

FiberCom 10/100BaseT to 100BaseFX Bridging Media Converter User's Manual

1. Overview

Electro Industries' FiberCom 10/100BaseT to 100BaseFX Bridging Media Converter (part # EI-FP-8110SA-25) provides 10/100Mbps communication between Cat 5 twisted pair Ethernet cables and Fiber Optic cables. The FiberCom protects your copper-wire investment, while extending the range of your communication capability and preparing your network for future optimization.

FiberCom features include:

- Support for half-duplex and full-duplex transmission.
- Ability to extend range of communication from 1000 meters maximum (with twisted pair alone) to 80 kilometers.
- Built-in switching core to implement flow control and reduce broadcast packets.
- Support for the transmission of extra long packets (1600 bytes) over VLAN.
- Built-in 128kB RAM for data buffering.
- Support for auto MDI-MDIX function for seamless device connection.
- Support for link pass-through function (LPF) for fault detection.
- Fiber optic immunity to electromagnetic interference (EMI) improves data transmission, especially in environments with high EMI, e.g., a manufacturing facility's plant floor.

IMPORTANT! Inspect your FiberCom package to ensure it contains the following items:

1. FiberCom Media Converter
2. External Power Supply

2. Specifications

Parameters	Specifications
Access mode	10/100 Mbps Gigabit Ethernet
Standards	IEEE802.3 10BaseT Ethernet, IEEE802.3U 100BaseTX/FX Fast Ethernet, IEEE802.1Q VLAN, IEEE802.1p CoS, IEEE802.1D Spanning Tree MAC Bridges
Wavelength	850nm/1310nm/1550nm
Transmission distance	Dual-fiber single-mode: (32.8k to 393.7k)feet/ (10/20/40/60/80/100/120)Km; Single-fiber single-mode: (32.8k to 262.5k)feet/ 10/20/40/60/80Km Category-5 twisted pair: 328 feet/100m
Port	One RJ45 port: Connected to STP/UTP Category-5 twisted pair One fiber port: Dual-fiber single-mode – ST fiber port (fiber size: 9/125µm)
Conversion mode	Medium conversion
Delay	<10µs
Bit error rate	<1/1000000000
MTBF	100,000 hours
LED	See chart on the next page
Power	90-265VAC Input using external power supply/ 5VDC Input jack
Power consumption	5W
Operating temperature	(50 to 131)°F/(10 to 55)°C
Operating humidity	5%~90%
Storage temperature	(-40 to 158)°F/(-40 to 70)°C
Storage humidity	5%~90% (non-condensing)
Dimensions	1.02"/26mm(H)*2.75"/70mm(W)*3.69"/94mm(L) (height * width * length)

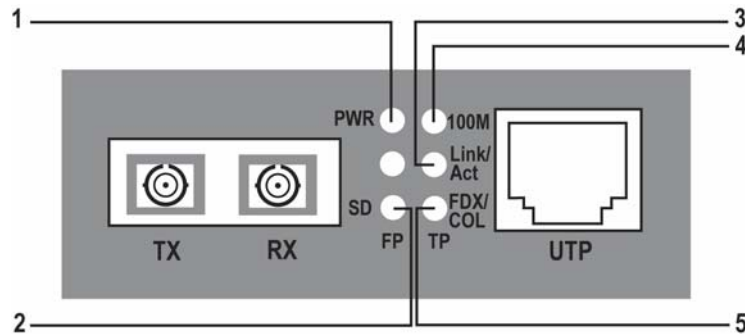
3. Connection

Connect the FiberCom Media Converter as follows:

- Connect the network device (work station, hub or switch) with RJ45 interface to the FiberCom's RJ45 jack, using Cat-5 twisted-pair.
- Connect the fiber optic cable to the FiberCom's ST Fiber jack.
- Plug the supplied Power supply into the FiberCom.
- Once the devices are powered on, the FiberCom LEDs indicate connection status. See next section.



4. Front Panel Indicators



Number	LED	Function	Status	Meaning
1	PWR	Power LED	ON	Power is ON
			OFF	Power is OFF
2	FP	Fiber port link/action status LED	ON	Fiber link is ACTIVE
			OFF	Fiber link is INACTIVE
3	Link/Act	UTP port link/action status LED	ON	Data is being received
			Blink	Data has been transmitted (not currently transmitting)
			OFF	Data is not being sent out
4	100M	UTP port speed LED	ON	100M speed
			OFF	10M speed
5	FDX/COL	Duplex Mode	ON	Full-duplex
			Blink	Data collision (Half-duplex mode, only)
			OFF	Half-duplex

5. Troubleshooting

If the FiberCom Media Converter fails to operate, follow these steps:

<p>1. Is the FiberCom's "PWR" LED illuminated? (See page 10)</p>	<p>No:</p> <ul style="list-style-type: none"> - Is the power supply compatible with the AC outlet? - Is the power supply installed properly in the FiberCom and the AC outlet? - Contact EIG's technical support. <p>Yes: continue to step 2.</p>
<p>2. Is the "FDX/COL" LED illuminated on a port with twisted-pair cable installed?</p>	<p>No:</p> <ul style="list-style-type: none"> - The FiberCom has selected half-duplex mode. <p>Yes:</p> <ul style="list-style-type: none"> - The FiberCom has selected full-duplex mode. <p>If the mode is not correct, disconnect and reconnect the twisted pair cable to restart the initialization process. Continue to step 3.</p>
<p>3. Is the "Link/Act" LED illuminated on the on the fiber cable port?</p>	<p>No:</p> <ul style="list-style-type: none"> - Check the fiber cables for proper connection. - Verify that the TX and RX cables are connected to the FiberCom's RX and TX ports, respectively. <p>Yes: continue to step 4.</p>
<p>4. Is the "100M" LED illuminated on a port with twisted-pair cable installed?</p>	<p>No:</p> <ul style="list-style-type: none"> - The FiberCom has selected 10Mbps operation. <p>Yes:</p> <ul style="list-style-type: none"> - The FiberCom has selected 100Mbps operation. <p>If the speed is not correct, disconnect and reconnect the twisted pair cable to restart the initialization process.</p>

FCC RFI Statement

Federal Communications Commission (FCC) Radio Frequency Interference

This device complies with part 15 of FCC regulations.

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Doc# E201701 V.1.03

January, 2011