

# 10/100/1000Base-T to 1000Base-SX/LX Smart Media Converter



To provide an easy powerful solution for FTTX applications, PLANET has released a new series of Smart Media Converters, the GST-80x series. The model numbers include 10/100/1000Base-T to 1000Base-SX/LX Smart Media Converters and features 'plug & play' and smart media conversion functions.

## High-Performing Network Communication with Distance Extension

PLANET's GST-80x Smart Gigabit Media Converter series expands communication distance with high Gigabit performance via a fiber-optical cable. The GST-80x series provides media conversion between 10/100/1000Base-T and 1000Base-SX/LX interfaces such as multi-mode LC/SC connectors (220m / 550m), single-mode LC/SC connectors (10/20/30/40/50/70/120km) and single fiber connectors (WDM,15/60km) for various fiber optic applications.

## 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 auto-negotiation / force for fiber interface and Link Pass-through function (LLCF/LLR). The Link Loss Carry Forward (LLCF) function works with Link Loss Return (LLR) to diagnose network connections. Also, the LLR function can immediately alarm a network administrator of a media link issue and provide a solution to the monitoring of an entire network.

## Easy Installation

The GST-80x series allows two segments to connect easily. The Smart Media Converter can be used as a standalone unit when powered by its DC adapter or used as a slide-in module with PLANET's 19-inch managed 16-slot media converter chassis (MC-1610MR / MC-1610MR48). The Managed media converter chassis manages the GST-80x and is able to monitor the local RS-232 console and remote web interface.

## 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 RJ-45 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

- Back-pressure and IEEE 802.3x compliant flow control and full wire-speed forwarding rate
- 9K 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) work with LLR in diagnosing network connections

## Smart Management

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

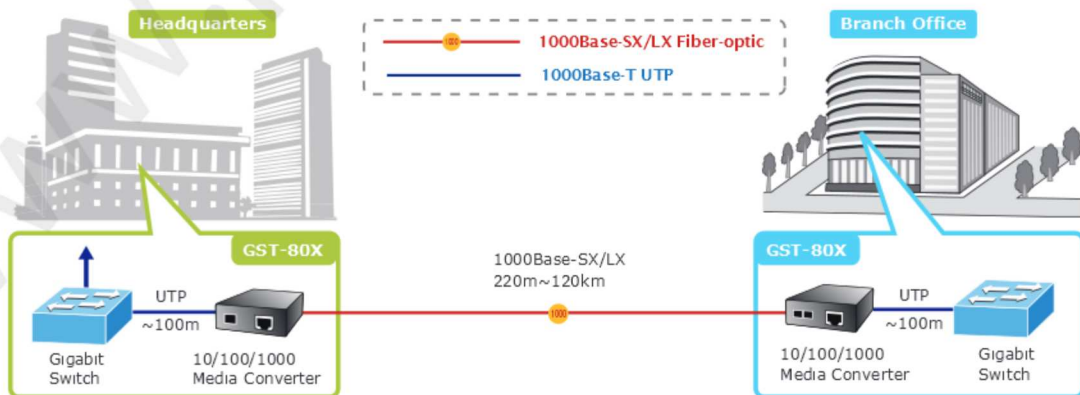
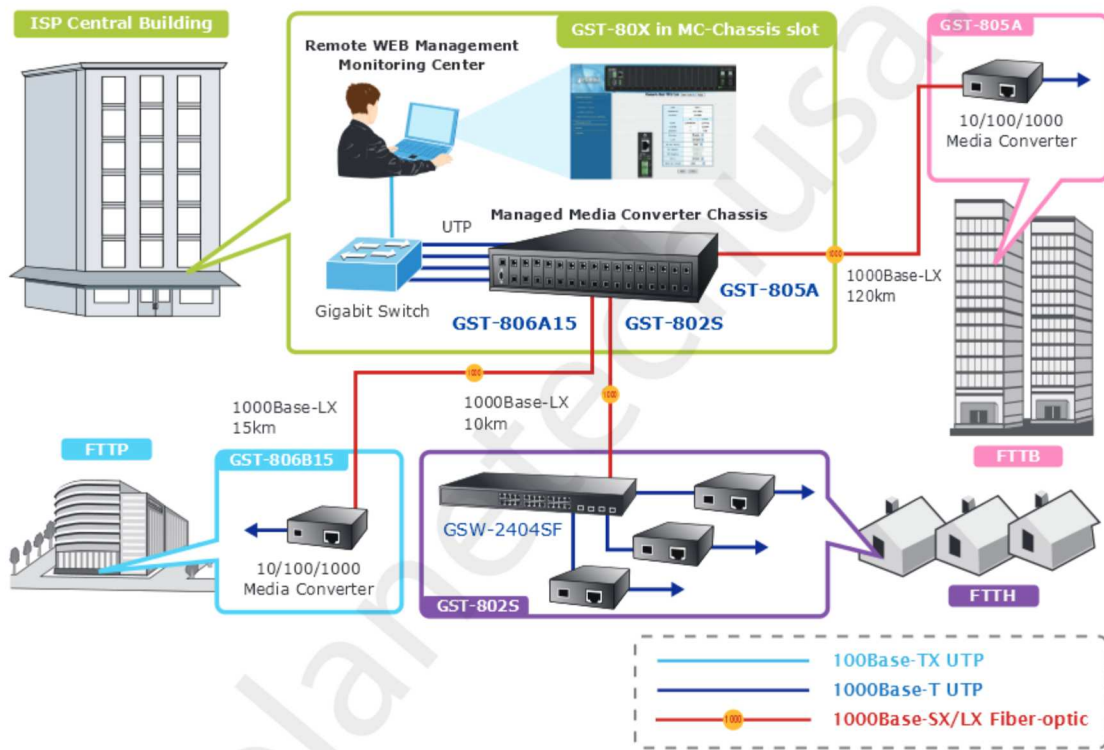
## Hardware

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

## Applications

### Fiber-Optic Networking for ISP, Enterprise, and Home

PLANET's GST-80x provides advanced media conversion technology. The 10/100/1000Base-T and 1000Base-SX/LX interfaces fulfill the different kinds of demands that expanding networks grows and demand. The GST-80x provides diverse fiber connect type options for different network applications. The GST-80x can work as a standalone device or be installed in a central management media converter chassis for centralized management. When working with the management media converter chassis, the GST-80x is a hot swappable device that prevents network downtime. The GST-80x is the ideal solution for ISPs, campuses and enterprises to build a FTTH (Fiber to the Home) or FTTC (Fiber to the Curb), and FTTB (Fiber to the Building) network.



## Specifications

Model	GST-802	GST-802S	GST-805A	GST-806A15	GST-806B15	GST-806A60	GST-806B60
Hardware Specifications							
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						
Ports	1 x 10/100/1000Base-T port 1 x 1000Base-SX/LX port						
Copper Interface	RJ-45 port (Auto-MDI/MDI-X) Twisted Pair						
Optic Interface	GST-802 / GST-802S: SC GST-805A: SFP GST-806A15 / GST-806B15 / GST-806A60 / GST-806B60: WDM						
Optic Wavelength	GST-802: 850nm GST-802S: 1310nm GST-805A: N/A GST-806A15: TX:1310nm / RX:1550nm GST-806B15: TX:1550nm / RX:1310nm GST-806A60: TX:1310nm / RX:1550nm GST-806B60: TX:1550nm / RX:1310nm						
Launch Power(dBm) Max.	GST-802: -4 dBm GST-802S: -3 dBm GST-805A: N/A GST-806A15: -3 dBm GST-806B15: +5 dBm GST-806A60: -3 dBm GST-806B60: +4 dBm						
Launch Power(dBm) Min.	GST-802: -9.5 dBm GST-802S: -9.5dBm GST-805A: N/A GST-806A15: -9 dBm GST-806B15: 0 dBm GST-806A60: -9 dBm GST-806B60: -1 dBm						
Receive Sensitivity	GST-802: -13.5 dBm GST-802S: -14.4 dBm GST-805A: N/A GST-806A15: -21 dBm GST-806B15: -25 dBm GST-806A60: -21 dBm GST-806B60: -25 dBm						
Maximum Input power	GST-802: -18 dBm GST-802S: -20 dBm GST-805A: N/A GST-806A15: -3 dBm GST-806B15: -3 dBm GST-806A60: -2 dBm GST-806B60: -2 dBm						
Speed Twisted-pair	10/20Mbps for Half / Full-Duplex 100/200Mbps for Half / Full-Duplex 2000Mbps for Full-Duplex						
Speed Fiber-optic	2000Mbps for Full-Duplex						
Cable 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						
Cable Fiber-optic Cable	<ul style="list-style-type: none"> <li>• 50/125µm or 62.5/125µm multi-mode fiber cable, up to 220/550m.</li> <li>• 9/125µm single-mode cable, provides long distance for 10/20/30/40/50/70/120km (vary on fiber transceiver or SFP module)</li> </ul>						
LED Indicator	<ul style="list-style-type: none"> <li>• PWR (Green)</li> <li>• TP: 1000, LINK/ACT</li> <li>• Fiber: LINK/ACT</li> </ul>						
DIP Switch	Fiber (Auto-negotiation / Manual), LFP (Disable / Enable)						
Power Consumption	3.1 Watts / 10BTU (maximum)						
OAM	TS-1000, IEEE 802.3ah terminal						

Jumbo Frame size	9K
Power Input	DC 5V / 2A
Dimensions (W x D x H)	81 x 94 x 26 mm
Operating Environment	Temperature: 0~50 degrees C; Humidity: 5~90% non-condensing
Storage Environment	Temperature: -40~70 degrees C; Humidity: 5~90% non-condensing
Emissions	FCC Class A, CE Class A

## Ordering Information

GST-802	10/100/1000Base-T to 1000Base-SX(SC,MM) Smart Media Converter-220m/550m
GST-802S	10/100/1000Base-T to 1000Base-LX(SC,SM) Smart Media Converter-10km
GST-805A	10/100/1000Base-T to 1000Base-LX/SX(mini-GBIC, SFP) Smart Media Converter-distance depends on SFP module
GST-806A15	10/100/1000Base-T to 1000Base-LX(WDM) Smart Media Converter-TX:1310nm-15km
GST-806B15	10/100/1000Base-T to 1000Base-LX(WDM) Smart Media Converter-TX:1550nm-15km
GST-806A60	10/100/1000Base-T to 1000Base-LX(WDM) Smart Media Converter-TX:1310nm-60km
GST-806B60	10/100/1000Base-T to 1000Base-LX(WDM) Smart Media Converter-TX:1550nm-60km

## Related SFP modules for GST-805A

MGB-SX	SFP-Port 1000Base-SX Transceiver, LC, MM-550m
MGB-LX	SFP-Port 1000Base-LX Transceiver, LC, SM-10km
MGB-L30	SFP-Port 1000Base-LX Transceiver, LC, SM-30km
MGB-L50	SFP-Port 1000Base-LX Transceiver, LC, SM-50km
MGB-L70	SFP-Port 1000Base-LX Transceiver, LC, SM-70km
MGB-L120	SFP-Port 1000Base-LX Transceiver, LC, SM-120km
MGB-LA10	1000Base-LX Transceiver, LC, WDM (TX:1310nm) SM-10km
MGB-LB10	1000Base-LX Transceiver, LC, WDM (TX:1550nm) SM-10km
MGB-LA20	1000Base-LX Transceiver, LC, WDM (TX:1310nm) SM-20km
MGB-LB20	1000Base-LX Transceiver, LC, WDM (TX:1550nm) SM-20km
MGB-LA40	1000Base-LX Transceiver, LC, WDM (TX:1310nm) SM-40km
MGB-LB40	1000Base-LX Transceiver, LC, WDM (TX:1550nm) SM-40km

## Related products

MC-1610MR / MC-1610MR48	16-Slot Managed Media Converter Chassis with Redundant Power Supply System
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