

Uplink Modules in EX 3200 and EX 4200 Switches

EX 3200 and EX 4200 switches support three types of uplink modules:

- SFP uplink module—Provides four ports for 1-gigabit small form-factor pluggable (SFP) transceivers.
- SFP + uplink module—Provides two ports for 10-gigabit small form-factor pluggable (SFP +) transceivers when configured to operate in 10-gigabit mode or four ports for 1-gigabit small form-factor pluggable (SFP) transceivers when configured to operate in 1-gigabit mode.
- XFP uplink module—Provides two ports for 10-gigabit small form-factor pluggable (XFP) transceivers.



NOTE: If you replace an uplink module with another uplink module of the same type, the switch detects the uplink module and creates an interface. However, if you replace an uplink module with an uplink module of a different type, or if you install an uplink module in the switch after the switch had booted without an uplink module, you must reboot the switch in order for the switch to detect the uplink module. See Table 1 on page 4.

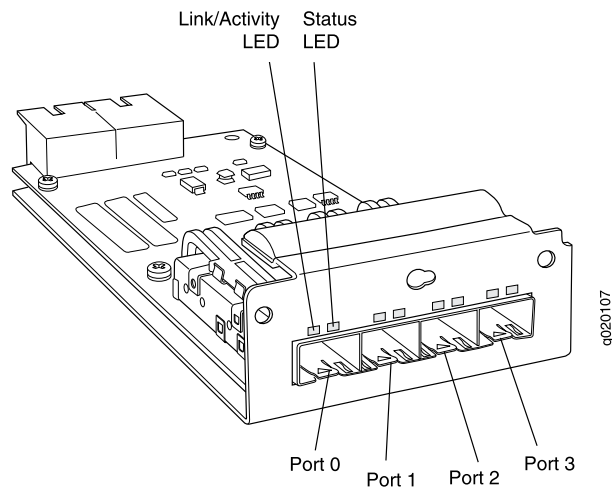
You can use the optional uplink module ports to connect an access switch to a distribution switch. You can also use these ports to connect members of a virtual chassis across multiple wiring closets.

When connecting uplink module ports, you can install an SFP uplink module at one end and install an SFP + uplink module configured to operate in the 1-gigabit mode at the other end. Likewise, you can install an XFP uplink module at one end and install an SFP + uplink module configured to operate in the 10-gigabit mode at the other end.

SFP Uplink Module

Figure 1 on page 2 shows the SFP uplink module, which provides four ports for 1-gigabit SFP transceivers.

Figure 1: SFP Uplink Module



SFP uplink modules are shipped with dust covers preinstalled in the ports.



NOTE: On an EX 3200 switch, if you install a transceiver in an SFP uplink module, a corresponding network port from the last four built-in ports is disabled. For example, if you install an SFP transceiver in port 2 on the uplink module (`ge-0/1/3`), then `ge-0/0/23` is disabled. The disabled port is not listed in the output of `show interface` commands.

The SFP uplink module requires JUNOS software for EX-series switches, Release 9.0 or later.

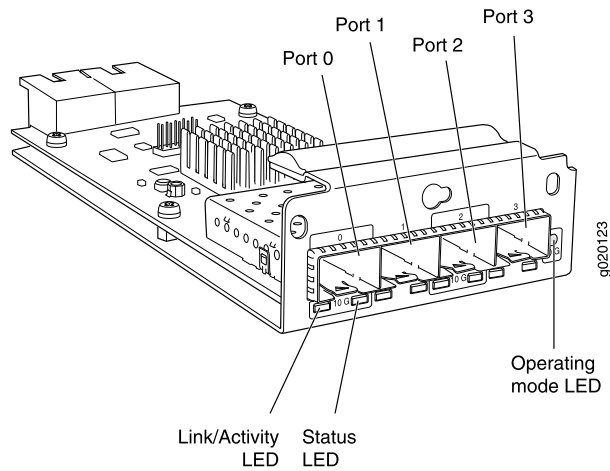
SFP+ Uplink Module

SFP + uplink modules can be used for either SFP + or SFP transceivers. You configure the operating mode on the module to match the type of transceiver you want to use—for SFP + transceivers, you configure the 10-gigabit operating mode, and for SFP transceivers, you configure the 1-gigabit operating mode. See *Setting the Mode on an SFP + Uplink Module (CLI Procedure)*.

By default, the SFP + uplink module operates in the 10-gigabit mode and supports only SFP + transceivers. If you have not changed the module from the default setting and you want to use SFP + transceivers, you do not need to configure the operating mode.

Figure 2 on page 3 shows the SFP + uplink module.

Figure 2: SFP+ Uplink Module



Transceivers are supported in the uplink module's ports as follows:

- SFP + transceivers are supported in ports 0 and 2.
- SFP transceivers are supported in all four ports.

The ports that support SFP + transceivers are labeled 10 G on the uplink module's faceplate (see Figure 2 on page 3).



NOTE: When an SFP + uplink module is operating in 10-gigabit mode:

- Only the 10-gigabit ports (ports 0 and 2) are enabled.
- You can only use SFP + transceivers in those ports.

When an SFP + uplink module is operating in 1-gigabit mode:

- All four ports are enabled.
- You can only use SFP transceivers in all four ports.

The SFP + uplink module has an LED on the faceplate (labeled Operating mode LED in Figure 2 on page 3) that indicates the operating mode. If the uplink module is operating in the 10-gigabit mode, the LED is lit. If the uplink module is operating in the 1-gigabit mode, the LED is unlit.

SFP + uplink modules are shipped with dust covers preinstalled in the ports.



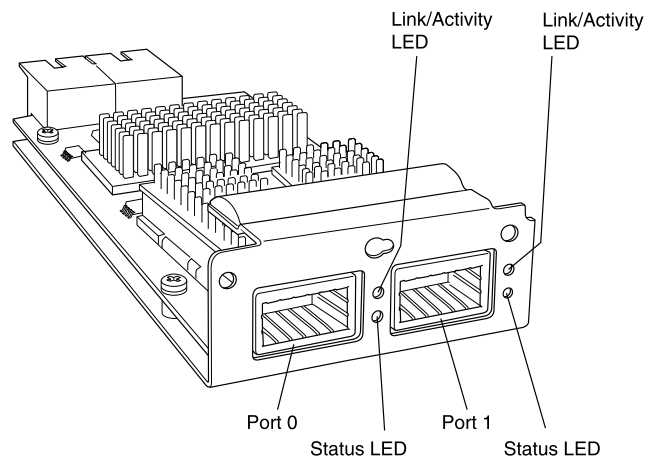
NOTE: On an EX 3200 switch, if you install a transceiver in an SFP + uplink module when the uplink module is operating in the 1-gigabit mode, a corresponding network port from the last four built-in ports is disabled. For example, if you install an SFP + transceiver in port 2 on the uplink module (`ge-0/1/3`), then `ge-0/0/23` is disabled. The disabled port is not listed in the output of `show interface` commands.

The SFP + uplink module requires JUNOS software for EX-series switches, Release 9.4 or later.

XFP Uplink Module

Figure 3 on page 4 shows the XFP uplink module, which provides two ports for 10-gigabit XFP transceivers.

Figure 3: XFP Uplink Module



XFP uplink modules are shipped with a dust cover preinstalled in one port.

The XFP uplink module requires JUNOS software for EX-series switches, Release 9.0 or later.

Effects of Uplink Module Installation and Replacement

Table 1 on page 4 describes how the switch functions when you install or replace uplink modules. It also describes what you can do to solve problems resulting from these installations and replacements.

Table 1: Effects of Uplink Module Installation and Replacement

Starting Condition	Event	Switch Response	Action
Switch was booted without uplink module.	Uplink module is installed.	Switch does not detect uplink module: <ul style="list-style-type: none"> ■ No interfaces are created. ■ Output from <code>show chassis</code> command does not display uplink module and transceivers. 	Reboot switch.

Table 1: Effects of Uplink Module Installation and Replacement (continued)

Starting Condition	Event	Switch Response	Action
Switch was booted with an uplink module installed in it.	Uplink module is removed.	Switch detects that the uplink module is not there and operates without it: <ul style="list-style-type: none"> ■ Output from <code>show chassis</code> command does not display uplink module and transceivers. 	Operate without uplink module.
Switch was booted with an uplink module installed in it.	Uplink module is replaced with one of the same type.	Switch detects the uplink module: <ul style="list-style-type: none"> ■ Interfaces are created. ■ Output from <code>show chassis</code> command displays uplink module and transceivers. 	Operate with uplink module.
Switch was booted with an uplink module installed in it.	Uplink module is replaced with one of a different type.	Switch does not detect the uplink module: <ul style="list-style-type: none"> ■ No interfaces are created. ■ Output from <code>show chassis</code> command does not display uplink module and transceivers. 	Reboot the switch.
Switch was booted with an uplink module installed in it.	Uplink module was taken offline.	Output from <code>show chassis</code> command displays uplink module in offline state.	Operate without uplink module.
Port of uplink module has been set as a virtual chassis port (VCP).	Uplink module is replaced.	VCP connection is broken.	Set the uplink module port as a VCP. See Setting an Uplink Port as a Virtual Chassis Port (CLI Procedure) .

- Related Topics**
- Network Port LEDs in EX 3200 and EX 4200 Switches
 - Uplink Modules Connector Pinout Information for EX 3200 and EX 4200 Switches
 - Optical Interface Support in EX 3200 and EX 4200 Switches
 - Example: Configuring Aggregated Ethernet High-Speed Uplinks Between a Virtual Chassis Access Switch and a Virtual Chassis Distribution Switch
 - Example: Configuring Aggregated Ethernet High-Speed Uplinks with LACP Between a Virtual Chassis Access Switch and a Virtual Chassis Distribution Switch
 - Installing an Uplink Module in an EX 3200 or EX 4200 Switch

