Brief introduction

Many thanks for purchasing 10/100M Fast Ethernet Bridging Converter. This product supports two types of media such as 10/100Base-TX to 100Base-FX according to IEEE 802.3(u). This converter is used as standalone device with external power supply.

Purchasing guide for bridging converter

Article-No	Description
MS400210	Fast Ethernet Bridge 10/100Base-TX to 100Base-FX SC, 1310 nm Multimode
MS400212	Fast Ethernet Bridge 10/100Base-TX to 100Base-FX SC, 1310 nm Single Mode

Packing list

Please check the following items in the package before installing the transceiver:

Fast Ethernet Bridging Converter	1pc
AC/DC adapter	1pc
User manual	1copy

Please contact the dealer immediately for any loss or damage to the above items.

Installation

1. Interface

RJ-45 interface:

The transmission media supports CAT5 twisted-pair with typical length of 100 meter. It supports auto-negotiation with automatic detection of the speed (10/100 Mbps) and the duplex mode and auto-crossing (MDI/MDIX).

Fiber interface:

Available as Multimode or Single Mode SC duplex interface (SC simplex on request). The duplex version includes two connectors, labelled TX (transmit) and RX (receive). The connection between two duplex fiber ports has to be crossed, so the connection has to be RX-TX and TX-RX.

2. Connection

The network device (PC, Switch, Access Point) with RJ-45 interface is connected to RJ-45 jack of the Bridging Converter through a twisted-pair cable. The Multi/Single Mode fiber cable is connected to SC fiber interface of the Bridging Converter. After powering on the Bridging Converter, the LEDs should show correct connections. (See the table below for the LED description).
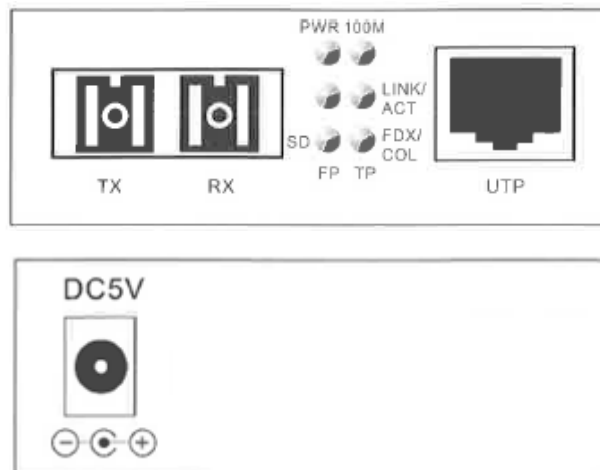

Figure 1: Schematic drawing of connectors and LEDs

Description for LEDs

LED indicator lamps serve as device monitoring and trouble display. The following is the explanation for each LED indicator lamp.

LED	Status	Function
PWR	On	Ready for operation
100M	On	RJ-45 with 100 Mbps
	Off	RJ-45 with 10 Mbps
LINK/ACT (FX)	On	Link at fiber port
	Flashing	Data activity fiber port
	Off	No connection at fiber port
LINK/ACT (TX)	On	Link at RJ-45 port
	Flashing	Data activity RJ-45 port
	Off	No connection at RJ-45 port
SD	On	Fiber signal detected
	Off	No fiber signal detected
FDX/COL (TX)	On	RJ-45 connection full duplex
	Off	RJ-45 connection half duplex

Technical Specifications optical transceiver:

P/N	Optical wavelength (nm)	Optical power (dBm)	Sensitivity (dBm)	Distance (km)
MS400210	1310	-12...-20	<-32	2
MS400212	1310	-3...-15	<-32	20

Main features:

- Compact Fast Ethernet Bridging Converter
- Compliant to IEEE 802.3, 802.3u, and 802.3x Standards
- Automatic configuration via auto-negotiation
- Integrated auto-crossing (MDI/MDIX) on RJ-45 port

Technical Specifications:

Type: Fast Ethernet Bridging Converter for the coupling of twisted-pair (10/100Base-TX) and fiber (100Base-FX) segments

Cable type: Shielded twisted-pair cable, 100 Ohm, min. category 5 for 100Base-TX (cat 3,4,5 for 10Base-T)

Fiber type: Multimode fiber 50 or 62,5/125 µm, Single Mode fiber 9/125 µm, duplex SC-connector (optional SC simplex)

Power supply: 5 V DC / max. 1 A via external power supply (included at delivery)

Power consumption: 2.5W

Operating temperature: 0 °C to 55 °C

Storage temperature: -20 °C to 80 °C

Humidity: 5 % to 90 % non-condensing

Dimensions: 26 x 71 x 94 mm (H x B x T)

CE Mark Warning:

These are Class A products. In a domestic environment these products may cause radio interference in which case the user will need to consider adequate preventative methods.

Cautions:

1. This product is suitable for indoor application.
2. Put on the dust cover of fiber interface when not used.
3. Visible and invisible light emitted from optical components may cause permanent damage to your eyes. Never look straight in the output of fiber optic components.

MICROSENS

Fast Ethernet Bridging Converter

User Manual

(Do not use until you read this manual carefully!)