

Replacing Components

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Replacing a Fan Module

You can replace a fan module while the switch is operating, as long as you perform the replacement within one minute. If you cannot perform the replacement within one minute, leave the original fan module in the chassis to maintain the designed airflow until you have the replacement fan module on hand and can perform the replacement.

Caution If you are replacing a module during operations, verify the replacement fan module has the correct direction of airflow. This means that it has the **same airflow direction** as the other modules in the chassis. Also, verify that the airflow direction takes in air from a cold aisle and exhausts air to a hot aisle. Otherwise, the switch can overheat and shutdown.

If you are changing the airflow direction of all the modules in the chassis, shutdown the switch before replacing all the fan and power supply modules with modules using the other airflow direction. During operations, all of the modules must have the same direction of airflow.

Removing a Fan Module

Caution The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

Procedure

On the fan module that you are removing, press the two sides of the fan module handle together, and pull on the handles enough to unseat it from its connectors.

Installing a Fan Module

Before you begin

- A fan slot must be open and ready for the new fan module to be installed.
- If the switch is operating, you must have a new fan module on hand and ready to install within one minute of removing the original fan module.
- The new fan module must have the **same airflow direction** as the other fan and power supply modules installed in the switch.

Procedure

Step 1 Holding the fan module by its handle, align the back of the fan module (the side with the electrical connectors) to the open fan slot in the chassis.

Step 2 Slide the fan module into the slot until it clicks in place.

Step 3 Verify that the Status (STS) LED turns on and becomes green.

Replacing a Power Supply Module

The switch requires two power supplies for redundancy. With one power supply providing the necessary power for operations, replace the other power supply during operations as long as the new power supply has the same airflow direction as the other modules in the chassis.

Replace a power supply with another supported power supply that has the same power source type as the other installed power supply. Additionally, the airflow direction of the power supply must match or conform to the airflow direction of the installed fan modules. For the airflow direction used by the switch, see the coloring of the fan modules.

Removing an AC Power Supply

To remove an AC power supply, disconnect the power cable and remove the module from the chassis.

Before you begin

- To replace a power supply during operations, there must be a functioning power supply providing power to the switch while you replace the other power supply. If there is only one power supply installed in the switch and you need to replace it, install the new power supply in the open slot and power it up before removing the original power supply.
- Ensure that the chassis is grounded. For grounding instructions, see Grounding the Chassis.

Procedure

Step 1 Disconnect the power cord from the power receptacle on the power supply to be removed. Verify that the LED turns off.

Note
The LED might be on and amber colored. This indicates that the input power has been disconnected.

Step 2 Remove the power supply from the chassis by pushing and holding its thumb latch to the left and pulling the power supply part way out of the chassis.

Step 3 Place your other hand under the power supply to support it while you slide it out of the chassis.

Either place the power supply on an antistatic surface or pack it in its packing materials.

What to do next

Install the replacement power supply.

Installing an AC Power Supply

You can replace one power supply while the other one provides power to the switch.

Before you begin

- The power supply that you are installing must be capable of using the same airflow direction as the fan trays installed in the same switch. It must use the same type of power source as the other power supply installed in the same switch. (Do not mix AC and DC power supplies in the same switch.)

Note If the power supply that you are replacing has a different color handle than the replacement power supply, verify that it has or will have the same airflow direction as the other modules in the switch.

- An AC power source must be within reach of the power cable that will be used with the replacement power supply. If you are using *n*+*n* power redundancy, there must be a separate power source for each power supply installed in the chassis. Otherwise, only one power source is required.

- There must be an earth-ground connection to the chassis that you are installing the replacement module. Typically, the chassis is grounded by its metal-to-metal connection with a grounded rack. If you need to ground the chassis, see Grounding the Chassis.

Procedure

Step 1 Holding the replacement power supply with one hand underneath the module and the other hand holding the handle, turn the power supply so that its release latch is on the side. Align the back end of the power supply (the end with the electrical connections) to the open power supply slot. Carefully slide the power supply all the way into the slot until it clicks into place.

Note
If the power supply does not fit into the open slot, turn the module over, before sliding it carefully into the open slot.

Step 2 Test the installation by trying to pull the power supply out of the slot without using the release latch.

If the power supply does not move out of place, it is secured in the slot. If the power supply moves, carefully press it all the way into the slot until it clicks into place.

Step 3 Attach the power cable to the electrical inlet on the front of the power supply.

Step 4 Verify that the other end of the power cable is attached to the appropriate power source for the power supply.

Step 5 Verify that the power supply is operational by making sure that the power supply LED is green.

Installing and Removing Small-Form Pluggable Modules

Before you begin

See the Cisco N9348Y2C6D-SE1U switch (datasheet on cisco.com for a list of supported SFP and SFP+ modules. Use only supported SFP/SFP+ modules on the platform.

Warning **Statement 1008—**Class 1 Laser Product

This product is a Class 1 laser product.

Note We recommend that you wait 30 seconds between removal and insertion of an SFP on an interface module. This allows the transceiver software to initialize and synchronize with the standby RSP. Changing an SFP more quickly could result in transceiver initialization issues that disable the SFP.

- Do not remove the dust plugs from the SFP and SFP+ modules or the rubber caps from the fiber-optic cable until you are ready to connect the cable. The plugs and caps protect the module ports and cables from contamination and ambient light.

- Removing and installing an SFP and SFP+ module can shorten its useful life. Do not remove and insert any SFP/SFP+ module more often than is necessary.
- To prevent ESD damage, follow your normal board and component handling procedures when connecting cables to the switch and other devices.
- When you insert several SFP and SFP+ modules in multiple ports, wait for 5 seconds between inserting each SFP/SFP+. This will prevent the ports from going into error / disabled mode. Similarly, when you remove an SFP and SFP+ from a port, wait for 5 seconds before reinserting it.

SUMMARY STEPS

1. Attach an ESD-preventive wrist strap to your wrist and to an earth ground surface.
2. Find the send (TX) and receive (RX) markings that identify the top of the SFP/SFP+ module.
3. If the SFP/SFP+ module has a bale-clasp latch, move it to the open, unlocked position.
4. Align the module in front of the slot opening and push until you feel the connector snap into place.
5. If the module has a bale-clasp latch, close it to lock the SFP/SFP+ module in place.
6. Remove the SFP and SFP+ dust plugs and save.
7. Connect the SFP and SFP+ cables.

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	Attach an ESD-preventive wrist strap to your wrist and to an earth ground surface.	
Step 2	Find the send (TX) and receive (RX) markings that identify the top of the SFP/SFP+ module.	On some SFP/SFP+ modules, the send and receive (TX and RX) markings might be shown by arrows that show the direction of the connection.
Step 3	If the SFP/SFP+ module has a bale-clasp latch, move it to the open, unlocked position.	
Step 4	Align the module in front of the slot opening and push until you feel the connector snap into place.	
Step 5	If the module has a bale-clasp latch, close it to lock the SFP/SFP+ module in place.	
Step 6	Remove the SFP and SFP+ dust plugs and save.	
Step 7	Connect the SFP and SFP+ cables.	

Install and Remove QSFP/QDD Transceiver Modules

This section provides the installation, cabling, and removal instructions for the Quad Small Form-Factor Pluggable transceiver modules. Refer to the Cisco Transceiver Modules Compatibility Information for additional details on optical transceivers.

Installing the Transceiver Module

Warning **Statement 1079—**Hot Surface

This icon is a hot surface warning. To avoid personal injury, do not touch without proper protection.



Caution The transceiver module is a static-sensitive device. Always use an ESD wrist strap or similar individual grounding device when handling transceiver modules or coming into contact with system modules.

Caution Protect the transceiver ports by inserting clean dust caps (8000-QSFP-DCAP) into any ports not in use or that do not have optical modules plugged in. If optical modules are plugged in but not in use, use the dust caps that were supplied with the optical modules to protect the TX and RX surfaces of the optical module.

Clean the optic surfaces of the fiber cables before you plug them back into the optical ports of another module.

The switch ships with dust caps plugged in. We **highly** recommend you keep the dust caps plugged in until you are ready to plug an optic. The dust caps protect the ports from possible EMI interference and also avoid contamination due to dust collection.

Caution To meet the EMI interference requirements, use the metal dust caps when the ports are not in use by optical modules.

Before you begin

Required Tools and Equipment

- Wrist strap or other personal grounding device to prevent ESD occurrences
- Antistatic mat or antistatic foam to set the transceiver on
- Fiber-optic end-face cleaning tools and inspection equipment

Procedure

Step 1 Attach an ESD wrist strap to yourself and a properly grounded point on the chassis or the rack.

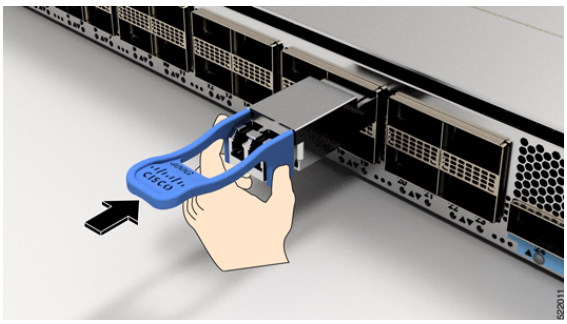
Step 2 Remove the transceiver module from its protective packaging.

Step 3 Check the label on the transceiver module body to verify that you have the correct model for your network. Do not remove the dust plug until you're ready to attach the network interface cable. The dust plug is not shown in the images.

Step 4 Hold the transceiver by the pull-tab so that the identifier label is on the top.

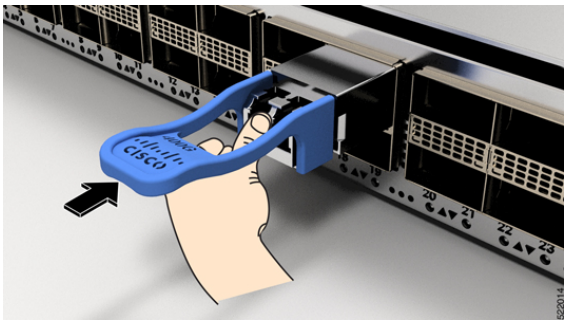
Step 5 Align the transceiver module in front of the module's transceiver socket opening and carefully slide the transceiver into the socket until the transceiver contacts the socket electrical connector.

Figure 1: Installing the QSFP Transceiver Module



Step 6 Press firmly on the front of the transceiver module with your thumb to fully seat the transceiver in the module's transceiver socket (see figure Seating the QSFP Transceiver Module).

Figure 2: Seating the QSFP Transceiver Module



IMPORTANT: If the latch isn't fully engaged, you might accidentally disconnect the transceiver module.

Attaching the Optical Network Cable

Before you begin

Before you remove the dust plugs and make any optical connections, use these guidelines:

- Keep the protective dust plugs installed in the unplugged fiber-optic cable connectors and in the transceiver optical bores until you are ready to make a connection.
- Inspect and clean the optical connector end faces just before you make any connections.
- Grasp the optical connector only by the housing to plug or unplug a fiber-optic cable.

Note

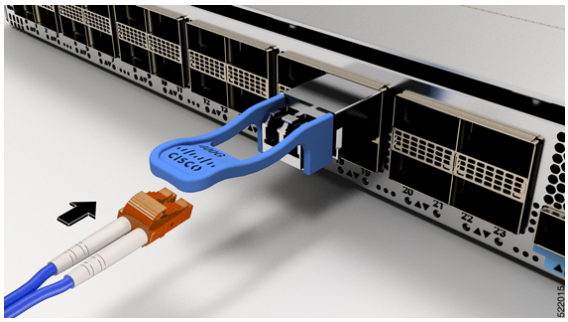
- The transceiver modules and fiber connectors are keyed to prevent incorrect insertion.
- The multiple-fiber push-on (MPO) connectors on the optical transceivers support network interface cables with either physical contact (PC) or ultra-physical contact (UPC) flat polished face types. The MPO connectors on the optical transceivers do not support network interface cables with an angle-polished contact (APC) face type.
- Inspect the MPO connector for the correct cable type, cleanliness, and any damage. For complete information on inspecting and cleaning fiber-optic connections, see the *Inspection and Cleaning Procedures for Fiber-Optic Connections* document.

Procedure

Step 1 Remove the dust plugs from the optical network interface cable MPO connectors and from the transceiver module optical bores. Save the dust plugs for future use.

Step 2 Attach the network interface cable MPO connectors immediately to the transceiver module.

Figure 3: Cabling a Transceiver Module



Removing the Transceiver Module

Caution The transceiver module is a static-sensitive device. Always use an ESD wrist strap or similar individual grounding device when handling transceiver modules or coming into contact with modules.

To remove a transceiver module, use these steps:

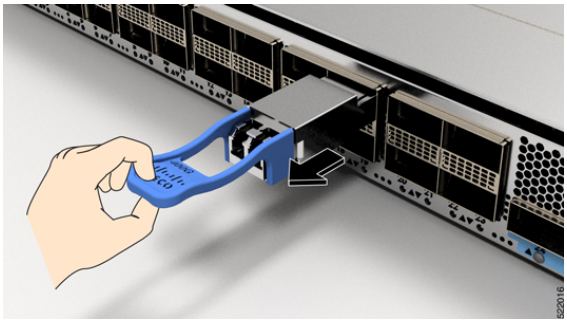
Procedure

Step 1 Disconnect the network interface cable from the transceiver connector.

Step 2 Install the dust plug immediately into the transceiver's optical bore.

Step 3 Grasp the pull-tab and gently pull to release the transceiver from the socket.

Figure 4: Removing the QSFP Transceiver Module



Step 4 Slide the transceiver out of the socket.

Step 5 Place the transceiver module into an antistatic bag.