

Product Specification

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

IGT-90xT

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2010/04/15	Neo Tsai	Initial release

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Reviewed by:	Kent Kang	Approved by:	Tom Shih

1. PRODUCT DESCRIPTION

The IGT-90xT series, it supports conversion between 10/100/1000Base-T and 1000Base-LX / SX network, which are SC / SFP connectors with single-mode or multi-mode media as required. The Ethernet signal allows two types of segments to connect easily, efficiently and inexpensively.

For efficient management, the IGT-90xT series Industrial Managed Gigabit Ethernet Media Converter equipped with remote Web / SNMP interface. With its built-in Web-based management, the PLANET IGT-90xT 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 IGT-90xT series Industrial 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 IGT-90xT series Industrial Managed Gigabit Ethernet Media Converter also supports flow control and back pressure in half-duplex to eliminate packets loss.

The PLANET IGT-90xT include following models.

- **IGT-902T:** 10/100/1000Base-T to 1000Base-SX Managed Media Converter (SC, MM)
- **IGT-902TS:** 10/100/1000Base-T to 1000Base-LX Managed Media Converter (SC, SM)
- **IGT-905A:** 10/100/1000Base-T to mini-GBIC Managed Media Converter (LC, MM/SM)

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
- 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 **IGT-902T**
- 1000Base-LX: 9/125µm single-mode cable provides long distance for 10km on **IGT-902TS**
- Mini-GBIC port provides multi choice of SFP modules on **IGT-905A**
- 10/100/1000Base-T: 1-port Cat. 5/5e/6 UTP cable, up to 100 meters
- DIN-Rail mountable and Wall-mountable hardware design
- Built-in IP-based Web interface for remote management

- Layer 2 Management Feature
 - Store-and-Forward mechanism
 - Built-in Web 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 9216 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
- Provides 12 to 48V DC Removable terminal block redundant power with polarity reverse protect function.
- LED indicators for easy network diagnosing
- Reset Button at the front panel for the factory default reset
- Choice of fiber-connector from SC, LC, 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

Product		IGT-902T	IGT-902TS	IGT-905A
Hardware Specification				
Copper Interface		1 x 10/100/1000Base-T RJ-45 Auto-MDI/MDI-X port		
Optic Interface		SC		SFP
Optical Mode		Multi-mode	Single-mode	Vary on module
Optic Wavelength		850nm	1310nm	-
Launch Power(dBm)	Max.	-4 dBm	-3 dBm	-
	Min.	-9.5 dBm	-9.5dBm	-
Receive Sensitivity		-13.5 dBm	-14.4 dBm	-
Maximum Input power		-18 dBm	-20 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 100m 100Base-TX: 2-pair UTP Cat. 5, up to 100m 1000Base-T: 4-pair STP Cat 5,6 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) 		
LED indicator		<ul style="list-style-type: none"> • Power: P1, P2, Fault • TP: LNK/ACT, 1000 • Fiber: LNK/ACT 		
Power Input		DC 12V to 48V Redundant power with polarity reverse protection function		
Power Consumption		7.9 Watts/ 27 BTU (maximum)		
Operating Environment		Temperature: -30~75 Degree C; Humidity: 5~90% non-condensing		
Storage Environment		Temperature: -40~85 Degree C; Humidity: 5~90% non-condensing		
Dimension (W x D x H)		135 x 85 x 32 mm		
Weight		423g		
Installation		DIN rail kit and wall mount ear		
Management and Layer 2 Features				
Management Interface		WEB / SNMP v1, v2c		
Port Configuration		Port disable/enable Auto-negotiation 10/100/1000Mbps Full and Half duplex mode selection. Flow Control disable / enable. Bandwidth control on each port.		

VLAN	IEEE 802.1q Tagged Based VLAN , 4K VLAN ID, up to 16 VLAN groups Q-in-Q VLAN
QoS	Traffic classification based on : <ul style="list-style-type: none"> • 802.1p priority • IP DSCP field in IP Packet • IP Address
Bandwidth Control	Ingress / Egress bandwidth control <ul style="list-style-type: none"> • Rate range: 512kbps to 500Mbps Storm control <ul style="list-style-type: none"> • Broadcast / Multicast / Unknown Unicast packet
Standard Conformance	
Emissions	FCC Class A, CE Class A
Standard	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX / 100Base-FX IEEE 802.3z 1000Base-SX/LX IEEE 802.3ab Gigabit 1000Base-T IEEE 802.3x Flow Control and Back pressure IEEE 802.1p Class of service IEEE 802.1Q VLAN Tagging IEEE 802.3ah OAM
Stability	IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)

* =Depend on the various SFP modules

3.3 PHYSICAL SPECIFICATION

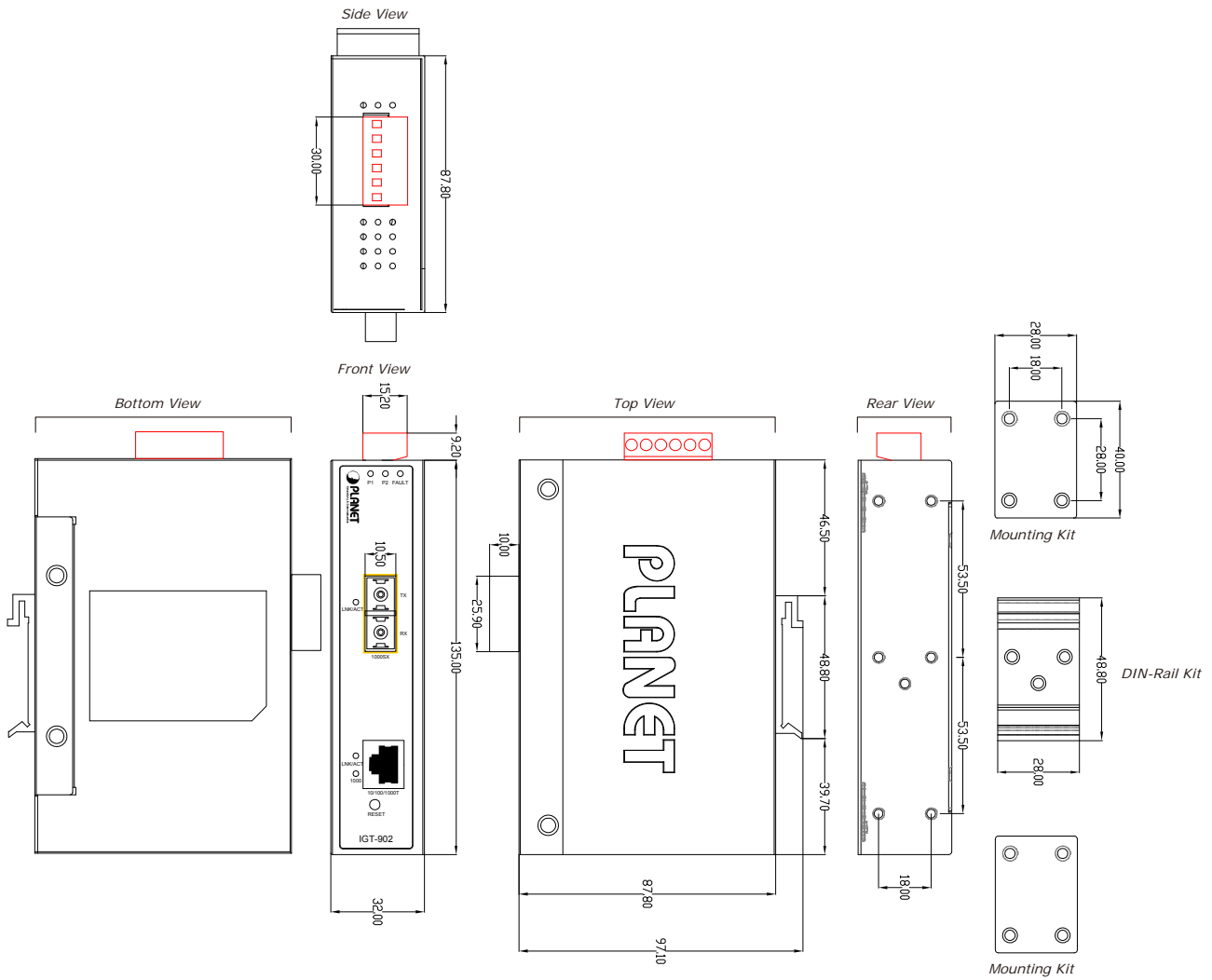
Dimensions

135 x 85 x 32 mm (W x D x H)

Weight:

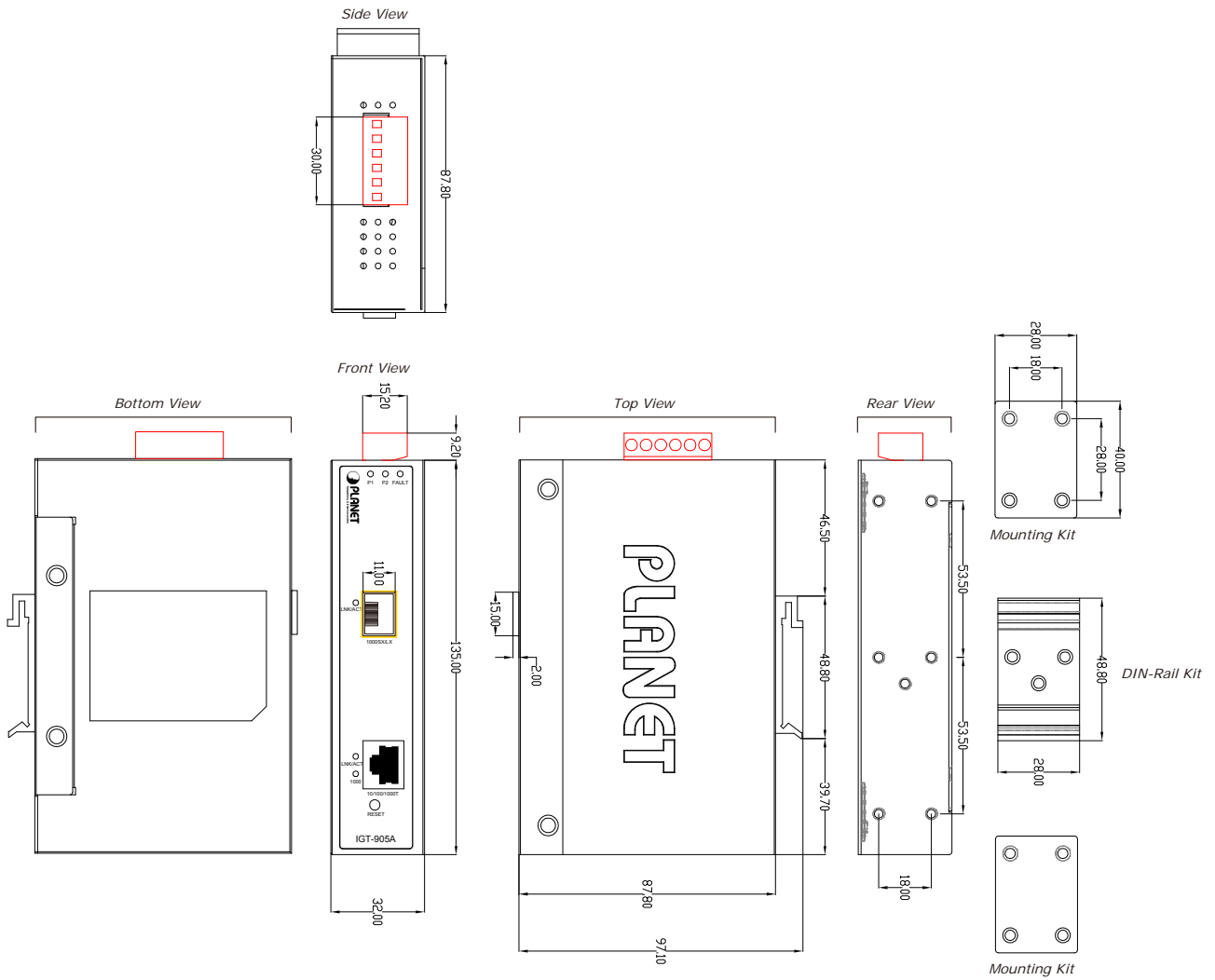
423g

IGT-902T / IGT-902TS Multi View drawing



Dimensions (unit = mm)

IGT-905A Multi View Drawing



Dimensions (unit = mm)

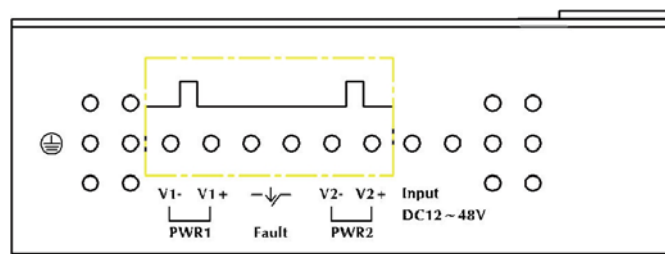
IGT-902T / IGT-902TS Front panel



IGT-905A Front panel



IGT-90xT Upper panel



LED definition

LED	Color	Function	
P1	Green	Lit	Indicate the power 1 has power.
P2	Green	Lit	Indicate the power 2 has power.
FAULT	Green	Lit	Indicate the either power 1 or power 2 has no power.
Fiber LNK /ACT	Green	Lights	To indicate that the Fiber Optical Port is successfully connecting to the network at 1000Mbps.
		Blinks	To indicate the Fiber Optical Port is receiving or sending data.
TP 1000	Green	Lights	To indicate that the Gigabit Ethernet Port is successfully connecting to the network at 1000Mbps. OFF indicate the Gigabit Ethernet Port is successfully connecting to the network at 10/100Mbps.
TP LNK /ACT		Lights	To indicate that the Gigabit Ethernet Port is successfully connecting to the network at 10/100/1000Mbps.
		Blinks	To indicate the Gigabit Ethernet Port is receiving or sending data.

3.4 ENVIRONMENTAL SPECIFICATION

Operating

Temperature: -30~75°C
 Relative Humidity: 5~90 %(non-condensing)

Storage

Temperature: -40~85°C
 Relative Humidity: 5~90 %(non-condensing)

3.5 ELECTRICAL SPECIFICATION

Input Voltage: DC 12V~48V Redundant power with polarity reverses protection function
 Power consumption: 7.9 Watts / 27BTU

3.6 REGULATORY COMPLIANCE

FCC Class A, CE Class A

3.7 RELIABILITY

MTBF > 100,000Hrs
 IEC60068-2-32 (Free fall)
 IEC60068-2-27 (Shock)
 IEC60068-2-6 (Vibration)

3.8 BASIC PACKAGING

- Industrial Managed Gigabit Ethernet Media Converter x1
- CD-ROM user's manual x 1
- Quick installation guide x 1
- DIN rail kit x 1
- Wall mount kit x 1

3.9 PACKING DIMENSION

Dimension: 207mm x 145mm x 46mm (W x D x H)
Weight: 573g (Gross weight)
18pcs in one carton