10/100/1000BASE-T to 1000BASE-X Smart Media Converter

Providing the flexibility of 10/100/1000Mbps Ethernet Media via RJ45 port and highly stable Gigabit fiber performance, PLANET **GST-802**, **GST-802S**, **GST-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 GST-80x gigabit media converter series extends communication distance with highly Gigabit performance via fiber optic cable. The GST-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
Multi-mode WDM	Simplex LC	2km
Single mode	Duplex LC/SC	20/40/80/120km
Single mode WDM	Simplex LC/SC	10/20/40/60/80/120km

Enhanced Smart Management Features

The GST-80x series provides auto MDI/MDI-X on its TP port and the DIP switch to configure the available smart functions including the auto-negotiation/force for fiber interface and **Link Fault Passthrough** function (LFP). The LFP function includes the **Link Loss Carry Forward (LLCF)/Link Loss Return (LLR)**.

- 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 media link issue and provide efficient solution to monitoring the network.

Standards

- Complies with IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3ab 1000BASE-T, IEEE 802.3z 1000BASE-SX/LX Ethernet Standard

Interface

- One **10/100/1000BASE-T** port with RJ45 connector
- One **1000BASE-SX/LX** port with LC/SC/WDM connector supporting multi-mode or single-mode fiber optic cable
- Auto-negotiation and Auto-MDI / MDI-X for 10/100/1000BASE-T port

Layer 2 Features

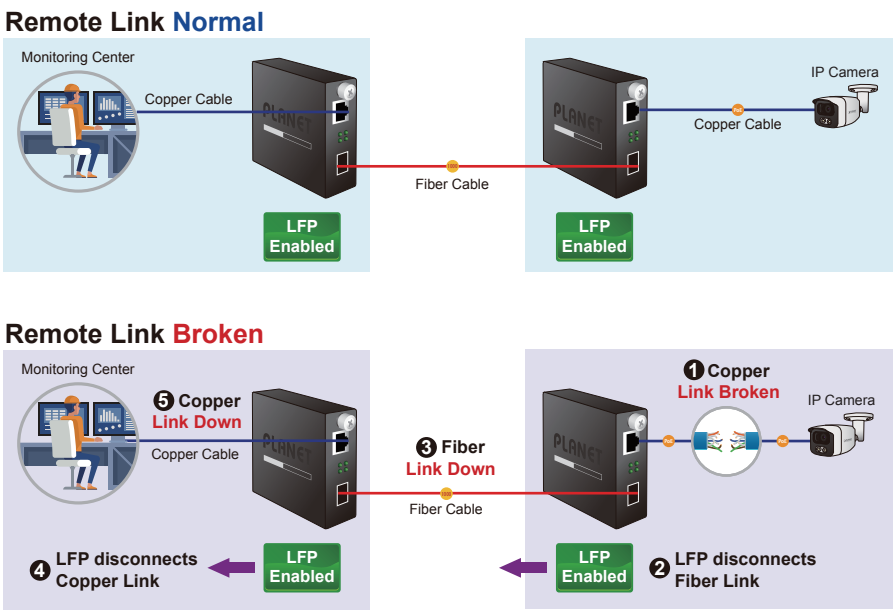
- Flow control: Back pressure for half duplex and IEEE 802.3x for full duplex
- Full wire-speed forwarding rate
- **16K Jumbo Frame** size supported
- Link Loss Return (**LLR**) switch on each fiber optic to aid in troubleshooting remote network connections
- Link Loss Carry Forward (**LLCF**) works with LLR in diagnosing network connections

Smart Management:

- Provides DIP switch for fiber (Auto-negotiation / Manual) and LFP function (Disable/Enable) setting
- Manageable through Web Smart / Managed Media Converter Chassis System (MC-1610MR/MC-1610MR48)
- **Bandwidth control/TS-1000 OAM/IEEE 802.3ah OAM/ Loop Back Test** function provided with MC-1610MR/MC-1610MR48 Managed Media Converter Chassis System

Hardware:

- Used as a stand-alone device or work with Managed Media Converter Chassis for up to 16 converters with redundant power supply for optional expansion use
- LED indicators for converter status
- Choice of fiber connectors from SC, LC, WDM, multi-mode / single-mode fiber/1000BASE-SX/ LX mini GBIC module
- EMI standards complies with FCC, CE class A



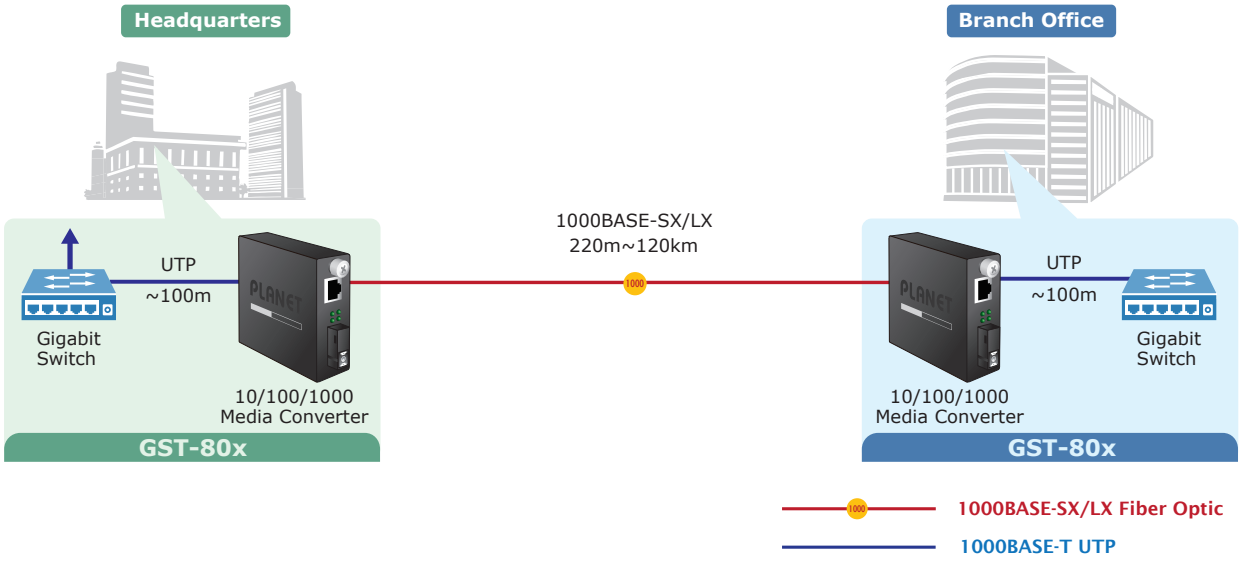
Easy Installation

The GST-80x series allows two types of the segment to connect easily. The GST-80x series Smart Media Converter can be used as a standalone unit when powered by its DC adapter or used as a slide-in module to PLANET 19-inch managed 16-slot media converter chassis (MC-1610MR/MC-1610MR48). The managed 16-slot media converter chassis can assist in producing the power for the GST-80x to maintain the fiber-optic network at one location, when working with the Web Smart / Managed media converter chassis, the GST-80x is able to be managed and its status can be monitored through the local RS-232 to RJ45 console and remote web interface.

Applications

Fiber-optic Networking for ISPs, Enterprises and Homes

With high performance of data transmission and easy installation, the GST-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

Model		GST-802	GST-802S	GST-805A	GST-806A15 GST-806B15	GST-806A60 GST-806B60
Hardware Specifications						
Copper Interface		10/100/1000BASE-T RJ45 port, Auto-MDI/MDI-X, Twisted-pair				
Optic Interface		1000BASE-SX Multi-mode, Duplex SC	1000BASE-LX Single mode, Duplex SC	1000BASE-X SFP slot	1000BASE-BX Single mode WDM Simplex SC	
Fiber Maximum Distance		220/550m	20km	Varies with SFP module	20km	60km
Optic Wavelength		850nm	1310nm	N/A	**GST-806A15/GST-806A60** TX:1310nm RX:1550nm **GST-806B15/GST-806B60** TX:1550nm RX:1310nm	
Max. Optical Output Power		-1.5dBm	-2dBm	N/A	GST-806A15: -2dBm GST-806B15: -2dBm	GST-806A60: -3dBm GST-806B60: -3dBm
Min. Optical Output Power		-9.5dBm	-8dBm	N/A	GST-806A15: -8dBm GST-806B15: -8dBm	GST-806A60: -2dBm GST-806B60: -5dBm
Receive Sensitivity		-17dBm	-22dBm	NA	-23dBm	-26dBm
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				
Cable	Twisted-pair	10BASE-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100BASE-TX: 2-pair UTP Cat. 5, up to 100 m 1000BASE-T: 4-pair STP Cat 5 up to 100m				
	Fiber-optic Cable	50/125μm or 62.5/125μm multi-mode fiber cable, up to 220/550m/2km. 9/125μm single-mode cable, provides long distance for 10/20/40/60/80/120km (vary on fiber transceiver or SFP module)				
LED Indicator		PWR (**Green**) TP: 1000, LINK/ACT(**Green**) Fiber: LINK/ACT(**Green**)				
DIP Switch		Fiber (Auto-negotiation/Manual), LFP (Disable/Enable)				
Power Consumption		2.3 watts/7.8BTU (maximum)				
OAM		TS-1000, IEEE 802.3ah terminal				
Jumbo Frame size		16K				
Power Input		DC 5V/2A				
Dimensions (W x D x H)		80 x 93 x 26 mm				
Weight		207g				
Operating Environment		Temperature: 0~50 degrees C Humidity: 5~95% non-condensing				
Storage Environment		Temperature: -10~70 degrees C Humidity: 5~95% non-condensing				
Emissions		FCC Class A, CE Class A				
Standards		IEEE 802.3, 10BASE-T IEEE 802.3u, 100BASE-TX IEEE 802.3ab, 1000BASE-T IEEE 802.3z, 1000BASE-SX/LX IEEE 802.3ah OAM				

Ordering Information

GST-802	10/100/1000BASE-T to 1000BASE-SX Smart Gigabit Media Converter -220/550m
GST-802S	10/100/1000BASE-T to 1000BASE-LX Smart Gigabit Media Converter -- 20km
GST-805A	10/100/1000BASE-T to 1000BASE-SX/LX Smart Gigabit Media Converter (mini-GBIC,SFP) - distance depending on SFP module
GST-806A15	10/100/1000BASE-T to 1000BASE-LX WDM Smart Gigabit Media Converter-TX: 1310 – 20km
GST-806B15	10/100/1000BASE-T to 1000BASE-LX WDM Smart Gigabit Media Converter-TX: 1550 – 20km
GST-806A60	10/100/1000BASE-T to 1000BASE-LX WDM Smart Gigabit Media Converter-TX:1310 – 60km
GST-806B60	10/100/1000BASE-T to 1000BASE-LX WDM Smart Gigabit Media Converter-TX: 1550 – 60km

Available 1000Mbps Modules for GST-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