

## 10/100Base-TX to 100Base-FX Media Converter



### 1. Overview

IEEE802.3/u Ethernet supports two types' media for network connection such as 10/100Base-TX and 100Base-FX. The bridge media converter is designed with a switch controller and buffer memory that connects two types segments operation smoothly. This converter can be used as standalone unit or as slide-in module to the 19" converter rack Chassis for use at a central wiring closet.

### 2. Technical Specifications:

Standards	IEEE802.3,IEEE802.3U,10/100Base-TX,100Base-FX
Media Supported	10Base-T:Cat3,4,5 UTP/STP,MAX 100m; 100Base-TX:Cat 5UTP/STP, MAX 100m; Multi-model fiber(50/125um,62.5/125um); Single-mode fiber(8.3/125um,9/125um,10/125um)
TP Connector	SC/ST
Referenced Transmission Distance	Dual-fiber multi-mode:2km Dual-fiber single-mode:25/40/60/80/100/120km Single-fiber single-mode:WDM 25/40/60/80km
Data Forward Rate	10Mbps:14,880pps 100Mbps:148,800pps
Flow Control	IEEE802.3xflow control for full-duplex model Back-pressure flow control for half-duplex model
Power Supply	1A@+5VDC or 110~260VAC or 48VDC
Power consumption	2.5W
Operation Temperature	0 °C to 50 °C
Relative Humidity	5% to 8% (non-condensation)

### 3. Installing the Converter

**For as 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 Chassis should supplied only from the same source, both Media Converter Rack Chassis are built to match each other at dimension,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. Default: Full duplex mode
TP Port	Attach TP Cat.5 cable to TP port MPR(Default):To a Switch or Hub DTE:To a workstation or NIC “DTE”/”MPR”slide switch is on the side panel

**Note for TP port cable connection:**

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(Network interface Card)

(DTE pin-outs is crossover on the board already)

Configure the MPR-DTE slide switch on the side panel for cable connection to a hub or NIC ( Network Interface Card)

c. Be sure the proper wiring and the Link LED status

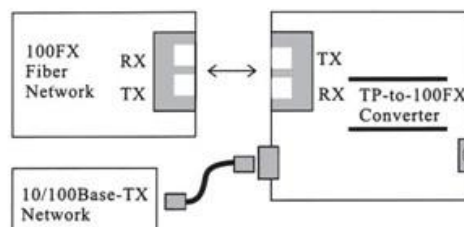


Fig.1 Basic Network Connection

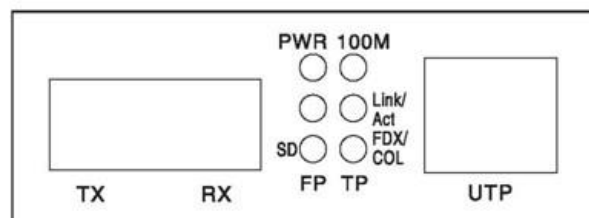
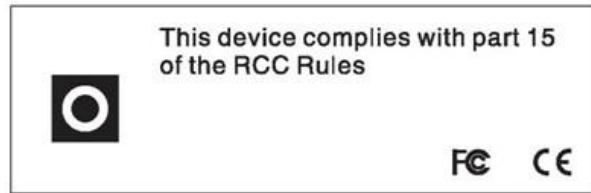


Fig.2 Converter Front Panel for external power



**Fig.3 Rear panel**

#### 4. Check List

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

- The TP-Fiber Converter
- AC-DC Power Adapter (for external models) or Power Cord (for internal models)
- This User's Manual

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

#### 5. LED Description

LED indicator lamp	Status	Explanation
FX Link/Act	ON	Connection status display for fiber link. "NO" indicates that Fiber link is in correct connection
	Blink	Active status display of fiber link. "Blink" indicates packet goes through Fx end.
TX Link/Act	ON	Connection status display for electric link. "NO" indicates that electric link is in correct connection
	Blink	Active status display of electric link. "Blink" indicates packet goes through Fx end.
FDX/COL	ON	Transceiver works in the full duplex mode
	OFF	Transceiver works in the half duplex mode
PWR	On	Power is on and normal
SD	On	Fiber signal is detected
100M	On	Transfer rate of electric interface is 100Mbps
	Off	Rate of electric interface is 10Mbps

#### 6. Connecting to TP, Fiber Device

Converter TP Port 10/100TX	Default:10/100Mbps Nway a. Auto-negotiation for Nway TP partner b. Behalf-duplex for non-Way TP partner, Class II hub, or 10Base-T device
Converter Fiber Port 100FX	100Mbps with duplex mode selectable: a. Full-duplex for 100Fdx fiber link partner b. Half-duplex for 100Hdx fiber link partner Fx duplex mode slide switch locates on the rear panel

#### 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 Converter Fiber Cable limitations:

SC/ST/VF/MT Multi-Mode Converter Models:	
Multi-mode Half-duplex	Node to Node:412m Node to Switch:412m
Multi-mode Full-duplex	Node to Node:2Km Node to Switch:2Km

.Single-mode (WDM) Converter Fiber Cable limitations:

SC Single-Mode Converter Models:	
SC25/SM25 Full-duplex Node to	Node/ Switch:25km
SC40/SM40 Full-duplex Node to	Node/ Switch:40km
SC60/SM60 Full-duplex Node to	Node/ Switch:60km
SC80/SM80 Full-duplex Node to	Node/ Switch:80km
SC100 Full-duplex Node to	Node/ Switch:100km
SC120 Full-duplex Node to	Node/ Switch:120km

## 8. Troubleshooting

If the media converter fails, isolate and correct the failure by determining the answers to the following questions and then taking the indicated action:

1. Is the power LED on the media converter illuminated?

**NO**

.Is the power adapter the proper type of voltage and cycle frequency for the AC outlet?

Is the power adapter properly installed in the media converter and in the outlet?

.Contact your local sales distributor for technical Support.

**.YES**

.Proceed to step 2.

2. Is the “Duplex/Link” LED illuminated on a port with twisted-pair cable installed?

**NO**

.Check the copper cabled for proper connection.

**YES**

.Amber=the media converter has selected half-duplex mode.

.Green=the media converter has selected full-duplex mode.

If the mode is not correct, disconnect and reconnect the twisted pair cable to restart the initialization process.

.Proceed to step 3.

3. Is the “LACT”LED illuminated on the fiber cable port?

**NO**

.Check the fiber cables for proper connection.

Verify that the TX and RX cables are connected to the RX and TX ports, respectively, on the 100Base-FX device.

**YES**

.Proceed to step 4.

4. Is the “Speed” LED illuminated on a port with twisted-pair cable installed?

**NO**

Check the copper cables for proper connection.

**YES**

.Amber=the media converter has selected 10Mb/s operation.

.Green=the media converter has selected 100Mb/s operation.

.If the speed is not correct, disconnect and reconnect the twisted pair cable to restart the initialization process.

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