



# 1000BASE-SX/1000BASE-LX Gigabit Ethernet Module Installation Guide

For the SuperStack® II Switch 3900 System

**Description** You have purchased one or both of the following Gigabit Ethernet modules:

- **Model 3C39001** — The 1000BASE-SX module provides a 1000 Mb uplink over multimode (MMF) fiber optic cable.
- **Model 3C39002** — The 1000BASE-LX module provides a 1000 Mb uplink over single mode (SMF) fiber or multimode fiber (MMF) optic cable.



*Follow the same installation instructions for both modules.*

Both modules use SC connectors over laser-transmission fiber cable. Recommended cable specifications:

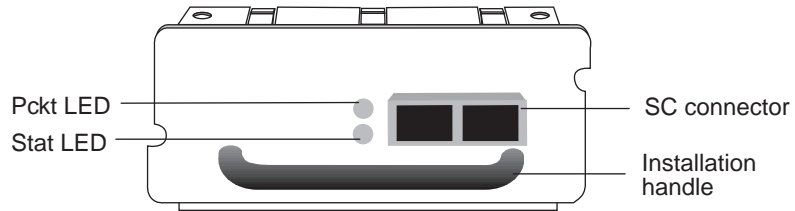
Module	Fiber Type	Maximum Cable Length
1000BASE-SX	62.5-micron MMF fiber	275 meters (902 ft)
1000BASE-SX	50-micron MMF fiber	550 meters (1805 ft)
1000BASE-LX	8-10 micron SMF fiber	10 kilometers (6.2 mi)
1000BASE-LX	62.5-micron MMF fiber	550 meters (1805 ft)
1000BASE-LX	50-micron MMF fiber	550 meters (1805 ft)



*Use a conditioned launch cable to connect the 1000BASE-LX transceiver to multimode fiber. Using this cable ensures reliability over the maximum 550 meter distance.*

The modules perform full-duplex, full line rate, nonblocking switching, and they comply with all IEEE 802.1Q and 802.1p specifications. The module is shown in Figure 1.

**Figure 1** 1000BASE-SX or 1000BASE-LX Module



Each module contains one **Pckt** (Packet) LED and one **Stat** (Status) LED, as described in this table:

LED	Name	Type	Color Displayed	Description
<b>Pckt</b>	Packet	Activity	Yellow	Data is passing through the port.
			Blinking yellow	Data is passing through the port.
			No light	Data is not passing through the port.
<b>Stat</b>	Status	Link	Green	The port is online.
			Blinking green	The port is online but disabled; diagnostic tests are being run.
			No light	The port is offline.

**Audience Description**

This guide is intended for **trained technical personnel** only. Do not attempt to remove or replace a SuperStack II Switch 3900 1000BASE-SX or 1000BASE-LX Gigabit Ethernet module if you do not have the proper training. For training information, call 1-800-NET-3COM.

**Safety Precautions**

Be sure to follow all safety precautions when you replace components in your SuperStack II Switch 3900 system. To avoid electric shocks, burns, or equipment damage, read and follow these warnings:



**WARNING:** Hazardous energy exists within the SuperStack II Switch 3900 system. Use extreme caution when you remove or replace the 1000BASE-SX or 1000BASE-LX Gigabit Ethernet module. Always be careful to avoid electric shock or equipment damage.



**WARNINGS:** Before you insert or remove the module, turn off the system by unplugging the power cord.

*When the system is on, never insert a metal object such as a screwdriver or a finger with jewelry into an open module slot.*

*When the system is on, do not touch any connections within the chassis with your hands or fingers.*

### ESD Safety Information

Electrostatic discharge (ESD) can damage components on the module. ESD, which occurs when the module is improperly handled, can cause complete or intermittent failures. To prevent ESD-related damage:

- Always wear an ESD wrist strap and ensure that the strap makes good skin contact.
- Verify that you are properly grounded.
- Keep the module in its antistatic shielded bag until you are ready to install it.
- Always handle the module by its edges.
- Do not touch the components, pins, leads, or solder connections.

### Fiber Safety Precautions

SuperStack II Switch 3900 modules use lasers in their fiber optic ports. To ensure your safety when you install or work with these modules, please comply with the precautions in this section.



**WARNING:** *The fiber optic lasers used in these modules meet the regulatory requirements for casual exposure to the eye. As with any source of bright light, however, 3Com recommends that you do not look into the laser light source.*

*IEC 825, Class 1 Laser Devices are for connection only to Class 1 Laser Devices. MMF and SMF fiber optic interfaces use lasers.*

CLASS 1  
LASER PRODUCT

## Before You Install

Before you install your new module, follow the appropriate preinstallation instructions in this section, depending on whether you are installing the 1000BASE-SX or 1000BASE-LX module for the first time or replacing an existing one.

*Read before installing in an empty slot*

Your SuperStack II Switch 3900 system is shipped with a fixed Gigabit Ethernet (1000BASE-SX) port and with two additional slots that can accept the optional 1000BASE-SX or 1000BASE-LX module.

Protective faceplates cover the optional module slots. Before you can install a module, you must remove the faceplate that covers the selected installation slot.



**CAUTION:** Do not operate the system with the faceplate removed. Doing so will damage the thermal system.

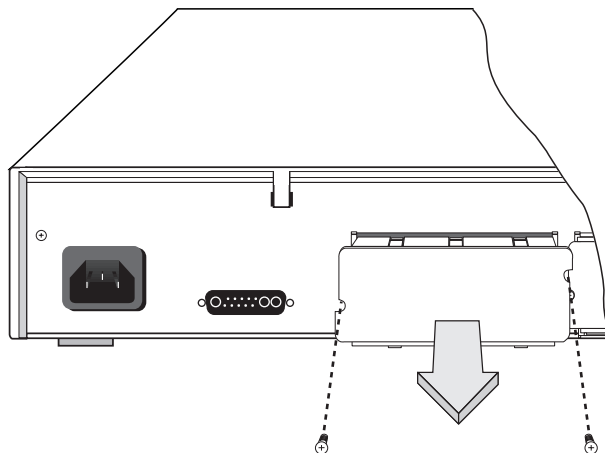


For this task, you need a Number 1 Phillips screwdriver.

To remove the faceplate:

- 1 Power down the system by unplugging the power cord.
- 2 Remove the two screws that secure the faceplate to the chassis.
- 3 Gently loosen the faceplate with your fingers.
- 4 Pull the faceplate away from the system. See Figure 2. Save the faceplate for future use.

**Figure 2** Removing the Faceplate from the Back Panel

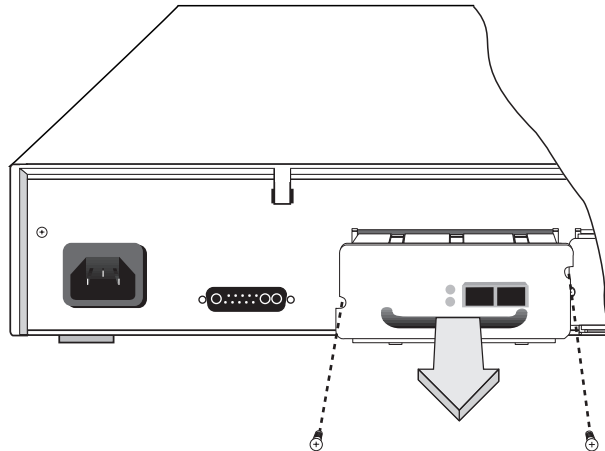


*Read before  
removing a module*

To remove a module:

- 1 Power down the system by unplugging the power cord.
- 2 Disconnect any network cables and remove the two screws that secure the module to the chassis.
- 3 Grasp the handle and gently slide the module out of the chassis. See Figure 3.
- 4 Put the module in an antistatic bag.
- 5 If you are not installing a new module immediately, cover the blank slot with a faceplate.

**Figure 3** Removing the 1000BASE-SX or 1000BASE-LX Module



## Installing the Module

To install the new module into the SuperStack II Switch 3900 system, follow the steps in this section.



**CAUTION:** When you handle a module, 3Com recommends that you always use a wrist strap that is connected to a proper ground. This precaution helps prevent electrostatic discharge from damaging a module. Also, when you are not using the module, store it in an antistatic bag. See "Safety Precautions" on page 3 for more cautions.

- 1 Power down the system by unplugging the power cord.
- 2 Put on an ESD wrist strap and ensure that you are properly grounded.
- 3 To remove the module from its antistatic bag, hold it by its edges.



**WARNING:** Do not insert any metal object into the open slot (for example, a screwdriver or a finger with jewelry). Doing so can cause burns or other bodily harm, as well as system damage.

- 4 Orient the module so that the handle is below the LEDs, as shown in Figure 4.
- 5 Place the module between the guides of the selected slot and gently slide it into the chassis.

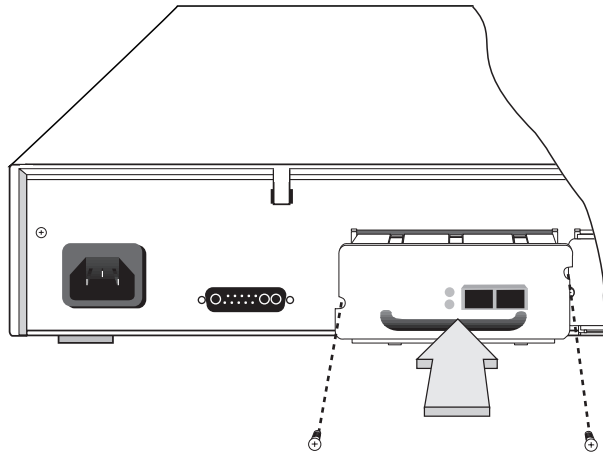
The module does *not* click into place. The module is seated in the chassis when the module faceplate is flush with the back of the chassis.



**CAUTION:** *If the module stops sliding before the faceplate is flush with the chassis, the module and backplane connectors are not aligned. Forcing the module inward can damage the module or the backplane connectors. If necessary, remove and reinsert the module, ensuring that the connectors are properly aligned. Do not tighten the screws to seat a module that is not properly inserted.*

- 6 Insert and tighten the screws to secure the module in the chassis.
- 7 Reinstall any network cables and reinsert the power plug.

**Figure 4** Installing the 1000BASE-SX or 1000BASE-LX Module





For information about cabling your module to the network, see “Gigabit Ethernet Ports” in Chapter 3 of your *SuperStack II Switch 3900 Getting Started Guide*.



*Your SuperStack II Switch 3900 system resets itself when you reinsert the power cord.*



*If you physically change the configuration of the system after you have defined an IP interface, the port designated for that interface may no longer be valid. You may have to redefine the interface. For more information, see the Management chapter in the Implementation Guide for your system.*

### **Module Diagnostics**

Your SuperStack II Switch 3900 system runs diagnostic tests at power up. Watch for these indicators:

- During diagnostic tests, the module’s **Stat** LED lights and blinks green.
- When the diagnostic tests have been successfully completed, the **Stat** LED remains green.
- If the module’s **Stat** LED remains off, the port is not operational.

To troubleshoot module failures, see the troubleshooting information in your *Getting Started Guide*.



# 3Com Corporation LIMITED WARRANTY

## SuperStack® II Switch 3900 1000BASE-SX/1000BASE-LX Gigabit Ethernet Module

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