#### **10&100M SFP Media Converter - Technical Specification**

#### 1. Introduction

10/100M 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 and 100 Base-Fx network segments, meeting long-distance, high-speed and high-broadband fast Ethernet workgroup users' needs, achieving high-speed remote interconnection for up to 120 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 and 100Base-FX
- Supported Ports: LC 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
- 128 K's data buffer RAM
- Support for low-delay time pure data transmission and full/half-duplex flow

control.

• Built-in watch-dog timer to monitor any error in internal data exchange

#### **2.2 Technical Parameters**

Number of Network Ports1 channelNumber of Optical Ports1 channelNIC Rate10/100 Mbit/sNIC Rate10/100 Mbit/sNIC Transmission Mode10/100M adaptive with support for automatic inversion of MDI/MDIXOptical Transmission RatePort 100Mbit/s	rier III a						
Ports I channel   NIC Transmission   Rate 10/100 Mbit/s   NIC Transmission   NIC Transmission   Mode 10/100M adaptive with support for automatic inversion of MDI/MDIX	reer III O						
Rate 10/100 Mbit/s   NIC Transmission 10/100M adaptive with support for automatic inversion of MDI/MDIX	ther III						
Mode Support for automatic MDI/MDIX	tter 111						
Optical Port 100Mbit/s							
Transmission Rate							
Operating Voltage AC 220V or DC +5V							
Overall Power <1W							
Network Ports RJ45 port							
	8.7/125um, 8/125,10/125um						
Data Channel   IEEE802.3x and collision base backpressure supported     Working Mode:   Full/half duplex supported     Transmission Rate     100Mbit/s     with error rate of zero							
Some Product Modes and port Technical Parameters of Optical Port							
Desk Type Dual-Optical Single-Mode/Multi-Mode Media Converter							
Product ModeWaveleng th (nm)Optical PortElectric PortOptical PowerReceiving Sensitivity (dBm)	Transmissi on Range (km)						
1 850 LC RJ-45 -8~-3 ≤-19	0.55						
2 1,310 LC RJ-45 -20~-15 ≤-34	2						
3 1,550 LC RJ-45 -15~-8 ≤-34	10						
4 1,310 LC RJ-45 $-15 \sim -8 \leq -34$	20						
5 1,310 LC RJ-45 -8~-3 ≤-34	40						
6 1,310 LC RJ-45 -5~0 ≤-34	60						

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7	1,550	LC	RJ-45	-5~0	≤-34	80	
8	1,550	LC	RJ-45	0~5	≤-36	100	
9	1,550	LC	RJ-45	0~5	≤-36	120	
Desk Type Single-Optical Two-Way Media Converter							
Product Mode	Waveleng	Optical	Electric	Optical	Receiving	Transmissi	
	th (nm)	Port	Port	Power	Sensitivity	on Range	
				(dBm)	(dBm)	(km)	
01	1,310	LC	RJ-45	-20~ -15	≤-34	2	
02	1,550	LC	RJ-45	-20~ -15	≤-34	2	
03	1,310	LC	RJ-45	-15~-8	≤-34	10	
04	1,550	LC	RJ-45	-15~ -8	≤-34	10	
05	1,310	LC	RJ-45	-15~ -8	≤-34	20	
06	1,550	LC	RJ-45	-15~ -8	≤-34	20	
07	1,310	LC	RJ-45	-8~ -3	≤-34	40	
08	1,550	LC	RJ-45	-8~ -3	≤-34	40	
09	1,310	LC	RJ-45	-5~0	≤-34	60	
10	1,550	LC	RJ-45	-5~0	≤-34	60	
11	1,550	LC	RJ-45	-5~0	≤-34	80	
12	1,310	LC	RJ-45	0~5	≤-34	80	
13	1,550	LC	RJ-45	0~5	≤-36	100	
14	1,490	LC	RJ-45	0~5	≤-36	100	
15	1,550	LC	RJ-45	0~5	≤-36	120	
16	1,490	LC	RJ-45	0~5	≤-36	120	

# 3. Operating Environment

## **3.1 Operating Voltage**

AC 220V/ DC +5V

## **3.2 Operating Humidity**

Operating Temperature:  $0^{\circ}$ C to  $+50^{\circ}$ C

Storage Temperature:  $-20^{\circ}$ C to  $+70^{\circ}$ 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

#### **5.1 Application Fields**

- For intranet prepared for expansion from 10M to 100M
- 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

#### **5.2 Application Industries**

Intelligent transport monitoring system, safety and security monitoring system, campus network, industrial monitoring (electric power, chemical industry, steel, oil, railway and water conservancy etc.); military monitoring (warehouse, guard and confidentiality etc.) TV program transfer system;

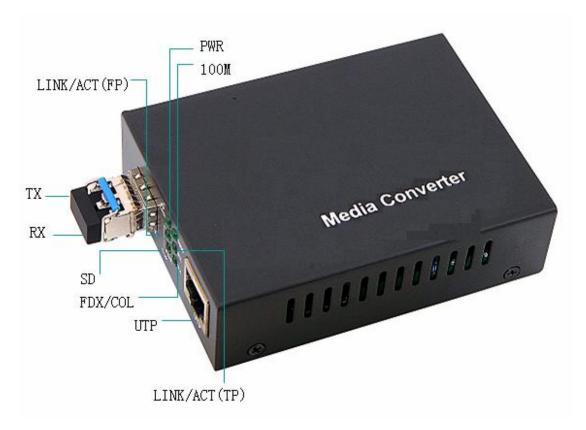
#### 6. Remarks and Notes

#### 6.1 Instructions on Media Converter Panel

Instructions on Front Panel Identification for front panel of the transceiver is shown below:

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a. Identification of Media Converter

TX - transmitting terminal; RX - receiving terminal;

b. PWR

Power Indicator Light – "ON" means normal operation of DC 5V power supply adaptor.

c. 100M Indicator Light

"ON" means the rate of the electric port is 100 Mbps, while "OFF" means the rate is 10 Mbps.

d. LINK/ACT (FP)

"ON" means connectivity of the optical channel; "FLASH" means data transfer in the channel; "OFF" means non-connectivity of the optical channel.

e. LINK/ACT (TP)

"ON" means connectivity of the electric circuit; "FLASH" means data transfer in the circuit; "OFF" means non-connectivity of the electric circuit.

f. SD Indicator Light

"ON" means input of optical signal; "OFF" means non input.

g. FDX/COL:

"ON" means full duplex electric port; "OFF" means half-duplex electric port.

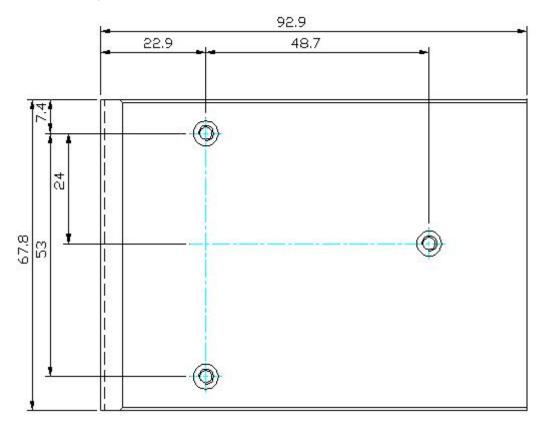
h. UTP

Non-shielded twisted pair port;

#### Instructions on Rear Panel



#### **6.2. Mounting Dimensions Sketch**



### 6.3. Connection Sketch

