

## 10/100/1000BASE-T to 1000BASE-SX/LX Gigabit Media Converter



Providing the flexibility of 10/100/1000Mbps Ethernet Media via RJ45 port and highly stable Gigabit fiber performance, PLANET **GT-802**, **GT-802S**, **GT-802S40**, **GT-806S60**, **GT-805A** and **GT-806A/B** media converters support conversion between **10/100/1000BASE-T** and **1000BASE-SX/LX** networks. There are SC/SFP/WDM connectors with single-mode or multi-mode media as required. The Ethernet signal allows three types of segments to connect easily, efficiently and inexpensively.

### Distance Extension with High Performance and Steady Network Communications

PLANET GT-80x gigabit media converter series extends communication distance with highly Gigabit performance via fiber optic cable. The GT-80x series provides media conversion between 10/100/1000BASE-T and 1000BASE-SX/LX interfaces for various fiber optic applications. The available fiber interfaces are shown below:

Optic Mode	Connector Type	Distance
Multi-mode	Duplex LC/SC	220m/550m/2km
Single mode	Duplex LC/SC	10/20/40/60/80/120km
Single mode WDM	Simplex LC/SC	10/15/20/40/60/80km

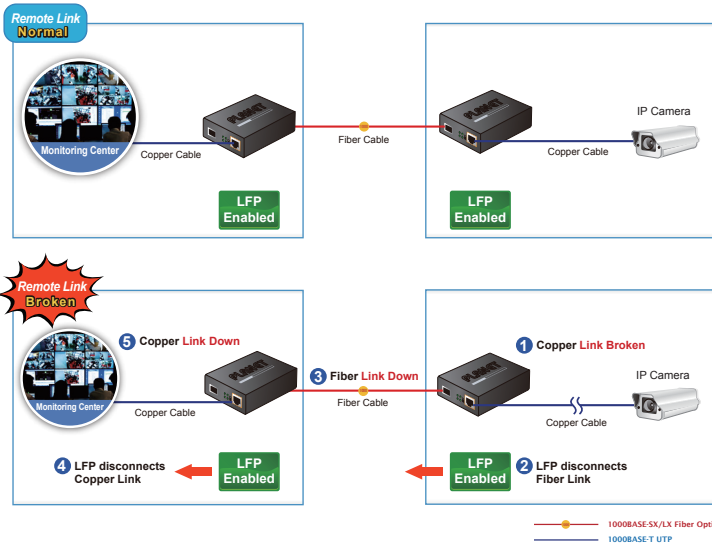
### Enhanced Smart Management Features

The GT-80x series provides auto MDI/MDI-X on its TP port and the DIP switch to configure the **Link Fault Passthrough** function (**LFP**). The LFP function includes the Link **Loss Carry Forward (LLCF)**/Link **Loss Return (LLR)**. LLCF/LLR can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the network. The DIP switch can disable or enable the LFP function.

- LLCF means when a device connected to the converter and the TP line loses the link, the converter's fiber will disconnect the link of transmission.
- LLR (Link Loss Return) means when a device connected to the converter and the fiber line loses the link, the converter's fiber will disconnect the link of transmission.

Both can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the network.

- Complies with IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3ab 1000BASE-T, IEEE 802.3z 1000BASE-SX/LX
- TP port supports 10/100/1000BASE-T auto-negotiation and auto-MDI/MDI-X
- 1000BASE-SX: 50/125µm or 62.5/125µm multi-mode fiber cable, up to 220/550m (GT-802)
- 1000BASE-LX: 9/125µm single-mode cable provides a distance of 10km (GT-802S)
- 1000BASE-LX: 9/125µm single-mode cable provides a distance of 40km (GT-802S40)
- 1000BASE-LX: 9/125µm single-mode cable provides a distance of 60km (GT-802S60)
- 1000BASE-SX/LX: 50/125µm/62.5/125µm multi-mode fiber cable or 9/125µm single-mode cable provides a distance depending on SFP module (GT-805A)
- 1000BASE-LX WDM interface is for up to 15km (single-mode fiber 9µm/125µm) on GT-806A15/GT-806B15
- 1000BASE-LX WDM interface is for up to 40km (single-mode fiber 9µm/125µm) on GT-806A40/GT-806B40
- 1000BASE-LX WDM interface is for up to 60km (single-mode fiber 9µm/125µm) on GT-806A60/GT-806B60
- 1000BASE-T: 2-pair Cat. 5/5e/6 UTP cable, up to 100 meters
- Layer 2 key features
  - IEEE 802.3x flow control for full duplex and back pressure for half duplex eliminate the loss of packets
  - Supports auto MDI/MDI-X function
  - Store-and-Forward mechanism
  - Non-blocking full wire-speed forwarding rate
- Media conversion between 10/100/1000BASE-T and 1000BASE-SX/LX.
- Fiber media allows
  - Multi-mode fiber using SC/LC/WDM connector
  - Single-mode fiber using SC/LC/WDM connector
- Compact size for working with PLANET MC family media



chassis (MC-700/MC-1500/MC-1500R/MC-1500R48)

- Wall-mountable design
- LED indicators for easy network diagnostics
- Provides DIP switch for LFP function (Disable/Enable) setting
- 9K jumbo frame supported
- Choice of fiber connectors from SC, LC and WDM; multi-mode/single-mode fiber for 1000BASE SFP interface
- Compact in size, easy installation

### Easy Installation

The GT-80x series allows two types of the segment to connect easily. The GT-80x series can be used as a standalone unit when powered by its DC adapter or used as a slide-in module to PLANET 19-inch 7-/15-slot media converter chassis (MC-700/MC-1500/ MC-1500R/MC-1500R48). These media chassis can assist in producing the power for the GT-80x to maintain the fiber-optic network at one location. As the Gigabit Media Converter fully complies with IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3ab 1000BASE-T and IEEE 802.3z 1000BASE-LX/SX, the Gigabit media conversion installation is quite quick and easy with its Plug and Play feature. The GT-80x also supports flow control and back pressure in half-duplex mode to eliminate packet loss.

## Optional installation method



Media Chassis Installation



DIN-rail Installation

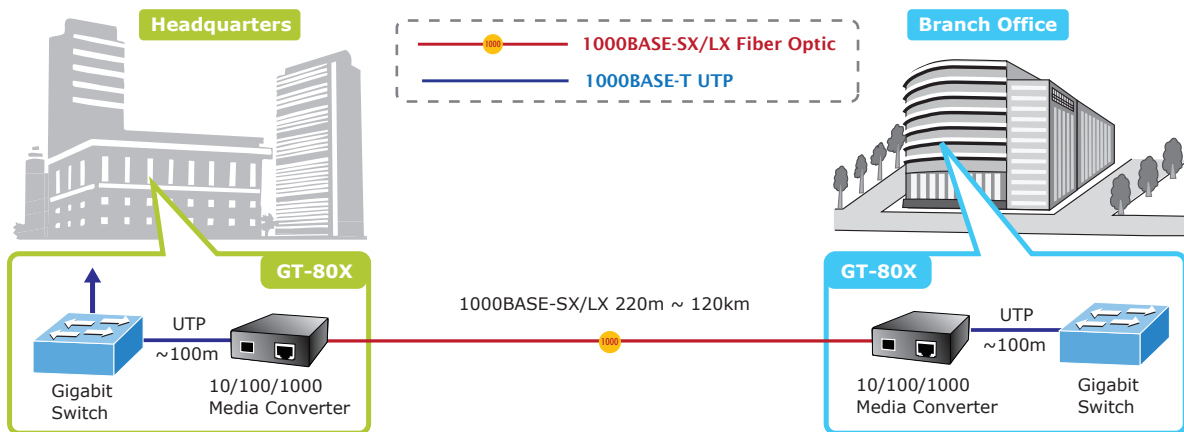
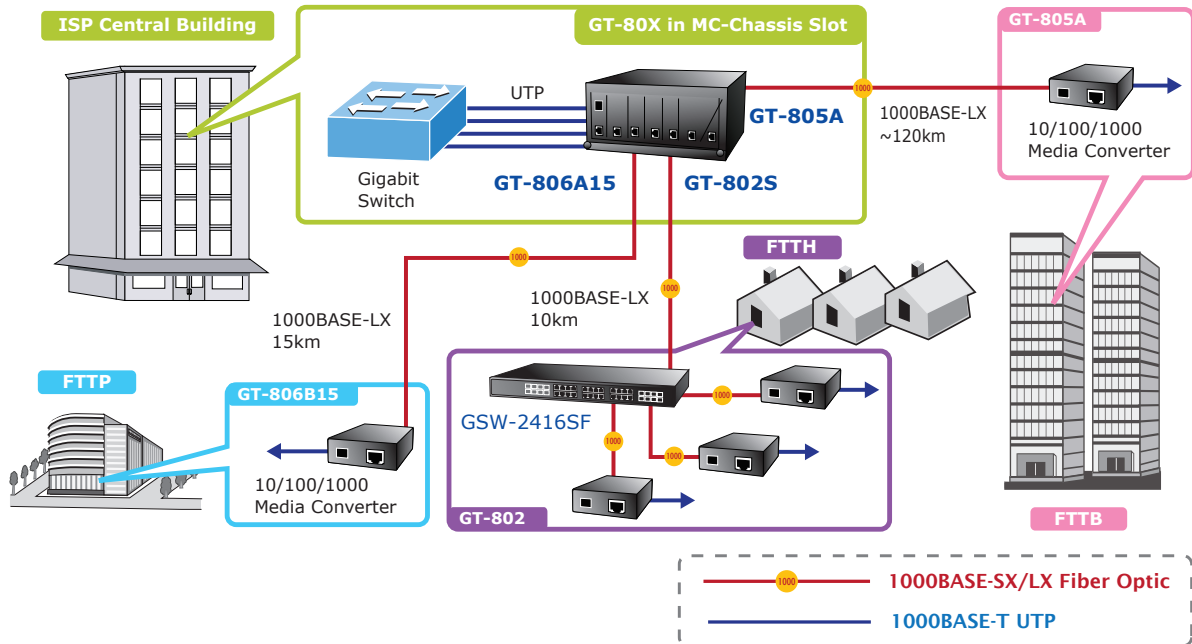


Wall-mount Installation

## Applications

Fiber-optic Networking for ISPs, Enterprises, and homes

With high performance of data transmission and easy installation, the GT-80x can build the ISP network solution of FTTH (Fiber to the Home) or FTTC (Fiber to the Curb) for ISPs and FTTBs (Fiber to the Building) for small enterprise network environment.



## Specifications

Product	GT-802	GT-802S GT-802S40 GT-802S60	GT-805A	GT-806A15 GT-806B15	GT-806A40 GT-806B40	GT-806A60 GT-806B60
<b>Hardware Specifications</b>						
Hardware Version	6					
Copper Port	10/100/1000BASE-T Ethernet TP RJ45 port (auto-MDI/MDI-X) twisted pair					
Fiber Port	1000BASE-X		100/1000BASE-X	1000BASE-BX		
Fiber Port Type (connector)	SC		SFP	WDM		
Copper Maximum Distance	100m					
Fiber Maximum Distance	220m&550m	GT-802S: 10km GT-802S40:40km GT-802S60:60km	N/A	15km	40km	60km
Optic Wavelength	850nm	1310nm	N/A	<b>GT-806A15:</b> TX:1310nm RX:1550nm <b>GT-806B15:</b> TX:1550nm RX:1310nm	<b>GT-806A40:</b> TX:1310nm RX:1550nm <b>GT-806B40:</b> TX:1550nm RX:1310nm	<b>GT-806A60:</b> TX:1310nm RX:1550nm <b>GT-806B60:</b> TX:1550nm RX:1310nm
Max. Optical Launch Power	-4dBm	-3dBm	N/A	-3dBm	<b>GT-806A40:</b> +5dBm <b>GT-806B40:</b> +4dBm	<b>GT-806A60:</b> +5dBm <b>GT-806B60:</b> +4dBm
Min. Optical Launch Power	-9.5dBm	-9.5dBm	N/A	-9dBm	<b>GT-806A40:</b> 0dBm <b>GT-806B40:</b> -1dBm	<b>GT-806A60:</b> 0dBm <b>GT-806B60:</b> -1dBm
Max. Input Power	N/A	-3	N/A	-3	-2	-2
Min. Input Power	-18	-20	N/A	-21	-25	-25
Optical Link Budget	3dB(62.5/125µm) 4dB(50/125µm)	4.9dB	N/A	12dB	<b>GT-806A40:</b> 25dB <b>GT-806B40:</b> 24dB	<b>GT-806A60:</b> 25dB <b>GT-806B60:</b> 24dB
LED Indicator	<ul style="list-style-type: none"> <li>• PWR</li> <li>• TP LINK/ACT, 1000 LINK/ACT</li> <li>• Fiber LINK/ACT</li> </ul>					
DIP Switch	LFP function (Disable / Enable) setting					
Power Consumption	4.6 watts/15 BTU (maximum)					
Power Input	DC 5V/2A					
Dimensions (W x D x H)	94 x 70 x 26 mm					
Weight	0.2kg					
<b>Converter Specifications</b>						
Speed	Twisted-pair: 10/20Mbps for half/full duplex 100/200Mbps for half/full duplex 2000Mbps for full duplex Fiber-optic: 2000Mbps for full duplex 200Mbps for full duplex (GT-805A only)					
Network Cables	Twisted-pair 10BASE-T: 2-pair UTP Cat. 3,4,5, up to 100m 100BASE-TX: 2-pair UTP Cat. 5, up to 100m 1000BASE-T: 4-pair STP Cat 5 up to 100m Fiber-optic Cable 1000BASE-SX: 50/125µm or 62.5/125µm multi-mode fiber cable, up to 220/550m/2km. 1000BASE-LX: 9/125µm single-mode cable, providing long distance for 10/20/40/80/120km (vary on SFP module) 100BASE-FX: 50/125µm or 62.5/125µm multi-mode fiber cable for up to 2km (vary on SFP module) 9/125µm single-mode cable for 20/40/60/120km (vary on SFP module)					
Jumbo Packet Size	9K					

Standard Conformance	
Standards Compliance	IEEE 802.3, 10BASE-T IEEE 802.3u, 100BASE-TX/100BASE-FX IEEE 802.3ab, 1000BASE-T IEEE 802.3z, 1000BASE-SX/LX IEEE 802.3x Full-duplex flow control
Environment	
Operating Environment	Operating temperature: 0 to 50 degrees C Humidity: 5~95% non-condensing
Storage Environment	Storage temperature: -10 to 70 degrees C Humidity: 5~95% non-condensing
Emissions	FCC Class A, CE Class A

## Ordering Information

GT-802	10/100/1000BASE-T to 1000BASE-SX Media Converter (SC, MM) -220/550m
GT-802S	10/100/1000BASE-T to 1000BASE-LX Media Converter (SC, SM) -10km
GT-802S40	10/100/1000BASE-T to 1000BASE-LX Media Converter (SC, SM) -40km
GT-802S60	10/100/1000BASE-T to 1000BASE-LX Media Converter (SC, SM) -60km
GT-805A	10/100/1000BASE-T to 1000BASE-X Media Converter (mini-GBIC, SFP) - distance depending on SFP module
GT-806A15	10/100/1000BASE-T to 1000BASE-LX (WDM) Media Converter TX:1310nm~15km
GT-806B15	10/100/1000BASE-T to 1000BASE-LX (WDM) Media Converter TX:1550nm~15km
GT-806A40	10/100/1000BASE-T to 1000BASE-LX (WDM) Media Converter TX:1310nm~40km
GT-806B40	10/100/1000BASE-T to 1000BASE-LX (WDM) Media Converter TX:1550nm~40km
GT-806A60	10/100/1000BASE-T to 1000BASE-LX (WDM) Media Converter TX:1310nm~60km
GT-806B60	10/100/1000BASE-T to 1000BASE-LX (WDM) Media Converter TX:1550nm~60km

## Available 1000Mbps Modules for GT-805A

Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	DDM	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	--	1000	Copper	--	100m	--	0 ~ 60 degrees C
MGB-SX(V2)	YES	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2(V2)	YES	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX(V2)	YES	1000	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MGB-L40	YES	1000	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MGB-L80	YES	1000	LC	Single Mode	80km	1550nm	0 ~ 60 degrees C
MGB-L120(V2)	YES	1000	LC	Single Mode	120km	1550nm	0 ~ 60 degrees C

Gigabit Ethernet Transceiver (1000BASE-BX, Single Fiber Bi-directional SFP)

Model	DDM	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-LA10(V2)	YES	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB10(V2)		1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA20(V2)	YES	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB20(V2)		1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA40(V2)	YES	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB40(V2)		1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA80	YES	1000	WDM(LC)	Single Mode	80km	1490nm	1550nm	0 ~ 60 degrees C
MGB-LB80		1000	WDM(LC)	Single Mode	80km	1550nm	1490nm	0 ~ 60 degrees C

## Available 100Mbps Modules for GT-805A

Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MFB-FX	100	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60 degrees C
MFB-F120	100	LC	Single Mode	120km	1310nm	0 ~ 60 degrees C