☞Brief introduction

Many thanks for purchasing Gigabit Ethernet optical Media Converter! This product supports IEEE802.3 10/100/1000Base-Tx and 1000Base-X protocol, as well as full duplex and half duplex mode. This manual is for adaptive 10M/100M/1000M Media Converter. The following guide is for customer's reference. Comply with IEEE 802.3af/at, its advanced auto-sensing algorithm enables taking power from IEEE 802.3af/at 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 transceivers

Model	Specifications
GVT-2010	10/100/1000M adaptive with SFP slot

☞Packing list

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

The PoE PD GE Media Converter 1set
AC/DC adaptor (optional) 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 adopts CAT5e 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
LC/SC 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 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 LC/SC fiber interface of the SFP module. 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/at 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.
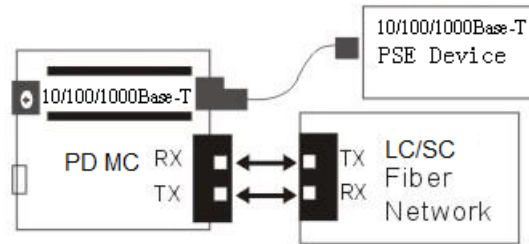

Figure 1 Schematic drawing of connection

☞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.
TP 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.
FDX	On	The connected device of media converter is working at full duplex mode.
	Off	The connected device of media converter is working at half duplex mode.
PWR	On	Power is on and normal or taking power from PSE device normal.
	Off	Power is abnormal or taking power from PSE device abnormal.
TP 100	On	Transfer rate of electric interface is 100Mbps.
TP 1000	On	Transfer rate of electric interface is 1000Mbps.

Note: when both TP 100 and TP 1000 LED indicator is OFF, the transfer rate of TP port is 10Mbps.

☞Main features

1. In conformity to IEEE 802.3 10 Base-T standard.
   In conformity to IEEE 802.3u 100 Base-TX standard
   In conformity to IEEE 802.3ab 1000 Base-T standard
   In conformity to IEEE 802.3z 1000 Base-X standard
   In conformity to IEEE 802.3x flow control standard
   In conformity to IEEE 802.3af/at PoE PD standard
2. IEEE802.3x full-duplex flow control and half-duplex back pressure.
3. Automatic identification of MDI/MDI-X line.
4. High-performance with store and forward mechanism.
5. SFP Hop-Swap slot.

☞Technical parameters:

Standard	IEEE802.3 10Base-T Ethernet, IEEE802.3u 100Base-TX Fast Ethernet, IEEE802.3ab 1000Base-T , IEEE802.3z 1000Base-SX/LX Gigabit Ethernet, IEEE 802.3x flow control, IEEE 802.3at POE+, IEEE 802.3af POE
Connector	Fiber: SC / SFP RJ-45 Socket: CAT-5 (10/100/1000Mbps or pure 1000Mbps) Twisted Pair cable, Auto MDI/MDI-X, Auto-Negotiation
Switch architecture	Store and Forward
Fiber parameters	Fiber Core: Multi-Mode (62.5/125um, 50/125um) 　　　　　　Single-Mode(9/125um) Wavelength: 850nm(Multi-mode) 　　　　　　1310nm(Single-Mode) Fiber Distance: 550M (Multi-Mode Fiber) 　　　　　　20km(Single-Mode)
Transparent packet	64 to 9000 Bytes for Ethernet packet
Link Lost Forward	UTP➔Fiber: If UTP port link down, then converter will forced fiber to link down. Fiber ➔ UTP: If Fiber port link down, the media converter will force UTP port to link down.
LED	PWR (power supply), FX LINK (optical link action) TP 1000 (TP cable rate1000M), TP 100 (TP cable rate 100M) TP LINK/ACT (TP cable packet forwarding action), FDX (TP full duplex operation)
Power	External: AC90~264V/DC100~380V input, 5V/2A output, Power over Ethernet (IEEE802.3af) 48 VDC
Dimension	71mm x 94mm x 26mm
EMI & safety	CE, FCC Class A

☞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 (1000base-X) when connected to other fiber device.
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.

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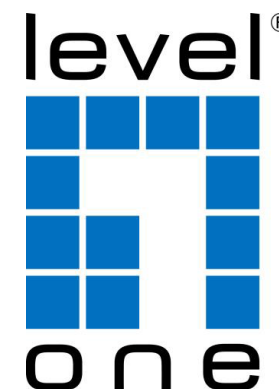
RJ-45 to SFP Gigabit Ethernet PoE PD

Media Converter, PoE Powered Device

(PD)

User manual / QIG

(Please read this manual carefully before used)

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