

Moxa Single-Strand Fiber Converter Hardware Installation Guide

1. Introduction

IEEE802.3u 100 Mbps Fast Ethernet supports two types of media for network connection: 10/100BaseT(X) and 100BaseFX. The Single-Strand Fiber Converter (ME60) is designed with an optic Wavelength Division Multiplexing (WDM) technology that transports bi-directional full duplex signals over a single- strand fiber cable simultaneously.

100Base-X network allows 512-bit time delay between any two node-stations in a collision domain. This switch-based converter breaks up the TP as well as Fiber segments' collision domain and extends the cabling distance.

2. Model Descriptions

| Model | TX, RX Wavelength |
|-------|-----------------------|
| ME60A | TX (Transmit) 1310 nm |
| | RX (Receive) 1550 nm |
| ME60B | TX (Transmit) 1550 nm |
| | RX (Receive) 1310 nm |

Note:

ME60A/ME60B products must be installed in pairs. I.e., install an ME60A at one end, and an ME60B at the other end.

ME60A and ME60B can be identified by looking at the labels on the products' side or back panel.

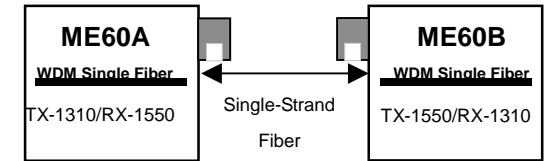
3. Installing MOXA Single-Strand Fiber Converter

Note:

The Single-Strand Fiber Converter Series is hot-swappable.

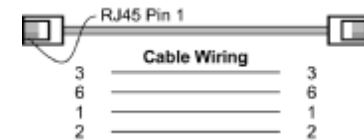
- 1. Wear a grounding device to protect against electrostatic discharge.
- 1. Verify that the AC-DC adapter conforms to your country's AC power requirement and then insert the power plug.
- 1. Install the media cable for network connection.

| | |
|------------|---|
| Fiber Port | Attach the single-strand fiber cable Install ME60A and ME60B models at the ends of the single-strand fiber cable. "100FDX" is only for WDM |
| TP Port | Attach a Cat. 5 UTP cable to the TP port. MPR: (Default): To a switch or hub DTE: To a workstation or NIC Note: The "DTE"/"MPR" slide switch is on the side panel. |



Note for TP port cable connection:

- 1. Use a straight-through cable.
Cable pin-outs for RJ45 jack 1, 2, 3, 6 to 1, 2, 3, 6 are shown below:



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



- 1. MPR (Default): To a switch or hub
- 1. DTE: To a workstation or NIC (Network Interface Card). (DTE pin-outs are set up as crossover on the board)

Copyright © 2003
Moxa Technologies Co., Ltd.
All rights reserved.

Reproduction without permission is prohibited.



Tel: +866-2-8919-1230

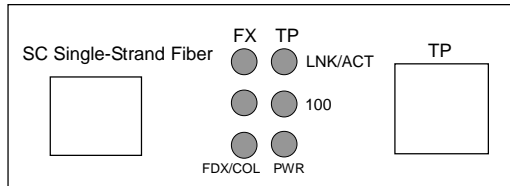
Fax: +886-2-8919-1231

www.moxa.com

support@moxa.com.tw

4. LED Description

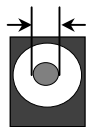
LED location and status are shown below:



| LED | Color | Function |
|------------|-------|--|
| FX LNK/ACT | Green | Lit for fiber port connection Blinks when fiber port is transmitting |
| FX 100 | Green | Lit when fiber port speed is at 100 Mbps |
| FX FDX/COL | Amber | Lit when fiber port is at full-duplex mode Blinks when collisions occur |
| TP LNK/ACT | Green | Lit when TP is connecting Blinks when TP is transmitting |
| TP 100 | Green | Lit when TP speed is 100 Mbps Off when TP speed is 10 Mbps |
| PWR | Green | Lit when +5V power is on |

5. DC Jack and AC-DC Power Adapter

The DC jack's central post is 2.5 mm wide



DC Jack: 2.5mm
DC Input: +5V
(DC current: full load consumption 0.7A)

6. Specifications

Technology

Standards: IEEE802.3u, 10/100BaseT(X), 100BaseFX

Data Transfer Rate: 100 Mbps/148,800 PPS, 10 Mbps/14,880 PPS

Flow Control: IEEE802.3x compliant for full-duplex. Back pressure flow control for half-duplex.

Interface

RJ45 ports: 10/100BaseT(X)

Fiber ports: 100BaseFX (SC connectors available)

LED Indicators: POWER, FX: LNK/ACT, 100, TP: LNK/ACT, FDX/COL

Dip switch: MPR (Default): To a switch or hub
DTE: To a workstation or NIC, Network Interface Card.

Cable limitation

UTP Cable: Cat. 5 cable (up to 100 m)

Single-Strand Fiber Cable: Recommended:

9/125 μ m single-mode, Optional: 8.3/125, 8.7/125 or 10/125 μ m single-mode

Wavelength: ME60A TX: 1310 nm/RX: 1550 nm, ME60B TX: 1550 nm/RX: 1310 nm

Min. TX Output: -10 dBm

Max. TX Output: -7 dBm

Sensitivity: -32 dBm

Power

Input voltage: 5VDC

Input current: 1A

Environment

Operating temperature: 0 to 50°C

Ambient Relative Humidity: 5 to 90%

Mechanical

Dimensions: 26.2(H) × 70.3(W) × 94(D) mm

Regulatory Approvals:

FCC Part 15 Class A and CE Mark

7. Service Information

Customer satisfaction is our number one concern. To ensure that customers receive the full benefit of our products, Moxa Internet Services has been set up to provide technical support, driver updates, product information, and user's manual updates.

E-mail for technical support:

support@moxa.com.tw

World Wide Web sites for product information:

<http://www.moxa.com>

<http://www.moxa.com.tw>

Copyright © 2003

Moxa Technologies Co., Ltd.

All rights reserved.

Reproduction without permission is prohibited.



Tel: +866-2-8919-1230

Fax: +886-2-8919-1231

www.moxa.com

support@moxa.com.tw