

100Base-FX <> 100Base-TX Fast Ethernet Converter User's Manual

(620-0062-000)

1. Overview

IEEE 802.3u 100Mbps Fast Ethernet supports two types media for network connection such as 100Base-TX and 100Base-FX. The media converter is used to convert one type media signal to other type equivalent that allows two type segments connect easily and inexpensively. The converter can be used as a standalone unit or as a slide-in module to the 19" converter rack (up to 10 units) for use at a central wiring closet.

2. Model Description

Model	Connector Type
CFM3000	Multi-Mode 1310nm Duplex-SC ↔ RJ-45
CFM3200	Multi-Mode 1310nm Duplex-ST ↔ RJ-45
CFM3800C20/C40/C60	Single-Mode 1310nm Duplex-SC ↔ RJ-45
CFM3800C80/C100	Single-Mode 1550nm Duplex-SC ↔ RJ-45

*: Models with MT-RJ or VF-45 fiber connector are available only upon request!

3. Checklist

Before you start installing the Converter, verify that the package contains the following:

- The TP-Fiber Converter
- AC-DC Power Adapter
- This User's Manual

Please notify your sales representative immediately if any of the aforementioned items is missing or damaged.

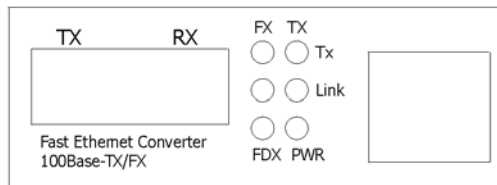


Fig. 1 100Mbps TP-to-Fiber Converter Front Panel



Fig. 2 100Mbps TP-to-Fiber Converter Side Panel

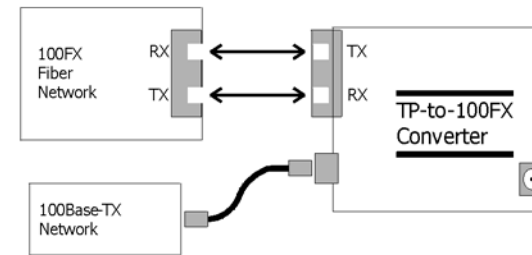


Fig. 3 Basic Network Connection

4. Installing the Converter

For as a standalone unit:

- ⇒ Verify the AC-DC adapter conforms to your country AC power requirement and insert the power plug
- ⇒ Connect the media cable for network connection

For as a slide-in unit:

- ⇒ The slide-in Media Converter and Converter Rack should be supplied only from the same source, both Media Converter and Rack are built to match each other at dimensions, DC jack, DC receptacle and power safety
- ⇒ Turn off the 19" converter rack power
- ⇒ Ensure that there is no activity in the network
- ⇒ Locate +5V DC power jack on converter back, carefully slide in and plug to 19" rack +5V DC power receptacle
- ⇒ Connect the media cable for network connection
- ⇒ Turn on the converter rack power, the Power LED will light up

Fiber Port	Attach the fiber cable. The Tx, Rx fiber cable must be paired at both ends.
TP Port	Attach TP Cat. 5 cable to TP port MPR (Default) : To a Switch or Hub DTE : To a workstation or Network Interface Card (NIC) "DTE"/"MPR" slide switch is on the side panel

Note:

- a. Use the straight-through cable.
Cable pin-outs for RJ-45 jack 1, 2, 3, 6 to 1, 2, 3, 6
- b. MPR (Default) : To a Switch or Hub
DTE : To a workstation or NIC
(DTE pin-outs is crossover on board already)
Configure the MPR-DTE slide switch on the side panel for cable connection to hub or Network Interface Card (NIC)
- c. Be sure the proper wiring and the Link LED status

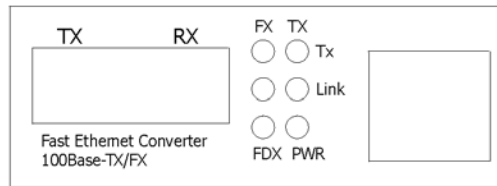
5. Connecting to 10/100Mbps N-Way Device

Converter TP Port	Default: 100Mbps auto-duplex-negotiation a. Full-duplex for 10/100 N-Way partner b. Half-duplex for non N-Way TP partner or Class II Hub
Converter Fiber Port	100Mbps and comes to: a. Full-duplex for 100Fdx fiber link partner b. Half-duplex for 100Hdx fiber link partner

Note:

- TP Partner must be set at 10/100 N-Way Auto-Negotiation for full duplex operation. When connecting to non N-Way TP partner, it will come to 100/half-duplex operation
- Fiber Link Partner should be set at full duplex mode

6. LED Description



LED	Color	Function
FX Tx	Green	Blink when fiber data is transmitting
FX Link	Green	Lit when fiber connection is good Blink when fiber data is receiving
TX Tx	Green	Blink when TP data is transmitting
TX Link	Green	Lit when TP connection is good Blink when TP data is receiving
FDX	Green	Lit when full-duplex mode is active
PWR	Green	Lit when +5V power is coming up

7. Cable Connection Parameter

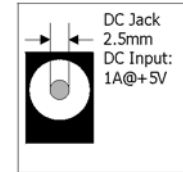
100Base-X network allows 512-bit time delay between any two node-stations in a collision domain. The overall bit-time of TP/Fiber wires and devices must be within 512-bit in a segment. You may use a switch to break up collision domain and extend the cabling distance.

- **TP Cable Limitations:** Cat. 5 100m
- **Multi-Mode Converters Fiber Cable Limitations:**
2km in Full-Duplex mode and 412m in Half-Duplex mode
- **Single-Mode Converters Fiber Cable Limitations (Full-Duplex ONLY):**

CFM3800 Single-Mode Converter:		
C20	:	20km
C40	:	40km
C60	:	60km
C80	:	80km
C100	:	100km

8. DC Jack and AC-DC Power Adapter

The DC jack's central post is 2.5mm wide; it conforms to the DC receptacle (2.5mm) on the 19-inch Converter Rack slot.



Keep the AC-DC adapter as spare parts when Media Converter is installed in a 19-inch Media Converter Rack.

9. Technical Specifications

- **Standards:** IEEE 802.3u 100Base-TX/FX
- **Models:**

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- **UTP Cable:** Category 5, up to 100m
- **Fiber Cable:**
50/125, 62.5/125, or 100/140μm multi-mode, up to 2km
8.3/125, 8.7/125, 9/125, or 10/125μm single-mode, up to 20~100km (models depended)
- **LED Indicators:** POWER, FX LNK, FX Tx, TX LNK, TX Tx, FDX
- **Data Transfer Rate:**
100Mbps auto-duplex-negotiation
100Mbps for half-duplex mode
200Mbps for full-duplex mode
- **Power Requirement:** 1A@+5V DC
- **Ambient Temperature:** 0° to 50° C
- **Humidity:** 5% to 90%
- **Dimensions:** 26.2 x 70.3 x 94 mm (H x W x D)
- **Complies with FCC Part 15 Class A and CE Mark**

Note: Connecting to Router, Bridge, or switch, please refer to the device's Technical Manual.