

## 1. Introduction

10/100/1000M adaptive fast Ethernet optical Media Converter is a new product used for optical transmission via high-speed Ethernet. It is capable of switching between twisted pair and optical and relaying across 10/100 Base-TX/1000 Base-Fx and 1000Base-FX network segments, meeting long-distance, high-speed and high-broadband fast Ethernet



workgroup users' needs, achieving high-speed remote interconnection for up to 100 km's relay-free computer data network. With steady and reliable performance, design in accordance with Ethernet standard and lightning protection, it is particularly applicable to a wide range of fields requiring a variety of broadband data network and high-reliability data transmission or dedicated IP data transfer network, such as telecommunication, cable television, railway, military, finance and securities, customs, civil aviation, shipping, power, water conservancy and oilfield etc, and is an ideal type of facility to build broadband campus network, cable TV and intelligent broadband FTTB/FTTH networks.

## 2. Overview

### 2.1 Features

- In accordance with Ethernet standards IEEE802.3, 10/100Base-TX/1000Base-TX and 1000Base-FX
- Supported Ports: SC for optical fiber; RJ45 for twisted pair
- Auto-adaptation rate and full/half-duplex mode supported at twisted pair port
- Auto MDI/MDIX supported without need of cable selection
- Up to 6 LEDs for status indication of optical power port and UTP port
- External and built-in DC power supplies provided
- Up to 1024 MAC addresses supported
- 512 kb data storage integrated, and 802.1X original MAC address authentication supported
- Conflicting frames detection in half-duplex and flow control in full duplex supported

### 2.2 Technical Parameters

Fiber mode	Connector	Wavelength	Distance	TX power(dbm)	RX power(dhm)
Multi-mode dual fiber	SC	850nm	550m	-17~-12	<<<-20.0
Multi-mode dual fiber	SC	1310nm	2 Km	-17~-12	<<<-20.0
Single-mode dual fiber	SC	1310nm	10 Km	-6~-12	<<<-21.0
Single-mode dual fiber	SC	1310nm	20 Km	-3~-8	<<<-23.0
Single-mode dual fiber	SC	1550nm	40 Km	-3~-0	<<<-25.0
Single-mode dual fiber	SC	1550nm	60 Km		
Single-mode dual fiber	SC	1550nm	80 Km	>>1	<<<-27.0
Single-mode single fiber	SC	A side:Tx1310nm/Rx1550nm B side:Tx1550nm/Rx1310nm	10 Km	-10~-5	<<<-20.0
Single-mode single fiber	SC	A side:Tx1310nm/Rx1550nm B side:Tx1550nm/Rx1310nm	20 Km	-8~-5	<<<-23.0
Single-mode single fiber	SC	A side:Tx1310nm/Rx1550nm B side:Tx1550nm/Rx1310nm	40 Km	-3~0	<<<-23.0
Single-mode single fiber	SC	A side:Tx1310nm/Rx1550nm B side:Tx1550nm/Rx1310nm	60 Km	-3~0	<<<-23.0

### **3. Operating Environment**

#### **3.1 Operating Voltage**

AC 220V/ DC +5V

#### **3.2 Operating Humidity**

Operating Temperature: 0°C to +50°C

Storage Temperature: -20°C to +70°C

Humidity: 5% to 90%

### **4. Quality Assurance**

MTBF > 100,000 hours;

Replacement within one year and non-charge repair within three years guaranteed

### **5. Application Fields**

- For intranet prepared for expansion from 100M to 1000M
- For integrated data network for multimedia such as image, voice and etc.
- For point-to-point computer data transmission
- For computer data transmission network in a wide range of business application
- For broadband campus network, cable TV and intelligent FTTB/FTTH data tape
- In combination with switchboard or other computer network facilitates for: chain-type, star-type and ring-type network and other computer networks

### **6. Remarks and Notes**

#### **6.1 Instructions on Media Converter Panel**

Instructions on Front Panel

Identification for front panel of the media converter is shown below:



a. Identification of Media Converter

TX - transmitting terminal; RX - receiving terminal;

b. PWR

Power Indicator Light ó ðONö means normal operation of DC 5V power supply adaptor.

c. 1000M Indicator Light

ðONö means the rate of the electric port is 1000 Mbps, while ðOFFö means the rate is 100 Mbps.

d. LINK/ACT (FP)

ðONö means connectivity of the optical channel; ðFLASHö means data transfer in the channel; ðOFFö means non-connectivity of the optical channel.

e. LINK/ACT (TP)

ðONö means connectivity of the electric circuit; ðFLASHö means data transfer in the circuit; ðOFFö means non-connectivity of the electric circuit.

f. SD Indicator Light

ðONö means input of optical signal; ðOFFö means non input.

g. FDX/COL:

“ON” means full duplex electric port; “OFF” means half-duplex electric port.

h. UTP

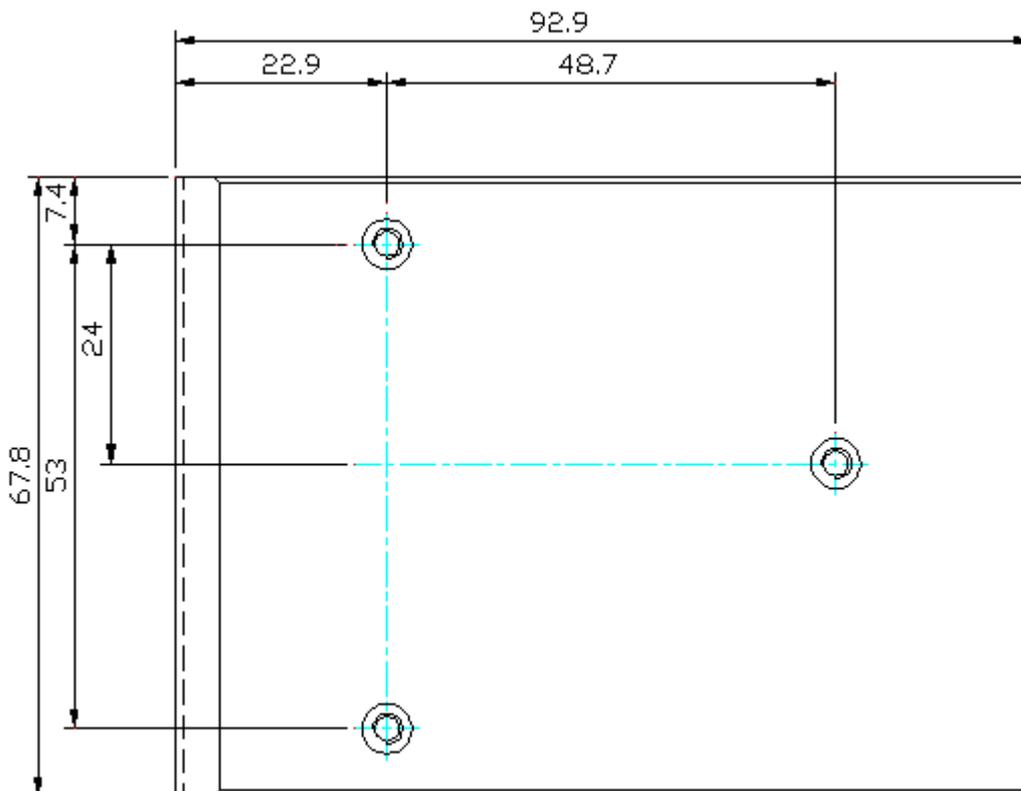
Non-shielded twisted pair port;

Instructions on Rear Panel

There is only a DC 5V external power port on the rear panel:



## 6.2. Mounting Dimensions Sketch



### 6.3. Product Connection Diagram

