Industrial Managed Gigabit Ethernet Media Converter with Wide Operating Temperature (-30~75 degrees C)

Interface

- 1-Port 10/100/1000Base-T RJ-45 with auto negotiation and auto-MDI/MDI-X function
- 1-Port 1000Base-SX SC interface, provides long distance up to 220/550m on IGT-902T
- 1-Port 1000Base-LX SC interface, provides long distance for 10km on IGT-902TS
- 1 Mini-GBIC slot, provides multi choice of SFP modules on IGT-905A

Industrial Conformance

- 12V to 48V DC, redundant power
- -30 to 75 degrees C operating temperature
- IP-30 metal case
- Relay alarm for port breakdown
- Supports 6KV DC Ethernet ESD protection
- Free fall, Shock and Vibration Stability
- DIN-rail and wall-mountable hardware design

Layer 2 Features

- Store-and-Forward mechanism
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- Maximum frame size to 9216 Bytes
- Loop detection / Broadcast / Multicast / Unicast storm control
- Supports VLANs
    - IEEE 802.1Q Tagged based VLAN
    - Up to 16 VLANs groups, out of 4K VLAN IDs
    - Management VLAN

Quality of Service

- Ingress/Egress Bandwidth control on TP / Fiber port
- 4 priority queues, strict priority and Weighted Round Robin (WRR)
- Traffic classification by:
    - IEEE 802.1p Class of Service
    - IP DSCP priority
    - IP Address priority

Distance Extension with High Performance and Steady Network Communicating

PLANET IGT-90xT Industrial Managed Gigabit Media Converter series extends communication distance with highly Gigabit performance via fiber optical wire, in which the extension distance could be up to 10km by applying IGT-902TS and IGT-905A (vary on SFP module) or up to 550m with the IGT-902T. The IGT-90xT series is specifically designed with durable components and strong housing case to operate reliably in electrically harsh and climatically demanding environments. The industrial level Gigabit media converter provides a high level of immunity to electromagnetic interference and heavy electrical surges which are usually found on plant floors or traffic control cabinets in sidewalk. Being able to operate under the temperature range from -30 to 75 degrees C, the IGT-90xT series can be placed in almost any difficult environment.

Robust Switching Performance

PLANET IGT-90xT Industrial Managed Media Converter series efficiently converts data between 10/100/1000Base-T and 1000Base-SX / LX network, and offers remote management and monitoring capabilities. The IGT-90xT series provides the flexibility with all kinds of 10/100/1000Mbps Ethernet Media on RJ-45 port and performs highly stable Gigabit fiber performance. It also delivers the dynamic status report and real-time alarm messages that helps the network administrator to easily monitor and manage the entire industrial networks.

User-friendly Centralized Web Management Interface

For efficient management, the IGT-90xT Industrial Managed Gigabit Ethernet Media Converter series is equipped with remote Web / SNMP (Simple Network Management Protocol) interface. With the built-in Web-based management interface, the IGT-90xT series acts as an easy-to-use, platform-independent management and configuration facility. It also can be managed via any standard-based management software by supporting standard SNMP. Moreover, the IGT-90xT series can manage the remote client devices by the TS-1000/802.3ah OAM protocol (operations, administration, and maintenance).

Enhanced Management Features

The IGT-90xT series can be programmed for advanced management functions such as IP address configuration, DHCP client function, port configuration, converter configuration, 802.1Q Tag VLAN, Q-in-Q VLAN, QoS, OAM control, Layer 2 protocol filter, broadcast storm control and Ingress/Egress bandwidth control to enhance bandwidth utilization. The enhanced management features offered by the IGT-90xT make it ideally suited for mission-critical and real-time control applications in the Industrial Ethernet networks.
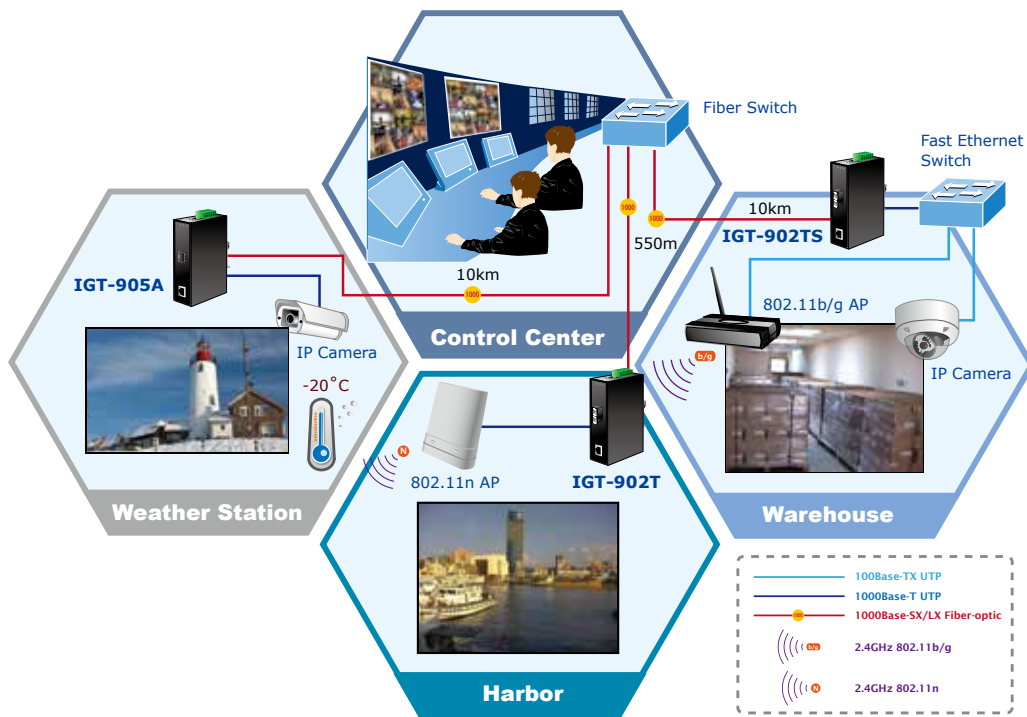
Applications

Transportation Networking

PLANET's managed industrial Gigabit media converter, IGT-90xT series, offers high reliability and security to make sure the continuous industrial operation in harsh environments such as control cabinet of transportation, factory floors or the extremely low or high temperatures environments. In the industrial networking environments, each networked device is required to keep running continuously in the hazardous status. If industrial equipment fails to connect to the network, it might influence the entire operation of industrial systems, thus causing incredible financial loss. With the IGT-90xT managed industrial Gigabit media converter, which complies with all the requirements of industrial applications, customers may enjoy high reliability, fast recovery capability, and safe Ethernet network operation.

Management

- Built-in IP-based Web interface for remote management
- SNMP v1 / v2c and 4 RMON groups, Event trap and SNMP trap support
- Manual IP address setting / DHCP client for IP address assignment
- 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
- Reset Button at the front panel for the factory default reset
- Display the current operating temperature

Fiber-Optic Networking for ISP, Enterprise, and Home

With high performance of data transmission and easy installation, the IGT-90xT series Industrial Managed Gigabit Ethernet Media Converter can build an ISP network solution of FTTH (Fiber to the Home), FTTC (Fiber to the Curb) for ISPs, or FTTB (Fiber to the Building) for small office network environment in the enterprises. The Web Management interface of the IGT-90xT series enables network administrators to easily monitor and set up the converter, the transmission speed and duplex through web browsers.

Specifications

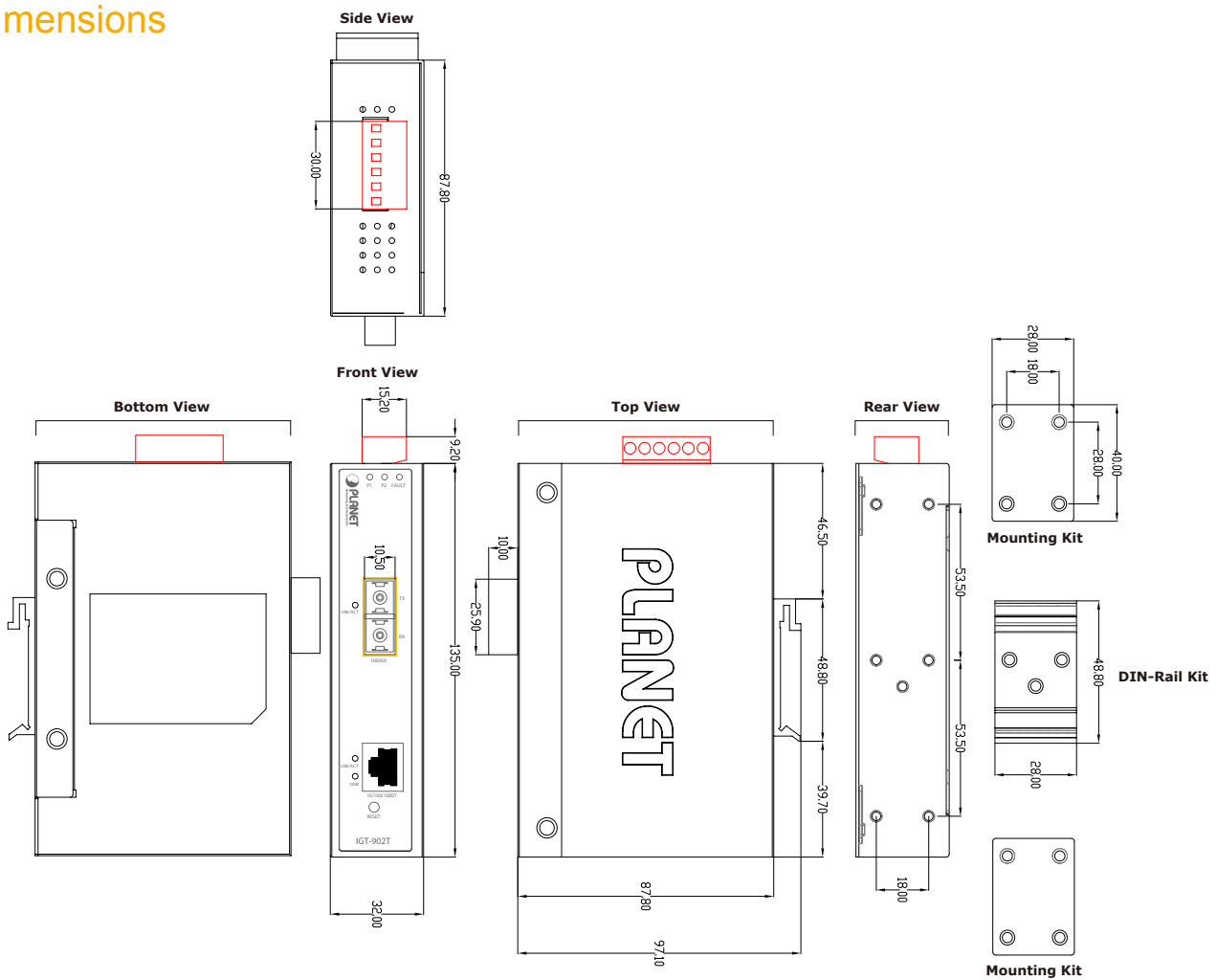| Model	IGT-902T	IGT-902TS	IGT-905A
Hardware Specifications			
Copper Interface	1 x 10/100/1000Base-T RJ-45 Auto-MDI/MDI-X port		
Optic Interface	IGT-902T: SC IGT-902TS: SC IGT-905A: SFP		
Optical Mode	IGT-902T: Multi-mode IGT-902TS: Single mode IGT-905A: Vary on module		
Optic Wavelength	IGT-902T: 850nm IGT-902TS: 1310nm IGT-905A : Vary on module		
Launch Power(dBm)	**MAX.** IGT-902T: -4 dBm IGT-902TS: -3 dBm **Min.** IGT-902T: -9.5 dBm IGT-902TS: -9.5 dBm		
Receive Sensitivity	IGT-902T: -13.5 dBm IGT-902TS: -14.4 dBm		
Maximum Input power	IGT-902T: -18 dBm IGT-902TS: -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 100 m 100Base-TX: 2-pair UTP Cat. 5, up to 100 m 1000Base-T: 4-pair STP Cat 5,6 up to 100m **Fiber-optic Cable** • 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 (vary on fiber transceiver or SFP module)		
LED indicator	• 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)		
Dimensions (W x D x H)	135 x 85 x 32 mm		
Weight	423g		
Installation	DIN rail kit and wall mount ear		
Power Consumption	7.9 watts/ 27 BTU (maximum)		
Operating Environment	Temperature: -30~75 degrees C Humidity: 5~90% non-condensing		
Storage Environment	Temperature: -40~85 degrees C Humidity: 5~90% non-condensing		
Dimensions (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 : • 802.1p priority • IP DSCP field in IP Packet • IP Address		
Bandwidth Control	Ingress / Egress bandwidth control • Rate range: 512kbps to 500Mbps Storm control • Broadcast / Multicast / Unknown Unicast packet		

Standards Conformance	
Standards Compliance	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX / FX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-SX / LX Gigabit Ethernet IEEE 802.3x Full-Duplex Flow Control
Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32(Free fall) IEC60068-2-27(Shock) IEC60068-2-6(Vibration)
Environmental Specifications	
Temperature	Operating: -30~75 degrees C Storage: -40~85 degrees C
Humidity	Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing)

Dimensions

Side View

Front View

Bottom View

Top View

Rear View

Mounting Kit

DIN-Rail Kit

Mounting Kit

Dimensions (unit = mm)

Ordering Information

IGT-902T	10/100/1000Base-T to 1000Base-SX Managed Industrial Gigabit Converter (-30~75 degrees C)(SC,MM)-550m
IGT-902TS	10/100/1000Base-T to 1000Base-LX Managed Industrial Gigabit Converter (SM) (-30~75 degrees C)(SC,SM)-10km
IGT-905A	10/100/1000Base-T to 1000Base-SX/LX Managed Industrial Gigabit Converter (mini-GBIC,SFP)

FC CE

PLANET reserves the right to change specifications without prior notice.

VIDELCO
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