

# Industrial 10/100/1000T to 2-port 100/1000X SFP Media Converter



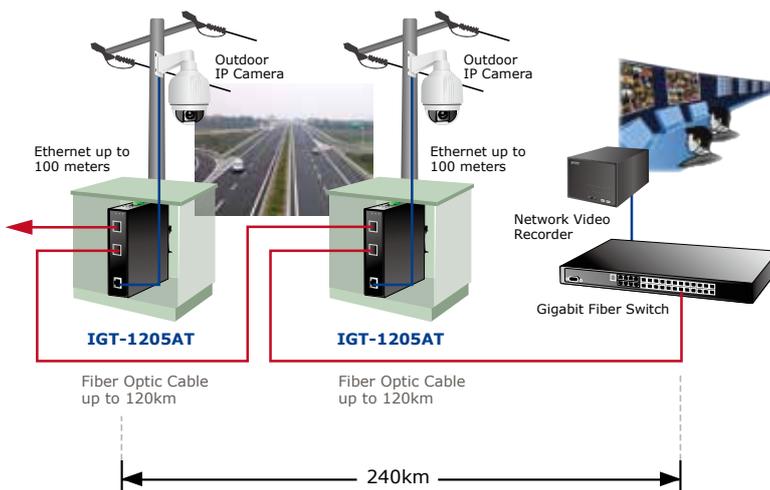
### Flexible, Reliable and Industrial-grade Network Distance Extension Solution

PLANET IGT-1205AT 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 RJ-45 copper and two 100/1000Base-X SFP fiber optic interfaces delivered in an IP30 rugged strong case with redundant power system. The IGT-1205AT 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.

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

The two SFP slots are compatible with 100Base-FX or 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) up to 10/20/30/40/50/70/120 kilometers (Single-mode fiber cable), and also the Fast Ethernet distance can be extended from 2km (Multi-mode fiber cable) up to 20/40/60 kilometers (Single-mode fiber cable). They are well suited for applications within the factory data centers and distributions.

### Extending Ethernet Distance



### Physical Port

- 1-port 10/100/1000Base-T RJ-45 with auto MDI / MDI-X function
- 2-port SFP slot interface, SFP supports 1000Base-X and 100Base-FX transceiver via DIP switch configured

### Fiber Port Redundancy

- Link status auto-detect and redundant on dual ports with the same connector type
- Only Primary-Port is active at a time, the Backup-Port is blocked
- When Primary-Port link failure occurs, the traffic will swap to Backup-Port automatically.
- Once the Primary-Port status is back to link-up, the traffic will swap from Backup-Port to Primary-Port

### Layer 2 Features

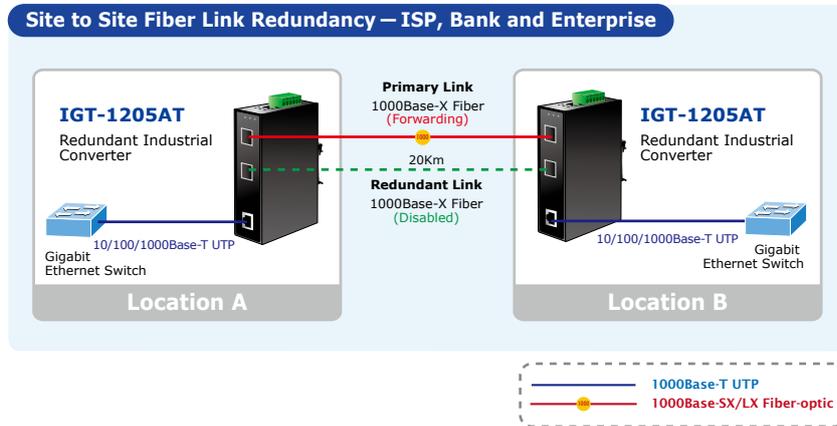
- Supports auto negotiation and 10/100Mbps half / full duplex and 1000Mbps full duplex mode
- High performance Store and Forward architecture, runt/ CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- 9K Jumbo Frame Size support
- Integrated address look-up engine, support 1K absolute MAC addresses
- Automatic address learning and address aging

### Industrial Case / Installation

- Slim IP30 metal case protection
- 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 6000 VDC for power line
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

**Adjustable 3-Port Switch Mode or 2 Fiber Redundant Mode**

Via the built-in DIP switch, the two SFP fiber interfaces of the IGT-1205AT can be configured as Ethernet switch mode or Fiber Redundant mode. With the Ethernet switch mode, it can operate in Store-and-Forward mechanism with high performance; with the 2-port Fiber redundant mode, it provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant mode supports auto-recovering function. If the destination port of a packet is link-down, it will forward the packet to the other port of the backup pair.



**Environmentally Hardened Design**

The IGT-1205AT is equipped with the slim-type IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IGT-1205AT provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb side traffic control cabinets. Being able to operate under the temperature range from -40 to 75 degrees C, the IGT-1205AT can be placed in almost any difficult environment. The IGT-1205AT also allows either DIN rail or wall mounting for efficient use of cabinet space.

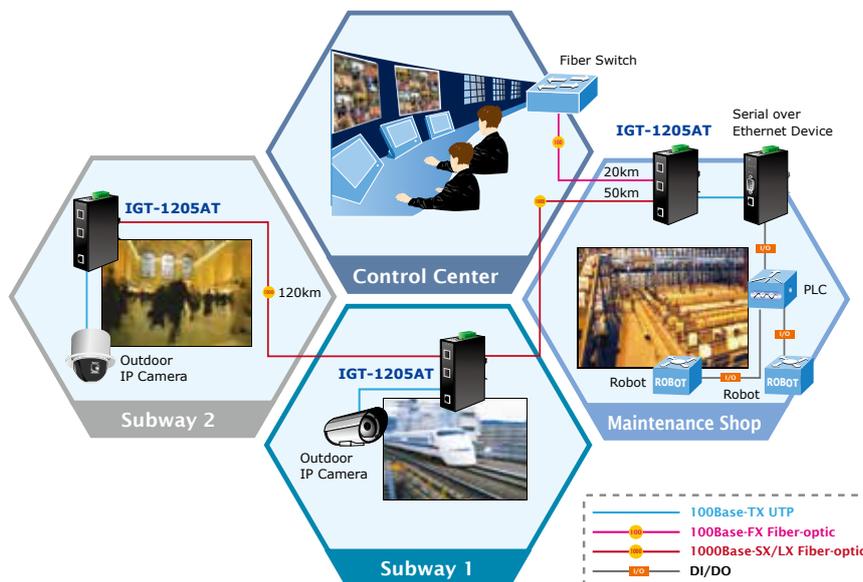
**Convenient and Reliable Power System**

To enhance the operation reliability and flexibility, the IGT-1205AT 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

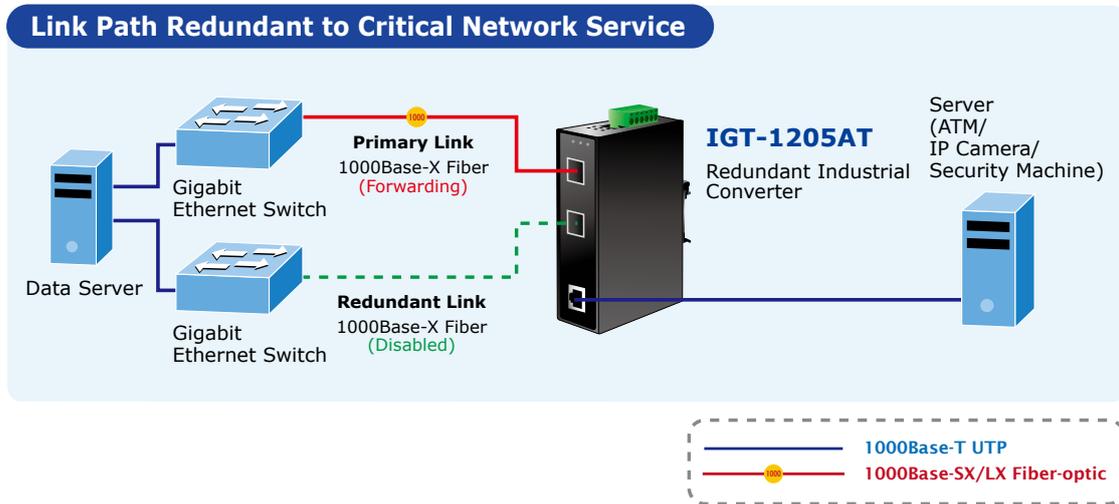
**Hardened Environment Application**

PLANET IGT-1205AT 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 control cabinet of transportation, factory, outdoors and places where extreme low or high temperatures can be experienced. Moreover, the IGT-1205AT is also compatible with 100Mbps and 1000Mbps SFP transceivers to provide a strong, stable and long-distance connection and flexible industrial networking deployment.



**Redundancy Application**

The IGT-1205AT industrial Gigabit Media Converter provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant-mode supports auto-recover function. If the destination port of a packet is link-down, it forwards the packet to the other port of the backup pair.



## Product Specifications

Model	IGT-1205AT
<b>Hardware Specifications</b>	
Copper Ports	1 x 10/100/1000Base-T RJ-45 TP Auto-MDI/MDI-X, Auto-Negotiation
SFP / mini-GBIC Slots	2 1000Base-SX/LX/BX SFP interfaces (Port-1 and Port-2) Compatible with 100Base-FX SFP
DIP Switch	<ul style="list-style-type: none"> <li>▪ DIP-1: SFP Port 1 1000Base-X (default) / 100Base-FX</li> <li>▪ DIP-2: SFP Port 2 1000Base-X (default) / 100Base-FX</li> <li>▪ DIP-3: Switch mode / Fiber Redundant mode</li> </ul>
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: <ul style="list-style-type: none"> <li>▪ Green: DC Power 1</li> <li>▪ Green: DC Power 2</li> <li>▪ Green: Power Fault</li> </ul> 2 x LED for Per Copper Port: <ul style="list-style-type: none"> <li>▪ Green:1000 LNK/ACT</li> <li>▪ Orange:100 LNK/ACT</li> </ul> 1 x LED for Per mini-GBIC interface (Port-1 and Port-2) <ul style="list-style-type: none"> <li>▪ Green: LNK/ACT</li> </ul>
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 32mm
Weight	505g
Power Requirements	DC 12~48V or AC 24V Redundant power with polarity reverses protection function
Power Consumption / Dissipation	4.8 watts/16BTU

Cable	<p><b>Twisted-Pair</b>            10Base-T: 2-Pair UTP CAT. 3, 4, 5, up to 100 meters            100Base-TX: 2-Pair UTP CAT. 5, 5e up to 100 meters            1000Base-T: 4-Pair UTP CAT. 5e, 6 up to 100 meters</p> <p><b>Fiber-Optic Cable</b>            1000Base-SX:            50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 550m            1000Base-LX:            9/125µm single-mode fiber optic cable, up to 10/20/30/40/50/70/120 kilometers (vary on SFP module)            100Base-FX:            ▪ 50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 2 kilometers            ▪ 9/125µm single-mode fiber optic cable, up to 20/40/60 kilometers (vary on SFP module)</p>
<b>Switch Specifications</b>	
Switch Processing Scheme	Store-and-Forward
Address Table	1K entries
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Switch fabric	6Gbps
Throughput (packet per second)	4.46Mpps@64bytes
Maximum Transmit Unit	9216 bytes
Speed	SX/LX: 2000Mbps (full-duplex) FX: 200Mbps (full-duplex) TP: 10/20Mbps, 100/200Mbps, 2000Mbps
<b>Switch Specifications</b>	
Standards Compliance	IEEE 802.3 Ethernet / 10Base-T IEEE 802.3u Fast Ethernet / 100Base-TX IEEE 802.3ab Gigabit Ethernet / 1000Base-T IEEE 802.3z Gigabit Ethernet / 1000Base-SX/LX 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)
<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-1205AT	Industrial 10/100/1000T to 2-port 100/1000X SFP Media Converter
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## Related Products

MFB-Series Transceiver	100Base-FX SFP Transceiver
MGB-Series Transceiver	1000Base-SX/LX SFP Transceiver