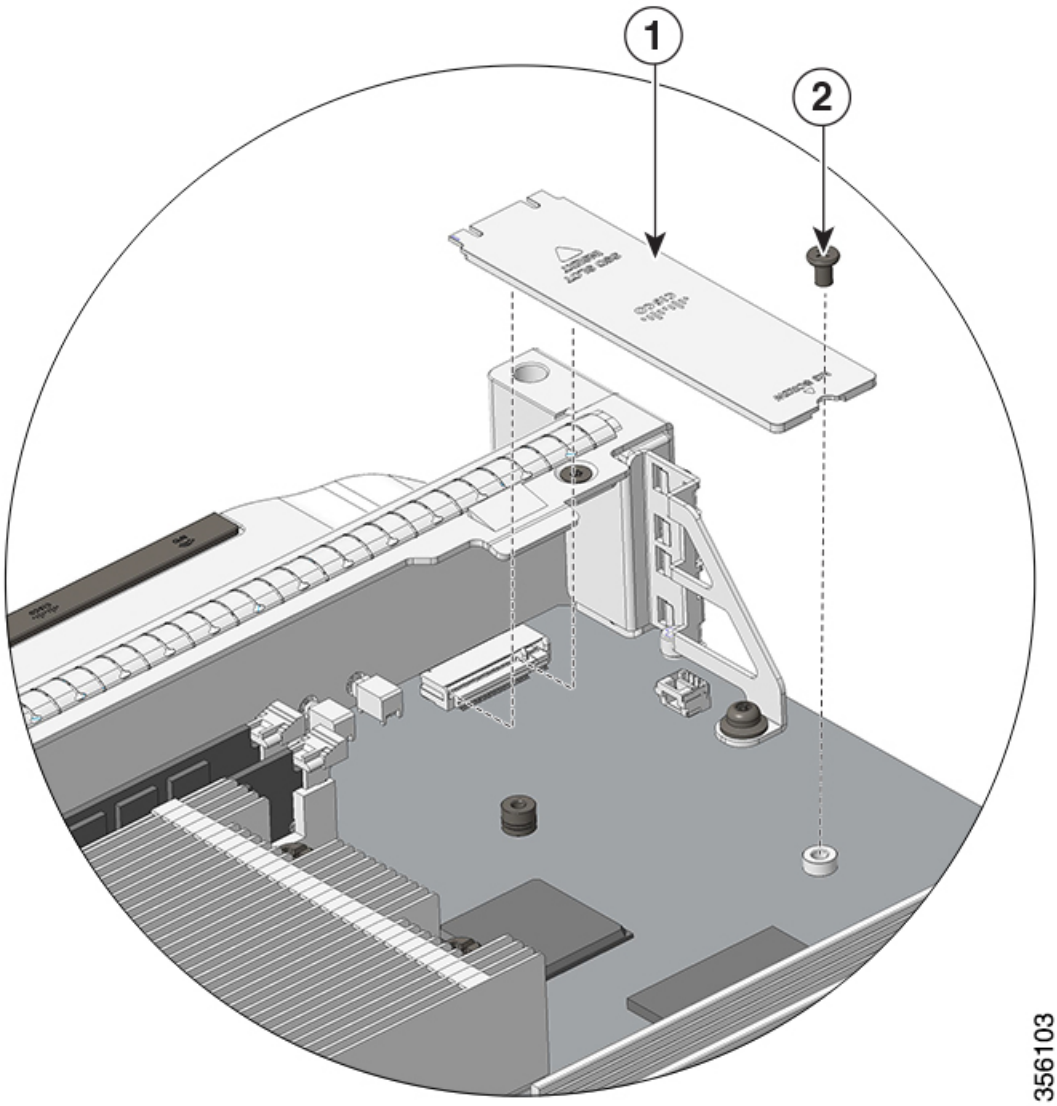
- You will need a Philips screwdriver to tighten the mounting screw.
- Take the necessary precautions to prevent ESD damage. Wear a grounded ESD wrist strap while handling the modules.

Procedure

Step 1 Loosen and remove the mounting screw on the blank SATA SSD module that is preinstalled on the supervisor engine.

Figure 18: Removing the Blank SATA SSD Module

The illustration used here is of a C9600-SUP-1 module. Note that in C9600X-SUP-2 module, the mating connector is perpendicular to the front panel of the supervisor module.



1	Blank SATA SSD module	2	Mounting screw

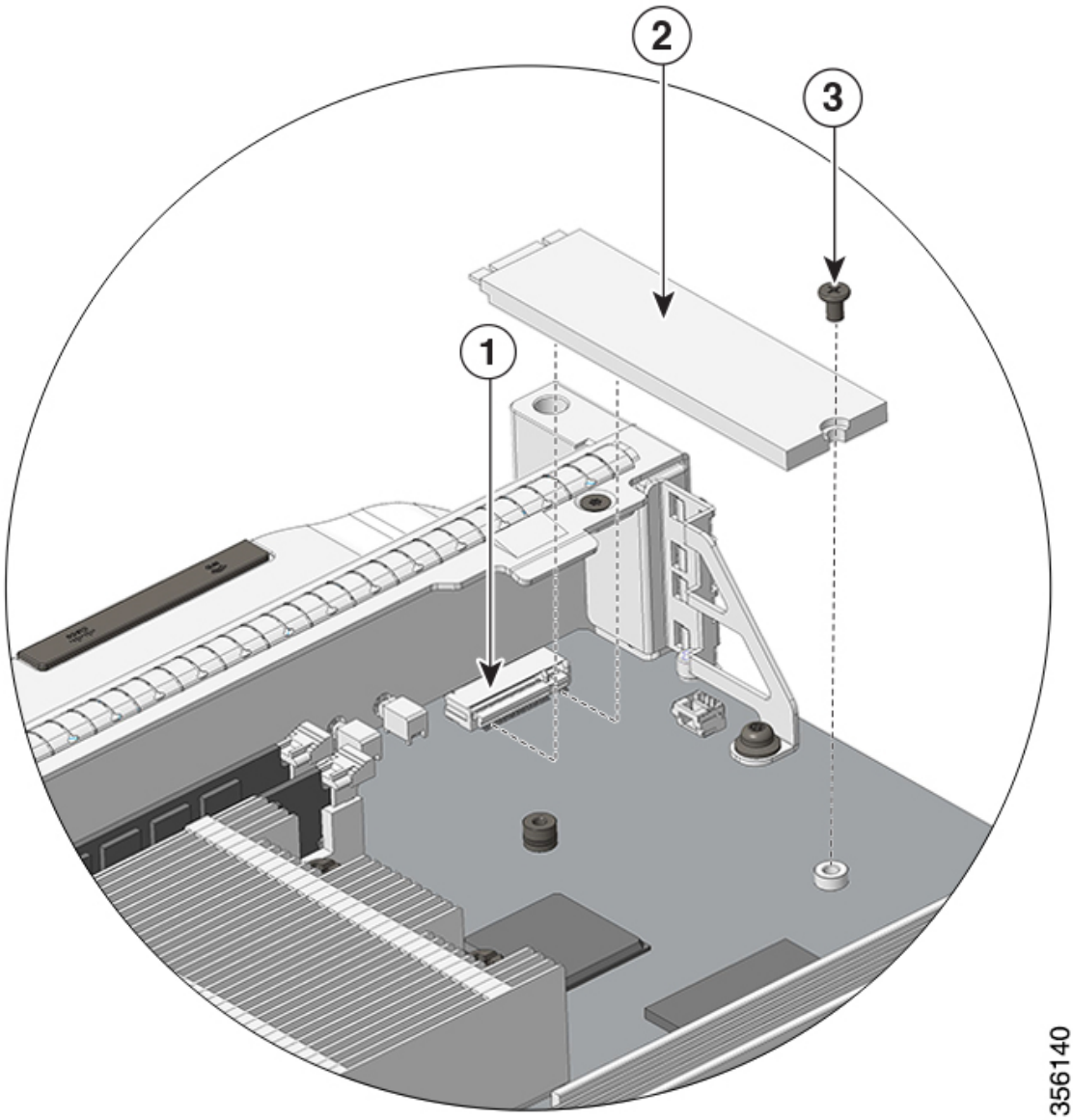
Step 2 Remove the new SATA SSD module from the shipping packaging.

Step 3 Slide the SATA SSD module into the mating connector at a 20-degree angle and then push it down.

Step 4 Install and tighten the mounting screw.

Figure 19: Installing a SATA SSD Module

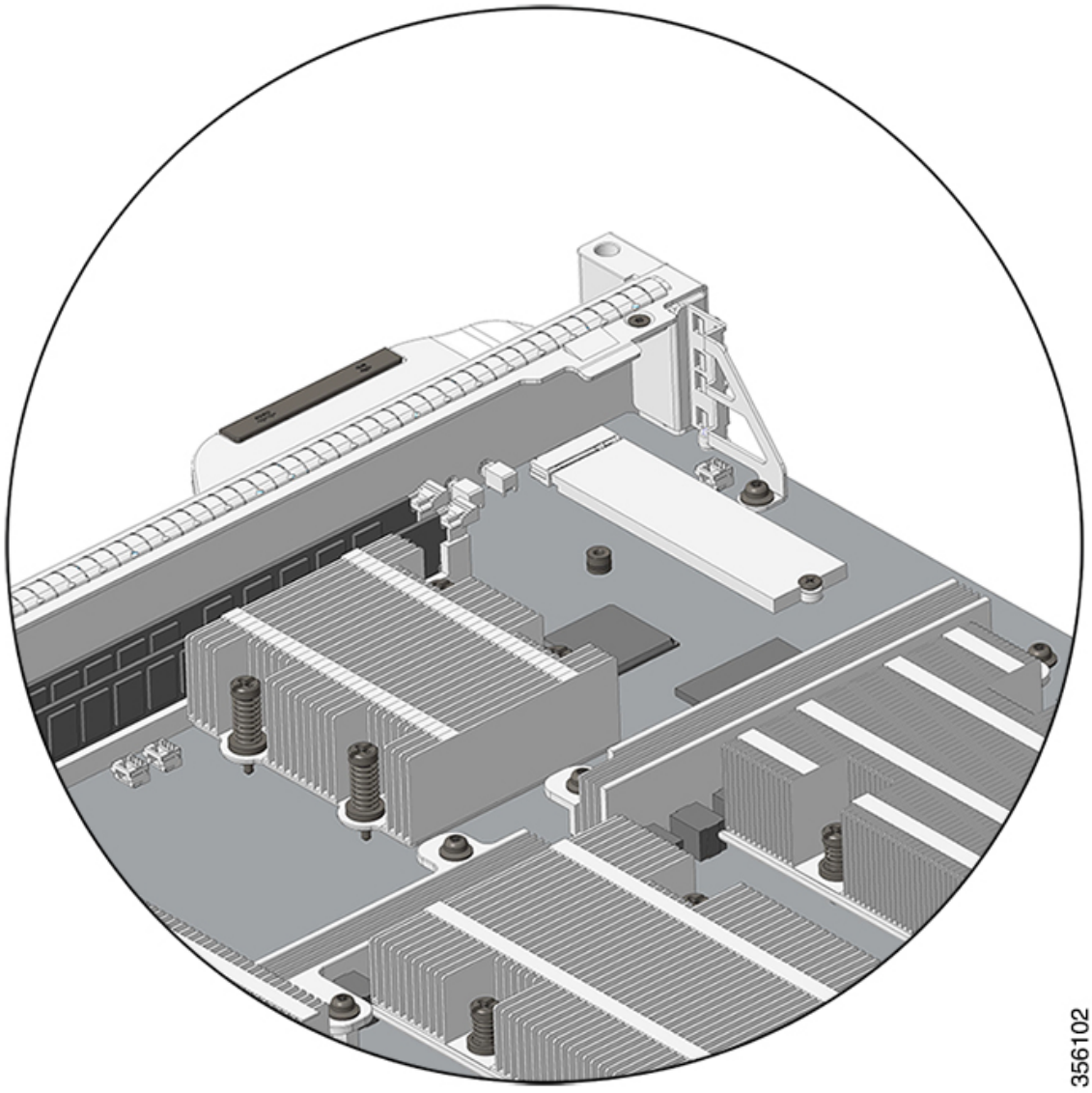
The illustration used here is of a C9600-SUP-1 module. Note that in C9600X-SUP-2 module, the mating connector is perpendicular to the front panel of the supervisor module.



1	Mating connector	3	Mounting screw
2	SATA SSD module	-	-

Figure 20: Supervisor Engine with SATA SSD Installed

The illustration used here is of a C9600-SUP-1 module. Note that in C9600X-SUP-2 module, the mating connector is perpendicular to the front panel of the supervisor module.



Step 5 Follow the procedure as described in Installing a Supervisor Engine, on page 12, to install the supervisor engine.

Step 6 Power on the chassis.

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

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