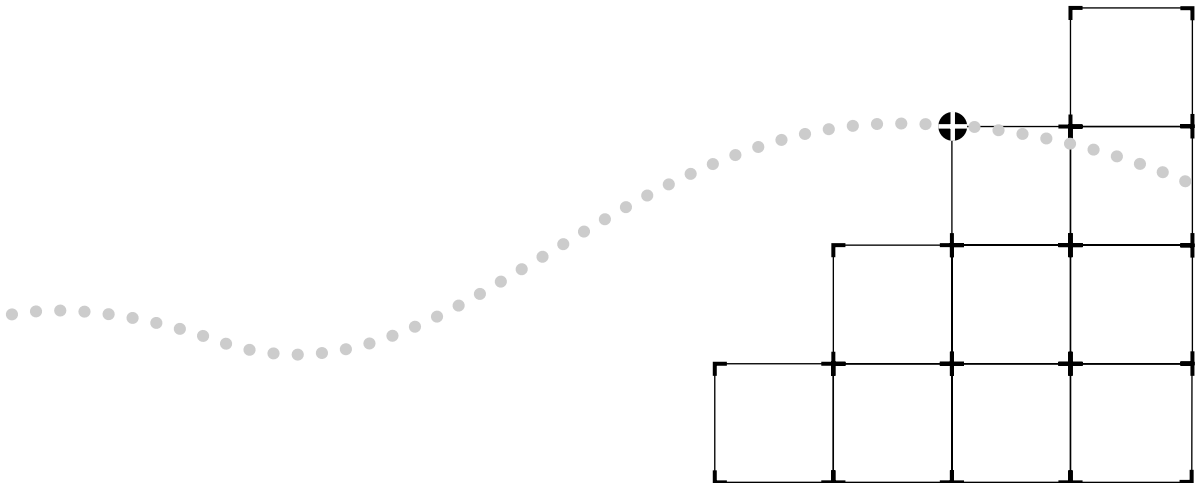




FIBER CONVERTER TR INSTALLATION GUIDE

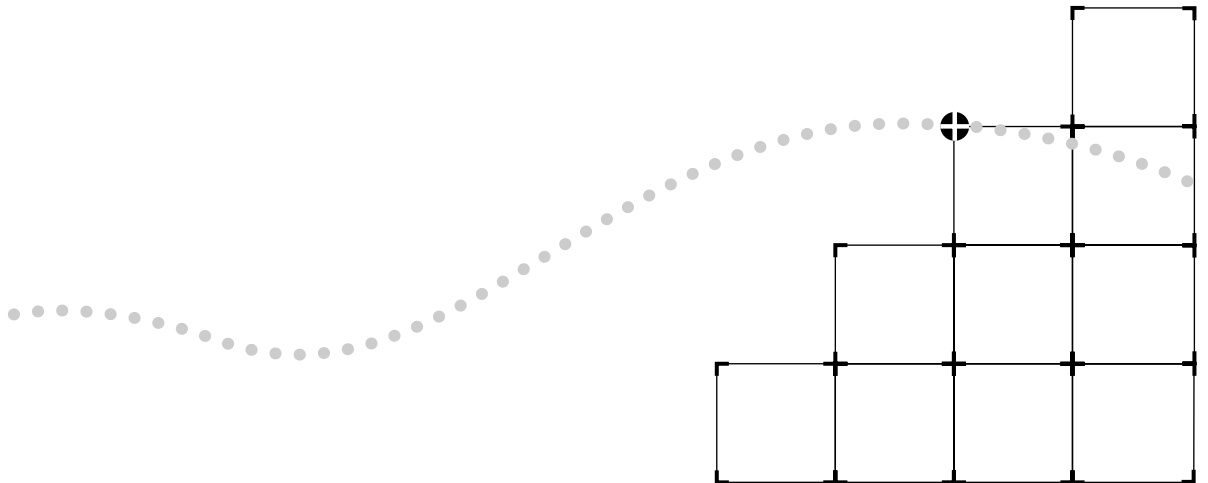




FIBER CONVERTER TR

INSTALLATION GUIDE

- 3C512210



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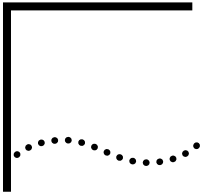
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Guide written, illustrated, and produced by Chris Flisher.



FIBER CONVERTER TR INSTALLATION GUIDE

Overview

This guide provides information on 3Com's Fiber Converter TR, including:

- Product Description
- Front Panel Components
- Typical Applications

Product Description

The 3Com Fiber Converter TR supports IEEE 802.5 standard Token Ring network communications over optical fiber cable at either 4 or 16 Mbps data rates. The Fiber Converter is best suited for communications between:

- End stations and hubs
- Internetworking devices (switches, routers, etc.) and hubs
- Two or more hubs via Ring In/Ring Out connections

The Fiber Converter TR automatically selects between 4 Mbps and 16 Mbps data rates. This simplifies installation and guarantees correct operation without interrupting ring communications.

The Fiber Converter TR provides fault tolerant operation by detecting faults on both fiber and copper connections in lobe repeater mode.

The Fiber Converter TR supports two principal applications:

- **Lobe repeater**—When used in collapsed-backbone switched or routed networks, the Fiber Converter TR provides a fiber optic connection from computer room internetworking devices to floor-based hubs. In addition, the Fiber Converter TR provides complete protection from electromagnetic interference on the fiber links. The Fiber Converter TR can also be used as a lobe extension for single end stations. Connections of up to 6600 ft. (2000M) are possible in both applications.
- **Main Ring repeater**—The Fiber Converter TR can be used to extend main ring connections for MAUs with copper-only main ring interfaces provided one unit is installed at each end of the fiber connection.

Features

- Configurable as a lobe or main ring repeater.
- Extends the maximum physical size of Token Ring local area networks.
- Automatically selects appropriate data rate of 4 or 16Mbps.
- Fault tolerance provides protection for both fiber and copper connections.
- Supports transmission distances of 6,600 feet (2km) over 62.5/125 micron fiber optic cable.
- Supports unshielded twisted pair (UTP) or shielded twisted pair (STP) as copper interface.

Front Panel Refer to the following figure for connections and LEDs

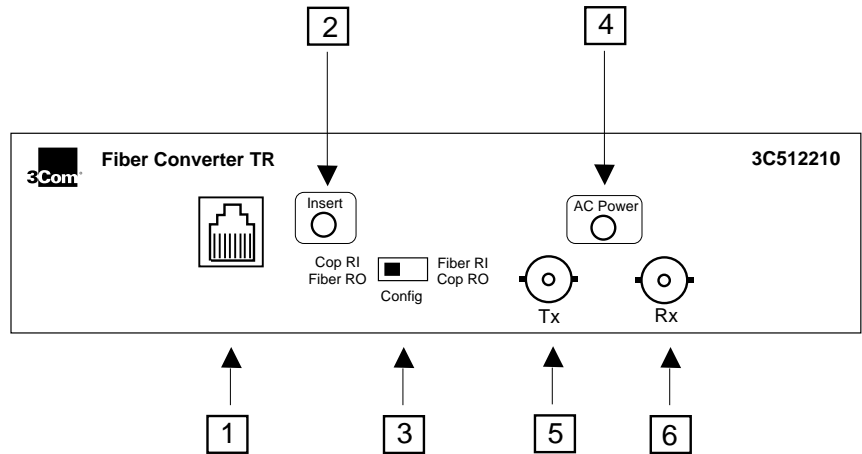


Figure 1 3Com Fiber Converter Front Panel

- 1 RJ45 Connector**—RJ45 connector supports Category 3, 4, 5 UTP cable and IBM Type 1, 2, 6 and 9 STP cable.
 - If the Fiber Converter TR is installed as a lobe repeater, use this connection for end station, switch, or hub.
 - If the Fiber Converter TR is installed as a main ring repeater, use this as a Ring in/Ring Out connection.
- 2 Insert LED**—The Insert LED illuminates when the RJ45 Ring In/Ring Out connection is present or there is a positive lobe connection.
- 3 Config**—Set the Config switch to determine the personality of the Fiber Converter ports. Refer to Figures 3, 4, and 5 for the appropriate switch settings.
- 4 Power LED**—The Power LED lights when AC power is applied to the unit.
- 5 Fiber Tx Connector**— ST fiber optic transmit (Tx) connector.
- 6 Fiber Rx Connector**— ST fiber optic receive (Rx) connector.

Typical Applications

The following illustrations depict typical applications for the 3Com Fiber Converter TR. The Fiber Converter TR broadens the range of your Token Ring network by extending the ring using fiber.

In switch or router environments

In Token Ring environments with switches or routers, the Fiber Converter TR extends the connection to remote or floor-based hubs. Refer to Config switch settings.

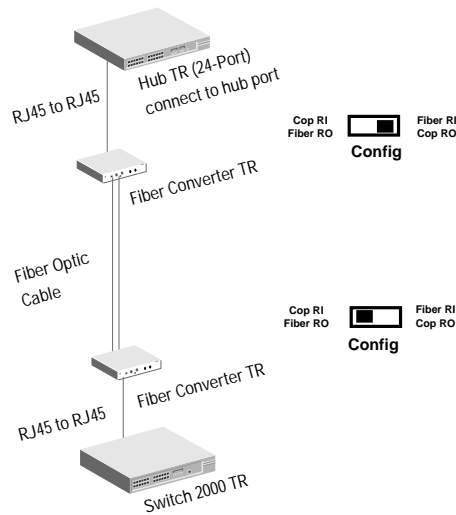


Figure 2 Fiber Converter TR in switch or router environment

In end station environments

When distances between end stations and the hub are greater than can be supported by standard STP or UTP cabling, the Fiber Converter TR provides a fiber option for supporting connectivity up to 6600 ft (2km). A pair of Fiber Converter TRs can be configured to extend a single lobe over optical fiber. In this method, single distant nodes can be supported without extending the main ring. Refer to Figure 3.

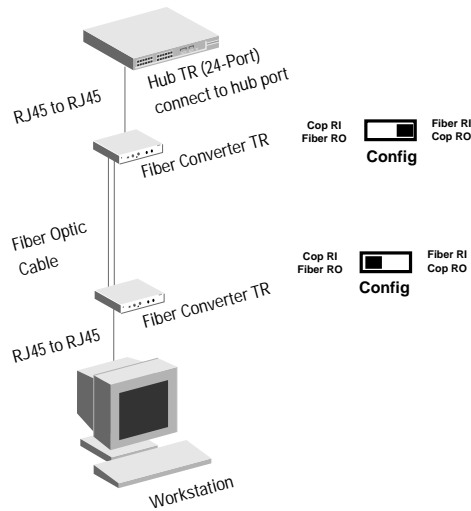


Figure 3 Fiber Converter TR in end station environment

Main Ring environments

The Fiber Converter TR provides a simple solution for extending Ring In /Ring Out connections in legacy environments with copper Ring In/ Ring Out connections. In these applications, the Fiber Converter TR must be used in pairs. Refer to Figure 4.

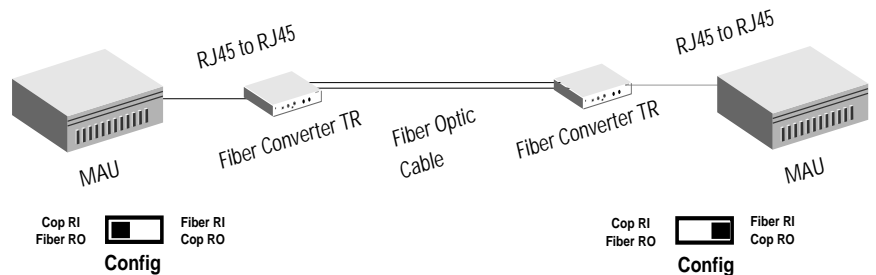


Figure 4 Fiber Converter TR in legacy environments

For fiber main ring connectivity between stacks of LinkBuilder FMS TR/SuperStack II Hub TRs use fiber RI/RO modules.



NOTE: The Fiber Converter TR will not interoperate with the 820AT.

Technical Specifications

Optical Power Budgets:	EMI Certification:
Min RX Power -25dBm	CE Mark
Min TX Power -15dBm	FCC Class A
Worst Case	EN 55022 (CISPR 22, Class A)-UTP
Tolerable Loss-10dB	EN 55022 (CISPR 22, Class B)-STP
	Mechanical:
	Length: 5.38 ins.
	Height: 1.53 ins.
	Depth: 3.57
	Weight: 14.1 oz.
Supported Distances:	Power Requirements:
Optical	9W (use only the power adapter supplied with the Fiber Converter TR)
62.5/125 um fiber up to 2 km	#3C565064-00 (USA)
	#3C565062-00 (Cont'l Europe)
	#3C565065-00 (UK)
Electrical	Standards Supported:
UTP-up to 50M	IEEE 802.5 LAN Standard
STP-up to 100 M	Interfaces:
	1 RJ45 (UTP/STP)
	1 ST Fiber Port
Safety Certification:	Environmental:
UL 1950	Temperature 41° to 122° F
CSA 950	(5° to 50°C)
EN 60950	Humidity up to 90% non-condensing

Use the following part numbers for replacement power supplies:

Dieses Gerät darf nur dem Netzgerät, Model verwendet werden:

- #3C565064-00 (USA)
- #3C565062-00 (Continental Europe)
- #3C565065-00 (UK)



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