

Ethernet Media Converter & Rack Chassis

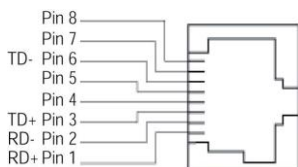


This quick installation guide describes how to install and use the Ethernet Media Converter and optional Rack Chassis.

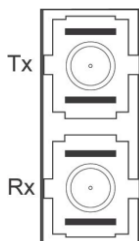
10/100BaseTX and 100BaseFX Connectors

10/100BaseTX Connections:

Pin	Regular Ports	Uplink Port
1	Receive Data + (input)	Transmit Data + (output)
2	Receive Data - (input)	Transmit Data - (output)
3	Transmit Data + (output)	Receive Data + (input)
4	NC	NC
5	NC	NC
6	Transmit Data - (output)	Receive Data - (input)
7	NC	NC
8	NC	NC



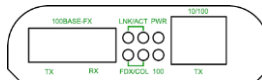
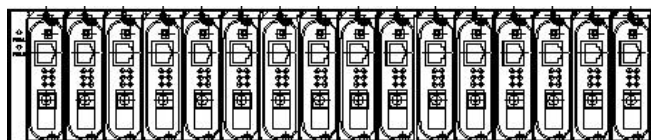
100BaseFX Connections:



The Tx (transmit) port of device 1 is connected to the Rx (receive) port of device 2, and the Rx (receive) port of device 1 to the Tx (transmit) port of device 2.

Description

The media converter provides one channel for media conversion between 10/100BaseTX and 100BaseFX. It can be used as a stand-alone device or with a standard 19 inch chassis as shown below.



Features

- One-channel media conversion: 10/100BaseTX & 100BaseFX
- Fiber media:
 - Multi-mode fiber using SC or ST connectors
 - Single-mode fiber using SC connectors
- Auto negotiation of speed and duplex mode on TX port
- Auto MDIX on TX port
- DIP switch configuration for:
 - Link-fault-pass-through
 - Fixed speed
 - Half/full duplex
- Store-and-forward mechanism
- Non-blocking full wire-speed forwarding rate
- Supports broadcast storm filtering
- Back-pressure & IEEE802.3x compliant flow control
- Front panel status LEDs
- External AC to DC power adapter (included)
- Used as a stand-alone device or with a chassis
- Hot-swappable when used with a chassis

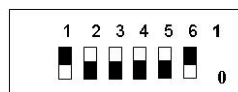
LED's and DIP Switch

LED Status:

LEDs	State	Indication
PWR	Steady	Power on (<i>PWR</i> stands for <i>POWER</i>)
	Off	Power off
100	Steady	100Mbps network connection
	Off	10Mbps network connection
LNK/ACT	Steady	Network connection established (<i>LNK</i> stands for <i>LINK</i>)
	Flashing	Transmitting or receiving data (<i>ACT</i> stands for <i>ACTIVITY</i>)
	Off	Neither a network connection established nor transmitting/receiving data
FDX/COL	Steady	Connection in full duplex mode (<i>FDX</i> stands for <i>FULL-DUPLEX</i>)
	Flashing	Collision occurred (<i>COL</i> stands for <i>COLLISION</i>)
	Off	Connection in half-duplex mode

DIP Switch Settings:

Pos.	DOWN (0)	UP (1)
1	Enable Link-fault-pass-through	Disable Link-fault-pass-through
2	RJ45 Auto Negotiation Enabled	RJ45 Forced Mode
3	RJ45 Forced to 100Mbps	RJ45 Forced to 10Mbps
4	RJ45 Forced to Full Duplex	RJ45 Forced to Half Duplex
5	Fiber Forced to Full Duplex	Fiber Forced to Half Duplex
6		



Link-fault-pass-through

Link-Fault-Pass-Through Overview:

When two Media Converters are connected via their fiber ports

Link Fault of the FX port:

A Link Fault condition will be sensed on the RJ45 port whenever the media converter detects a Link Fault condition on the Fiber port. (The 100, LNK/ACT, and FDX/COL LED's will be off.)

Link Fault of the TX port:

Media Converter A: A Link Fault condition will be sensed on the Fiber port whenever the media converter detects a Link Fault condition on the RJ45 port. Thus, the 100, LNK/ACT, and FDX/COL LEDs of the RJ45 port of the Media Converter A would be off.

Media Converter B: A Link Fault condition will be informed to the Fiber port of the Media Converter B. Then a Link Fault condition will be sensed on the RJ45 port of the Media Converter B whenever the Media Converter B detects a Link Fault condition on the Fiber port. Thus, the 100, LNK/ACT, and FDX/COL LEDs of the Media Converter B would be off.

Link Fault of the FX port						
		TX Port			FX Port	
LEDs	PWR	100	LNK/ACT	FDX/COL	LNK/ACT	FDX/COL
Media Converter A	ON	OFF	OFF	OFF	OFF	OFF
Media Converter B	ON	OFF	OFF	OFF	OFF	OFF

Link Fault of the TX port						
		TX Port			FX Port	
LEDs	PWR	100	LNK/ACT	FDX/COL	LNK/ACT	FDX/COL
Media Converter A	ON	OFF	OFF	OFF	ON	ON
Media Converter B	ON	OFF	OFF	OFF	OFF	OFF

Installation

Connecting Power:

The media converter is a plug-and-play device, so simply plug the power supply into the converter and then the AC outlet.



Installing the Media Converter into the Chassis:

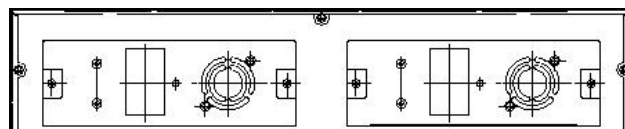
The media converter fits into any of the chassis expansion slots.

- First, remove one of the expansion slot carriers
- Then, install the converter onto the carrier
- Next, insert the carrier onto the guide rails of the expansion slot
- Carefully slide the carrier unit in, until it firmly fits the chassis
- Reinstall the screw that locks the carrier to the chassis

Installing the Power Supply into the Chassis:

The power supply fits into either of the two power supply bays on the back of the rack chassis.

- First, remove the cover plate
- Then, insert the power supply into the guide rails of the bay
- Carefully slide the power supply in until it firmly fits in the chassis
- Tighten the thumb screws provided on the power supply



Rack Chassis Specifications

Features:

- House up to 16 media converters
- Front panel LED's for power status
- Standard 19 inch Rack, 2U size
- Hot-swappable: Media converters and Power supplies
- Cooling fans for ventilation - one on right & left sides of chassis
- Ventilation holes on each side
- Load sharing mechanism:
 - If one power supply fails, the other takes over immediately
- Each converter bay is electrically isolated from each other
- Over current protection
 - Fuses on PCB for each converter bay
 - Fuses on each power supply

Chassis Specifications:

Capacity	Houses up to 16 media converters
Power	One power supply included, second optional hot-swappable
Cooling	One fan on the left and right side of the chassis
LED Indicators	One LED for each power supply's power status)
Dimensions	17.3 x 10.9 x 3.5 in (44 x 27.6 x 9 cm) Standard 19 inch, 2U size
Net Weight	8.5kg approx. (with sixteen media converters)

Power Supply Specifications:

Power Input	110 to 240VAC, 50/60Hz
Power Output	12VDC, 84W max.
Load	7A max.
Operating Temp	0°C to 40° C (32°F to 104°F)
Storage Temp	-25°C to 70°C (-13°F to 158°F)
Emissions	FCC Part 15 Class A; CE Class A

Media Converter Specifications

Applicable Standards	IEEE 802.3 10BaseT, IEEE 802.3u 100BaseTX & 100BaseFX
Fixed Ports	(1) TX port, (1) FX port
Speed	10BaseT: 10/20Mbps for half/full-duplex 100BaseTX/FX: 100/200Mbps for half/full-duplex
Switching Method	Store-and-Forward
Forwarding rate	14,880/148,800pps for 10/100Mbps
Cable	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 up to 100m 100BaseTX: 2-pair UTP/STP Cat. 5 up to 100m 100BaseFX: MMF (50 or 62.5µm), SMF (9 or 10µm)
LED Indicators	Per Unit - PWR1, PWR2, FAULT, LFP Per Port - TX: LNK/ACT, FDX/COL, 100 FX: LNK/ACT, FDX/COL
Dimensions	4.3 x 3.2 x 0.9 in. (10.9 x 8 x 2.4 cm)
Weight	0.15 Kg
Power	External Power Supply 12VDC @ 280mA
Power Consumption	3.4W
Operating Temperature	0°C to 50°C
Storage Temperature	-25°C to 70°C
Humidity	10 to 90%, non-condensing
Emissions	FCC Part 15, Class A; CE
Safety	UL/CUL 60950, EN60950, IEC 60950, IEC61000-6-2