

MX 1M Series:

10/100Mbps Multiport Media Converter

Installation and Operation Manual

MX1M-FX-SC (ST)

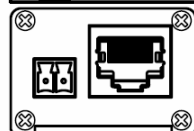
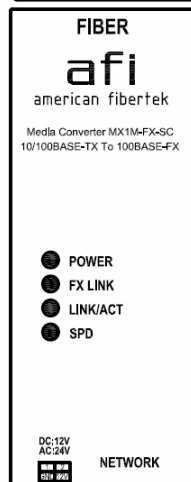
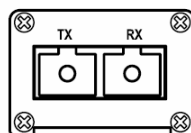
Models:

Standalone (Micro)

Multi Mode

MX1M-FX-SC

Front panel

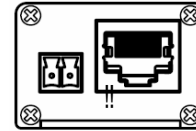
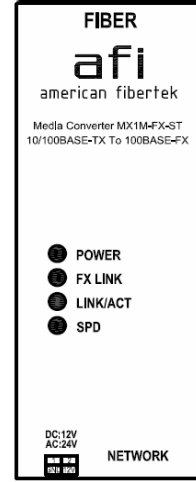
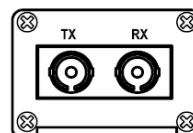


Rear panel

Multi Mode

MX1M-FX-ST

Front panel



Rear panel

Instruction Manual & User Guide

MX1M-FX-SC (ST)Series:

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1) Safety Instructions

Safety precautions applied in using the products:

The product manufactured has employed either the Class ONE Laser or LED for the emission of an invisible light energy for the fibre-optic transmitter. The following rules must be strictly abided to avoid any accidental damage to human eye-sight or whatsoever.

- 1) Always make sure that the Fibre-optic connector is securely connected to the product before and during the product is powered up, and never disconnect the connector at any time in the working condition.
- 2) Never attempt to observe the Fibre-optic output port of the product or have direct eyesight contact with it in any circumstances during the power-up period.
- 3) Do not perform any testing, adjustment or alignment works other than those specified in this manual. Or it may be hazardous to the personnel involved or the product itself.

(2) Product Overview

2.1 Introduction

The MX1M-TX-ST (SC) is the model among the MX1M Multiport Media Converter series products offering for connect 10/100Mbps Fast Ethernet from UTP to fiber optic cabling. Media converter complies with IEEE802.3 standards, it is designed to convert data signal between 10/100 Base-T and 100 Base-FX fast Ethernet. The media converter is connected between Fiber cable and twisted cable segments with network. They are all designed to meet the relevant industrial needs working in both multi-mode (62.5/125u @1310nm) and single-mode (9/125u @1310nm) optical transmission formats with identical technical specifications. The MX1M-FX-SC/ST multi-port media converter respectively. The configurations are elaborated by connection diagrams in Section 4 of this manual.

The products are powered by different types of power supply units due to their different installation requirements. See the details of the mounting chassis and the power supply units in section 3.

2.2 Specifications:

(a) Electrical

Port (MX1M-FX-SC/ST)	1 X RJ45
Standard	IEEE 802.3 IEEE 802.3u
Cabling 10Base-T/ 100Base-TX	Cat 5 or above
Maximum Distance	100M
Switch Mechanize	Store and forward switching mechanism
Ethernet data rate	Full Duplex: 20Mbps or 200Mbps Half Duplex: 10Mbps or 100Mbps
Forward and filter rate	14,881pps (10 Base-T) 148,810pps (100 Base-T)

Optical

Fiber	TWO fiber
Connecter	SC/ST
Maximum Distance (Km)	Mullet-Mode (62.5/125u): 2Km
Wavelength (nm)	1310nm

Power

MX1M-FX-SC(ST)

Voltage	12VDC or 24VAC
Supplies	PA/12V

(b) Physical

Micro

Weight (Kg)	0.12
Dim.(Hawed) mm):	117.1X36.2 X 24.5

(c) Environmental

Operating Temperature (MX1M-FX-SC/ST)	-20°C ~ +55°C
Relative Humidity	0 ~ 95% non-condensing

(d) Mean Time Between Failure (MTBF)

MTBF	>100,000 Hours
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(3) Installation

3.1 General

The MX1M-FX-SC(ST) products are carefully inspected, tested and calibrated before shipment to ensure stable and trouble-free service. Please check the equipment for any visible damage which may have been caused during transit.

3.2 Installation requirements

The MX1M-FX-SC(ST) products are installed in mini cabinets as mentioned in section 2.1 for the ease of mounting. See Fig.3.2 for the mini cabinet.

The equipment is designed to work for individual links and meet the specification within an ambient temperature of -20°C to +70°C contained in any type of chassis or cabinets as mentioned above. Therefore, there is no special provision for cooling purpose. However, extra care should be taken to prevent excessive ambient heat rise when the unit is installed inside a closed and unventilated enclosure.

3.3 Installation

The MX1M-FX-SC(ST) models can be put on with different mountings, such as installed into an enclosure or equipment cabinet; or they can be individually wall-mounted, or mounted on any fixtures, etc. The units work with external power adaptors for standalone purpose deploying in systems from mini to large scales. See Fig. 3.2 for the unit with its mini cabinet.

3.4 Power Supply

The MX1M-FX-SC(ST) models are powered by PA/12V power adaptor to work as a micro(standalone) unit. The 12V DC input voltage by using 2-pins screw terminal at the rear panel of MX1M-FX-SC(ST).



Fig. 3.1 Power Adaptor



Fig. 3.2 MX1M-FX-ST(SC) unit

(4) Cable connections & Set-up procedures

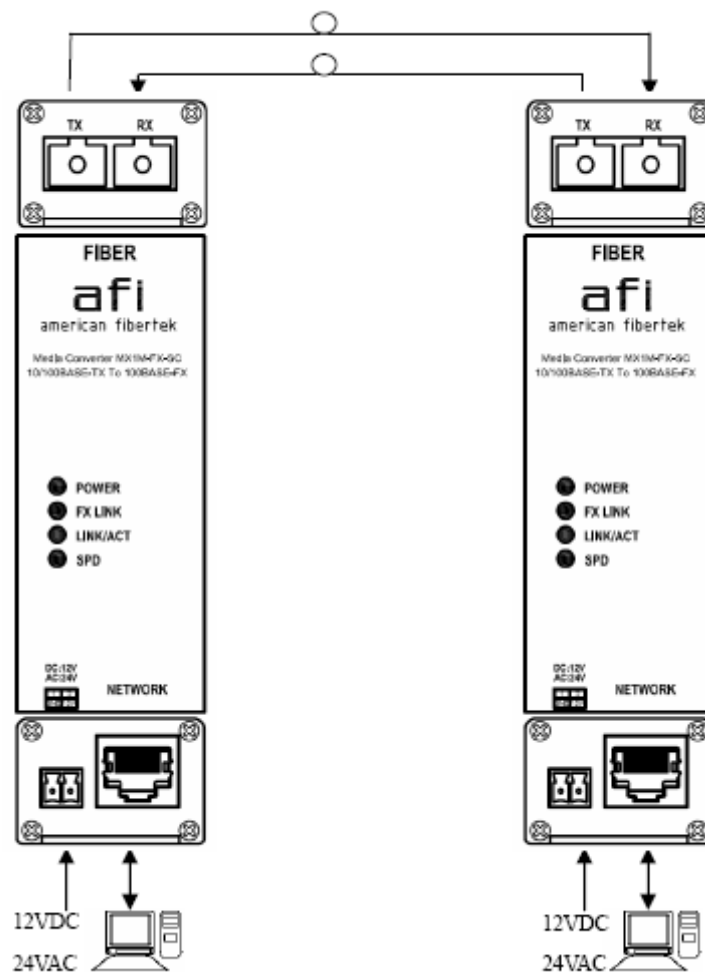
4.1 Cable Connections

With suitable cables for Ethernet and optical signals connected properly, the MX1M-FX-SC(ST) models can be linked up with their own or hybrid with MX1M-FX-SC(ST). It is designed to convert data signal between 10/100 Base-T and 100 Base-FX fast Ethernet. The media converter is connected between Fiber cable and twisted cable segments with network.

Cable types:

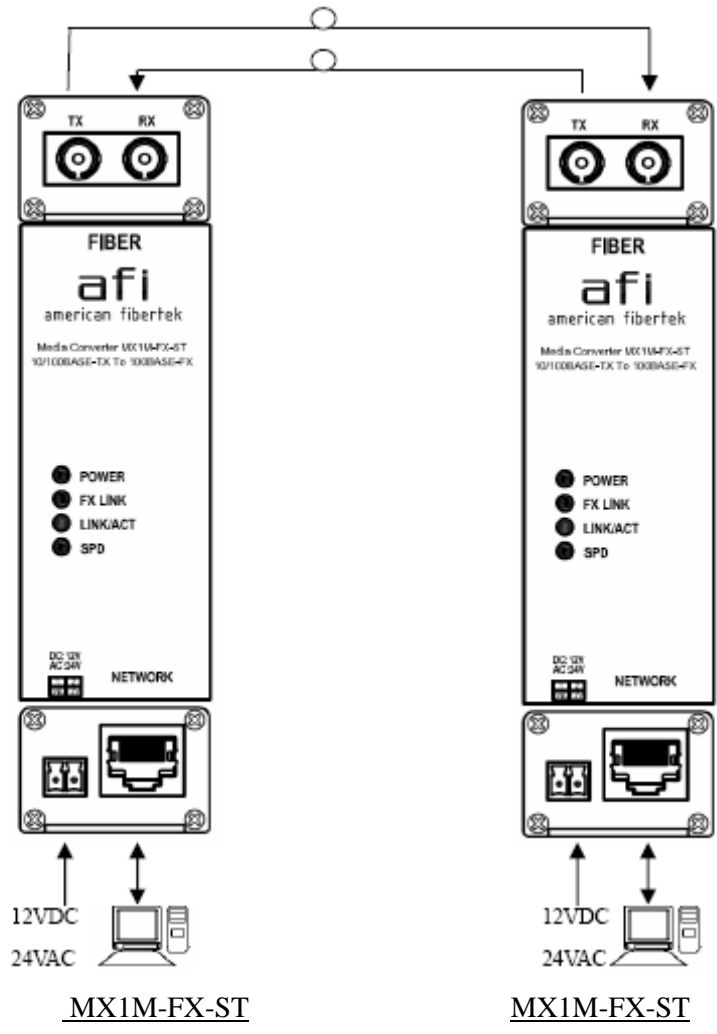
- i) Cat 5 crimped with RJ45 plug for Ethernet communication.
- ii) Optic-Fibre fused with suitable Fibre-optic connectors for optical signals.

Fig. 4.1 Multi-port media converter Transmission with the MX1M-FX-SC(ST) models.



MX1M-FX-SC

MX1M-FX-SC



4.2 setup procedure

There is no special setup procedure for putting the units in operation. Once the units are connected with suitable cables and powered up, they operate properly simultaneously with healthy signals free of any alignments or any control adjustments.

(5) Operational Guides

5.1 Front Panel Indications:

5.1.1 MX1M-FX-SC(ST)

5.1.1.1 LED Indicators:

Indicator	Colour	Description
POWER	Green	Lit when power is applied to MX1M-FX-SC(ST).
FX LINK	Green	Lit when an optical link has been set up between the Transmitter and Receiver.
SPD	No Lit	No Lit when a signal is 10Mbps
	Green	Lit when a signal is 100Mbps
LINK/ACT	Green	Lit when data transmit.

5.1.1.2 Signal Ports:

Fiber	TX/ RX	SC/STOptical Connector for connection of Optic-fibre cable
NETWORK -		RJ45 terminal block for DATA connections

5.2 Front Panel Drawings:

Fig. 5.2.1

MX1M-FX-SC

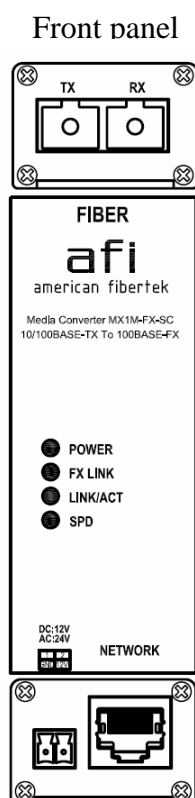


Fig. 5.2.2

MX1M-FX-ST

