# 10/100/1000Base-Tx to 1000Base-Fx Media Converter

## Overview

This product supports IEEE802.3 10 Base-T standard/IEEE 802.3u 100Base-TX/FX standard IEEE 802.3z 1000Base-TX/FX standard, IEEE 802.3x Flow control standard as well as full duplex and half duplex mode.


The media converter transforms the transmission media of Ethernet signal from CAT5 100m to optical fiber 850/1310/1550nm. It can extend the transmission distance to several kilometers or hundred kilometers.

All Wintop Media converters apply the new 0.25μm technology to improve the performance and to avoid the packet lost with long the transmission. It also reduce the delay time to less than 9.6 μs

Using media converter is an economical solution to achieve long distance transmission base on current status.

1. Interface

**RJ-45 interface:** One port 10/100/1000Base-Tx, 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**: One port 1000Base-Fx, SC/UPC 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/UPC fiber interface of the optical transceiver single and dual fiber. Then switch on. The corresponding LED is on for correct connection. (See the table below for the LED indicator lamp)

Table 1 : Front panel for single fiber media converter

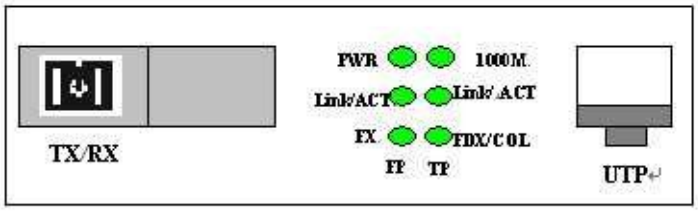
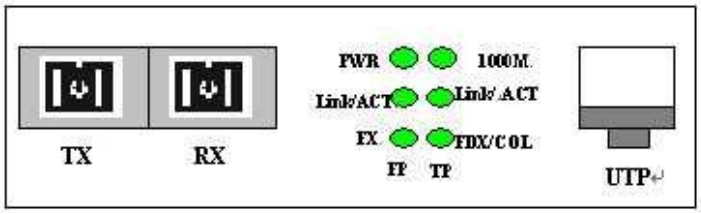



Table 2 : Front panel for dual fiber media converter




3. 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 | Function | Status | Description |
|---|---|---|---|
| PWR | Power LED | ON | Power is ON |
| | | OFF | Power is Fail |
| FX | Fiber port signal detect LED | ON | Laser is receiving |
| | | OFF | No laser input |
| FX-LINK/ACT | Fiber port link/action status LED | ON | Fiber link is OK |
| | | Blink | Data is been received or transmitted |
| | | OFF | Fiber link is fail |
| 1000M | UTP port speed LED | ON | 1000Mbps speed |
| | | OFF | 100Mbps speed |
| TX-LINK/ACT | UTP port link/action status LED | ON | UTP link is OK |
| | | Blink | Data is been received or transmitted |
| | | OFF | UTP link is fail |
| FDX/COL | UTP port duplex LED | ON | Full duplex |
| | | OFF | Half duplex |

## Main features

1. In conformity to IEEE 802.3 10 Base-T standard.
   In conformity to IEEE 802.3u 100 Base-TX/FX standard.
   In conformity to IEEE 802.3z 1000 Base-TX/FX standard.
   In conformity to IEEE 802.3x Flow control standard.
2. Max. 2M buffer memory built in chip.
   Auto negotiation back pressure flow control for full duplex IEEE802.3 X and half duplex.
3. Automatic identification of MDI/MDI-X cross line.
4. High-performance1.4Gbps memory bandwidth.
5. In conformity to safety code of FCC and 15 CLASS B and CE MARK.

## Technical parameters

1. Standard Protocol: IEEE802.3 10 Base-T standard
   IEEE 802.3u 100Base-TX/FX standard
   IEEE 802.3z 1000Base-TX/FX standard
   IEEE 802.3x Flow control standard
2. Connector: 1 UTP RJ-45 connector, 1 SC/ST connector
3. Operation mode: full duplex mode or half duplex mode
4. Power supply parameter: 90-240Vac, 50/60Hz with outside switching adaptor: 5V DC
   built-in: 110-265VAC or 48VDC
   power consumption: 4W
5. Environmental temperature: 0°C - 60 °C
6. Relative humidity: 5%-90% none-condensing
7. BER < 1E-9
8. TP cable: Cat5 UTP cable 100m
9. Transfer fiber: multi-mode: 50/125, 62.5/125 or 100/140μm
   single mode: 8.3/125, 8.7/125, 9/125 or 10/125μm
10. Dimensions:
    External power supply: 26mmx 70mm x 95mm
    Internal power supply: 30mm x 110mm x 140mm

## 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 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

## Ordering information

| PN | λ TX nm | λ RX nm | PTX dBm | SEN dBm | Overload dBm | Distance Km | Loss dB/km | Connector |
|---|---|---|---|---|---|---|---|---|
| WT-8110GMA-11-05AS | 850 | 850 | -8~-3 | ≤-19 | ≥-3 | 0.55 | 2.5 | MM Dual SC |
| WT-8110GMA-11-2AS | 1310 | 1310 | -8~-3 | ≤-20 | ≥-3 | 0.55 | 0.4 | MM Dual SC |
| WT-8110GSA-11-10AS | 1310 | 1310 | -8~-3 | ≤-24 | ≥-3 | 10 | 0.4 | SM Dual SC |
| WT-8110GSA-11-20AS | 1310 | 1310 | -8~-3 | ≤-24 | ≥-3 | 20 | 0.4 | SM Dual SC |
| WT-8110GSA-11-40AS | 1550 | 1550 | -5~0 | ≤-24 | ≥-3 | 40 | 0.25 | SM Dual SC |
| WT-8110GSA-11-60AS | 1550 | 1550 | -5~0 | ≤-24 | ≥-3 | 60 | 0.25 | SM Dual SC |
| WT-8110GSB-11-10A-AS | 1310 | 1550 | -8~-3 | ≤-24 | ≥-3 | 10 | 0.4 | SM BIDI SC |
| WT-8110GSB-11-10B-AS | 1550 | 1310 | -8~-3 | ≤-24 | ≥-3 | 10 | 0.25 | SM BIDI SC |
| WT-8110GSB-11-20A-AS | 1310 | 1550 | -8~-3 | ≤-24 | ≥-3 | 20 | 0.4 | SM BIDI SC |
| WT-8110GSB-11-20B-AS | 1550 | 1310 | -8~-3 | ≤-24 | ≥-3 | 20 | 0.25 | SM BIDI SC |
| WT-8110GSB-11-40A-AS | 1310 | 1550 | -5~0 | ≤-24 | ≥-3 | 40 | 0.4 | SM BIDI SC |
| WT-8110GSB-11-40B-AS | 1550 | 1310 | -5~0 | ≤-24 | ≥-3 | 40 | 0.25 | SM BIDI SC |
| WT-8110GSB-11-60A-AS | 1310 | 1550 | -2~+3 | ≤-24 | ≥-3 | 60 | 0.4 | SM BIDI SC |
| WT-8110GSB-11-60B-AS | 1550 | 1310 | -5~0 | ≤-24 | ≥-3 | 60 | 0.25 | SM BIDI SC |