

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



## *Distance Extension with High Performance and Steady Network Communicating*

The PLANET Industrial Managed Gigabit Media Converter – **IGT-90xT** 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 by 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 degree C allow the IGT-90xT series can be placed in almost any difficult environment.

## *Robust Converter Performance*

The PLANET IGT-90xT series Industrial Managed Media Converter 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 series Industrial Managed Gigabit Ethernet Media Converter is equipped with remote Web / SNMP (Simple Network Management Protocol) interface. By 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 makes it ideally suited for mission-critical and real-time control applications in the Industrial Ethernet networks..

## KEY FEATURES

### *INTERFACE*

- 1-Port 10/100/1000Base-T RJ-45 with Auto-negotiation and Auto-MDI/MDI-X function
- 1 Port 1000Base-SX SC interface, provide 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 Degree C operation 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

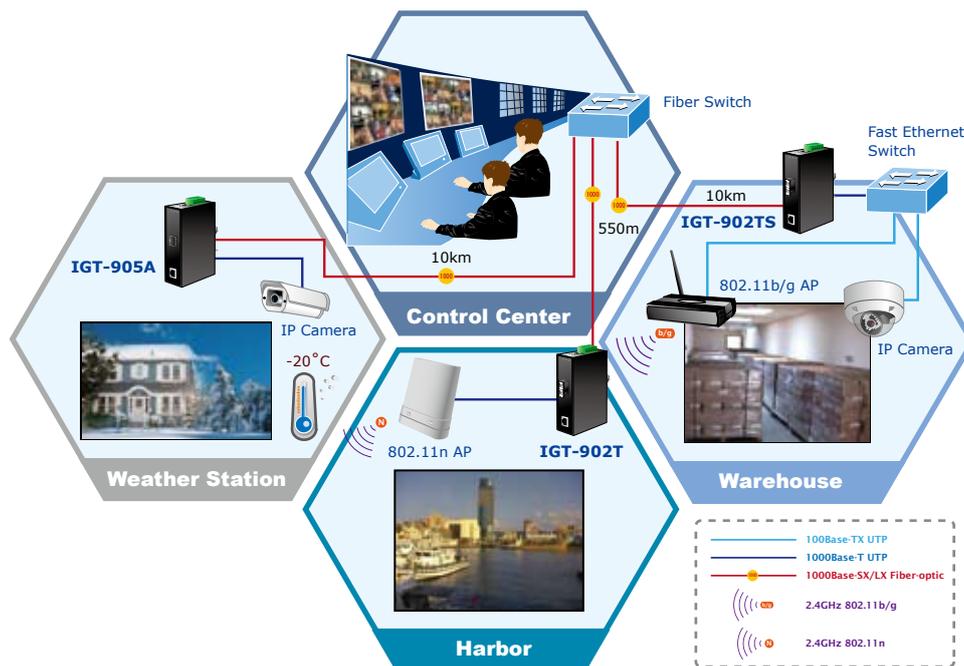
**MANAGEMENT**

- 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

**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 and thus cause incredible financial loss. By adopting 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.



*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 setup the converter, the transmission speed and duplex through web browsers.

**SPECIFICATION**

<b>Product</b>		<b>Industrial Managed Gigabit Ethernet Media Converter</b>		
<b>Model</b>		<b>IGT-902T</b>	<b>IGT-902TS</b>	<b>IGT-905A</b>
<b>Hardware Specification</b>				
<b>Copper Interface</b>		1 x 10/100/1000Base-T RJ-45 Auto-MDI/MDI-X ports		
<b>Optic Interface</b>		SC		SFP
<b>Optical Mode</b>		Multi-mode	Single mode	Vary on module
<b>Optic Wavelength</b>		850nm	1310nm	-
<b>Launch</b>	<b>MAX.</b>	-4 dBm	-3 dBm	-
	<b>Min.</b>	-9.5 dBm	-9.5dBm	-
<b>Receive Sensitivity</b>		-13.5 dBm	-14.4 dBm	-
<b>Maximum Input power</b>		-18 dBm	-20 dBm	-
<b>Speed</b>	<b>Twisted-pair</b>	10/20Mbps for Half / Full-Duplex 100/200Mbps for Half / Full Duplex 2000Mbps for Full-Duplex		
	<b>Fiber-optic</b>	2000Mbps for Full-Duplex		
<b>Cable</b>	<b>Twisted-pair</b>	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		
	<b>Fiber-optic Cable</b>	- 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)		
<b>LED indicator</b>		Power: P1, P2, Fault TP: LNK/ACT, 1000 Fiber: LNK/ACT		
<b>Power Input</b>		DC 12V to 48V Redundant power with polarity reverse protection function		
<b>Power Consumption</b>		7.9 Watts/ 27 BTU (maximum)		
<b>Operating Environment</b>		Temperature: -30~75 Degree C Humidity: 5~90% non-condensing		
<b>Storage Environment</b>		Temperature: -40~85 Degree C Humidity: 5~90% non-condensing		
<b>Dimension (W x D x H)</b>		135 x 85 x 32 mm		
<b>Weight</b>		423g		
<b>Installation</b>		DIN rail kit and wall mount ear		
<b>Management and Layer 2 Features</b>				
<b>Management Interface</b>		WEB / SNMP v1, v2c		
<b>Standard</b>		IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3z Gigabit 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		
<b>Stability</b>		IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)		

**ORDERING INFORMATION**

<b>IGT-902T</b>	10/100/1000Base-T to 1000Base-SX Managed Industrial Gigabit Converter (-30~75 Degree C)
<b>IGT-902TS</b>	10/100/1000Base-T to 1000Base-LX Managed IndustrialGigabit Converter (SM) (-30~75 Degree C)
<b>IGT-905A</b>	10/100/1000Base-T to mini-GBIC Industrial Managed Media Converter (LC,MM/SM)-distance depend on SFP module (-30~75 Degree C)

**AVAILABLE MINI-GBIC MODULES FOR IGT-905A**

<b>MGB-GT</b>	SFP-Port 1000Base-T mini-GBIC module
<b>MGB-SX</b>	SFP-Port 1000Base-SX mini-GBIC module
<b>MGB-LX</b>	SFP-Port 1000Base-LX mini-GBIC module
<b>MGB-L30</b>	SFP-Port 1000Base-LX mini-GBIC module -30KM
<b>MGB-L50</b>	SFP-Port 1000Base-LX mini-GBIC module -50KM
<b>MGB-L70</b>	SFP-Port 1000Base-LX mini-GBIC module -70KM
<b>MGB-L120</b>	SFP-Port 1000Base-LX mini-GBIC module -120KM
<b>MGB-LA10</b>	SFP-Port 1000Base-LX mini-GBIC module- LC WDM(TX:1310nm), SM,10km
<b>MGB-LB10</b>	SFP-Port 1000Base-LX mini-GBIC module- LC WDM(TX:1550nm), SM,10km
<b>MGB-LA20</b>	SFP-Port 1000Base-LX mini-GBIC module- LC WDM(TX:1310nm), SM,20km
<b>MGB-LB20</b>	SFP-Port 1000Base-LX mini-GBIC module- LC WDM(TX:1550nm), SM,20km
<b>MGB-LA40</b>	SFP-Port 1000Base-LX mini-GBIC module- LC WDM(TX:1310nm), SM,40km
<b>MGB-LB40</b>	SFP-Port 1000Base-LX mini-GBIC module- LC WDM(TX:1550nm), SM,40km