



GBIC TRANSCEIVER INSTALLATION GUIDE

For 3Com GBIC (Gigabit Interface Converter) Transceivers

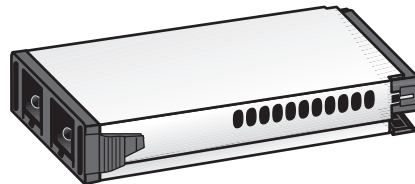
Transceiver Description

The GBIC ports on your system connect to Gigabit Ethernet segments through a GBIC transceiver (Figure 1), providing a high-speed connection over fiber. The transceiver connects to the network using a duplex SC fiber optic connector. You can remove and replace the transceiver with the system on.



CAUTION: Before you insert the transceiver, verify that CoreBuilder 3500 system software release 1.2.0 or higher is installed on your system.

Figure 1 GBIC Fiber Optic Transceiver



To ensure optimal performance, compatibility, and regulatory compliance, use only GBIC transceivers that 3Com supports. For a list of currently supported GBICs, visit this 3Com Web site:

http://www.3Com.com/gigabit_ethernet/gbics



This installation guide assumes that you have installed the 1000BASE GBIC module in your system. For information on installing the module, see the 1000BASE GBIC Module Installation Guide.

GBIC LX Transceivers

The 1000BASE GBIC LX transceiver supports these connections:

- A direct connection to single-mode fiber optic cable
- Connection to multimode fiber through a conditioned launch cable



To ensure optimal performance, compatibility, and regulatory compliance, use only conditioned launch cables that 3Com supports. For a list of currently supported conditioned launch cables, see this 3Com Web site:

http://www.3Com.com/gigabit_ethernet/gbics

Table 1 shows the transmission ranges for each connection.

Table 1 GBIC LX Multimode and Single-Mode Transmission Ranges

Fiber Type	Diameter (microns)	Modal Bandwidth (MHz*km)	Transmission Range in meters (feet)
Multimode	62.5	500	2 to 550 (6.6 to 1804.6)
Multimode	50	400	2 to 550 (6.6 to 1804.6)
Multimode	50	500	2 to 550 (6.6 to 1804.6)
Single Mode	9	–	2 to 10,000 (6.6 to 32,810)

GBIC SX Transceivers

The 1000BASE GBIC SX transceiver supports a direct connection to 62.5 or 50 micron multimode fiber-optic cable.

Table 2 shows the transmission ranges for each connection.

Table 2 GBIC SX Multimode Transmission Ranges

Fiber Type	Diameter (microns)	Modal Bandwidth (MHz*km)	Transmission Range in meters (feet)
Multimode	62.5	160	2 to 220 (6.6 to 721.8)
Multimode	62.5	200	2 to 275 (6.6 to 902.3)
Multimode	50	400	2 to 500 (6.6 to 1640.5))
Multimode	50	500	2 to 550 (6.6 to 1804.6)

Safety Precautions

Be sure to follow all safety precautions when you replace a 1000BASE GBIC transceiver in the system. To avoid electric shocks and burns to yourself and damage to the equipment, read and follow these warnings:



WARNING: When the system is on, never insert a metal object such as a screwdriver or a finger with jewelry into open module slots.



WARNING: When the system is on, do not touch any connections inside the chassis with your hands or fingers.

Fiber Safety Precautions

The 1000BASE GBIC module uses lasers in its fiber optic port. To ensure your safety when you install or work with these modules, read and comply with the precautions in this section.



WARNING: The fiber optic lasers used in the 1000BASE GBIC module 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.

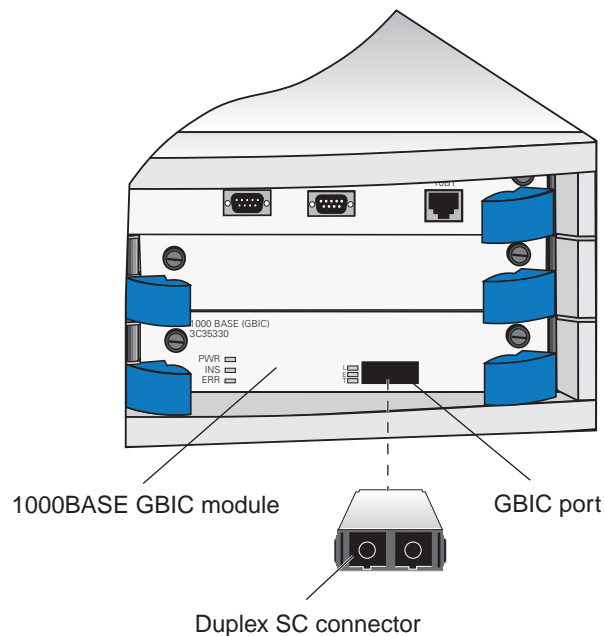
CLASS 1
LASER PRODUCT

Inserting the Transceiver

Before you connect the Gigabit Ethernet module to the network, first insert the transceiver into the GBIC port on the module:

- 1 Orient the transceiver so that the duplex SC connector is toward you, as shown in Figure 2.

Figure 2 Inserting the GBIC Transceiver



- 2 Do one of the following, depending on the transceiver that you are using:
 - **Side tabs** — Compress the side tabs and gently slide the transceiver into the GBIC port until it clicks into place.
OR
 - **Front lever** — Move the front lever to the upright position and gently slide the transceiver into the GBIC port until it clicks into place (or until you cannot insert it any further). Then move the front lever to the downward position to lock the transceiver into place.

Removing the Transceiver

In the event that you need to replace the GBIC transceiver, do one of the following, depending on the transceiver that you are using:

- **Side tabs** — Compress the side tabs and gently pull the transceiver out of the port.
OR
- **Front lever** — Move the front lever to the upward position. Then grasp the lever and gently pull the transceiver out of the port.

Troubleshooting

After you insert the GBIC transceiver into the module, the system software verifies these facts:

- **A proper connection is established between the transceiver and module host board.**

The transceiver connects to the module host board through a 20-pin connector. If the transceiver is not seated properly and a clean connection is not established, the Administration Console displays this error message:

```
ERROR: GBIC read failure on <slot number>, please re-insert the transceiver.
```

To correct this problem, completely remove the transceiver and then reinsert it. If the problem persists, contact 3Com Technical Support. For contact information, see the Technical Support appendix in your system's *Getting Started Guide*.

- **The GBIC is working correctly.**

If the system detects a problem with the transceiver, the Administration Console displays this error message:

```
ERROR: GBIC checksum failure on <slot number>.
```

To correct this problem, replace the transceiver with another one. If the problem persists, contact 3Com Technical Support. For contact information, see the Technical Support appendix in your system's *Getting Started Guide*.

- **The inserted transceiver is a model that 3Com supports.**

A transceiver that 3Com supports is one that 3Com has specifically tested and qualified for use with the CoreBuilder 3500. Pretesting at 3Com ensures proper functionality and compatibility with the system.

If you insert a GBIC transceiver that 3Com does not support, the system software reports the *portType* in the *ethernet summary* and *ethernet detail* menus as:

```
(GBIC) Non-Qualified
```

Although this report does not necessarily indicate that the GBIC transceiver will not function properly with the system, it does indicate that 3Com has not qualified the transceiver and does not support it. These non-qualified transceivers may violate your local regulatory emissions standards and safety standards.



To ensure optimal performance, compatibility, and regulatory compliance, use only GBIC transceivers that 3Com supports. For a list of currently supported GBICs, visit this 3Com Web site:

http://www.3Com.com/gigabit_ethernet/gbics

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