



CHAPTER 2

Switch Installation

This chapter describes how to start your switch and how to interpret the power-on self-test (POST) that ensures proper operation. It describes the planning and cabling considerations to keep in mind while planning your stack. It describes how to install the switch and make connections to the switch. Read the topics and perform the procedures in this order:

- [Preparing for Installation, page 2-1](#)
- [Verifying Switch Operation, page 2-7](#)
- [Planning the Stack, page 2-8](#)
- [Installing the Switch, page 2-11](#)
- [Connecting StackWise Cable to StackWise Ports, page 2-30](#)
- [Installing and Removing SFP Modules, page 2-33](#)
- [Installing and Removing XENPAK Modules \(Catalyst 3750G-16TD Switch\), page 2-35](#)
- [Connecting to the 10/100 and 10/100/1000 Ports, page 2-39](#)
- [Connecting to an SFP Module, page 2-41](#)
- [Connecting to a XENPAK Module, page 2-44](#)
- [Where to Go Next, page 2-45](#)

Preparing for Installation

This section covers these topics:

- [Warnings, page 2-2](#)
- [Installation Guidelines, page 2-6](#)
- [Box Contents, page 2-7](#)
- [Tools and Equipment, page 2-7](#)

Warnings

These warnings are translated into several languages in the *Regulatory Compliance and Safety Information for the Catalyst 3750 Switch* guide.



Warning

To prevent the switch from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 113°F (45°C). To prevent airflow restriction, allow at least 3 inches (7.6 cm) of clearance around the ventilation openings. Statement 17B



Warning

Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals. Statement 43



Warning

Do not stack the chassis on any other equipment. If the chassis falls, it can cause severe bodily injury and equipment damage. Statement 48



Warning

An exposed wire lead from a DC-input power source can conduct harmful levels of electricity. Be sure that no exposed portion of the DC-input power source wire extends from the terminal block plug. Statement 122



Warning

Blank faceplates (filler 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 and faceplates are in place. Statement 156



Warning

Ethernet cables must be shielded when used in a central office environment. Statement 171



Warning

If a redundant power system (RPS) is not connected to the switch, install an RPS connector cover on the back of the switch. Statement 265



Warning

Attach only the following Cisco RPS model to the RPS receptacle: PWR-RPS2300, PWR675-AC-RPS-N1=. Statement 370



Warning

When the Catalyst 3750-12S switch and 100BASE-FX MMF small form-factor pluggable (SFP) module (model number GLC-GE-100FX) are running, the surface temperature of the removed SFP module might be hot. Statement 377

**Warning**

Read the wall-mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation to people and damage to the system. Statement 378

**Warning**

Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001

**Warning**

Before performing any of the following procedures, ensure that power is removed from the DC circuit. Statement 1003

**Warning**

Read the installation instructions before connecting the system to the power source. Statement 1004

**Warning**

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 5 A Statement 1005

**Note**

This warning applies only to the Catalyst 3750G-12S-SD switch.

**Warning**

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 15 A Statement 1005

**Note**

This warning applies to all the Catalyst 3750 switches except the Catalyst 3750G-12S-SD switch.

**Warning**

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006

**Warning**

Class 1 laser product. Statement 1008

**Warning**

This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security.

Statement 1017

**Warning**

The plug-socket combination must be accessible at all times, because it serves as the main disconnecting device. Statement 1019

**Warning**

A readily accessible two-poled disconnect device must be incorporated in the fixed wiring.

Statement 1022

**Warning**

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024

**Warning**

This unit might have more than one power supply connection. All connections must be removed to de-energize the unit. Statement 1028

**Warning**

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Statement 1030

**Warning**

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

Statement 1040

**Warning**

For connections outside the building where the equipment is installed, the following ports must be connected through an approved network termination unit with integral circuit protection: 10/100/1000 Ethernet. Statement 1044

**Warning**

When installing or replacing the unit, the ground connection must always be made first and disconnected last. Statement 1046

**Warning**

To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of: 45°C Statement 1047

**Warning**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

**Warning**

Voltages that present a shock hazard may exist on Power over Ethernet (PoE) circuits if interconnections are made using uninsulated exposed metal contacts, conductors, or terminals. Avoid using such interconnection methods, unless the exposed metal parts are located within a restricted access location and users and service people who are authorized within the restricted access location are made aware of the hazard. A restricted access area can be accessed only through the use of a special tool, lock and key or other means of security. Statement 1072

**Warning**

No user-serviceable parts inside. Do not open. Statement 1073

**Warning**

Installation of the equipment must comply with local and national electrical codes. Statement 1074

Statement 371—Power Cable and AC Adapter

接続ケーブル、電源コード、AC アダプタ、バッテリーなどの部品は、必ず添付品または指定品をご使用ください。添付品・指定品以外の部品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、電気用品安全法により、当該法の認定（PSE とコードに表記）でなく UL 認定（UL または CSA マークがコードに表記）の電源ケーブル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。

**Caution**

To comply with the Telcordia GR-1089 Network Equipment Building Systems (NEBS) standard for electromagnetic compatibility and safety, connect the ethernet cables only to intrabuilding or nonexposed wiring or cabling.

**Caution**

To comply with the Telcordia GR-1089 NEBS standard, PoE or non-PoE 10/100/1000 Ethernet port cables that exit from either the left side or right side of the switch should be routed and tied to the nearest rack metal hardware.

**Note**

The grounding architecture of this product is DC-isolated (DC-I).

Catalyst 3750G Integrated Wireless LAN Controller Switches

This warning applies only to the Catalyst 3750G-24WS-S25 and 3750G-24WS-S50 switches:

**Warning**

There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Statement 1015

Installation Guidelines

When you decide where to place the switch, be sure to observe these requirements:

- For copper Ethernet ports, including 10/100 ports, 10/100/1000 ports, and 1000BASE-T SFP module ports, cable lengths from the switch to connected devices can be up to 328 feet (100 meters).
- See [Table B-3 on page B-5](#) for a list of cable specifications for 1000BASE-SX, 1000BASE-LX, 1000BASE-ZX, and CWDM fiber-optic SFP module connections. Each port must match the wave-length specifications on the other end of the cable, and for reliable communications, the cable must not exceed the stipulated cable length.
- See the Catalyst 3750 release notes for cable requirements for XENPAK module connections. Each port must match the wave-length specifications on the other end of the cable, and for reliable communications, the cable must not exceed the required cable length.

**Note**

When you use shorter distances of single-mode fiber cable, you might need to insert an inline optical attenuator in the link to avoid overloading the receiver.

When the fiber-optic cable span is less than 25 km, you should insert a 5-decibel (dB) or 10-dB inline optical attenuator between the fiber-optic cable plant and the receiving port on the 1000BASE-ZX SFP module at each end of the link.

- The operating environment must be within the ranges listed in [Appendix A, “Technical Specifications.”](#)
- Clearance to front and rear panels must be such that
 - You can easily read the front-panel indicators.
 - Access to ports is sufficient for unrestricted cabling.
Make sure that there is access to the rear of the rack if you are planning to stack the switches. If you do not have access to the rear panel, make sure that you cable the switches before you rack-mount them.
 - The AC power cord can reach from the AC power outlet to the connector on the switch rear panel.
- Cabling must be away from sources of electrical noise, such as radios, power lines, and fluorescent lighting fixtures. Make sure the cabling is safely away from other devices that might damage the cables.
- Airflow around the switch and through the vents must be unrestricted.
- Temperature around the unit should not exceed 113°F (45°C).

**Note**

If you install the switch in a closed or multirack assembly, the temperature around it might be greater than normal room temperature.

- Cisco Ethernet Switches are equipped with cooling mechanisms, such as fans and blowers. However, these fans and blowers can draw dust and other particles, causing contaminant buildup inside the chassis, which can result in a system malfunction.

You must install this equipment in an environment as free as possible from dust and foreign conductive material (such as metal flakes from construction activities).

These standards provide guidelines for acceptable working environments and acceptable levels of suspended particulate matter:

- Network Equipment Building Systems (NEBS) GR-63-CORE
- National Electrical Manufacturers Association (NEMA) Type 1
- International Electrotechnical Commission (IEC) IP-20

Box Contents

The switch getting started guide on Cisco.com describes the box contents. If any item is missing or damaged, contact your Cisco representative or reseller for support.

Tools and Equipment

You need to supply a number-2 Phillips screwdriver to rack-mount the switch.

Verifying Switch Operation

Before you install the switch in a rack, on a wall, or on a table or shelf, you should power on the switch and verify that the switch passes POST. See the “Running Express Setup” section in the getting started guide for the steps required to connect a PC to the switch and to run Express Setup.

Powering On the Switch and Running POST

If your configuration has an RPS, connect the switch and the RPS to the same AC power source. See the “Power Connectors” section on page 1-25, and see the Cisco RPS documentation for more information.



Note

Always set the RPS in standby mode when you are connecting devices to it and in active mode during normal operation.

To power on the switch, connect one end of the AC power cord to the AC power connector on the switch, and connect the other end of the power cord to an AC power outlet.

To power on a DC switch, see [Appendix C, “Connecting to DC Power,”](#) for complete instructions.



Warning

Attach only the Cisco RPS model to the RPS receptacle: PWR-RPS2300, PWR675-AC-RPS-N1=. Statement 370

As the switch powers on, it begins the POST, a series of tests that runs automatically to ensure that the switch functions properly. POST lasts approximately 1 minute.

When the switch begins POST, the System, the RPS, the Master, the Status, the Duplex, the Speed, and the Stack LEDs turn green. (On the PoE switches, the PoE LED also turns green as POST begins.) The System LED flashes green, and the other LEDs remain continuous green.

When POST completes successfully, the System LED remains green. The RPS LED remains green for some time and then returns to its operating status. The other LEDs turn off and return to their operating status. When POST fails, the System LED turns amber.

**Note**

POST failures are usually fatal. Call Cisco Systems if your switch does not pass POST.

Powering Off the Switch

After a successful POST, disconnect the power cord from the switch. Install the switch in a rack, on a wall, on a table, or on a shelf as described in the [“Installing the Switch” section on page 2-11](#).

Planning the Stack

If you plan to stack your switches, read these sections:

- [Planning Considerations, page 2-8](#)
- [Powering Considerations, page 2-8](#)
- [Cabling Considerations, page 2-9](#)
- [Recommended Cabling Configurations, page 2-10](#)

Planning Considerations

Before connecting the Catalyst 3750 switches in a stack, observe these planning considerations:

- Size of the switch. For switch dimensions, see [Appendix A, “Technical Specifications.”](#) Some switches are deeper than the other switches. Stacking switches of the same size together makes it easier to cable the switches.
- Length of cable. Depending on the configurations that you have, you might need cables of different sizes. If you do not specify the length of the StackWise cable, the 0.5-meter cable is supplied. If you require the 1-meter cable or the 3-meter cable, you can order it from your Cisco supplier. For cable numbers, see the [“StackWise Ports” section on page 1-24](#). The [“Recommended Cabling Configurations” section on page 2-10](#) provides examples of recommended configurations.
- Access to the rear ports for unrestricted cabling.
Make sure that you have access to the rear of the rack if you plan to stack the switches. If you do not have access to the rear panel, make sure that you cable the switches before you rack-mount them.
- For concepts and procedures to manage switch stacks, see the switch software configuration guide.

Powering Considerations

Consider the following guidelines before you power on the switches in a stack:

- The sequence in which you initially power on the switches might affect the switch that becomes the stack master.

- If you want a particular switch to become the stack master, power on that switch first. This switch becomes the stack master and remains the stack master until a master re-election is required. After approximately 10 seconds, power on the remaining switches in the stack.
- If you have no preference as to which switch becomes the stack master, power on all the switches in the stack within a 10-second timeframe. These switches participate in the stack master election. Switches powered up after the 10-second timeframe do not participate in the election.
- Power off a switch before you add it to or remove it from an existing switch stack.

**Note**

For conditions that can cause a stack master re-election or to manually elect the stack master, see the “Managing Switch Stacks” chapter in the switch software configuration guide.

Cabling Considerations

The illustrations in this section display cabling configuration examples that show the stack bandwidth and possible stack partitioning.

Figure 2-1 shows an example of a stack of Catalyst 3750 switches that provides full bandwidth and redundant StackWise cable connections.

Figure 2-1 Example of a Stack with Full Bandwidth Connections

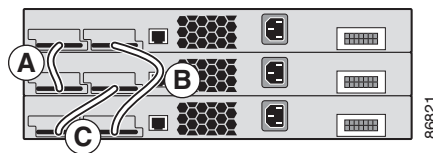


Figure 2-2 shows an example of a stack of Catalyst 3750 switches with incomplete StackWise cabling connections. This stack provides only half bandwidth and does not have redundant connections.

Figure 2-2 Example of a Stack with Half Bandwidth Connections

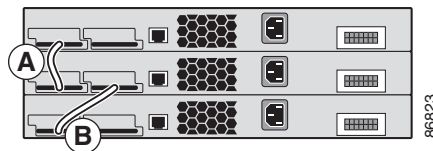
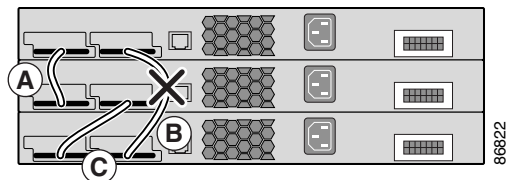
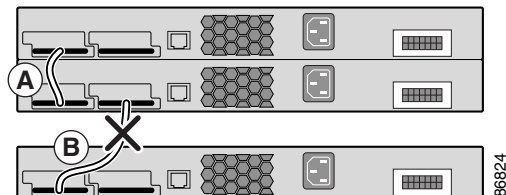


Figure 2-3 and Figure 2-4 show examples of stacks of Catalyst 3750 switches with failover conditions. In Figure 2-3, the StackWise cable is bad in link B; therefore, this stack provides only half bandwidth and does not have redundant connections. In Figure 2-4, link B is bad; therefore, this stack partitions into two stacks, and switch 1 and switch 3 are stack masters.

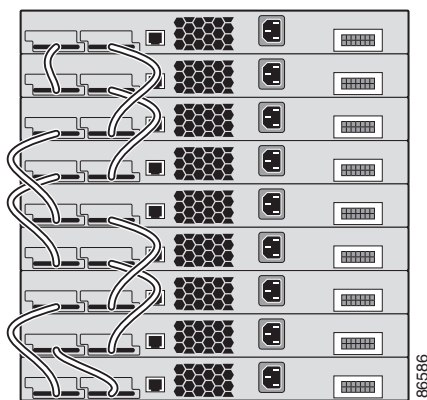
Figure 2-3 *Example of a Stack with a Failover Condition***Figure 2-4** *Example of a Partitioned Stack with a Failover Condition*

Recommended Cabling Configurations

This section describes the recommended cabling configurations for stacking the switches.

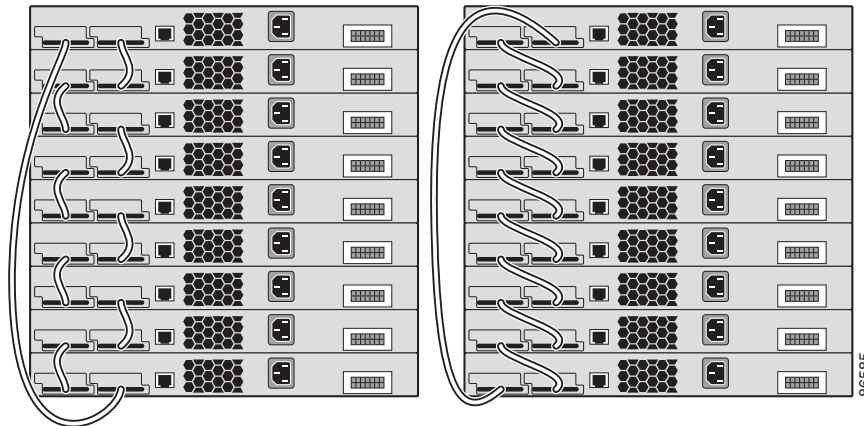
Stacking Switches in Vertical Racks or on a Table

Figure 2-5 is an example of a recommended configuration using the supplied 0.5-meter StackWise cable. In this example, the switches are stacked in a vertical rack or on a table. This configuration provides redundant connections.

Figure 2-5 *Stacking the Switches in a Vertical Rack or on a Table Using the 0.5-meter StackWise Cable*

The configuration examples in Figure 2-6 use the 3-meter StackWise cable in addition to the supplied 0.5-meter StackWise cable. This configuration also provides redundant connections.

Figure 2-6 *Stacking the Catalyst 3750 Switches in a Vertical Rack or on a Table Using 0.5-meter and 3-meter StackWise Cables*



Side-by-Side Mounting in a Rack or on a Wall

Figure 2-7 and Figure 2-8 are examples of recommended configurations where the switches are rack- or wall-mounted side-by-side. Use the 1-meter and 3-meter StackWise cables to connect the switches. These configuration provide redundant connections.

Figure 2-7 *Stacking up to Eight Switches in a Side-by-Side Mounting Configuration*

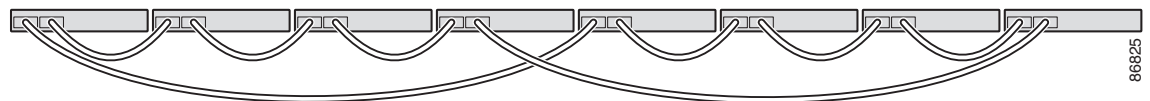
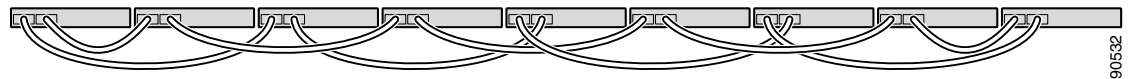


Figure 2-8 *Stacking Nine Switches in a Side-by-Side Mounting Configuration 90532*



Installing the Switch

This section describes these installation procedures:

- [Rack-Mounting, page 2-12](#)
- [Wall-Mounting, page 2-27](#)
- [Table- or Shelf-Mounting, page 2-30](#)

Rack-Mounting

**Warning**

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006

To install the switch in a 19-inch or 24-inch rack (24-inch racks require optional mounting hardware), follow the instructions described in these procedures:

- [Removing Screws from the Switch, page 2-12](#)
- [Attaching Brackets to the Catalyst 3750G-24TS Switch, page 2-14](#)
- [Attaching Brackets to the Catalyst 3750G Integrated Wireless LAN Controller Switches, page 2-17](#)
- [Attaching Brackets to All Other Catalyst 3750 Switches, page 2-18](#)
- [Mounting the Switch in a Rack, page 2-24](#)
- [Attaching the Cable Guide, page 2-26](#)

**Note**

When you install the switch in a 24-inch rack, an optional bracket kit that is not included with the switch is required. You can order a kit containing the 24-inch rack-mounting brackets and hardware from Cisco. For the Catalyst 3750G-24TS switch, order part number RCKMNT-3550-1.5RU=. For the other Catalyst 3750 switches, order part number RCKMNT-1RU=. The Catalyst 3750G-24WS-S25 and the 3750G-24WS-S50 switch do not support 24-inch rack-mounting.

Removing Screws from the Switch

If you plan to install the switch in a rack, you must first remove the screws in the switch chassis so that you can attach the mounting brackets.

- [Figure 2-9, Figure 2-10, and Figure 2-11](#) show how to remove the chassis screws in a 1-rack-unit (RU) switch.
- [Figure 2-12](#) shows how to remove the chassis screws in a 1.5-RU switch.
- [Figure 2-13](#) shows how to remove the chassis screws in a 2-RU switch.

Figure 2-9 Removing Screws from the Catalyst 3750-24TS, 3750V2-24TS, 3750G-24T, 3750-24PS, 3750V2-24PS, 3750-48TS, 3750-48PS, 3750V2-48PS, and 3750G-16TD Switch

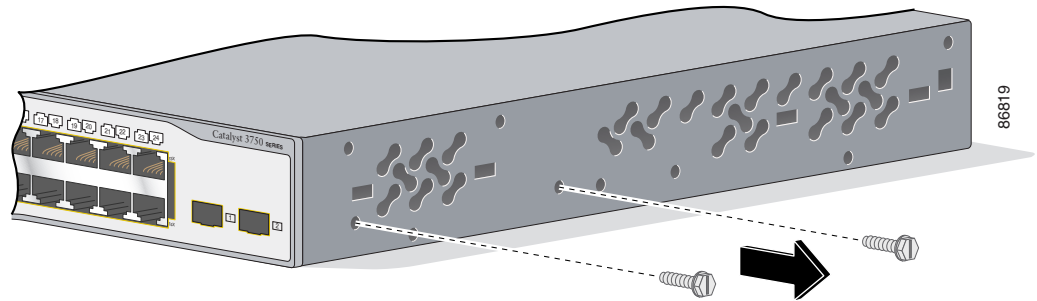


Figure 2-10 Removing Screws from the Catalyst 3750G-24TS-1U, 3750G-24PS, 3750G-48PS, and 3750G-48TS Switch

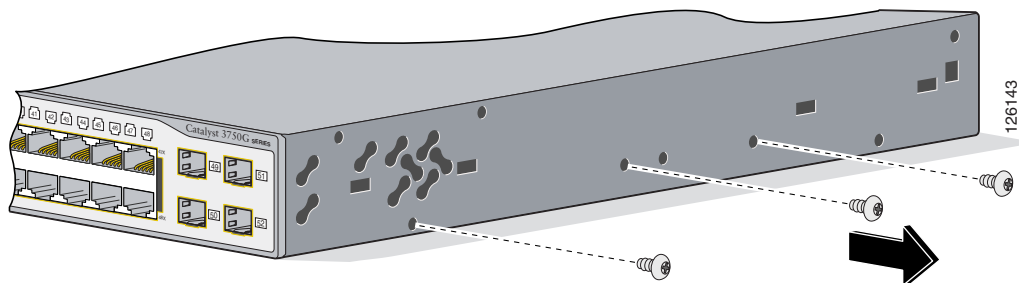


Figure 2-11 Removing Screws from the Catalyst 3750G-12S and 3750-12S-SD Switch

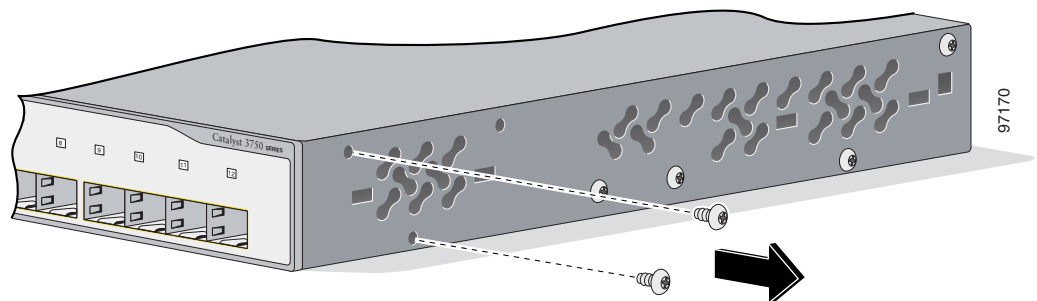
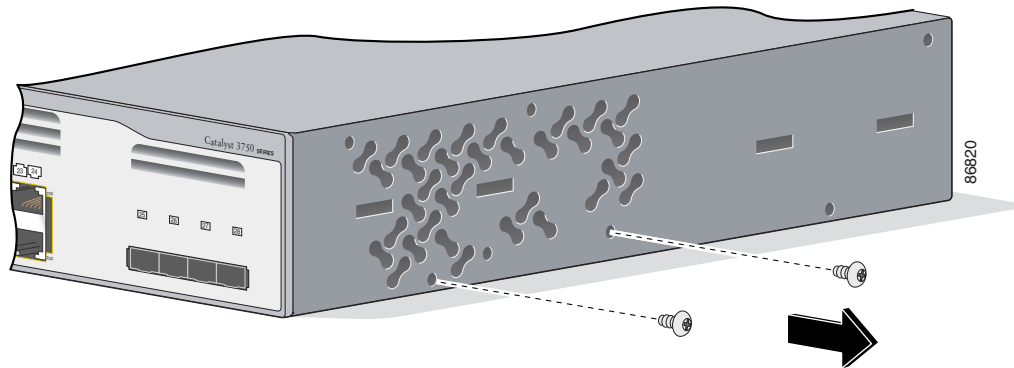
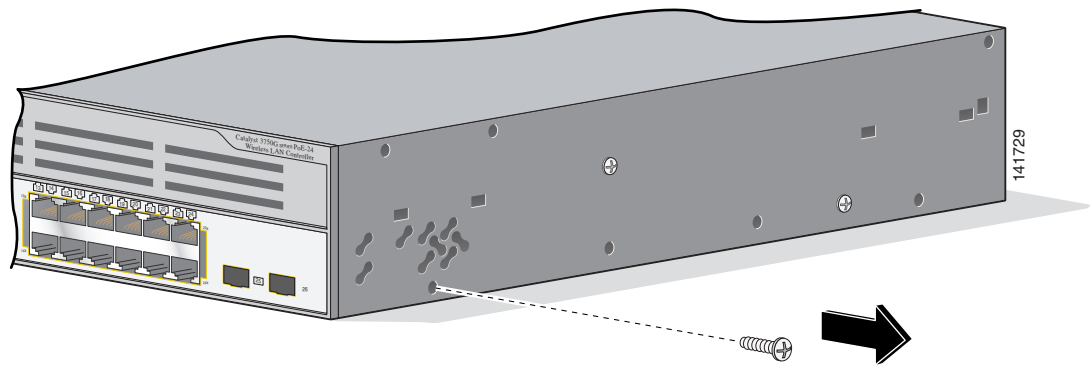
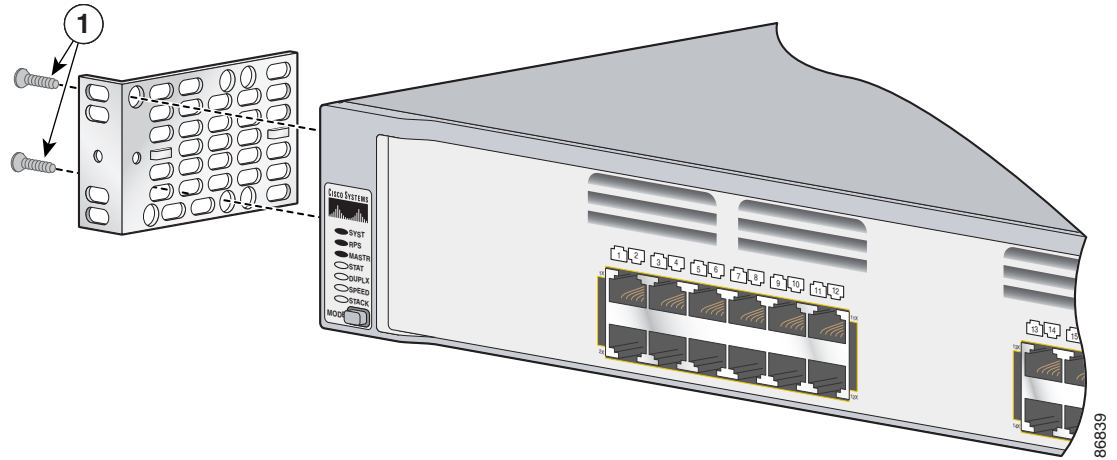


Figure 2-12 Removing Screws from the 3750G-24TS Switch**Figure 2-13** Removing Screws from the 3750G-24WS-S25 and the 3750G-24WS-S50 Switch

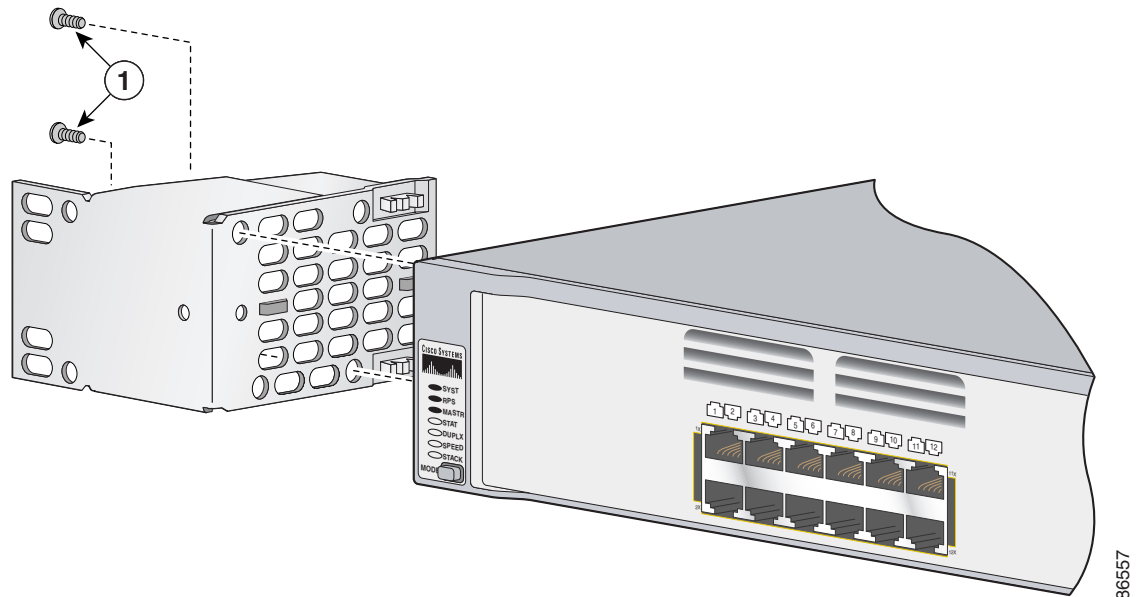
Attaching Brackets to the Catalyst 3750G-24TS Switch

The bracket orientation and the brackets that you use depend on whether you are attaching the brackets for a 19-inch or a 24-inch rack.

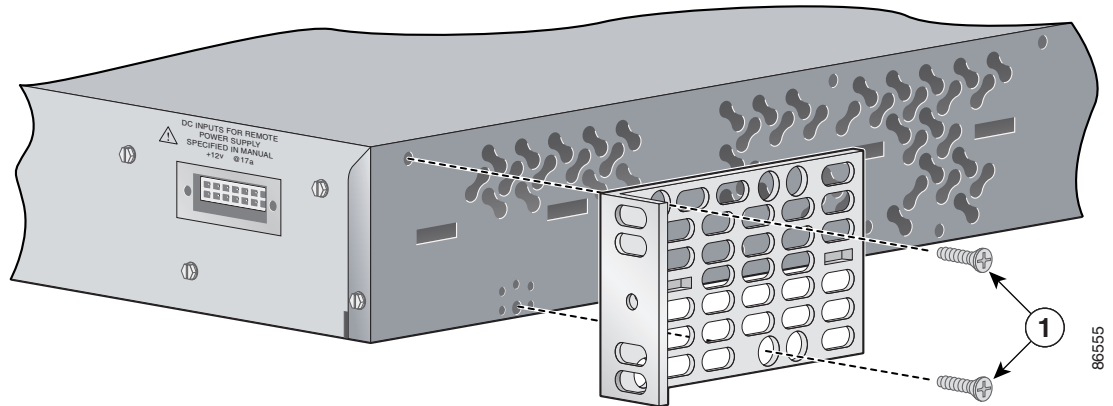
[Figure 2-14](#) through [Figure 2-19](#) show how to attach each type bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side.

Figure 2-14 Attaching Brackets for 19-inch Racks, Front Panel Forward

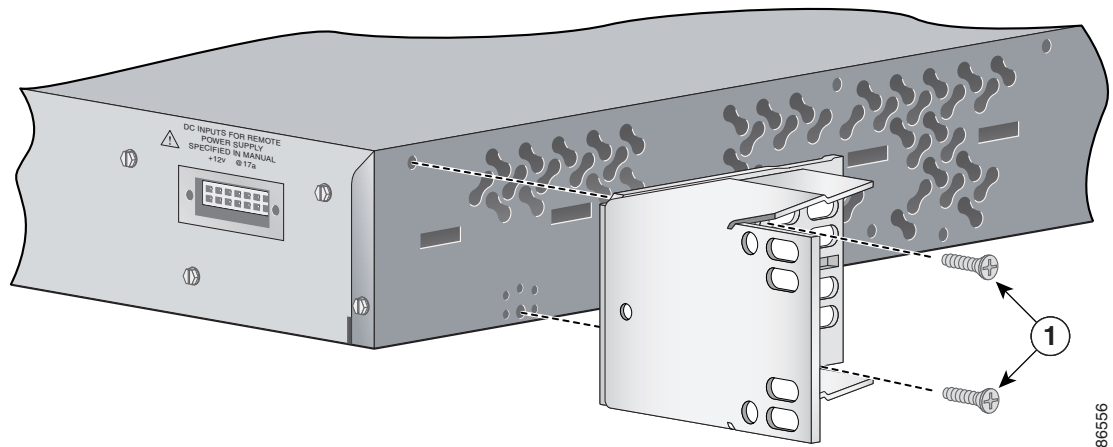
1	Phillips flat-head screws
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Figure 2-15 Attaching Brackets for 24-Inch Racks, Front Panel Forward

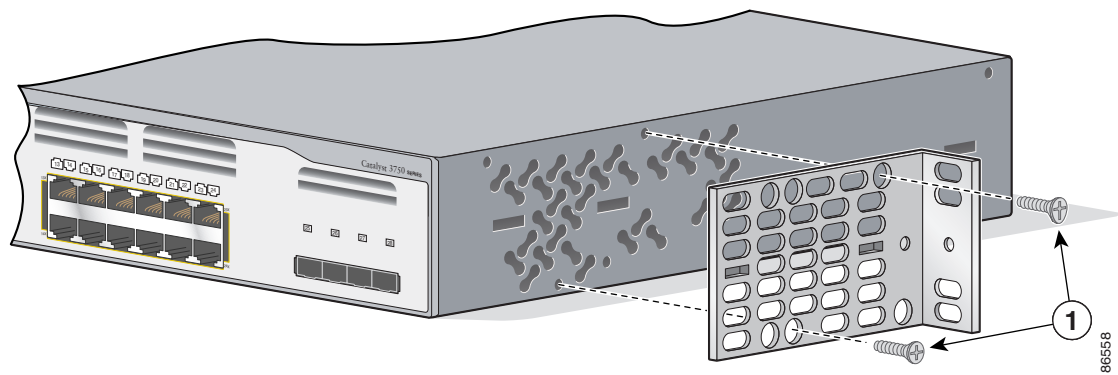
1	Phillips flat-head screws
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Figure 2-16 Attaching Brackets for 19-Inch Racks, Rear Panel Forward

1	Phillips flat-head screws
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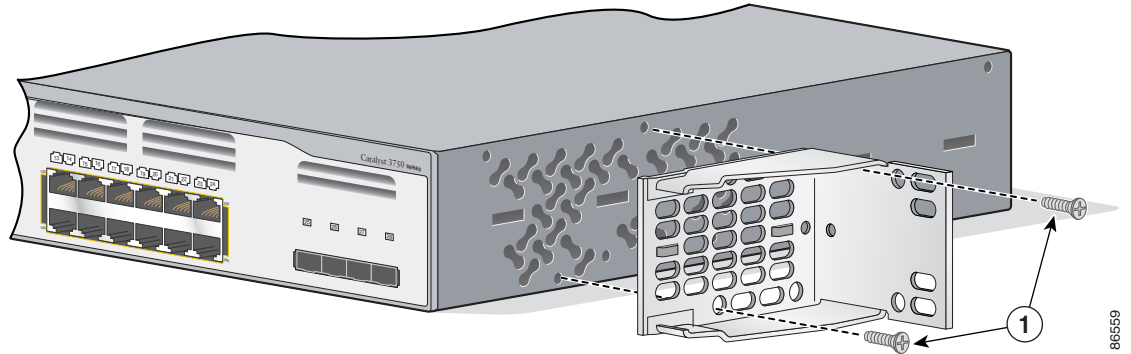
Figure 2-17 Attaching Brackets for 24-Inch Racks, Rear Panel Forward

1	Phillips flat-head screws
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Figure 2-18 Attaching Brackets for 19-Inch Telco Racks

- | | |
|----------|---------------------------|
| 1 | Phillips flat-head screws |
|----------|---------------------------|

Figure 2-19 Attaching Brackets for 24-Inch Telco Racks

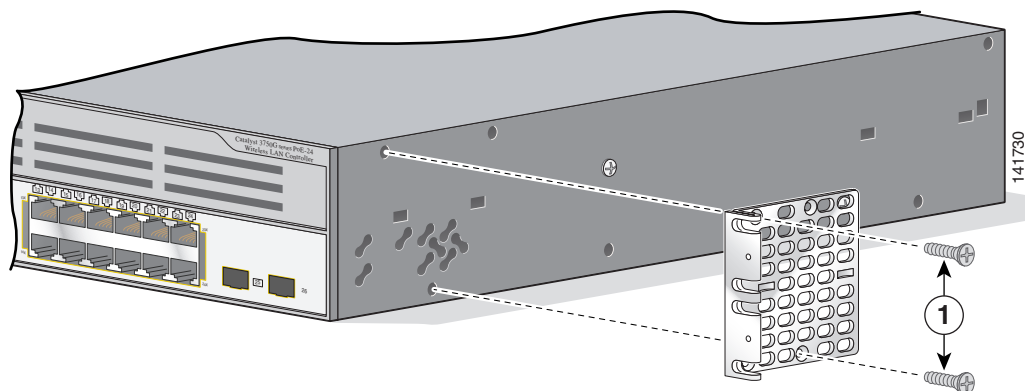


- | | |
|----------|---------------------------|
| 1 | Phillips flat-head screws |
|----------|---------------------------|

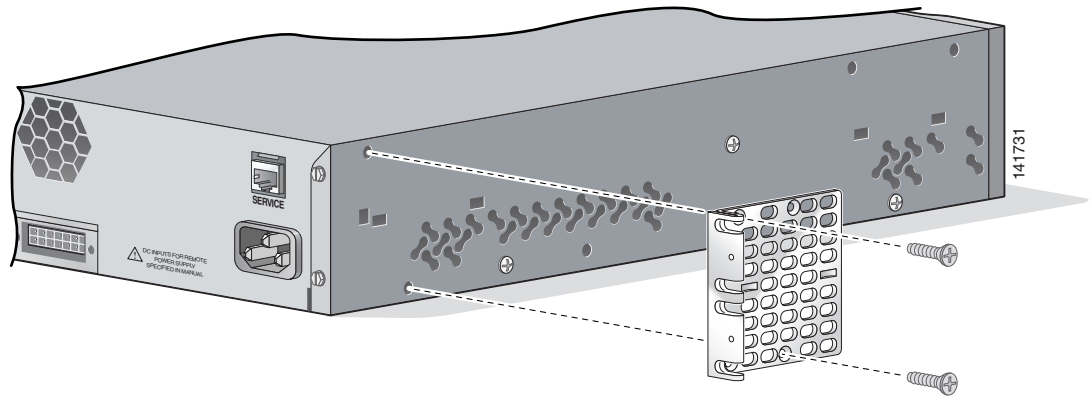
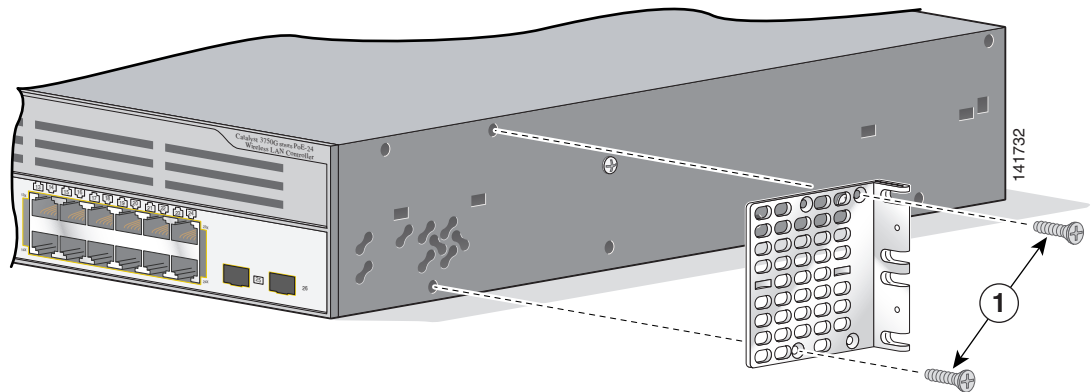
Attaching Brackets to the Catalyst 3750G Integrated Wireless LAN Controller Switches

The wireless LAN controller switches can only be mounted on 19-inch racks. This section describes how to attach 19-inch brackets on the Catalyst 3750G-24WS-S25 and the 3750G-24WS-S50 switches. [Figure 2-20](#), [Figure 2-21](#), and [Figure 2-22](#) show how to attach the bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side. For 19-inch racks, use part number 700-21419-XX.

Figure 2-20 Attaching Brackets for 19-Inch Racks, Front Panel Forward



- | | |
|----------|---------------------------|
| 1 | Phillips flat-head screws |
|----------|---------------------------|

Figure 2-21 Attaching Brackets for 19-Inch Racks, Rear Panel Forward**Figure 2-22 Attaching Brackets for 19-Inch Telco Racks**

1	Phillips flat-head screws
---	---------------------------

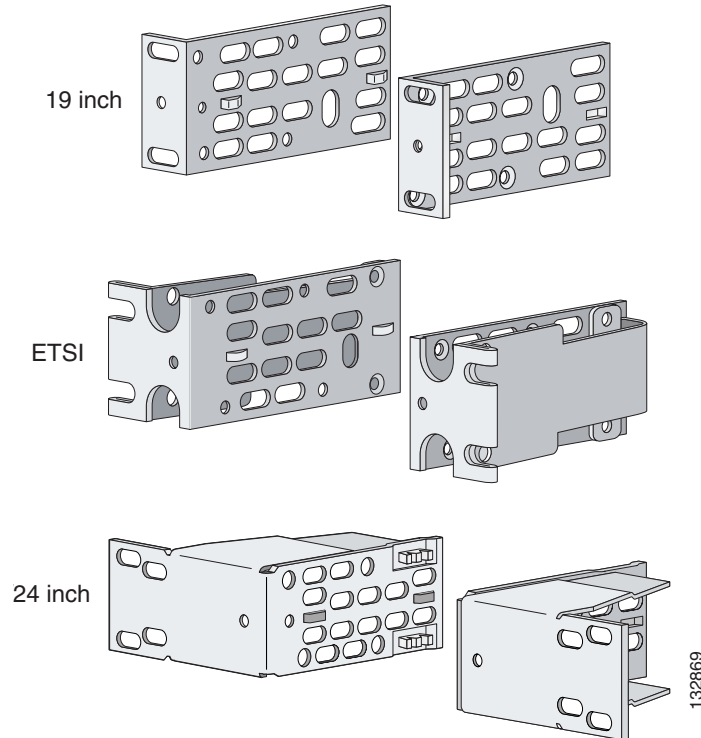
Attaching Brackets to All Other Catalyst 3750 Switches

This section describes how to attach brackets to these Catalyst 3750 switches:

- Catalyst 3750-24TS, 3750V2-24TS, and 3750G-24TS
- Catalyst 3750G-24T
- Catalyst 3750-24FS and Catalyst 3750V2-24FS
- Catalyst 3750G-12S and 3750G-12S-SD
- Catalyst 3750-24PS, 3750V2-24PS, and 3750G-24PS
- Catalyst 3750-48PS, 3750V2-48PS, and 3750G-48PS
- Catalyst 3750G-16TD
- Catalyst 3750-48TS, 3750V2-48TS, and 3750G-48TS

The bracket orientation and the brackets that you use depend on whether you are attaching the brackets for a 19-inch, a 23-inch, a 24-inch rack, or a ETSI rack. [Figure 2-23](#) shows the bracket options.

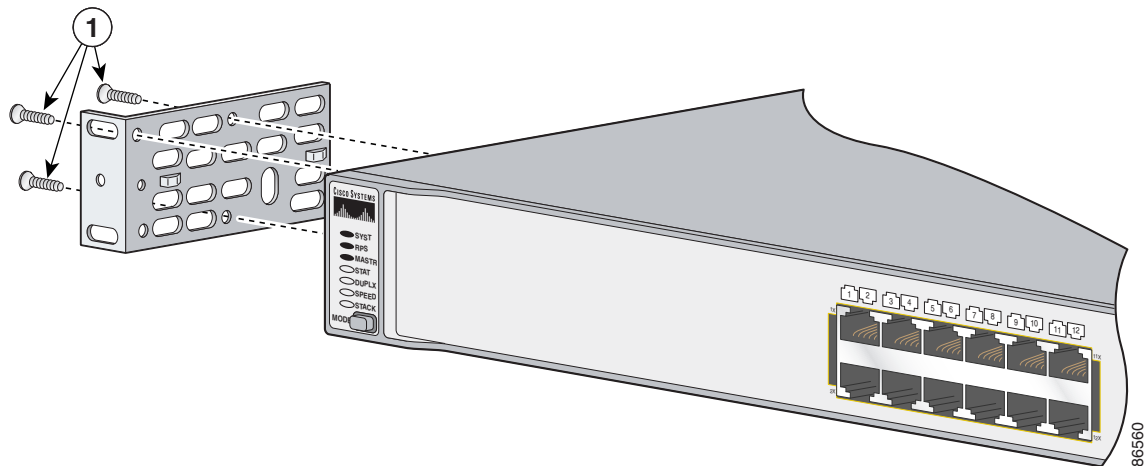
Figure 2-23 Rack-Mounting Brackets



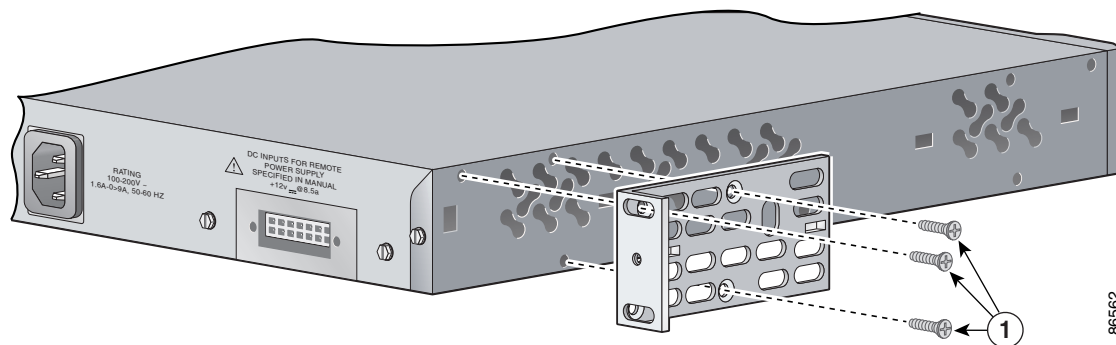
- For 19-inch racks, use part number 700-08209-XX, and see [Attaching Brackets for 19-Inch Racks and 19-Inch Telco Racks, page 2-19](#).
- For 23-inch racks, use part number 700-21646-XX, and see [Attaching Brackets for 23-Inch Racks, page 2-21](#).
- For 24-inch racks, use part number 700-12398-XX, and see [Attaching Brackets for 24-Inch Racks and 24-Inch Telco Racks, page 2-22](#).
- For ETSI racks, use part number 700-19781XX, and see [Attaching Brackets for ETSI Racks, page 2-23](#).

Attaching Brackets for 19-Inch Racks and 19-Inch Telco Racks

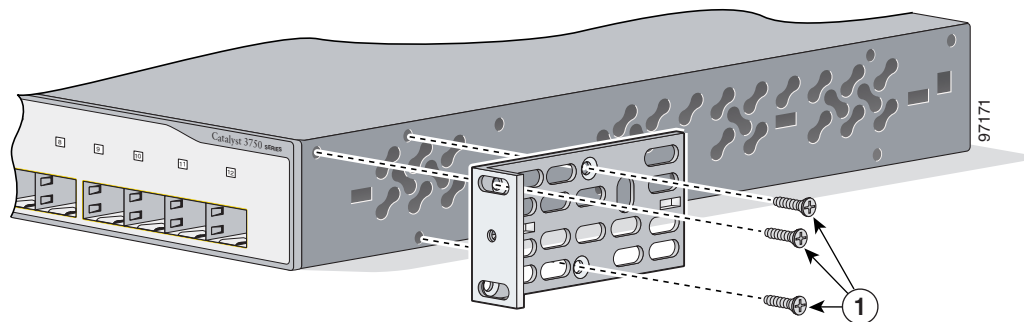
This section shows to attach brackets for 19-inch racks in [Figure 2-24](#) through [Figure 2-27](#). These illustrations show how to attach each type of bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side.

Figure 2-24 Attaching Brackets for 19-Inch Racks, Front Panel Forward

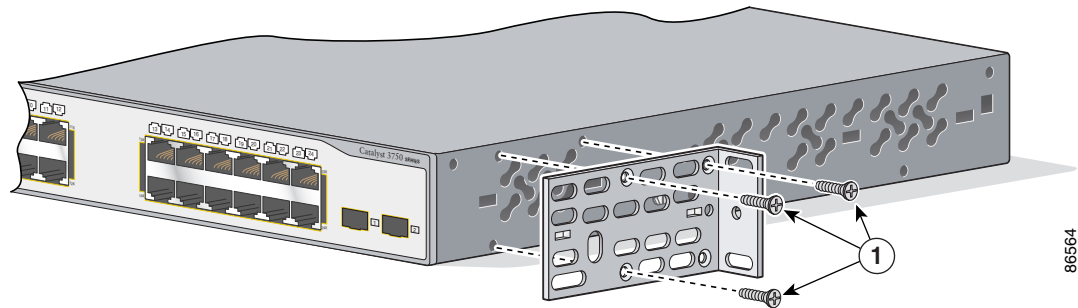
1 Phillips flat-head screws

Figure 2-25 Attaching Brackets for 19-Inch Racks, Rear Panel Forward

1 Phillips flat-head screws

Figure 2-26 Attaching Brackets for 19-Inch Racks

1 Phillips truss-head screws

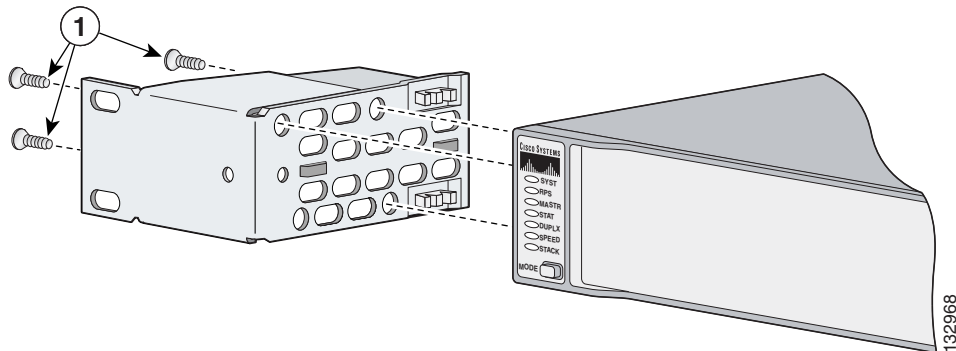
Figure 2-27 Attaching Brackets for 19-Inch Telco Racks

86564

1	Phillips flat-head screws
----------	---------------------------

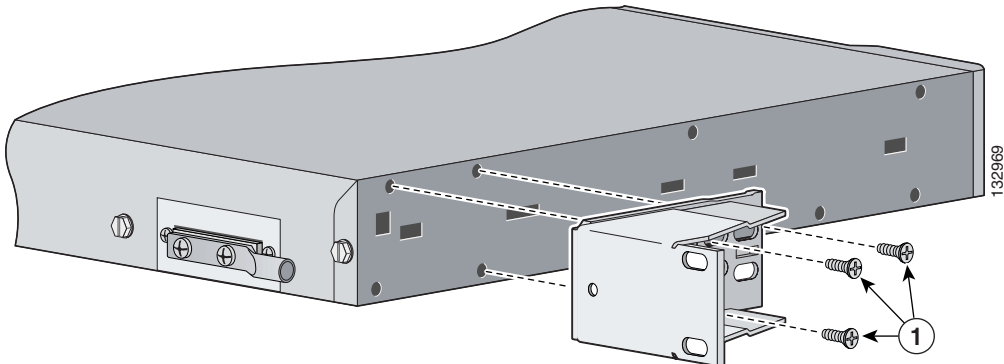
Attaching Brackets for 23-Inch Racks

This section shows to attach brackets for 23-inch racks in [Figure 2-28](#) and [Figure 2-29](#). These illustrations show how to attach each type of bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side.

Figure 2-28 Attaching Brackets for 23-Inch Racks, Front Panel Forward

132968

1	Phillips flat-head screws
----------	---------------------------

Figure 2-29 Attaching Brackets for 23-Inch Racks, Rear Panel Forward

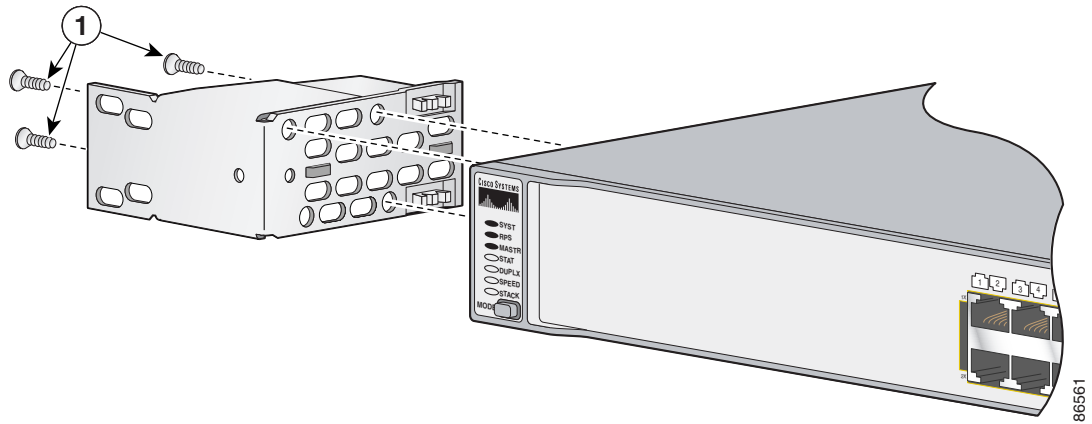
132969

1	Phillips flat-head screws
----------	---------------------------

Attaching Brackets for 24-Inch Racks and 24-Inch Telco Racks

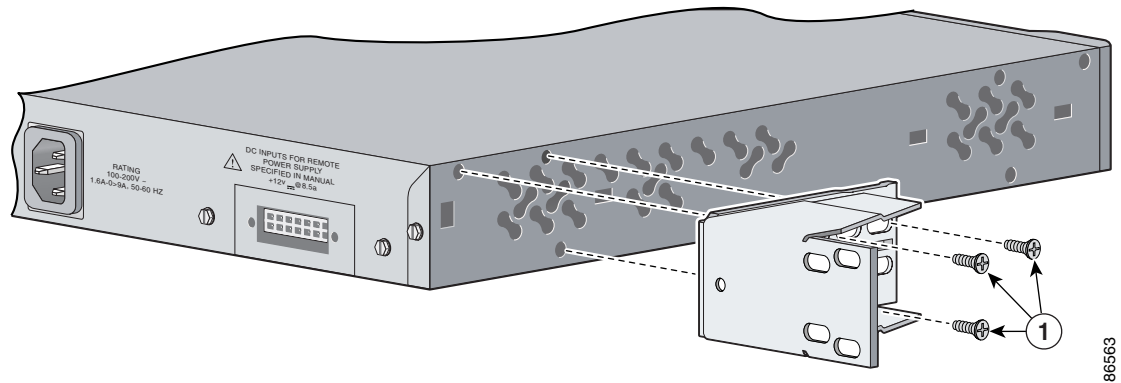
This section shows to attach brackets for ESTI racks in [Figure 2-30](#), [Figure 2-31](#), and [Figure 2-32](#). These illustrations show how to attach each type of bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side.

Figure 2-30 Attaching Brackets for 24-Inch Racks, Front Panel Forward

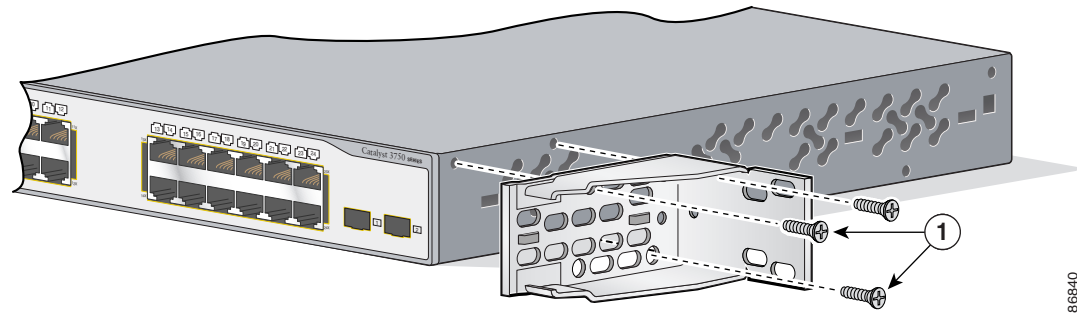


1 Phillips flat-head screws

Figure 2-31 Attaching Brackets for 24-Inch Racks, Rear Panel Forward



1 Phillips flat-head screws

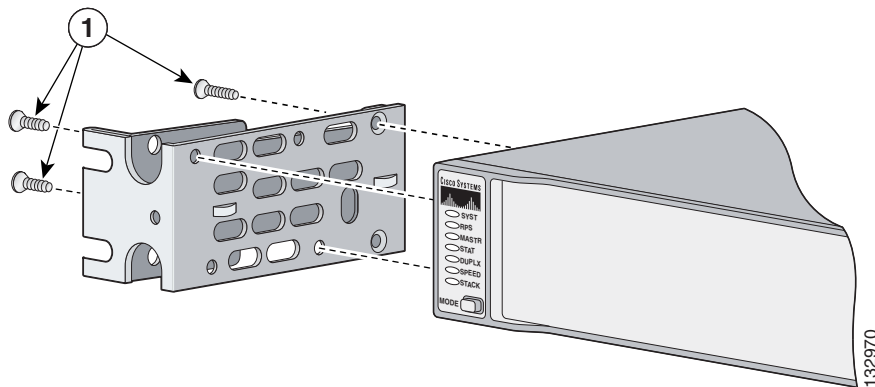
Figure 2-32 Attaching Brackets for 24-Inch Telco Racks

86840

1	Phillips flat-head screws
----------	---------------------------

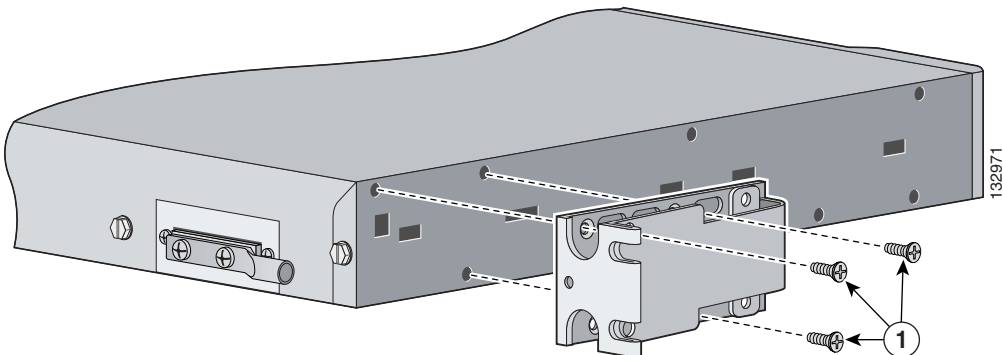
Attaching Brackets for ETSI Racks

This section shows to attach brackets for ETSI racks in [Figure 2-33](#) and [Figure 2-34](#). These illustrations show how to attach each type of bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side.

Figure 2-33 Attaching Brackets for ETSI Racks, Front Panel Forward

132970

1	Phillips flat-head screws
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Figure 2-34 Attaching Brackets for ETSI Racks, Rear Panel Forward

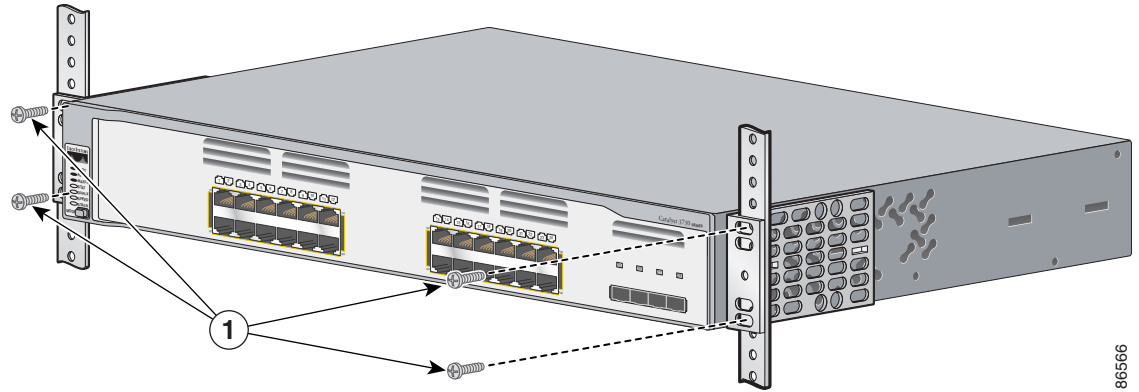
132971

1	Phillips flat-head screws
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Mounting the Switch in a Rack

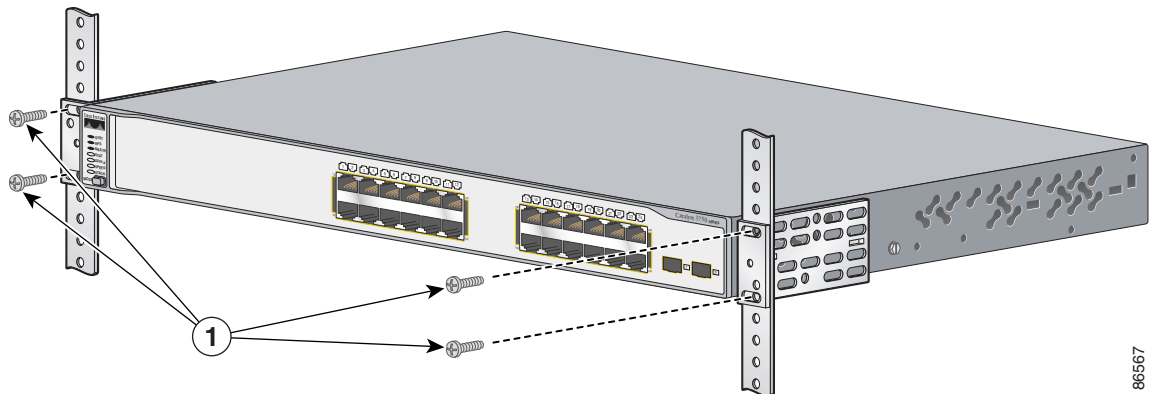
After the brackets are attached to the switch, use the four supplied number-12 Phillips machine screws to securely attach the brackets to the rack, as shown in [Figure 2-35](#), [Figure 2-36](#) and [Figure 2-37](#).

Figure 2-35 *Mounting the Catalyst 3750G-24TS Switch in a Rack*

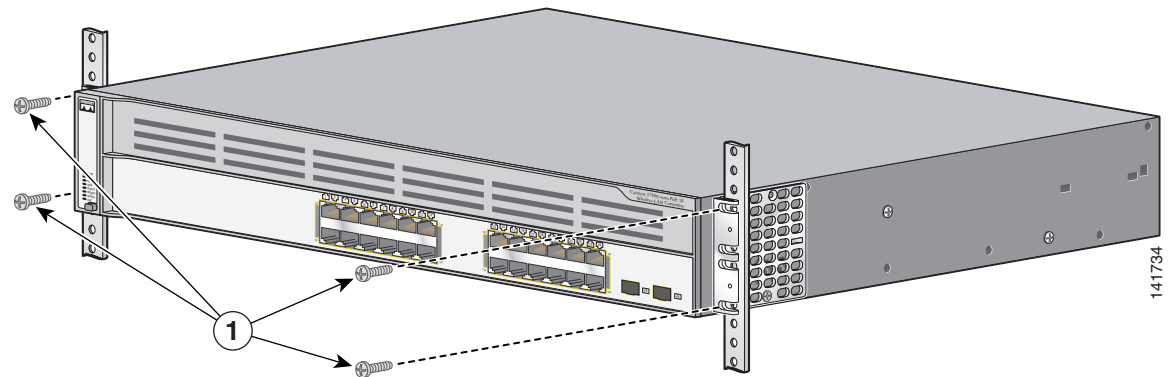


1	Phillips machine screws
---	-------------------------

Figure 2-36 *Mounting the Other Catalyst 3750 Switches in a Rack*



1	Phillips machine screws
---	-------------------------

Figure 2-37 Mounting the Catalyst 3750G-24WS-S25 and 3750G-24WS-S50 Switches in a Rack

1	Phillips machine screws
----------	-------------------------

After you mount the switch in the rack, you might need to perform these tasks to complete the installation, to run the setup program, and to access the switch:

- (Optional) Connect the switches in the stacks. See the [“Connecting StackWise Cable to StackWise Ports”](#) section on page 2-30.
- Power on the switch. See the [“Verifying Switch Operation”](#) section on page 2-7. If the switches are stacked, see the [“Planning Considerations”](#) section on page 2-8 for information on powering considerations.
- Connect to a 10/100 or 10/100/1000 port and run Express Setup. See the *Catalyst 3750 Switch Getting Started Guide* for instructions.
- Connect to the front-panel ports. See the [“Connecting to the 10/100 and 10/100/1000 Ports”](#) section on page 2-39 and the [“Connecting to an SFP Module”](#) section on page 2-41 to complete the installation.

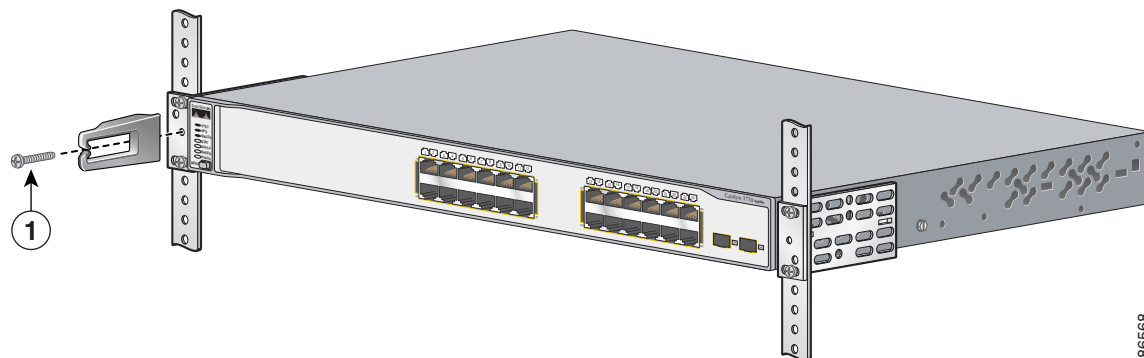
For configuration instructions about using the CLI setup program, go to [Appendix D, “Configuring the Switch with the CLI-Based Setup Program.”](#)

To use the CLI, enter commands at the *Switch>* prompt through the console port by using a terminal program or through the network by using Telnet. For configuration information, see the switch software configuration guide or the switch command reference.

Attaching the Cable Guide

We recommend attaching the cable guide to prevent the cables from obscuring the front panel of the switch and the other devices installed in the rack. Use the supplied black screw, as shown in [Figure 2-38](#), [Figure 2-39](#) and [Figure 2-40](#) to attach the cable guide to the left or right bracket.

Figure 2-38 Attaching the Cable Guide on the 24-Port Catalyst 3750 Switches



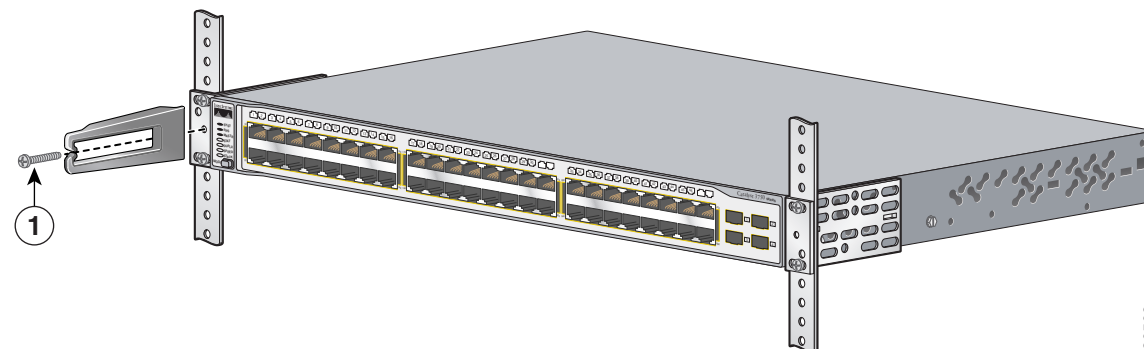
1	Cable guide screws
---	--------------------



Note

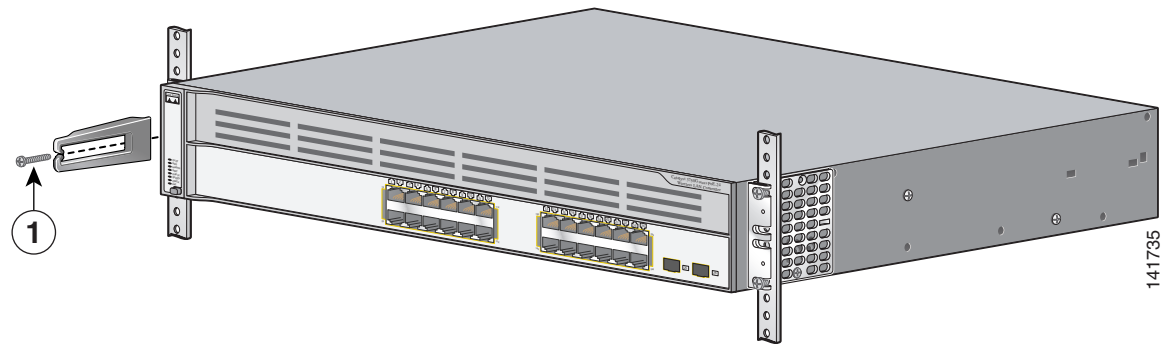
The 48-port Catalyst 3750 switches ship with the cable guide shown in [Figure 2-39](#). This cable guide secures up to 48 cables. Use the supplied black screw to mount it on the left bracket.

Figure 2-39 Attaching the Cable Guide on the 48-Port Catalyst 3750 Switches



1	Cable guide screws
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Figure 2-40 *Attaching the Cable Guide on the Catalyst 3750 Integrated Wireless LAN Controller Switches*



1	Cable guide screws
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Wall-Mounting

These switches wall-mount only with the front panel facing up:

- Catalyst 3750-24FS, Catalyst 3750V2-24FS
- Catalyst 3750-24TS, 3750-48TS, 3750-24PS, 3750-48PS
- Catalyst 3750G-12S, 3750G-12S-SD
- Catalyst 3750G-24T, 3750G-24TS, 3750G-24TS-1U
- Catalyst 3750G-24PS, 3750G-48PS
- Catalyst 3750G-16TD

These switches wall-mount with the front panel facing up or down:

- Catalyst 3750V2-24TS, 3750V2-48TS
- Catalyst 3750V2-24PS, 3750V2-48PS

These switches do not support wall-mounting. Do not wall-mount these switches:

- Catalyst 3750G-24WS-S25
- Catalyst 3750G-24WS-S50

The illustrations in this section show the Catalyst 3750G-24TS switch as an example.



Warning

Read the wall-mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation to people and damage to the system. Statement 378

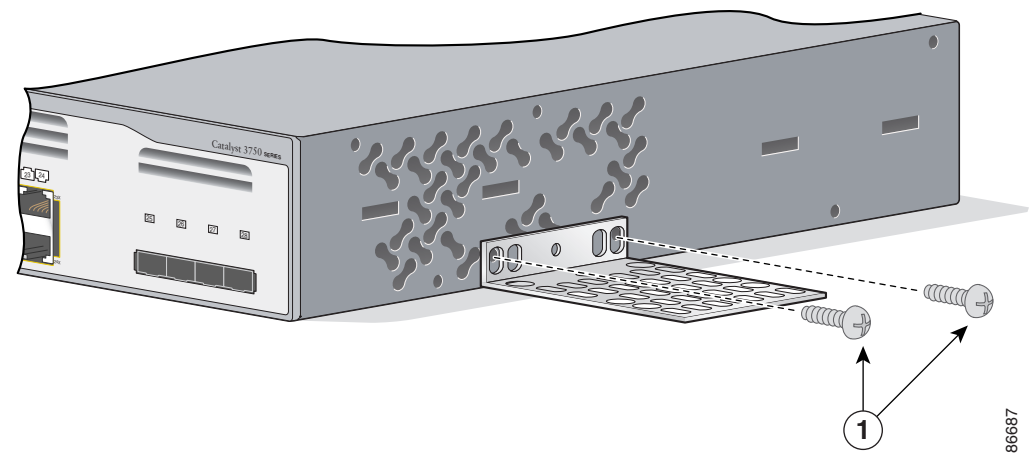
To install the switch on a wall, follow the instructions in these procedures:

- [Attaching the Brackets to the Switch for Wall-Mounting, page 2-28](#)
- [Attaching the RPS Connector Cover, page 2-28](#)
- [Mounting the Switch on a Wall, page 2-29](#)

Attaching the Brackets to the Switch for Wall-Mounting

Figure 2-41 shows how to attach a 19-inch bracket to one side of the switch. Follow the same steps to attach the second bracket to the opposite side.

Figure 2-41 Attaching the 19-inch Brackets for Wall-Mounting



1	Phillips truss-head screws
---	----------------------------

Attaching the RPS Connector Cover

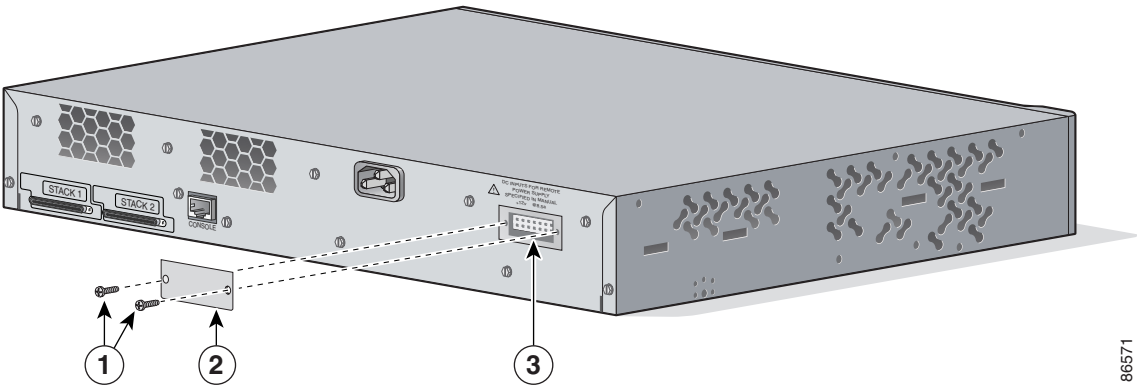
If you are not using an RPS with your switch, use the two Phillips pan-head screws to attach the RPS connector cover to the back of the switch, as shown in Figure 2-42.



Warning

If an RPS is not connected to the switch, install an RPS connector cover on the back of the switch.
Statement 265

Figure 2-42 Attaching the RPS Connector Cover on the Switch



1	Phillips pan-head screws	3	RPS connector
2	RPS connector cover		

Mounting the Switch on a Wall

For the best support of the switch and cables, make sure the switch is attached securely to wall studs or to a firmly attached plywood-mounting backboard. Mount the switch with the front panel facing up, as shown in [Figure 2-43](#).

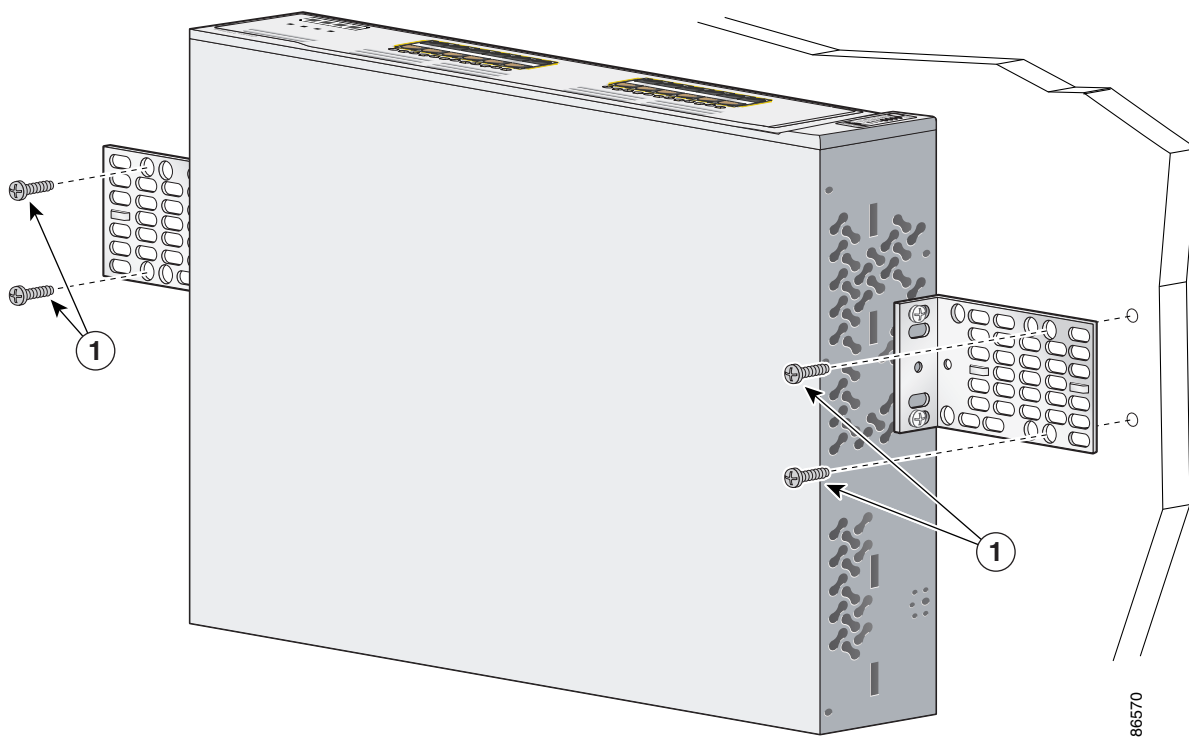
See the “[Wall-Mounting](#)” section on [page 2-27](#) for the switches that can also mount with the front panel facing down.



Warning

Read the wall-mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation to people and damage to the system. Statement 378

Figure 2-43 *Mounting the Switch on a Wall*



1	User-supplied screws
----------	----------------------

After the switch is mounted on the wall, you might need to perform these tasks to complete the installation, run the setup program, and access the switch:

- (Optional) Connect the switches in the stacks. See the “[Connecting StackWise Cable to StackWise Ports](#)” section on [page 2-30](#).
- Power on the switch. See the “[Verifying Switch Operation](#)” section on [page 2-7](#). If the switches are stacked, see the “[Planning Considerations](#)” section on [page 2-8](#) for information on powering considerations.
- Connect to a 10/100 or 10/100/1000 port and run Express Setup. See the *Catalyst 3750 Switch Getting Started Guide* for instructions.

- Connect to the front-panel ports. See the [“Connecting to the 10/100 and 10/100/1000 Ports” section on page 2-39](#) and the [“Connecting to an SFP Module” section on page 2-41](#) to complete the installation.

For configuration instructions about using the CLI setup program, go to [Appendix D, “Configuring the Switch with the CLI-Based Setup Program.”](#)

To use the CLI, enter commands at the *Switch>* prompt through the console port by using a terminal program or through the network by using Telnet. For configuration information, see the switch software configuration guide or the switch command reference.

Table- or Shelf-Mounting

Follow these steps to install the switch on a table or shelf:

Step 1 Locate the adhesive strip with the rubber feet in the mounting-kit envelope. Attach the four rubber feet to the recessed areas on the bottom of the unit.

Step 2 Place the switch on the table or shelf near an AC power source.

After the switch is mounted on the table, you might need to perform these tasks to complete the installation, run the setup program, and access the switch:

- (Optional) Connect the switches in the stacks. See the [“Connecting StackWise Cable to StackWise Ports” section on page 2-30](#).
- Power on the switch. See the [“Verifying Switch Operation” section on page 2-7](#). If the switches are stacked, see the [“Planning Considerations” section on page 2-8](#) for information on powering considerations.
- Connect to a 10/100 or 10/100/1000 port and run Express Setup. See the *Catalyst 3750 Switch Getting Started Guide* for instructions.
- Connect to the front-panel ports. See the [“Connecting to the 10/100 and 10/100/1000 Ports” section on page 2-39](#) and the [“Connecting to an SFP Module” section on page 2-41](#) to complete the installation.

For configuration instructions about using the CLI setup program, go to [Appendix D, “Configuring the Switch with the CLI-Based Setup Program.”](#)

To use the CLI, enter commands at the *Switch>* prompt through the console port by using a terminal emulation program or through the network by using Telnet. For configuration information, see the switch software configuration guide or the switch command reference.

Connecting StackWise Cable to StackWise Ports

Follow these steps to connect the StackWise cable to the StackWise ports:

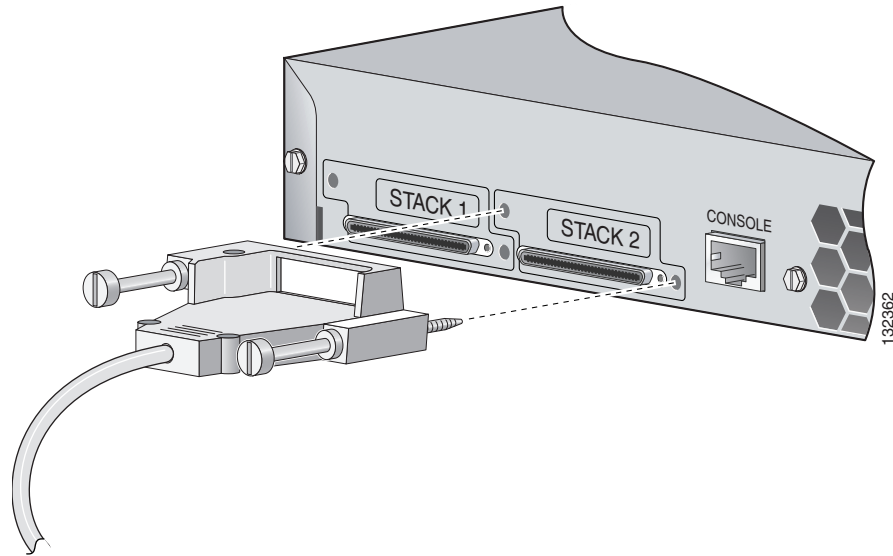
Step 1 Remove the dust covers from the StackWise cables and StackWise ports, and store them for future use.

Step 2 Insert one end of the StackWise cable into the StackWise port on the back of the switch. (See [Figure 2-44](#).)



Note Always use a Cisco-approved StackWise cable to connect the switches.

Figure 2-44 Inserting the StackWise Cable in a StackWise Port



Step 3 Use the window in the StackWise cable to align the connector correctly. Secure the screws tightly.

Step 4 Insert the other end of the cable into the connector of the other switch, and secure the screws tightly.



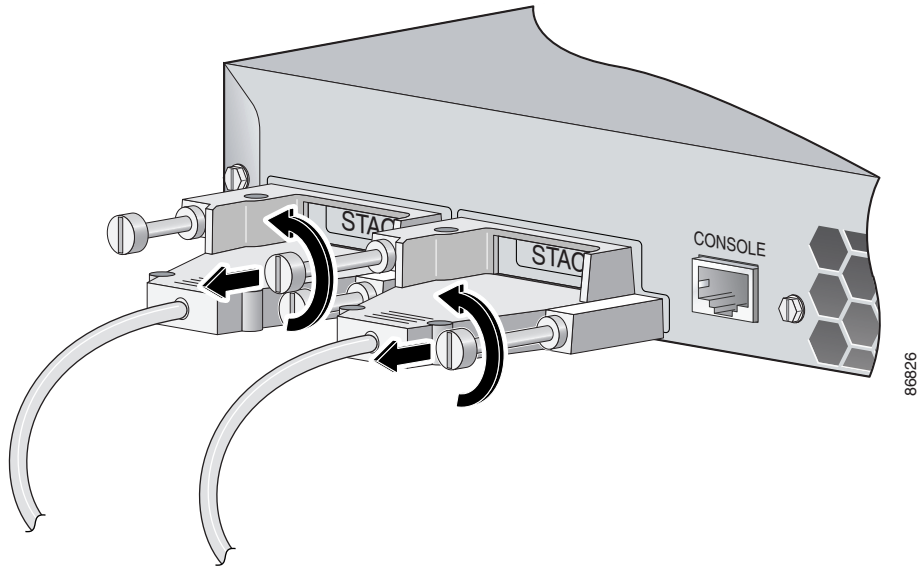
Caution Removing and installing the StackWise cable can shorten its useful life. Do not remove and insert the cable more often than is absolutely necessary.

Replace the dust covers on the connectors to protect them from dust when you are not using them.

When you need to remove the StackWise cable from the connector, make sure to fully unscrew the screws before removing the connector. Make sure that you also remove the correct screws from the StackWise port.

Figure 2-45 shows the correct removal procedure.

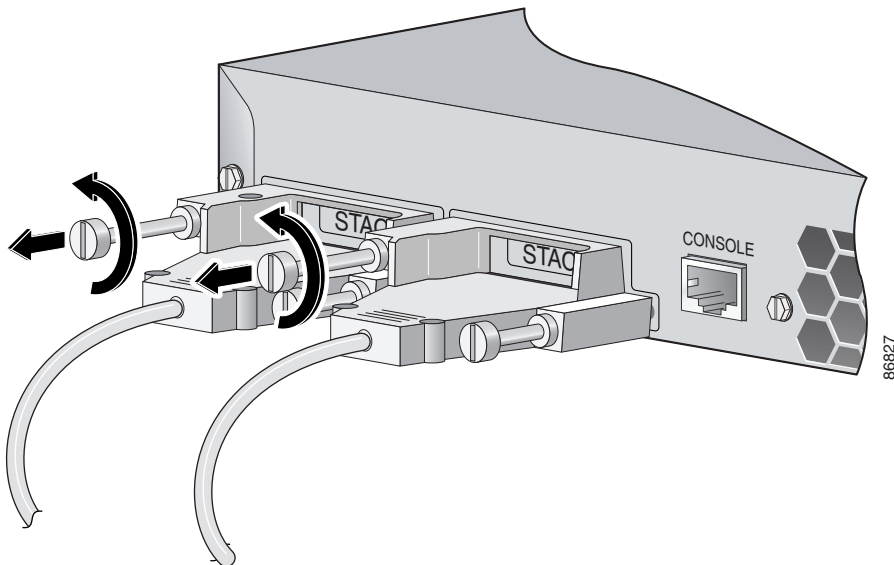
Figure 2-45 *Correct Removal of the StackWise Cable from a StackWise Port*



Caution

Do not remove the cable by using the procedure shown in Figure 2-46.

Figure 2-46 *Incorrect Removal of a StackWise Cable from a StackWise Port*



Installing and Removing SFP Modules

These sections describe how to install and remove SFP modules. SFP modules are inserted into SFP module slots on the front of the Catalyst 3750 switches. These field-replaceable modules provide uplink interfaces.

You can use any combination of SFP modules. See the Catalyst 3750 release notes for the list of SFP modules that the Catalyst 3750 switch supports. Each port must match the wave-length specifications on the other end of the cable, and the cable must not exceed the stipulated cable length for reliable communications. See the [“Installation Guidelines” section on page 2-6](#) for cable stipulations for SFP connections.

Use only Cisco SFP modules on the Catalyst 3750 switch. 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 switch.

For detailed instructions on installing, removing, and cabling the SFP module, see your SFP module documentation.

Installing SFP Modules into SFP Module Slots

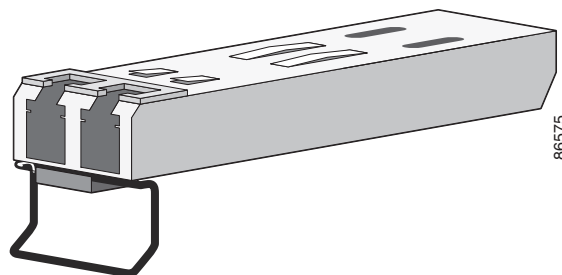
[Figure 2-47](#) shows an SFP module that has a bale-clasp latch.

**Caution**

We strongly recommend that you do not install or remove fiber-optic SFP modules with cables attached because of the potential damage to the cables, the cable connector, or the optical interfaces in the SFP module. Disconnect all cables before removing or installing an SFP module.

Removing and installing an SFP module can shorten its useful life. Do not remove and insert SFP modules more often than is absolutely necessary.

Figure 2-47 SFP Module with a Bale-Clasp Latch



To insert an SFP module into the SFP module slot, follow these steps:

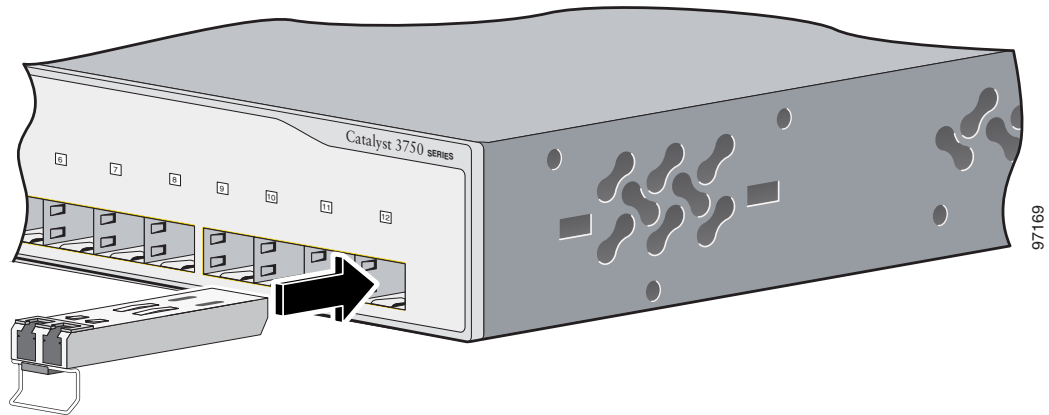
- Step 1** Attach an ESD-preventive wrist strap to your wrist and to a bare metal surface on the chassis.
- Step 2** Find the send (TX) and receive (RX) markings that identify the top side of the SFP module.

**Note**

On some SFP modules, the send and receive (TX and RX) markings might be replaced by arrows that show the direction of the connection, either send or receive (TX or RX).

- Step 3** Align the SFP module in front of the slot opening.
- Step 4** Insert the SFP module into the slot until you feel the connector on the module snap into place in the rear of the slot.

Figure 2-48 Installing an SFP Module into an SFP Module Slot



- Step 5** For fiber-optic SFP modules, remove the dust plugs from the optical ports, and store them for later use.



Caution

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

- Step 6** Insert the cable connector into the SFP module:
- For fiber-optic SFP modules, insert the LC or MT-RJ cable connector into the SFP module.
 - For copper SFP modules, insert the RJ-45 cable connector into the SFP module.



Note

When you connect to 1000BASE-T SFP modules, be sure to use a twisted four-pair, Category 5 or later cable.

Removing SFP Modules from SFP Module Slots

To remove an SFP module from a module slot, follow these steps:

- Step 1** Attach an ESD-preventive wrist strap to your wrist and to a bare metal surface on the chassis.
- Step 2** Disconnect the cable from the SFP module.



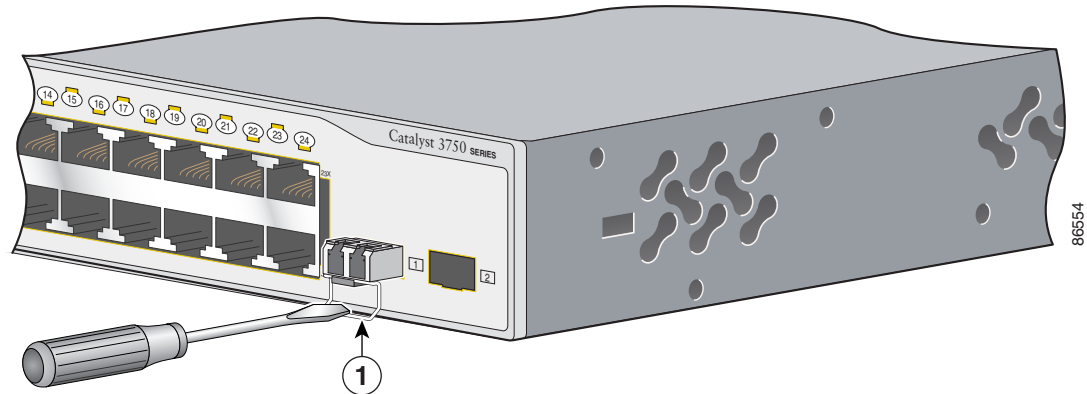
Tip

For reattachment, note which cable connector plug is send (TX) and which is receive (RX).

Step 3 Unlock and remove the SFP module, as shown in [Figure 2-49](#).

If the module has a bale-clasp latch, pull the bale out and down to eject the module. If the bale-clasp latch is obstructed and you cannot use your index finger to open it, use a small, flat-blade screwdriver or other long, narrow instrument to open the bale-clasp latch.

Figure 2-49 Removing a Bale-Clasp Latch SFP Module by Using a Flat-Blade Screwdriver



1	Bale clasp
----------	------------



Warning

When the Catalyst 3750-12S switch and 100BASE-FX MMF small form-factor pluggable (SFP) module (model number GLC-GE-100FX) are running, the surface temperature of the removed SFP module might be hot. Statement 377

- Step 4** Grasp the SFP module between your thumb and index finger, and carefully remove it from the module slot.
- Step 5** For fiber-optic SFP modules, insert a dust plug into the optical ports of the SFP module to keep the optical interfaces clean.
- Step 6** Place the removed SFP module in an antistatic bag or other protective environment.

Installing and Removing XENPAK Modules (Catalyst 3750G-16TD Switch)

These sections describe how to install and remove XENPAK modules:

- [Removing SFP Modules from SFP Module Slots, page 2-34](#)
- [Removing a XENPAK Module, page 2-38](#)

XENPAK modules are inserted into the XENPAK module slot on the front panel of the Catalyst 3750G-16TD switch. These field-replaceable transceiver modules provide 10-Gigabit interfaces.

**Note**

The 10-Gigabit Ethernet XENPAK modules are referred to as 10-Gigabit Ethernet module ports in the switch software documentation.

See the Catalyst 3750 release notes for the list of XENPAK modules that the Catalyst 3750G-16TD switch supports. Use only Cisco XENPAK modules on the Catalyst 3750G-16TD switch. Each XENPAK 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 XENPAK module meets the requirements for the switch.

See [Table B-2 on page B-4](#) for cable requirements for XENPAK module connections. For detailed instructions on installing, removing, cabling, and troubleshooting the XENPAK module, see your XENPAK module documentation.

Installing a XENPAK Module

[Figure 2-50](#) shows a XENPAK module.

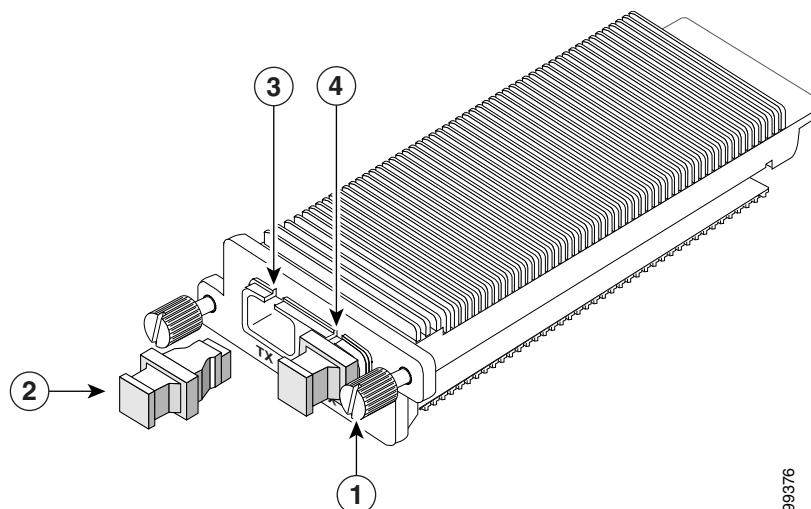
**Caution**

We strongly recommend that you do not install or remove fiber-optic XENPAK modules with cables attached because of the potential damage to the cables, the cable connector, or the optical interfaces in the XENPAK module. Disconnect all cables before removing or installing the XENPAK module.

**Caution**

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

Figure 2-50 **XENPAK Module**

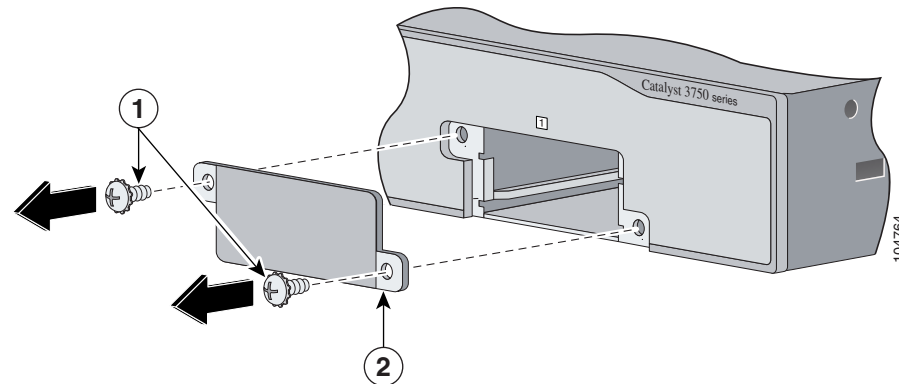


1	Captive installation screw	3	Sending optical bore
2	Optical bore dust plug	4	Receiving optical bore

To insert a XENPAK module, follow these steps:

- Step 1** Attach an ESD-preventive wrist strap to your wrist and to a bare metal surface on the chassis.
- Step 2** Remove the two Phillips-head retaining screws from the XENPAK module slot cover, and store them for later use.
- Step 3** Remove the cover, as shown in [Figure 2-51](#).

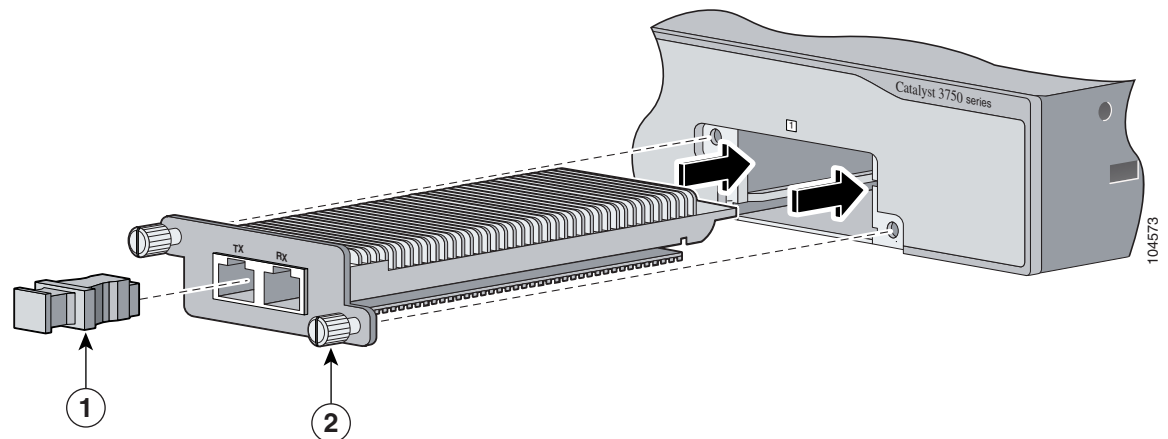
Figure 2-51 Removing the XENPAK Module Slot Cover



1	Phillips-head screw	2	Module slot cover
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- Step 4** Remove the XENPAK module from the protective packaging.
- Step 5** Align the XENPAK module with the guide rails inside the module slot, and slide the module into the opening until the back of the XENPAK faceplate is flush with the switch faceplate. (See [Figure 2-52](#).)

Figure 2-52 Installing a XENPAK Module in the Catalyst 3750G-16TD Switch



1	Optical bore dust plug	2	Captive installation screw
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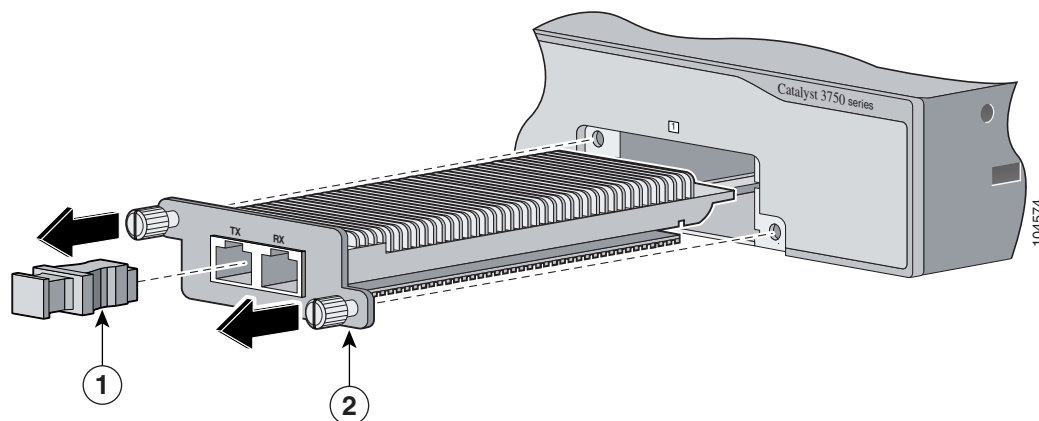
- Step 6** Secure the XENPAK module in place by tightening the two captive installation screws. Do not overtighten the captive screws.

Removing a XENPAK Module

To remove a XENPAK module, follow these steps:

- Step 1** Attach an ESD-preventive wrist strap to your wrist and to a bare metal surface on the chassis.
- Step 2** Disconnect the cable from the XENPAK module. For fiber-optic modules, install the optical bore dust plugs.
- Step 3** Loosen the two captive installation screws that secure the XENPAK module in the slot.
- Step 4** Carefully pull on the two captive installation screws to disconnect the XENPAK module from the slot.
- Step 5** Grasp the edges of the XENPAK module, and carefully slide it out of the slot, as shown in [Figure 2-53](#).

Figure 2-53 Removing a XENPAK Module



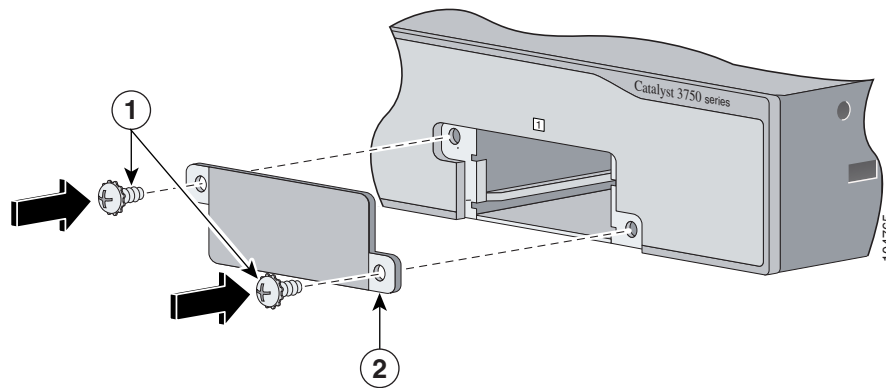
- | | | | |
|----------|------------------------|----------|----------------------------|
| 1 | Optical bore dust plug | 2 | Captive installation screw |
|----------|------------------------|----------|----------------------------|

- Step 6** Use two Phillips-head screws to attach the XENPAK module slot cover to the switch front panel, as shown in [Figure 2-54](#).



Warning

Blank faceplates (filler 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 and faceplates are in place. Statement 156

Figure 2-54 Replacing the XENPAK Module Slot Cover

1	Phillips-head screw	2	Module slot cover
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Connecting to the 10/100 and 10/100/1000 Ports

The switch 10/100 and 10/100/1000 ports configure themselves to operate at the speed of attached devices. If the attached ports do not support autonegotiation, you can explicitly set the speed and duplex parameters. Connecting devices that do not autonegotiate or that have their speed and duplex parameters manually set can reduce performance or result in no linkage.

To maximize performance, choose one of these methods for configuring the Ethernet ports:

- Let the ports autonegotiate both speed and duplex.
- Set the port speed and duplex parameters on both ends of the connection.



Warning

Voltages that present a shock hazard may exist on Power over Ethernet (PoE) circuits if interconnections are made using uninsulated exposed metal contacts, conductors, or terminals. Avoid using such interconnection methods, unless the exposed metal parts are located within a restricted access location and users and service people who are authorized within the restricted access location are made aware of the hazard. A restricted access area can be accessed only through the use of a special tool, lock and key or other means of security. Statement 1072

You can configure the 10/100 and 10/100/1000 PoE ports on the switch to either automatically provide PoE when a Cisco IP Phone, Cisco Aironet Access Point, or end device compliant with IEEE 802.3af is connected. Alternatively, you can configure them to never provide PoE, even if an IP phone or an access point is connected. The default setting is Auto. To prevent ESD damage, follow your normal board and component handling procedures.

Use the guidelines in [Table 2-1](#) to select the correct cable for connecting the switch 10/100 and 10/100/1000 ports to other devices. See the [“Cable and Adapter Specifications”](#) section on page B-5 for cable-pinout descriptions.

Table 2-1 Recommended Ethernet Cables

Device	Crossover Cable ¹	Straight-Through Cable ¹
Switch to switch	Yes	No
Switch to hub	Yes	No
Switch to computer or server	No	Yes
Switch to router	No	Yes
Switch to IP phone	No	Yes

1. 100BASE-TX and 1000BASE-T traffic requires twisted four-pair, Category 5 or higher cable. 10BASE-T traffic can use Category 3 or Category 4 cable.

You can use the **mdix auto** interface configuration command in the CLI to enable the automatic medium-dependent interface crossover (auto-MDIX) feature. When the auto-MDIX feature is enabled, the switch detects the required cable type for copper Ethernet connections and configures the interfaces accordingly. Therefore, you can use either a crossover or a straight-through cable for connections to a copper 10/100, 10/100/1000, or 1000BASE-T SFP module port on the switch, regardless of the type of device on the other end of the connection.

The auto-MDIX feature is enabled by default on switches running Cisco IOS Release 12.2(18)SE or later. For releases between Cisco IOS Release 12.1(14)EA1 and 12.2(18)SE, the auto-MDIX feature is disabled by default. For configuration information for this feature, see the switch software configuration guide or the switch command reference.

Follow these steps to connect to 10BASE-T, 100BASE-TX or 1000BASE-T devices:

**Caution**

PoE faults are caused when noncompliant cabling or powered devices are connected to a PoE port. Only standard-compliant cabling can be used to connect Cisco pre-standard IP Phones and wireless access points or IEEE 802.3af-compliant devices to PoE ports. A cable or device that causes a PoE fault must be removed from the network.

Step 1

When you connect the switch to workstations, servers, routers, and Cisco IP Phones, connect a straight-through cable to an RJ-45 connector on the front panel. (See [Figure 2-55](#).) When you connect the switch to other switches or to repeaters, use a crossover cable. (See the “[Cable and Adapter Specifications](#)” section on [page B-5](#) for cable-pinout descriptions.)

When you connect a switch to 1000BASE-T-compatible devices, be sure to use a twisted four-pair, Category 5 or later cable.

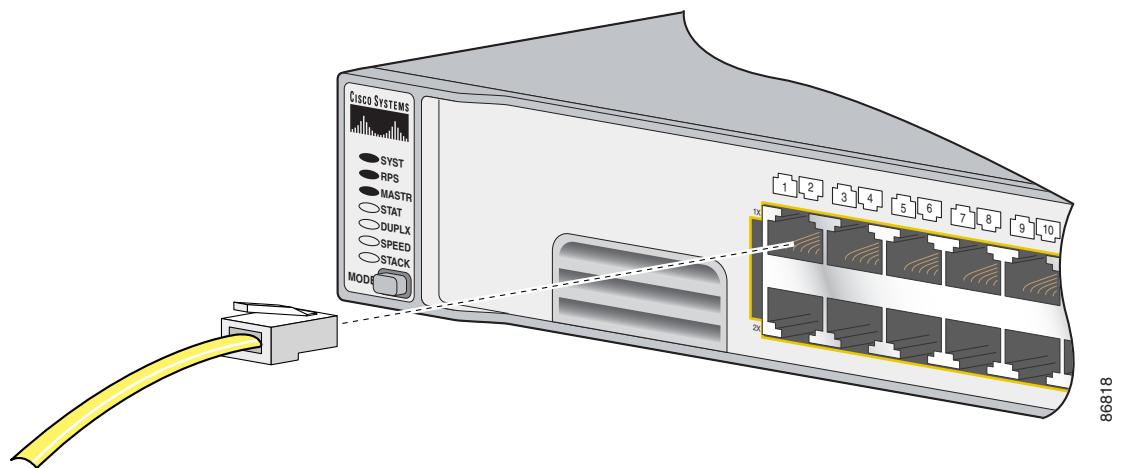
You can connect the Catalyst 3750 switch to a Cisco IP Phone through a straight-through, twisted four-pair Category 5 or later cable. The rear panel of the Cisco IP Phone might have more than one RJ-45 connector. Use the LAN-to-phone connector to connect the Cisco IP phone to the switch. See the Cisco IP Phone documentation for more information about connecting devices to it.

**Note**

Many legacy powered devices, including older Cisco IP phones and access points that do not fully support IEEE 802.3af, might not support PoE when connected to the switches by a crossover cable.

- Step 2** Connect the other end of the cable to an RJ-45 connector on the other device. The port LED turns on when both the switch and the connected device have established link.
- The port LED is amber while Spanning Tree Protocol (STP) discovers the topology and searches for loops. This process takes about 30 seconds, and then the port LED turns green. If the port LED does not turn on, the device at the other end might not be turned on, or there might be a cable problem or a problem with the adapter installed in the attached device. See [Chapter 3, “Troubleshooting,”](#) for solutions to cabling problems.
- Step 3** Reconfigure and reboot the connected device if necessary.
- Step 4** Repeat Steps 1 through 3 to connect each device.

Figure 2-55 Connecting to an Ethernet Port



Connecting to an SFP Module

This section describes how to connect to SFP modules.

- For instructions on how to connect to fiber-optic SFP modules, see the [“Connecting to 1000BASE-T SFP Modules”](#) section.
- For instructions on how to connect to 1000BASE-T SFP modules, see the [“Connecting to 1000BASE-T SFP Modules”](#) section.
- For instructions on how to install or remove an SFP module, see the [“Installing and Removing SFP Modules”](#) section on page 2-33.

Connecting to a Fiber-Optic SFP Module

Follow these steps to connect a fiber-optic cable to an SFP module:



Warning

Class 1 laser product. Statement 1008

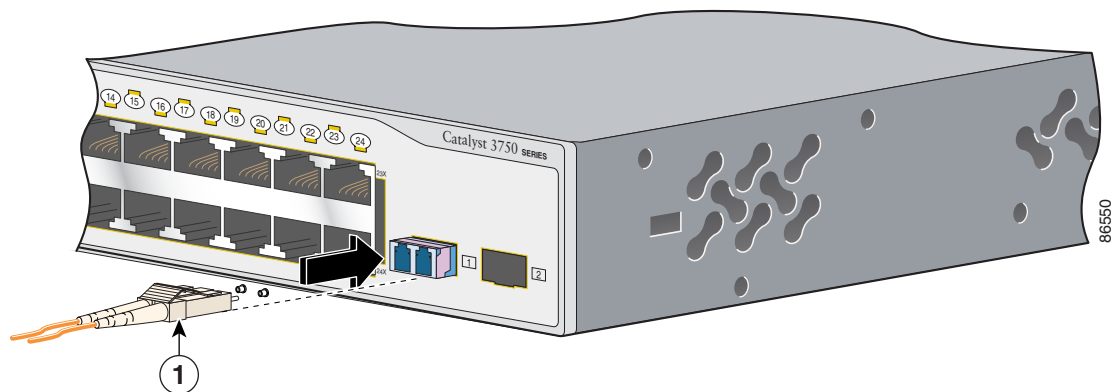
**Caution**

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

Before you connect the switch to the SFP module, be sure that you understand the port and cabling stipulations in [“Installation Guidelines” section on page 2-6](#) and in the [“SFP Module Slots” section on page 1-12](#).

-
- Step 1** Remove the rubber plugs from the module port and fiber-optic cable, and store them for future use.
- Step 2** Insert one end of the fiber-optic cable into the SFP module port (see [Figure 2-56](#)).
- Step 3** Insert the other cable end into a fiber-optic receptacle on a target device.
- Step 4** Observe the port status LED.
- The LED turns green when the switch and the target device have an established link.
 - The LED turns amber while the STP discovers the network topology and searches for loops. This process takes about 30 seconds, and then the port LED turns green.
 - If the LED is off, the target device might not be turned on, there might be a cable problem, or there might be problem with the adapter installed in the target device. See [Chapter 3, “Troubleshooting,”](#) for solutions to cabling problems.

Figure 2-56 *Connecting to an SFP Module Port*



1	LC connector
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- Step 5** If necessary, reconfigure and restart the switch or target device.

**Caution**

For detailed instructions on removing the SFP modules, see your SFP documentation.

Connecting to 1000BASE-T SFP Modules

Follow these steps to connect a Category 5 cable to a 1000BASE-T SFP module port (see [Figure 2-57](#)):


Caution

To prevent ESD damage, follow your normal board and component handling procedures.

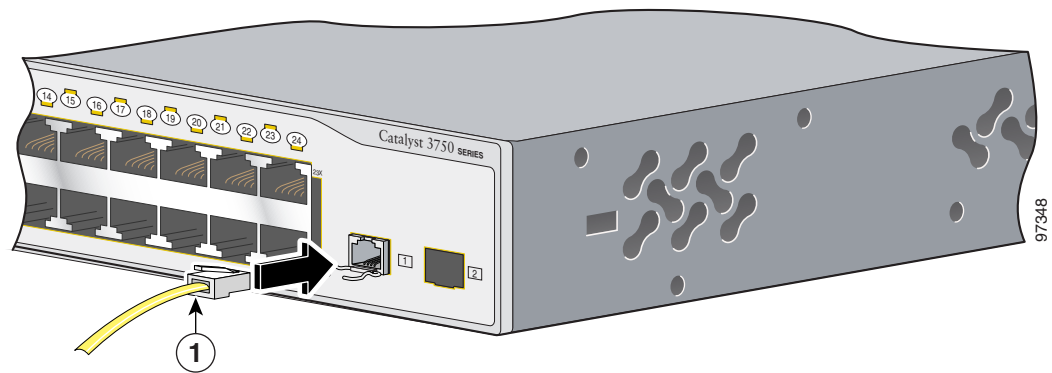
Step 1

When you connect the switch to servers, workstations, and routers, insert a four twisted-pair, straight-through cable in the RJ-45 connector. When you connect the switch to other switches or repeaters, insert a four twisted-pair, crossover cable.


Note

When you connect the switch to a 1000BASE-T device, be sure to use a four twisted-pair, Category 5 or higher cable.

Figure 2-57 Connecting to an SFP Module Port



1	RJ-45 connector
----------	-----------------

Step 2 Insert the other cable end in an RJ-45 connector on a target device.

Step 3 Observe the port status LED.

- The LED turns green when the switch and the target device have an established link.
- The LED turns amber while the STP discovers the network topology and searches for loops. This process takes about 30 seconds, and then the port LED turns green.
- If the LED is off, the target device might not be turned on, there might be a cable problem, or there might be problem with the adapter installed in the target device. See [Chapter 3, “Troubleshooting,”](#) for solutions to cabling problems.

Step 4 If necessary, reconfigure and restart the switch or target device.

Connecting to a XENPAK Module

The 10-Gigabit Ethernet XENPAK modules are referred to as 10-Gigabit Ethernet module ports in the switch software documentation.

Make sure that the XENPAK module is fully inserted into the module slot and that the captive installation screws are fully tightened before attaching the fiber-optic interface cable connector to the XENPAK module connector.

Follow these steps to connect a fiber-optic cable to a XENPAK module:

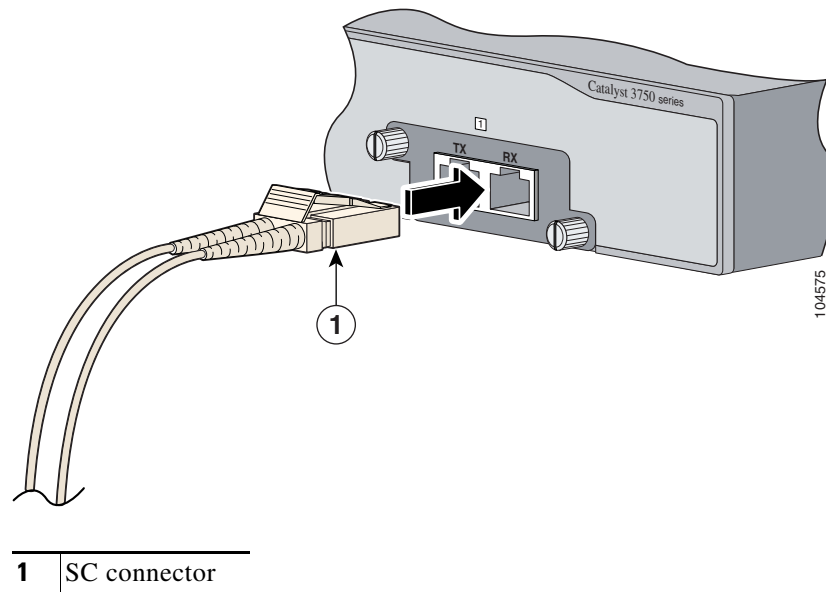
**Warning**

Class 1 laser product. Statement 1008

**Caution**

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

-
- Step 1** Remove the rubber plugs from the XENPAK module ports and the fiber-optic cable, and store them for future use.
- Step 2** Align the fiber-optic cable SC connector with the XENPAK module connector, so that transmit (TX) on the cable meets receive (RX) on the XENPAK module connector, and RX on the cable meets TX on the XENPAK module.
- Step 3** Insert the fiber-optic cable connector into the XENPAK module ports (see [Figure 2-58](#)).
- Step 4** Insert the other cable end into a fiber-optic receptacle on a target device.
- Step 5** Observe the XENPAK module port status LED.
- The LED turns green when the switch and the target device have an established link.
 - The LED turns amber while the STP discovers the network topology and searches for loops. This process takes about 30 seconds, and then the port LED turns green.
 - If the LED is off, the target device might not be turned on, there might be a cable problem, or there might be problem with the adapter installed in the target device. See [Chapter 3, “Troubleshooting,”](#) for solutions to cabling problems.

Figure 2-58 Connecting to a XENPAK Module Port

Step 6 If necessary, reconfigure and restart the switch or target device.

Where to Go Next

If the default configuration is satisfactory, the switch needs no further configuration. You can use any of these management options to change the default configuration:

- Start the device manager, which is in the switch memory, to manage individual and standalone switches. This is an easy-to-use web interface that offers quick configuration and monitoring. You can access the device manager from anywhere in your network through a web browser. For more information, see the device manager online help.
- Start the Network Assistant application, which is described in the *Getting Started with Cisco Network Assistant* guide. Through this GUI, you can configure and monitor a switch cluster or an individual switch.
- Use the CLI to configure the switch as a member of a cluster or as an individual switch from the console. See the *Catalyst 3750 Switch Command Reference* on Cisco.com for information on using the CLI with a Catalyst 3750 switch.
- Start an SNMP application such as the CiscoView application.

