

Product Specification

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

GT-90x

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2008/11/03	Marc Liao	Initial release

Author	Marc Liao	Editor:	Marc Liao
Reviewed by:	Kent Kang	Approved by:	Tom Shih

1. PRODUCT DESCRIPTION

The GT-90x series, it supports conversion between 10/100/1000Base-T and 1000Base-LX / SX network, which 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. This GT-90x series Managed Gigabit Ethernet Media Converter can be used as a stand-alone unit or as a slide-in module to the PLANET Media Converter Chassis (**MC-700, MC-1000 and MC-1500**). These media chassis can assist in providing DC power for GT-90x series Managed Gigabit Ethernet Media Converter to maintain the fiber-optic network at one centralized location.

For efficient management, the GT-90x series Managed Gigabit Ethernet Media Converter equipped with remote Web / SNMP interface. With its built-in Web-based management, the PLANET GT-90x series Managed Gigabit Ethernet Media Converter offers an easy-to-use, platform-independent management and configuration facility and can be programmed for advanced management functions. Such as IP address Configuration / DHCP Client function, password setting / firmware upgrade, system reboot / factory default, port configuration that include TP / Fiber port speed duplex mode setting, flow control setting and Ingress/Egress bandwidth control setting, converter configuration that include maximum packet length setting, Broadcast / Multicast / Unicast storm control setting, 16 IEEE 802.1Q VLAN groups support and powerful Q-in-Q VLAN function, Quality of Service (QoS), TS-1000 / IEEE 802.3ah OAM function and TCP & UDP filter function. It supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software as well.

As the GT-90x series Managed Gigabit Ethernet 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 by simple plugging and playing feature. The GT-90x series Managed Gigabit Ethernet Media Converter also supports flow control and back pressure in half-duplex to eliminate packets loss.

The PLANET GT-90x include following models.

- **GT-902:** 10/100/1000Base-T to 1000Base-SX Managed Media Converter (SC, MM)
- **GT-902S:** 10/100/1000Base-T to 1000Base-LX Managed Media Converter (SC, SM)
- **GT-905A:** 10/100/1000Base-T to mini-GBIC Managed Media Converter (LC, MM/SM)
- **GT-906A15:** 10/100/1000Base-T to 1000Base-LX WDM Managed Gigabit Converter - TX: 1310 -15KM
- **GT-906B15:** 10/100/1000Base-T to 1000Base-LX WDM Managed Gigabit Converter - TX: 1550-15KM
- **GT-906A60:** 10/100/1000Base-T to 1000Base-LX WDM Managed Gigabit Converter - TX: 1310-60KM
- **GT-906B60:** 10/100/1000Base-T to 1000Base-LX WDM Managed Gigabit Converter - TX: 1550-60KM

2. PRODUCT FEATURES

- Complies with IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-SX/LX
- Comply with IEEE 802.3, IEEE 802.3u 10/100Base-TX, IEEE 802.3ab 1000Base-T Ethernet Standard
- One-channel media conversion between 10/100/1000Base-T and 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 on **GT-902**
- 1000Base-LX: 9/125µm single-mode cable provides long distance for 10km on **GT-902S**
- 1000Base-LX WDM interface for up to 15km (single-mode fiber 9µm/125µm) on **GT-906A15/B15**
- 1000Base-LX WDM interface for up to 60km (single-mode fiber 9µm/125µm) on **GT-906A60/B60**
- 1000Base-T: 2-pair Cat. 5/5e/6 UTP cable, up to 100 meters
- Compact size for working with PLANET MC family Media Chassis (**MC-700/1000R/1500**)
- Wall-mountable hardware designed
- Built-in IP-Base **Web interface** for remote management
- Layer 2 Management Feature
 - Store-and-Forward mechanism
 - Built-in Web operation interface for remote management and setup
 - Manual IP address setting / DHCP client for IP address assignment
 - SNMP v1 / v2c monitor / private Enterprise MIB
 - Event trap and SNMP trap support
 - Speed duplex mode configuration / Flow Control setting / bandwidth Control on TP / Fiber port
 - Supports Port Status / Ethernet Statistics on both TP and Fiber interface
 - Supports Maximum frame size to 16K bytes
 - Loop detection / Broadcast / Multicast / Unicast storm control
 - Management VLAN / 16 IEEE 802.1Q VLAN groups / Q-in-Q VLAN
 - 802.1p Tag Priority / IP address priority / IP DSCP option in Quality of Service Mode and Strict Priority / Weighted Round Robin (WRR) QoS policies
 - TS-1000 OAM / IEEE 802.3ah OAM / Loop Back Test
 - 16 TCP / UDP Filter groups
 - Password setting, IP setting and devices description setting through Planet Smart discovery utility
 - Firmware upgrade via remote Web interface

- External DC5V 2A power supply
- Compact in size, easy installation
- LED indicators for easy network diagnosing
- Reset Button at the front panel for resetting the factory default
- Choice of fiber-connector from SC, LC, WDM, multi-mode / single-mode fiber /1000Base-SX / LX mini GBIC module

3. PRODUCT SPECIFICATION

3.1 MAIN COMPONENT

Converter ASIC: Realtek RTL8213M x1

Fiber-optic transceiver: vary by model

3.2 FUNCTIONAL SPECIFICATIONS

Model	GT-902	GT-902S	GT-905A	GT-906A15	GT-906B15	GT-906A60	GT-906B60	
Hardware Specification								
Standards	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX IEEE 802.3ab, 1000Base-T IEEE 802.3z, 1000Base-SX/LX							
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	SC		SFP	WDM				
Optic Wavelength	850nm	1310nm	-	TX:1310nm RX:1550nm	TX:1550nm RX:1310nm	TX:1310nm RX:1550nm	TX:1550nm RX:1310nm	
Launch Power(dBm)	Max.	-4 dBm	-3 dBm	-	-3 dBm	+5 dBm	-3 dBm	+4 dBm
	Min.	-9.5 dBm	-9.5dBm	-	-9 dBm	0 dBm	-9 dBm	-1 dBm
Receive Sensitivity	-13.5 dBm	-14.4 dBm	-	-21 dBm	-25 dBm	-21 dBm	-25 dBm	
Maximum Input power	-18 dBm	-20 dBm	-	-3 dBm	-3 dBm	-2 dBm	-2 dBm	
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	<ul style="list-style-type: none"> ▪ 50/125µm or 62.5/125µm multi-mode fiber cable, up to 220/550m. ▪ 9/125µm single-mode cable, provides long distance for 10/15/20/30/40/50/60/70/120km (very on fiber transceiver or SFP module) 						

3.3 PHYSICAL SPECIFICATION

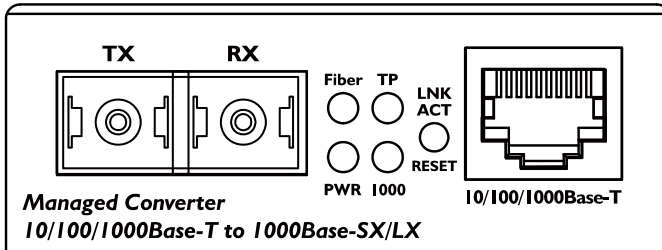
Dimensions

94 x 70 x 26mm (W x D x H)

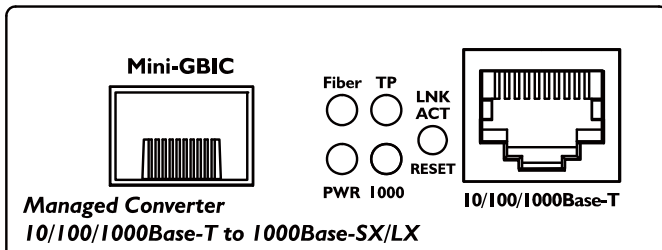
Weight:

0.2kg

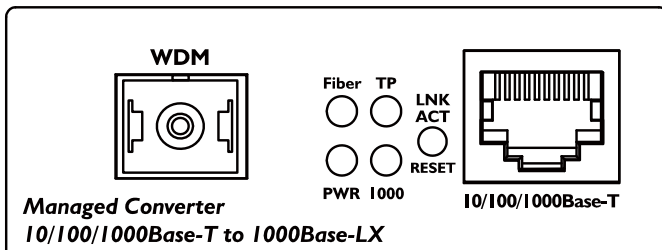
GT-90x Front panel



PLANET GT-902 / GT-902S Front Panel

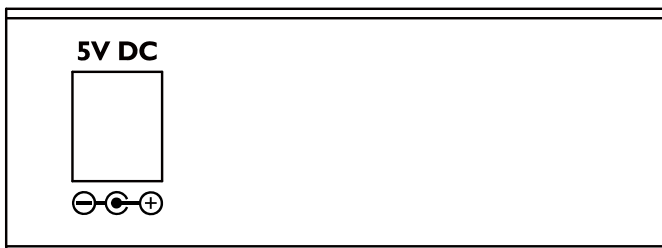


PLANET GT-905A Front Panel



PLANET GT-906A/B Front Panel

GT-90x Real panel



PLANET GT-90x Rear Panel

LED definition

LED	Color	Description
PWR	Green	Lit: When +5VDC power detected.
Fiber LNK/ACT	Green	Lit: To indicate the link through that fiber port is successfully established. Blink: Indicate that the Fiber port is actively sending or receiving data over that port.
TP LNK/ACT	Green	Lit: To indicate the link through that port is successfully established. Blink: Indicate that the port is actively sending or receiving data over that port.
TP 1000	Green	Lit: When the port runs in 1000Mbps Full duplex mode Off: When the port runs in 10/100Mbps Half / Full duplex mode.

3.4 ENVIRONMENTAL SPECIFICATION

Operating

Temperature: 0~50°C
Relative Humidity: 0~90 %(non-condensing)

Storage

Temperature: -40~70°C
Relative Humidity: 0~90 %(non-condensing)

3.5 ELECTRICAL SPECIFICATION

Input Voltage: DC 5V / 2A
Power consumption: 4 Watts / 13BTU

3.6 REGULATORY COMPLIANCE

FCC Class A, CE

3.7 Reliability

MTBF > 50,000 hrs @ 25 degree C

3.8 BASIC PACKAGING

- Managed Gigabit Ethernet Media Converter x1
- CD-ROM user's manual x1
- Quick installation guide x1
- External DC 5V / 2A power adapter x 1

3.9 PACKING DIMENSION

Dimension: 140mm x 285mm x 70mm (W x D x H)
Weight: 0.53kg (Gross weight)
20pcs in one carton