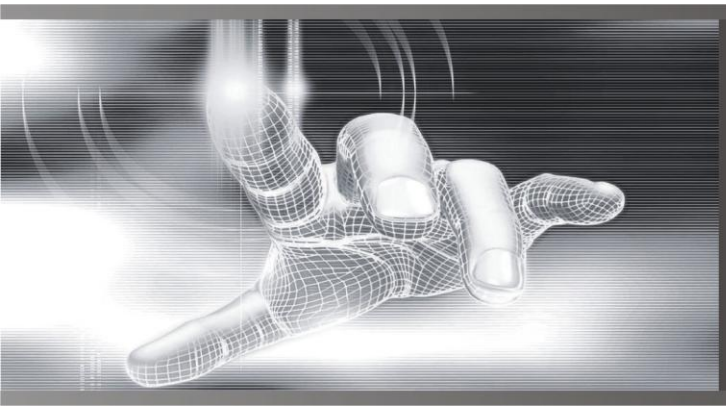
Optowire

10/100/1000M Fiber Optical Media Converter SFP LFP



User's Manual

info@optowire.net

(Do not use until you read this manual carefully)

☞ PRODUCT OVERVIEW

HD 10/100/1000M Ethernet media converter adopts switching technology to fulfill media conversion. It complies with IEEE802.3z and IEEE802.3ab standards, and supports two types of media network connections: 10/100/1000Base-T and 1000Base-SX/LX. It inter-converts electrical signals of 10/100/1000Base-T twisted pairs with optical signals of 1000Base-FX, extending the transmission distance of a network from 100m via copper cables to 550m via multimode fiber optical cable (fiber size: 62.5/125μm or 50/125μm), to 20Km/40Km/60Km/80Km/100Km via single mode fiber cable (fiber size: 9/125μm). It supports transmission in multi-mode dual fiber; single-mode dual fiber, single-mode single fiber.

☞ MAIN FEATURES

- Supporting inter-conversion between 10/100/1000Base-TX and 1000Base-SX
- Supporting full-duplex and half-duplex and its auto-sensed
- Supporting automatic cross connection of twisted pair interfaces, facilitating system commissioning and installation
- Supporting the transmission of extra-long VLAN packets
- Supporting Quality of Service (QoS) and ensuring the transmission of VoIP packets
- Supporting STP to form a redundant network
- Supporting LFP function

☞ TECHNICAL INDEXES

Parameter	Specifications
Access mode	10/100/1000Mbps Gigabit Ethernet
Standard	IEEE802.3ab 1000Base-T , IEEE802.3z 1000Base-SX/LX Gigabit thernet,IEEE802.1qVLAN,IEEE802.1p QoS,IEEE802.1d Spanning Tree
Wavelength	850nm/1310nm/1550nm
Transmission distance	Dual-fiber multi-mode: 220m (62.5/125μm)/550m (50/125μm) Dual-fiber single-mode: 25/40/60/80Km Single-fiber single-mode: 25/40/60Km Category-5 twisted pair: 100m
Port	One RJ45 connector: connected to STP/UTP category-5 twisted pair One fiber port: Multi-mode SC/FC/ST (fiber size: 50,62.5/125μm) Single mode SC/FC/ST (fiber size: 9/125μm)
Conversion means	Media conversion

Delay	<10us
BER	<10-9
MTBF	100,000 hours
LED	PWR (power supply), FX /ACT(optical link action), 1000M (twisted pair link1000M), 100M (twisted pair link 100M), TP/ACT (twisted pair packet forwarding) ,FDX (Full or half duplex status)
Power Supply	AC110-220V to DC5V 1A , 12V1A
Power consumption	5W
Operating temperature	-10~55ºC
Operating humidity	5%~90%
Maintaining temperature	-40~70ºC
Maintaining humidity	5% ~ 90% non-condensing
Dimensions	26mm (H) * 70mm (W) * 94 mm (D) (external power supply)
	30mm (H) * 110mm (W) * 140 mm (D) (internal power supply)

☞ ORDERING INFORMATION

HD-220S-20	Gigabit Ethernet 10/100/1000Mbps Media Converter, SC (Single Mode Dual fiber), LFP and Jumbo frame, XX=(10/20/40/60/80) km
HD-210S-20A/B	Gigabit Ethernet 10/100/1000Mbps Media Converter, SC (Single Mode Single Fiber WDM, Tx = 1310 nm (1490 nm), LFP and Jumbo frame, XX=(10/20/40/60/80) km
HD-210S-20A/B	Gigabit Ethernet 10/100/1000Mbps Media Converter , SC (Single Mode Single Fiber WDM, Tx= 1550 nm), LFP and Jumbo frame, XX=(10/20/40/60/80) km
HD-220M-2	Gigabit Ethernet 10/100/1000Mbps Media Converter 2 Km (1310 nm) SC (Multimode), LFP and Jumbo fram
HD-220M-550	Gigabit Ethernet 10/100/1000Mbps Media Converter 550 m (850 nm) SC (Multimode), LFP and Jumbo frame

☞ PACKING LIST

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

The media converter 1pcs

AC/DC power adapter 1pcs

User's manual 1copy

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

☞EXPLANATION FOR LED INDICATOR LAMP

LED indicator lamp	status	Explanation
PWR	ON	Power is ON.
	OFF	Power is Fail.
FX /ACT	ON	Fiber link is ok.
	Blink	Data is been received or transmitted
	OFF	Fiber link is fail.
TP/ACT	ON	Link is ok.
	Blink	Data is been received or transmitted
	OFF	Link is fail.
FDX	ON	Full duplex
	OFF	Half duplex
100M	ON	Ethernet port 100M speed
1000M	ON	Ethernet port 1000M speed

☞INSTALLATION

1. Interface

RJ-45 interface

The transmission media adopts CAT5 twisted-pair with typical length of 100 meter. It features the function of automatically identifying the through line and cross wire

Fiber interface

SC/ST fiber interface is of duplex mode type, including two interfaces, namely TX and RX. When the two sets of optical transceiver are interfaced or connected to switch with fiber interface, the fiber is in cross connection, namely "TX-RX", "RX-TX" (direct butting for single optical fiber).

2. Connection

The network device (work station, hub or switch) with RJ-45 interface is connected to RJ-45 jack of optical transceiver through twisted-pair. And the multi/single mode fiber is connected to SC/ST fiber interface of the optical transceiver. Then switch on. The corresponding LED is on for correct connection. (See the table below for the LED indicator lamp)

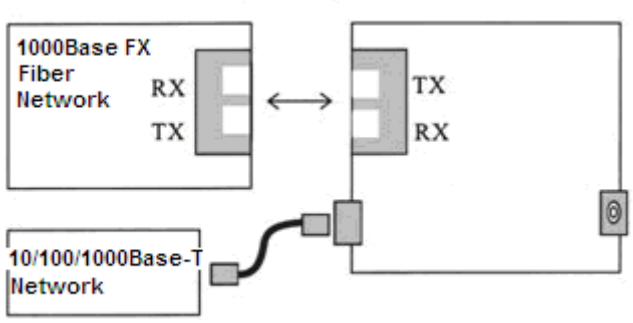


Figure 1： Basic Network Connection

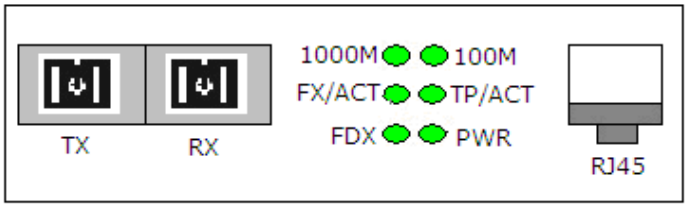


Figure 2： Front panel

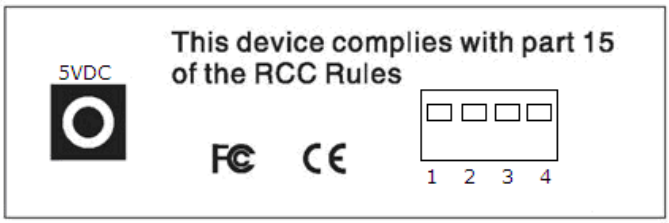


Figure 3：Back panel

3. Select DIP Switch :

SW1	ON	Jumbo
	OFF	No Jumbo
SW2	ON	LFP
	OFF	NO LEP
SW3	ON	FDX
	OFF	NO FDX
SW4	ON	FLOW
	OFF	NO FLOW

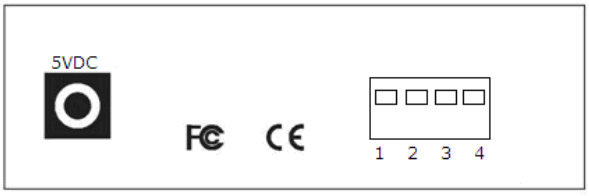


Figure 4：DIP switch for 10/100/1000

Note: Before using LFP function, please pay attention to re-power on the two media converter after connecting all the copper cables and fiber patch-cords.

☞ CAUTIONS:

1. This product is suitable for indoor application.
2. Put on the dust cover of fiber interface when not used.
3. It is forbidden to stare at the TX fiber-transfer end with naked eyes.
4. Single optical fiber transceiver must be used in pair (See the attachment description in delivery).

☞ TROUBLE SHOOTING

1. Device is not matched. Please select the corresponding network device according to the transfer rate of the product (10Mbps or 100Mbps or 1000Mbps) when connected to other network devices (network card, hub, switch).
2. Line loss is excessive during the fiber wiring. Excessive loss in connector plug-in and fiber soldering welding, and excessive intermediate nodes may cause excessive loss rate or abnormal operation.