Industrial Compact 2-Port 10/100/1000BASE-T to 2-Port 100/1000BASE-X SFP Media Converter

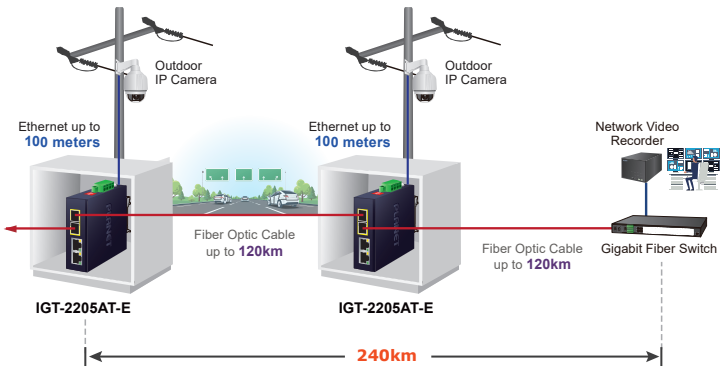
Flexible, Reliable and Industrial-grade Network Distance Extension Solution

PLANET IGT-2205AT-E is an industrial-grade Gigabit media converter that provides non-blocking wire-speed performance and high flexibility for extending Gigabit Ethernet in harsh industrial environments. It is equipped with **two 10/100/1000BASE-T RJ45** copper ports and **two 100/1000BASE-X SFP** fiber optic interfaces, enclosed in a rugged IP40-rated case with a redundant power system. The IGT-2205AT-E is ideal for applications such as surveillance deployment, industrial control, and wireless service in environments with extreme temperatures ranging from **-40 to 75 degrees C**.

Fiber-Optic Link Capability Enables Extension of Network Deployment

The two SFP slots are compatible with **100BASE-FX and 1000BASE-X** fiber-optic transceivers. The robust fiber uplink capability ensures stable throughput for all connected network nodes. Gigabit Ethernet transmission can be extended up to **300 meters** over **multi-mode fiber** and up to **10/20/30/40/50/70 kilometers over single-mode** fiber. Fast Ethernet can be extended up to 2 kilometers with multi-mode fiber or up to 20/40/60 kilometers with single-mode fiber. This makes it well-suited for use in factory data centers and distribution networks.

Extending Ethernet Distance



Physical Port

- 2-port 10/100/1000BASE-T RJ45 with auto MDI / MDI-X function
- 2-port SFP, supporting 100/1000BASE-X transceiver type auto detection

Fiber Port Redundancy (This function is only enabled when DIP Switch 1 is set to ON)

- Only primary port is active at a time, while the backup port is blocked.
- When primary port link failure occurs, the traffic will swap to back up 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
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- 10K jumbo frame size support
- Integrated address look-up engine, supporting 8K absolute MAC addresses
- Automatic address learning and address aging

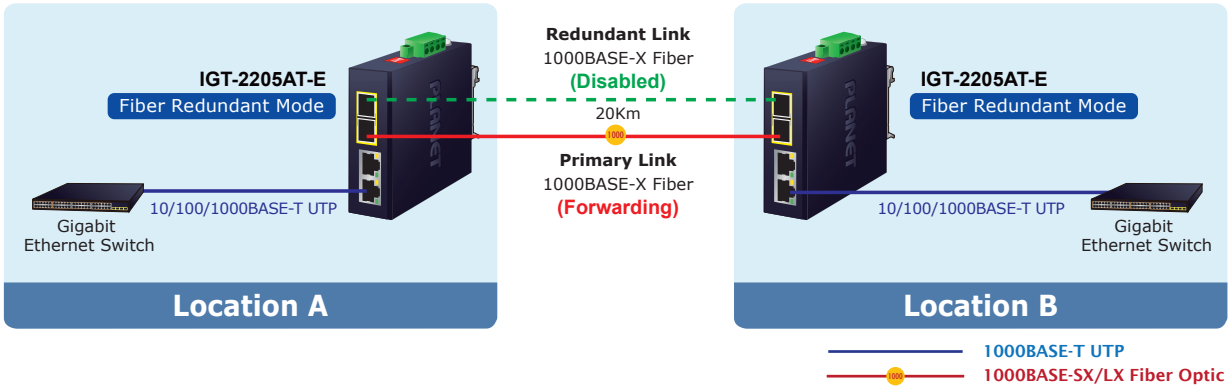
Industrial Case and Installation

- Slim IP40 metal case protection
- DIN-rail, side wall-mount design for redundant power design
- Redundant Power Design
  - 12 to 58V DC, redundant power with reverse polarity protection function
- Supports 4000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Adjustable 4-port Switch Mode or 2-port Fiber Redundant Mode

Via the built-in DIP switch, the two SFP fiber interfaces of the IGT-2205AT-E 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.

Site to Site Fiber Link Redundancy — ISP, Bank and Enterprise



Environmentally Hardened Design

The IGT-2205AT-E is equipped with a slim-type IP40-rated metal case for easy deployment in demanding industrial environments. With IP40 industrial-grade protection, the IGT-2205AT-E provides a high level of immunity against electromagnetic interference and heavy electrical surges typically found on plant floors or in curbside traffic control cabinets. Capable of operating in a wide temperature range from -40 to 75 degrees C, the IGT-2205AT-E can be installed in almost any harsh environment. It also supports both DIN rail and wall mounting, allowing for efficient use of cabinet space.

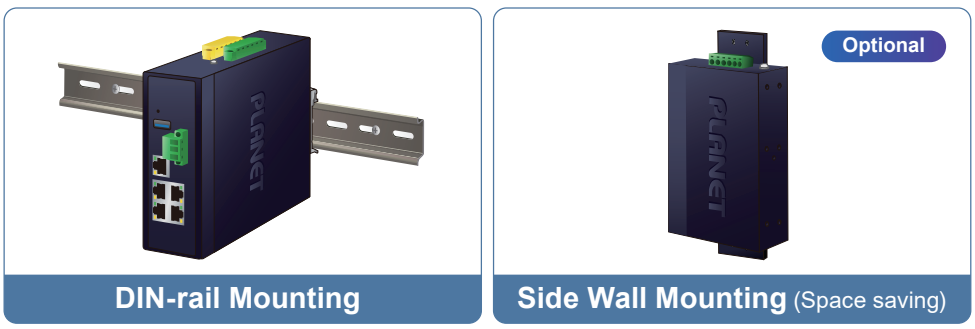
Convenient and Reliable Power System

To enhance operational reliability and flexibility, the IGT-2205AT-E is equipped with two DC power input connectors for redundant power installation. It supports a wide input voltage range from 12 to 58V DC, making it suitable for global high-availability applications requiring dual or backup power inputs.

Flexible and Easy Installation with Limited Space

The compact-sized IGT-2205AT-E is specially designed for installation in narrow spaces such as wall enclosures. It can be mounted via wall mounting or DIN rail, offering greater flexibility and ease of installation in space-constrained environments.

Installation method

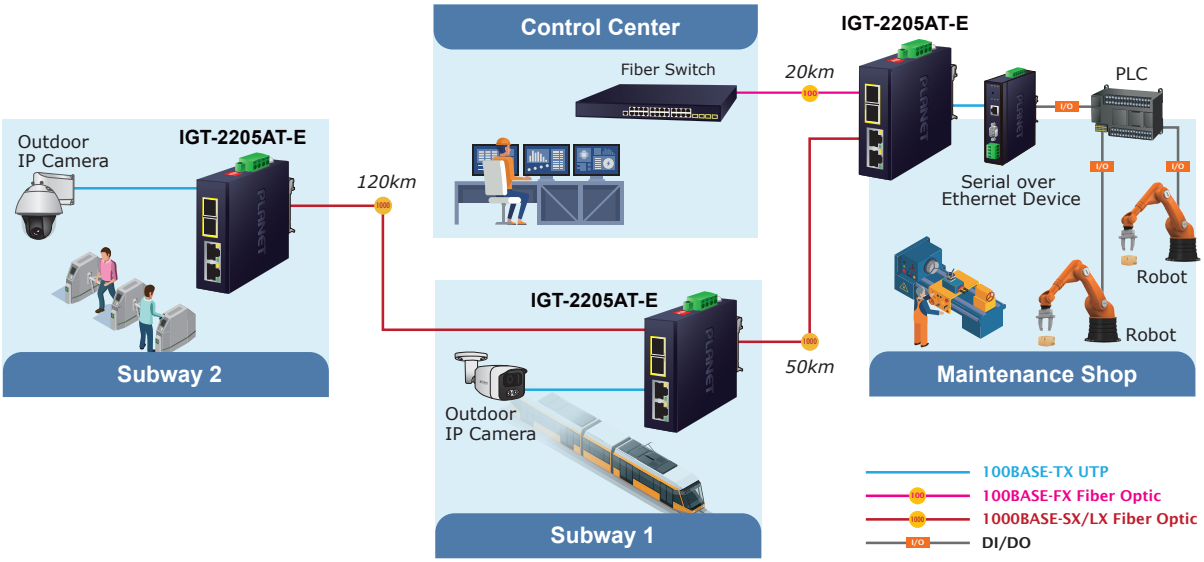


* The above pictures are for illustration only.

Applications

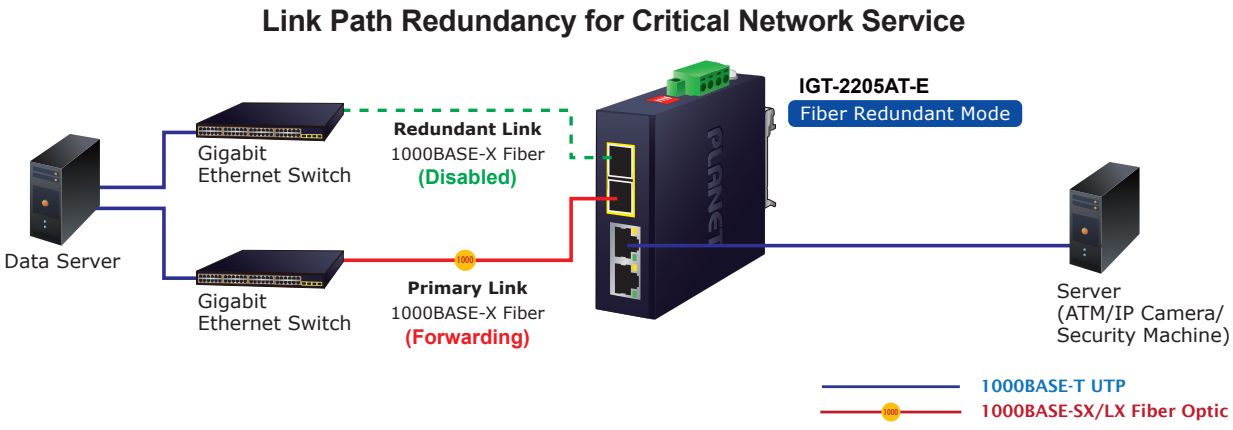
Hardened Environment Application

PLANET IGT-2205AT-E Industrial Gigabit Media Converter offers full-port Gigabit transmission speed. It is designed with high reliability and security to ensure continuous operation in harsh environments such as transportation control cabinets, factory floors, outdoor installations, and locations with extreme temperatures. In addition, the IGT-2205AT-E is compatible with 100/1000Mbps SFP transceivers to provide a stable, long-distance connection and flexible industrial networking deployment.



Redundancy Application

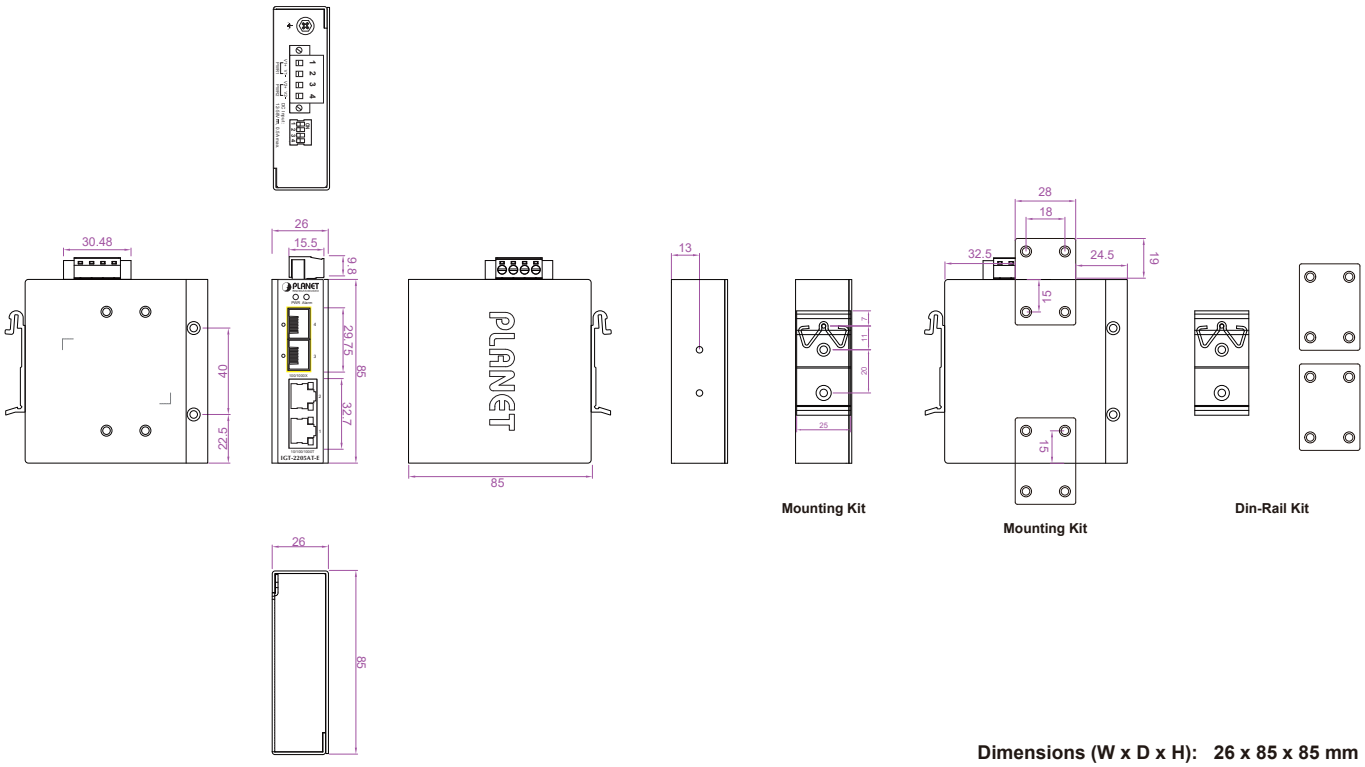
The IGT-2205AT-E Industrial Gigabit Media Converter supports rapid fiber link redundancy for mission-critical Ethernet applications. The redundant mode features an auto-recovery function—when the destination port of a packet is link-down, the converter will automatically forward the packet to the backup port, ensuring uninterrupted communication.



Product Specifications

Model	IGT-2205AT-E			
Hardware Specifications				
Copper Port	2 x 10/100/1000BASE-T RJ45 TP Auto-MDI/MDI-X, auto-negotiation			
SFP / mini-GBIC Slots	2 x 100/1000BASE-X SFP interfaces Supports auto detection			
DIP Switch	**DIP**	**Function**	**ON**	**OFF**
	1	Fiber Redundancy	Port 3 and Port 4 are both linked; only Port 3 transmits data. If Port 3 fails, traffic will switch to Port 4.	Port 3 and Port 4 are both linked and can transmit data simultaneously.
	2	Flow Control	Pauses transmission when receiver is busy to reduce packet loss	No flow control; data sends continuously, may lose packets
	3	Broadcast Storm Restraint	Limits broadcast traffic to prevent network overload.	No limit; broadcasts may cause network congestion.
	4	Fiber Port Speed Selection	Can link and transmit data at both 100/1000 Mbps.	Can only link and transmit data at 1000 Mbps.
Connector	Removable 4-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for Power 2			
LED	System and Power: ■ Green: Power 1 ■ Red: Alarm Per Copper Port (Port-1~ Port-2): ■ Green: Port LNK/ACT ■ Amber:1G LNK SFP interface (Port-3~ Port-4) ■ Green: 1G LNK/ACT			
ESD Protection	4KV DC			
Enclosure	IP40 type metal case			
Installation	DIN-rail kit (Side wall mount is an optional accessory)			
Dimensions (W x D x H)	26 x 85 x 85mm			
Weight	294g			
Power Requirements	DC 12~58V Redundant power with reverse polarity protection			
Power Consumption / Dissipation	Max. 0.58 watts/1.98 BTU (Power on without any connection) Max. 3.5 watts/11.94 BTU (Ethernet full loading)			
Switch Specification				
Switch Processing Scheme	Store-and-Forward			
Address Table	8K entries			
Maximum Transmit Unit	10K bytes			
Switch fabric	8Gbps			
Throughput (packet per second)	11.9Mpps@64bytes			
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex			
Standards Conformance				
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX IEEE 802.3x Full-Duplex Flow Control IEEE 802.3az Energy Efficient Ethernet			
Regulatory Compliance	FCC Part 15 Class A, CE			
Stability Testing	IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)			
Environment				
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C			
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)			

Dimensions



Dimensions (W x D x H): 26 x 85 x 85 mm

Ordering Information

IGT-2205AT-E	Industrial Compact 2-Port 10/100/1000BASE-T to 2-Port 100/1000BASE-X SFP Media Converter

Related Product

IGT-900-2T2S	Industrial 2-Port 10/100/1000T + 2-Port 100/1000/2500X SFP Managed Media Converter
IGT-900-1T1S	Industrial 1-Port 10/100/1000T + 1-Port 100/1000/2500X SFP Managed Media Converter
IGT-2205AT	Industrial 2-port 10/100/1000T to 2-port 100/1000/2500X SFP Media Converter
IGT-1205AT	Industrial 1-port 10/100/1000T to 2-port 100/1000/2500X SFP Media Converter
IGT-805AT	Industrial 10/100/1000BASE-T to 100/1000BASE-X SFP Media Converter
IGT-815AT	Industrial Compact 100/1000BASE-X to 10/100/1000BASE-T Media Converter

PLANET Technology Corporation

11F., No.96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)

Tel: 886-2-2219-9518 Fax: 886-2-2219-9528

Email: sales@planet.com.tw www.planet.com.tw