

## ☞ Brief introduction

Many thanks for purchasing LevelOne Fast Ethernet optical converter! This product supports IEEE802.3U 100Base-Tx/Fx protocol, as well as full duplex and half duplex mode. This manual is for adaptive 10M/100M converters. Comply with IEEE 802.3af, its advanced auto-sensing algorithm enables taking power from IEEE 802.3af, Power Source Equipment(PSE) or Power over Ethernet (PoE) injector. It also supports high safety with short circuit protection and power-in auto-detection (power from AC/DC power adapter or PSE device).

## Purchasing guide for LevelOne optical converters

Model	Specifications
FVT-0103TXFC	10/100M adaptive, multi-mode 2km, SC
FVT-0104TXFC	10/100M adaptive, single mode 20~100km, SC

## ☞ Packing list

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

The PoE PD FE Media Converter            1set  
 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 adopts CAT5 twisted-pair with typical length of 100 meter. It features the function of automatically identifying the through line and cross wire (10/100M).

## Fiber interface

SC/ST fiber interface is of full duplex mode or half type, including two interfaces, namely TX and RX. When the two sets of optical converter 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 power sourcing equipment (PSE) with RJ-45 interface is connected to RJ-45 jack of media converter through twisted-pair. And the multi/single mode fiber is connected to SC/ST fiber interface of the optical converter. Then switch on. The corresponding LED is on for correct connection. (See the table below for the LED indicator lamp)

- Please make sure that the power of PSE device is turned on, or else the converter will not work.
- In case that no 802.3af PSE is available or PSE with PoE power fails, you may install an AC-DC adapter for a backup solution. Do not connect PSE TP port and AC-DC adapter at a time.

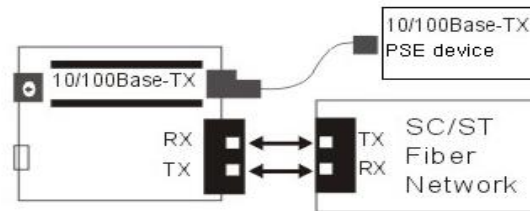


Figure 1 Schematic drawing of connection

## ☞ Explanation for LED indicator lamp

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

LED	Status	Explanation
FX Link/Act	On	Connection status display for fiber link. "ON" indicates that Fiber link is in correct connection.
	Blink	Active status display of fiber link. "Blink" when fiber data is present.
TX Link/Act	On	Connection status display for electric link. "ON" indicates that electric link is in correct connection.
	Blink	Active status display of fiber link. "Blink" when TP data is receiving.
FX-FDX	On	Transceiver works in the full duplex mode.
	Off	Transceiver works in the half duplex mode.
PWR	On	Power is on and normal (DC +5V).
PoE	On	PoE power is on and normal
TP 100	On	Transfer rate of electric interface is 100Mbps.
	Off	Rate of electric interface is 10Mbps.

## ☞ Fiber transmission features:

Product model	Optical wavelength (nm)	Optical power (dbm)	Sensibility (dbm)	Distance
FVT-0103TXFC	1310	>-21dBm	>-31dBm	2km
FVT-0104TXFC	1310	>-15dBm	>-34dBm	20KM

☞ Technical parameters:

1. Standard Protocol: IEEE802.3 10 Base-T standard  
IEEE 802.3u 100Base-TX/FX standard  
IEEE802.3x full-duplex flow control  
IEEE 802.3af PoE PD standard
2. Connector: one UTP RJ-45 connector, one SC/ST connector
3. Operation mode: full duplex mode or half duplex mode
4. Automatic identification of MDI/MDI-X line.
5. Power supply parameter:  
--1A@5V DC from AC/DC adaptor  
--60mA@48V DC from IEEE802.3af PSE or PoE injector
6. Environmental temperature: -20°C-70 °C
7. Relative humidity: 5%-90%
8. TP cable: Cat5 UTP cable
9. Transfer fiber:  
multi-mode: 50/125, 62.5/125 or 100/140 μm  
single mode: 8.3/125, 8.7/125, 9/125 or 10/125 μm
10. Dimensions: 26(H) × 71(W) × 94(D) mm

☞ DIP Switch Function (Optional):

- Toggle ON pin 1 to LFP is enabled; OFF is disabled (default).
- Toggle ON pin 2 to enable the cut-through mode of packets forward;  
OFF is store and forward mode (default).
- Toggle OFF pin 3 to auto-negotiation mode is enabled (default);  
ON pin 3 to force the TP port work 10/100Mbps, full/ half duplex.
- Toggle OFF pin 4 to TP is 100Mbps when TP at force (default);  
ON is 10Mbps when TP at force.
- Toggle OFF pin 5 to TP is full duplex when TP at force (default);  
ON is half duplex when TP at force.
- Toggle OFF pin 6 to FX is full duplex (default); ON is

work half duplex.

· Please turn on the PIN 3 when set PIN 4 and PIN5;

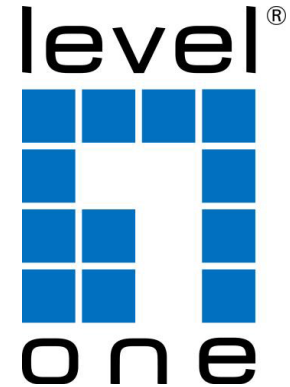
· Once S1-1,S1-2,S1-3,S1-4 or S1-5 is changed, please restart the Media Converter

☞ 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) when connected to PD.
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.



**FVT-0103TXFC / FVT-0104TXFC**

10/100BASE-TX to 100BASE-FX SC PoE PD Converter

**User manual / QIG**

(Please read this manual carefully before use it )

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