SFP Port Configuration

This chapter contains instructions for installing small form-factor pluggable (SFP) laser optical transceiver modules. It contains these sections:

- SFP Support, page 4-1
- Installing, Removing, and Maintaining SFPs, page 4-2

The Gigabit Ethernet ports on these modules are used primarily for backbone interconnection of other high-performance switches and routers.

SFP Support

A SFP is a hot-swappable input/output device that plugs into the SFP ports, linking the switch with the fiber-optic network. (See Figure 4-1.) The following SFP media types are supported:

- CWDM (CWDM-SFP-xxxx=)
- Cisco 1000BASE-T SFP (GLC-T=)
- Short wavelength 1000BASE-SX (GLC-SX-MM=)
- Long wavelength/long haul 1000BASE-LX/LH (GLC-LH-SM=)
- Extended distance 1000BASE-ZX (GLC-ZX-SM=)
Installing, Removing, and Maintaining SFPs

The following sections describe how to install, remove, and maintain small form factor pluggables (SFPs).

SFP Modules and Alternative Wiring

The Cisco 4948 switch has four ports that can be configured with any combination of SFP modules with LC connectors, as shown in Figure 4-1. The interface configuration mode command `media-type sfp | rj45` can be used to configure the media type for these ports in the switch software and determines whether the SFP or the RJ-45 connector is used. The default is SFP.

⚠️ Caution

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

_NOTE_

You must insert the SFP with the latching mechanism reversed on SFP port 46 and port 48.

*Figure 4-1 Connecting LC Connectors to the SFP Module*
The SFP modules have three different types of latching devices used to secure and detach the SFP module from a switching module port. The three types of SFP modules are described in the following sections:

- Mylar Tab SFP Modules, page 4-3
- Actuator/Button SFP Modules, page 4-5
- Inserting and Removing Bale-Clasp SFP Modules, page 4-8

### Mylar Tab SFP Modules

**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

The Mylar tab SFP module (see Figure 4-2) has a tab that you must pull to remove the module from a switching module port.

**Figure 4-2  Mylar Tab SFP Module**

To insert the Mylar tab SFP module into a switching module port, line up the SFP module with the port, and slide it into place. (See Figure 4-3.)
Figure 4-3 Inserting a Mylar Tab SFP Module

![Inserting a Mylar Tab SFP Module](image)

**Caution**

When pulling the tab to remove the SFP module, be sure to pull in a straight outward motion so that you remove the SFP module from the port in a parallel direction. Do not twist or pull the tab because you may disconnect it from the SFP module.

To remove the SFP module from the switching module port, pull the tab gently in a slightly downward direction until it disengages from the port, and then pull the SFP module out. (See Figure 4-4.)

Figure 4-4 Removing a Mylar Tab SFP Module

![Removing a Mylar Tab SFP Module](image)
Actuator/Button SFP Modules

**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

The actuator/button SFP module (see Figure 4-5) has a button that you must push to remove the SFP module from a switching module port.

*Figure 4-5  Actuator/Button SFP Module*

To insert the actuator/button SFP module into a switching module port, line up the SFP module with the port, and slide it in until the actuator/button clicks into place. (See Figure 4-6.) Be sure not to press the actuator/button as you insert the SFP module because you might inadvertently disengage the SFP module from the port.

*Figure 4-6  Inserting an Actuator/Button SFP Module*
To remove an actuator/button SFP module from a switching module port, follow this procedure:

**Step 1**  Gently press the actuator/button on the front of the SFP module until it clicks and the latch mechanism activates, releasing the SFP module from the port. (See Figure 4-7.)

**Step 2**  Grasp the actuator/button between your thumb and index finger, and carefully pull the SFP module from the port.
Figure 4-7  Removing an Actuator/Button SFP Module from a Port
Inserting and Removing Bale-Clasp SFP Modules

**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

The bale-clasp SFP module (see Figure 4-8) has a bale clasp that you use to secure the SFP module in a switching module port.

**Figure 4-8  Bale-clasp SFP Module**

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**Inserting a Bale-Clasp Module**

To insert a bale-clasp SFP module into a switching module port, follow these steps:

**Step 1** Close the bale-clasp before inserting the SFP module.

**Step 2** Line up the SFP module with the port, and slide it into the port. (See Figure 4-9.)
Removing a Bale-clasp Module

To remove a bale-clasp SFP module from a switching module port, follow these steps:

**Step 1** Open the bale clasp on the SFP module with your index finger in a downward direction as shown in Figure 4-10. If the bale clasp 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, as shown in Figure 4-11.

**Step 2** Grasp the SFP module between your thumb and index finger, and carefully remove it from the switching module port, as shown in Figure 4-10.
Figure 4-10  Removing a Bale-clasp SFP Module with Your Index Finger
Figure 4-11  Removing a Bale-clasp SFP Module with a Flat-Blade Screwdriver