

# Industrial 10/100/1000BASE-T to 100/1000BASE-X SFP Media Converter



## *Flexible, Reliable and Industrial-grade Network Distance Extension Solution*

PLANET IGT-805AT is an Industrial Gigabit Media Converter providing non-blocking wire-speed performance and great flexibility for Gigabit Ethernet extension in harsh industrial environment. It is equipped with one 10/100/1000BASE-T RJ45 copper and one 100/1000BASE-X SFP fiber optic interface delivered in an IP30 rugged strong case with redundant power system. The IGT-805AT is well suited for applications in deploying surveillance system, and securing control and wireless service in climatically demanding environments with wide temperature range from -40 to 75 degrees C. With 9K jumbo frame feature support, the IGT-805AT can handle extremely large amounts of data transmission in a secure topology linking to a backbone or high-power servers.

## *Fiber-Optic Link Capability Enables Extension of Network Deployment*

The SFP slot of the IGT-805AT is compatible with 100BASE-FX and 1000BASE-SX / LX / WDM through SFP (Small Form Factor Pluggable) fiber-optic transceivers. The fiber optic uplink capability guarantees the throughput to all nodes hooked into the network and the Gigabit Ethernet distance can be extended from 550 meters (multi-mode fiber cable) to 10/20/30/40/50/60/70/120 kilometers (single-mode fiber cable), and also the Fast Ethernet distance can be extended from 2km (multi-mode fiber cable) to 20/40/60 kilometers (single-mode fiber cable). It is the ideal product for applications within the factory data centers and distributions.

## Physical Port

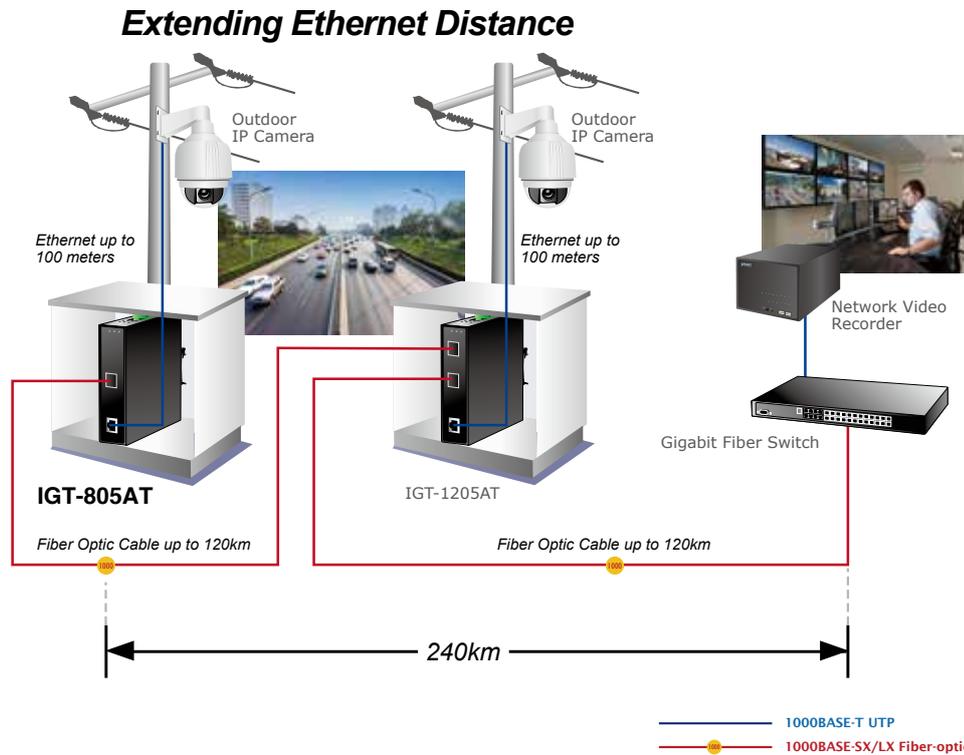
- 1-port 10/100/1000BASE-T RJ45 with auto MDI / MDI-X function
- 1 SFP interface, 100/1000BASE-X dual mode (auto detection)

## Layer 2 Features

- IEEE 802.3 / 802.3u / 802.3ab / 802.3z Ethernet standard compliant
- Supports auto-negotiation and 10/100Mbps half / full duplex and 1000Mbps full duplex mode
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- 9K jumbo frame size support■
- LFP function support
- Automatic address learning and address aging

## Industrial Case / Installation

- Slim-type IP30 metal case
- DIN rail and wall-mount design
- Redundant power design
  - 12 to 48V DC, redundant power with polarity reverse protect function
  - AC 24V power adapter acceptable
- Supports EFT protection for 6000 VDC for power line
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature



#### Enhanced Smart Management Features

The IGT-805AT provides auto MDI/MDI-X on its TP port and built-in Link Fault Pass-through function (LFP). The LFP function includes Link Loss Carry Forward (LLCF) and Link Loss Return (LLR), both of which can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the net. LLCF means when a device connected to the converter and the TP line loses the link, the converter's fiber port will disconnect the link of transmission. LLR means when a device connected to the converter and the fiber line loses the link, the converter's fiber port will disconnect the link of transmission. Therefore, the IGT-805AT greatly supports the administrators to manage the network efficiently.

#### Environmentally Hardened Design

The IGT-805AT is equipped with the slim-type IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IGT-805AT provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curbside traffic control cabinets. Being able to operate under the temperature range from -40 to 75 degrees C, the IGT-805AT can be placed in almost any difficult environment. The IGT-805AT also allows either DIN rail or wall mounting for efficient use of cabinet space.

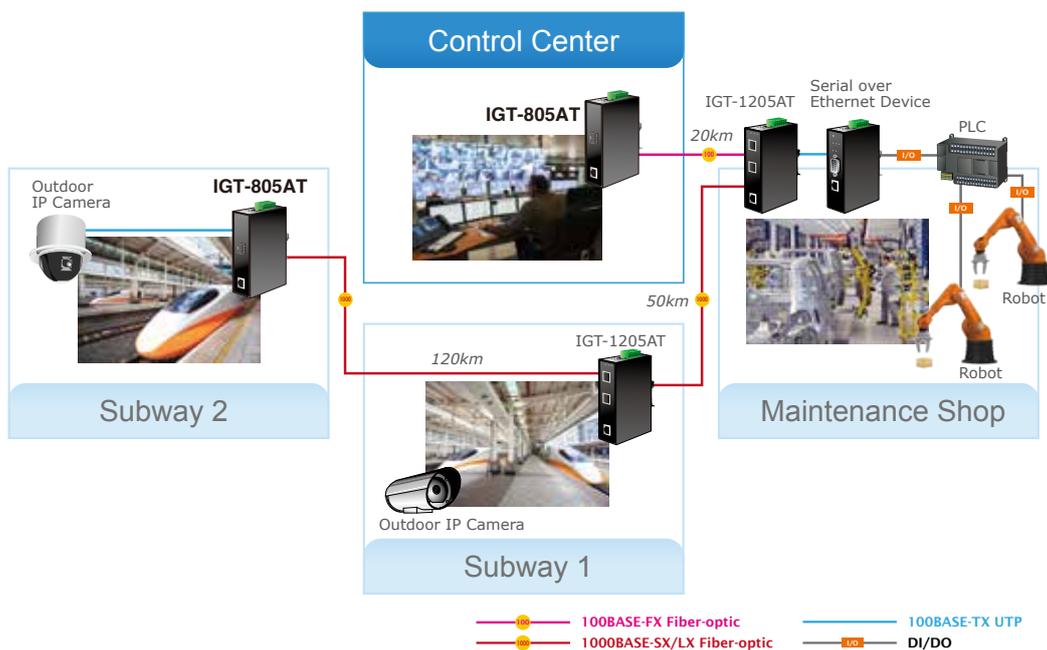
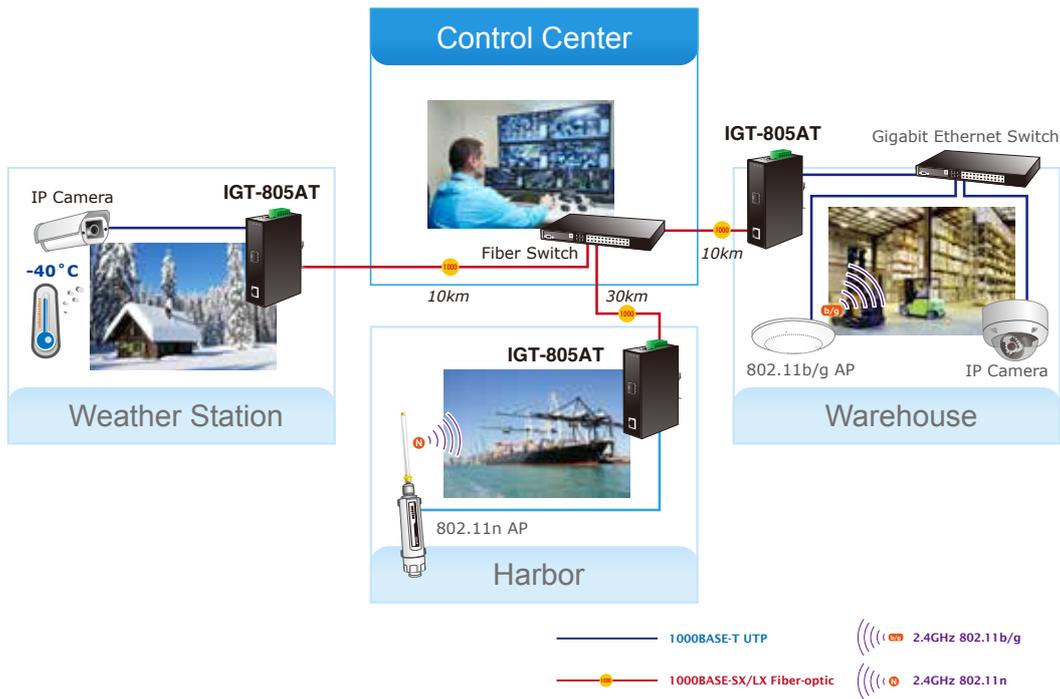
#### Convenient and Reliable Power System

To enhance the operation reliability and flexibility, the IGT-805AT is equipped with two DC power input connectors for redundant power supply installation. It also possesses an integrated power supply source with wide-ranging voltages (12 to 48V DC or 24V AC) for worldwide high availability applications requiring dual or backup power inputs.

## Applications

### Hardened Environment Application

PLANET IGT-805AT Industrial Gigabit Media Converter offers full port Gigabit speed. It provides very high reliability and security features to make sure the continuous operation in harsh environments such as transportations, factories, outdoors and places where extremely low or high temperatures can be experienced. Moreover, the IGT-805AT is also compatible with 100Mbps and 1000Mbps SFP transceivers to provide a strong, stable and long-distance connection and flexible industrial networking deployment.



## Specifications

Model	IGT-805AT
<b>Hardware Specifications</b>	
Copper Interface	1 x 10/100/1000BASE-T RJ45 TP Auto-MDI/MDI-X, auto-negotiation
Fiber Optic Interface	1 1000BASE-SX/LX/BX SFP interface. Compatible with 100BASE-FX SFP
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1, Pin 3/4 for fault alarm, Pin 5/6 for Power 2
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A @ DC 24V
LED	3 x LED for System and Power: – Green: DC Power 1 – Green: DC Power 2 – Green: Power Fault 2 x LED for Per Copper Port: – Green: LNK/ACT – Green:1000 1 x LED for Per Mini-GBIC Interface – Green: LNK/ACT
ESD Protection	6KV DC
EFT Protection	6KV DC
Enclosure	IP30 type metal case
Installation	DIN rail kit and wall mount ear
Dimensions (W x D x H)	135 x 87 x 32 mm
Weight	458g
Power Requirements	DC 12~48V, redundant power with polarity reverse protection function. AC 24V power adapter
Power Consumption / Dissipation	3.3 watts/11BTU
<b>Converter Specifications</b>	
Flow Control	Back pressure for half duplex. IEEE 802.3x pause frame for full duplex
Fabric	4Gbps
Throughput (packet per second)	2.97Mpps@64bytes
Maximum Transmission Unit	9216 bytes
Network Cables	<b>10/100/1000BASE-T:</b> Cat3, 4, 5, 5e, 6 UTP cable (100 meters, max.) EIA/TIA-568 100-ohm STP (100 meters, max.) <b>1000BASE-SX :</b> 50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 550m (varying on SFP module) <b>1000BASE-LX :</b> 9/125µm single-mode fiber optic cable, up to 10/20/30/40/50/60/70/120 kilometers (varying on SFP module) <b>100BASE-FX :</b> 50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 2 kilometers (varying on SFP module) 9/125µm single-mode fiber optic cable, up to 20/40/60 kilometers (varying on SFP module)
<b>Standards Conformance</b>	
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet IEEE 802.3x full-duplex flow control
Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)
<b>Environment</b>	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)

## Ordering Information

IGT-805AT	Industrial 10/100/1000BASE-T to 100/1000BASE-X SFP Media Converter
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## Related Products

IGS-10080MFT	Industrial 8 100/1000X SFP + 2-Port 10/100/1000T Managed Switch (-40~75 degrees C)
IGTP-80xT Series	1000BASE-SX / LX to 10/100/1000BASE-T 802.3at PoE Industrial Media Converter
MGB-Series Transceiver	1000BASE-SX/LX SFP Transceiver

## Available Gigabit SFP Modules for IGT-805AT

MGB-GT	SFP-Port 1000BASE-T Module
MGB-SX	SFP-Port 1000BASE-SX mini-GBIC module - 220/550m
MGB-LX	SFP-Port 1000BASE-LX mini-GBIC module - 10km
MGB-L30	SFP-Port 1000BASE-LX mini-GBIC module - 30km
MGB-L50	SFP-Port 1000BASE-LX mini-GBIC module - 50km
MGB-L70	SFP-Port 1000BASE-LX mini-GBIC module - 70km
MGB-L120	SFP-Port 1000BASE-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000BASE-LX (WDM,TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000BASE-LX (WDM,TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000BASE-LX (WDM,TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000BASE-LX (WDM,TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000BASE-LX (WDM,TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000BASE-LX (WDM,TX:1550nm) mini-GBIC module - 40km

## Available Fast Ethernet SFP Modules for IGT-805AT

MFB-FX	SFP-Port 100BASE-FX Transceiver (1310nm) - 2km
MFB-F20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km
MFB-F40	SFP-Port 100BASE-FX Transceiver (1310nm) - 40km
MFB-F60	SFP-Port 100BASE-FX Transceiver (1310nm) - 60km
MFB-FA20	SFP-Port 100BASE-BX Transceiver (WDM,TX:1310nm) - 20km
MFB-FB20	SFP-Port 100BASE-BX Transceiver (WDM,TX:1550nm) - 20km