

Compact Industrial 2-Port 100/1000X SFP to 2-Port 10/100/1000T 802.3at PoE+ Media Converter



Ruggedly Built for Harsh Environments

PLANET IGTP-2205AT is the smallest, industrial-grade Gigabit PoE+ Media Converter, featuring **two 100/1000BASE-X SFP fiber ports** and **two 10/100/1000BASE-T 802.3at PoE+ copper ports** in an IP30-rated rugged but compact-size case. Being able to operate under the temperature ranging from -40 to 75 degrees C, the IGTP-2205AT provides reliable, stable and continuous long-range data transmission and can be installed in any harsh environment without taking space into consideration.

As the trend for an IIoT (Industrial Internet of Things) infrastructure continues to grow, the IGTP-2205AT is designed to simplify industrial network deployment with its Plug and Play feature. Besides offering stable and reliable fast data and power transmission, it also aligns with the AIoT (Artificial Intelligence of Things) concept by enabling seamless integration of intelligent systems. This allows the collection and analysis of valuable data, empowering real-time decision-making and enhancing operational efficiency across various industrial applications.

IEEE 802.3at PoE Plus

Complying with the **IEEE 802.3at Power over Ethernet Plus (PoE+)** standard, the IGTP-2205AT forwards Gigabit speed Ethernet data transmission and provides a total **60-watt** power budget with a maximum of **30-watt** power output per port over an additional 100m UTP cable to an 802.3af/at PoE PD (powered device) installed in a remote area where sufficient and reliable power input is required. Users can easily upgrade their current networks without the need of software configuration.



Physical Port

- 2-port 10/100/1000BASE-T RJ45 with IEEE 802.3at PoE+ injector function
- Two SFP slots, supporting 1000BASE-X and 100BASE-FX transceiver dual mode

Power over Ethernet

- Complies with IEEE 802.3at PoE Plus end-span PSE.
- 2 IEEE 802.3at/af device powered
- Supports PoE Power up to 30 watts for PoE port.
- Provides DC 48~54V power over RJ45 Ethernet cable to PD with Ethernet port.
- Auto detects IEEE 802.3at/af equipment and protects devices from being damaged by incorrect installation.
- Remote power feeding up to 100m
- IEEE 802.3at/af PoE splitter devices compatible

Layer 2 Features

- Supports auto-negotiation and 10/100Mbps half/full duplex and 1000Mbps full duplex mode on RJ45 port.
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex).
- PROFINET Traffic Pass-through with QoS

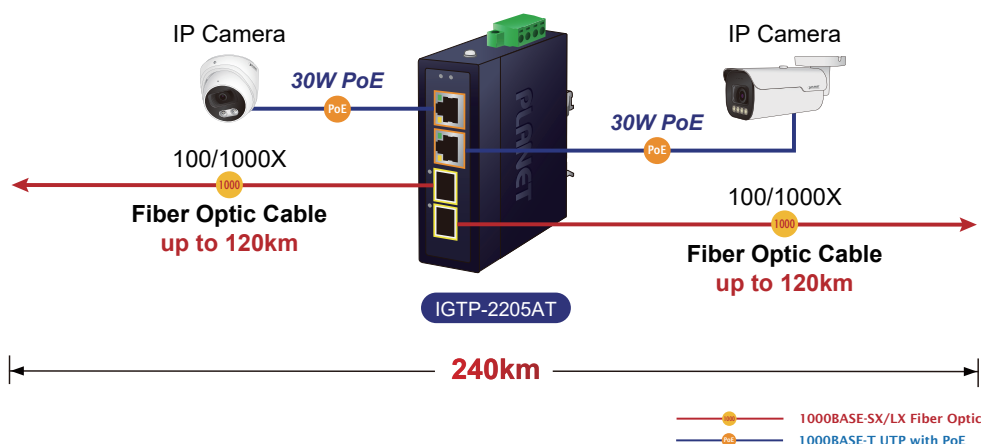
Industrial Case and Installation

- IP30 metal case
- DIN-rail and wall-mount designs
- 48V~54V DC power with reverse polarity protection
- Connective removable terminal block
- Supports 6000 VDC Ethernet ESD protection.
- -40 to 75 degrees C operating temperature
- Free fall, shock-proof and vibration-proof for industries

Fiber-optic Link Capability Extends the Range of Network Deployment

The maximum distance between a PoE PSE (power sourcing equipment) and a PD via Ethernet UTP cable is 100 meters. To flexibly extend the PoE deployment range, the IGTP-2205AT's SFP slot supporting 100BASE-FX/1000BASE-X, SFP modules, and more can reach a transmission distance of up to 120km or 240km with Daisy-Chain topology.

Daisy-Chain Fiber Media Converter with PoE+



Dual Power Input for High Availability Network System

The IGTP-2205AT features a strong dual power input system with wide-ranging voltages (48V~54V DC) incorporated into customer's automation network to enhance system reliability and uptime. In the example below, when Power Supply 1 fails to work, the hardware failover function will be activated automatically to keep powering the IGTP-2205AT via Power Supply 2 without any break of operation.

Environmentally Hardened Design

The IGTP-2205AT is specifically designed with durable components and strong housing case to operate reliably in electrically harsh and climatically demanding environments like plant floors or curbside traffic control cabinets. With wide operating temperature range of -40 to 75 degrees C, the IGTP-2205AT is ideal for service providers, campuses and public areas to deploy outdoor PoE wireless access points, outdoor IP cameras or IP phones in any places easily and efficiently.

Robust Protection

The IGTP-2205AT provides contact discharge of $\pm 6\text{KV}$ DC and air discharge of $\pm 8\text{KV}$ DC for Ethernet ESD protection. It also supports $\pm 6\text{KV}$ surge immunity to improve product stability and protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

Flexible and Easy Installation with Limited Space

The compact sized IGTP-2205AT is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN rail, thereby making its usability more flexible and easies in any space-limited location.



DIN-rail Mounting



Wall Mounting



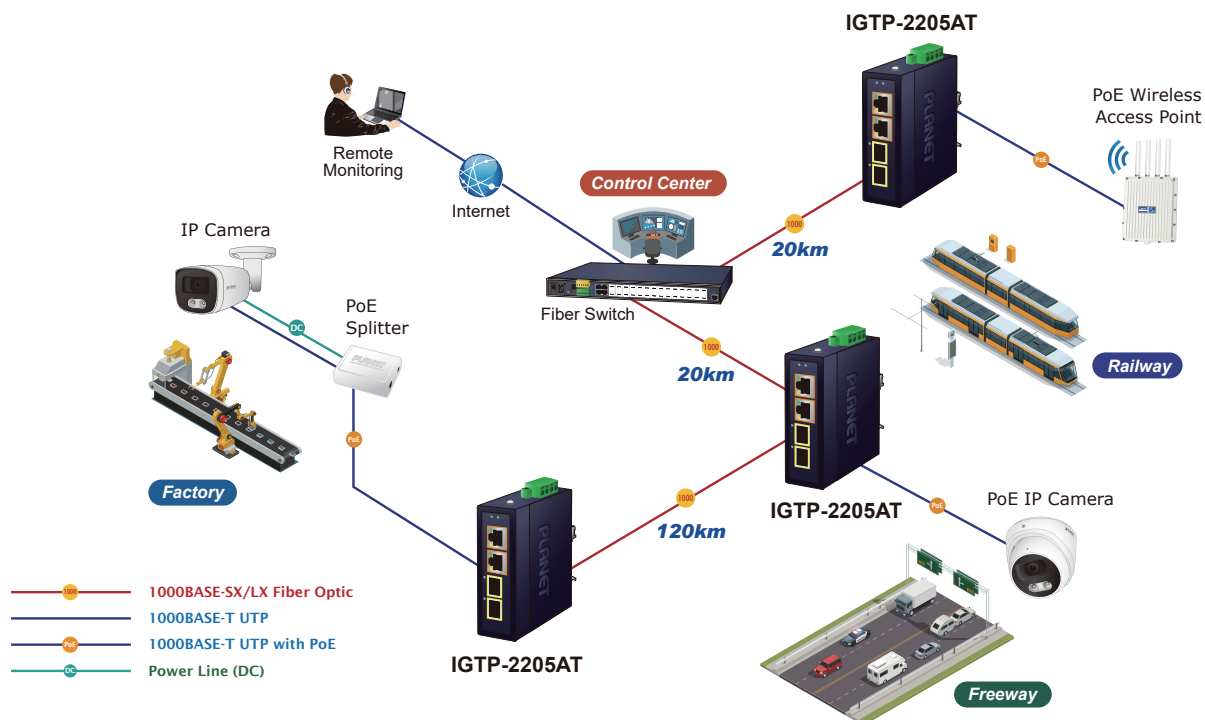
Side Wall Mounting
(Space saving)

Applications

Flexible and User-friendly PoE Deployment with Gigabit Fiber Extension

For the places difficult to find the power outlet, the IGTP-2205AT provides the easiest way to power network equipment such as PTZ (Pan, Tilt & Zoom) IP cameras, speed dome IP cameras, color touch-screen VoIP telephones, multi-channel (IEEE 802.11a/b/g/n/ac) wireless LAN access points and other network devices that need higher power to function normally.

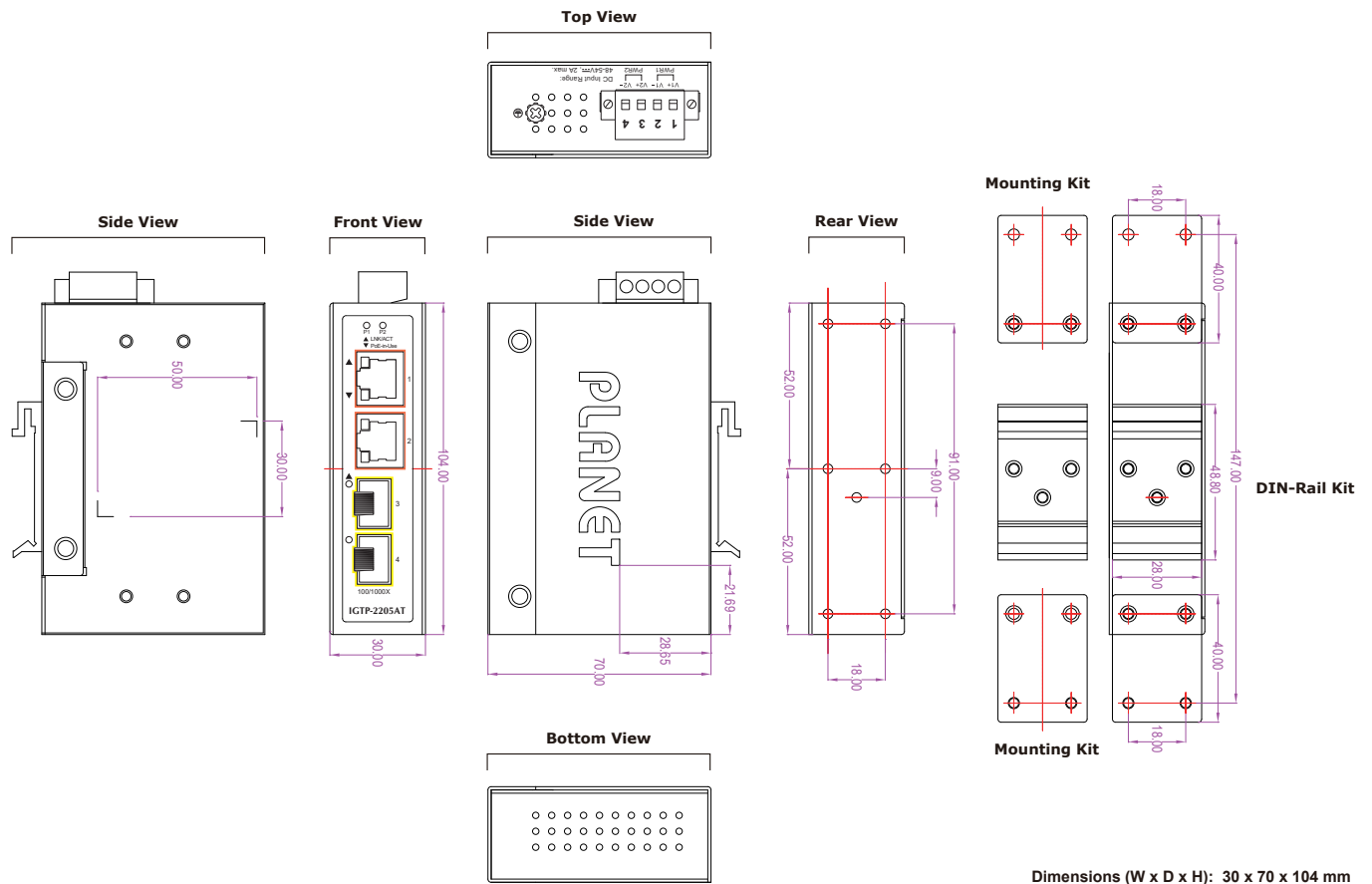
For instance, users can flexibly install security IP camera, wireless access point and other IEEE 802.3af/at compliant network equipment in the public areas such as stations, freeways, airports and campuses for surveillance and wireless roaming needs.



Product Specifications

Model	IGTP-2205AT
Hardware Specifications	
Copper Port	2 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports with PoE injector function
SFP Port	2 1000BASE-SX/LX/BX SFP interfaces Compatible with 100BASE-FX SFP
Flow Control	Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode
Maximum Frame Size	9K
LED	System: P1/P2 (Green) Fiber 100/1000BASE-X:LNK/ACT (Green) TP 10/100/1000BASE-T:LNK/ACT(Green) PoE: Power-in-use (Amber)
Dimensions (W x D x H)	30 x 70 x 104 mm
Weight	260 g
Power Requirements	DC 48~54V, redundant power with reverse polarity protection function (>51V DC for PoE+ output recommended)
Power Consumption	System ON without loading DC 48V: 1.44W/4.91BTU DC 54V: 1.62W/5.53BTU Full loading with PoE DC 48V:81.6W/ 278.43 BTU DC 54V:82.1W/ 280.14 BTU
Enclosure	IP30 metal case
Installation	DIN-rail kit and wall-mount kit
ESD Protection	6KV DC
Cables	10/100/1000BASE-T: 2-pair UTP Cat. 3, 4, 5, 5e, 6 (maximum 100 meters) EIA / TIA-568 100-ohm STP (maximum 100 meters) 100BASE-FX/1000BASE-SX/LX: Multi-mode: 50/125µm or 62.5/125µm optical fiber Single-mode: 9/125µm optical fiber
Power Over Ethernet	
PoE Standard	IEEE 802.3at Power over Ethernet Plus
PoE Power Output	48~54V DC: 30 watts per port
PoE Power Supply Type	End-span
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Budget	60 watts
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Protocols and Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet over Fiber Optic IEEE 802.3x Flow Control IEEE 802.3az Energy Efficient Ethernet (EEE) IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~85 degrees C
Humidity	Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing)

Dimensions



Ordering Information

IGTP-2205AT	Compact Industrial 2-Port 100/1000X SFP to 2-Port 10/100/1000T 802.3at PoE+ Media Converter
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Related Product

IGTP-815AT	Compact Industrial 100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Media Converter
IGTP-805AT	100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter (mini-GBIC, SFP)
IGTP-825AT	Industrial IP67 1000BASE-X SFP to 10/100/1000BASE-T 802.3at PoE+ Media Converter
IGTP-802T	1000BASE-SX to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter (SC,MM) -- 550m
IGTP-802TS	1000BASE-LX to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter (SC,SM) -- 20km
GTP-805A	100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE Media Converter (mini-GBIC, SFP)
IGUP-805AT	Industrial 1-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter
IGUP-1205AT	Industrial 2-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter
IGUP-2205AT	Industrial 2-Port 100/1000X SFP to 2-Port 10/100/1000T 802.3bt PoE++ Media Converter
MGB-Series Transceiver	1000BASE-SX/LX SFP Transceiver
MFB Series Transceiver	100BASE-FX SFP Transceiver

Available Fast Ethernet SFP Modules

Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MFB-TFX	100	LC	Multi-Mode	2km	1310nm	-40 ~ 85 degrees C
MFB-TF20	100	LC	Single Mode	20km	1310nm	-40 ~ 85 degrees C

Fast Ethernet Transceiver (100BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MFB-TFA20	100	WDM (LC)	Single Mode	20km	1310nm	1550nm	-40~85 degrees C
MFB-TFB20	100	WDM (LC)	Single Mode	20km	1550nm	1310nm	-40~85 degrees C
MFB-TFA40	100	WDM (LC)	Single Mode	40km	1310nm	1550nm	-40~85 degrees C
MFB-TFB40	100	WDM (LC)	Single Mode	40km	1550nm	1310nm	-40~85 degrees C
MFB-TSA	100	WDM (LC)	Multi- Mode	2km	1310nm	1550nm	-40~85 degrees C
MFB-TSB	100	WDM (LC)	Multi- Mode	2km	1550nm	1310nm	-40~85 degrees C

Available 1000Mbps Modules for IGTP-2205AT

Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-TGT	1000	Copper	--	100m	--	-40 ~ 85 degrees C
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 85 degrees C
MGB-TSX2	1000	LC	Multi Mode	2km	1310nm	-40 ~ 85 degrees C
MGB-TLX(V2)	1000	LC	Single Mode	20km	1310nm	-40 ~ 85 degrees C
MGB-TL30	1000	LC	Single Mode	30km	1310nm	-40 ~ 85 degrees C
MGB-TL40	1000	LC	Single Mode	40km	1310nm	-40 ~ 85 degrees C
MGB-TL70	1000	LC	Single Mode	70km	1550nm	-40 ~ 85 degrees C
MGB-TL80	1000	LC	Single Mode	80km	1550nm	-40 ~ 85 degrees C

Gigabit Ethernet Transceiver (1000BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-TSA	1000	WDM(LC)	Single Mode	2km	1310nm	1550nm	-40 ~ 85 degrees C
MGB-TSB	1000	WDM(LC)	Single Mode	2km	1550nm	1490nm	-40 ~ 85 degrees C
MGB-TLA10(V2)	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 85 degrees C
MGB-TLB10(V2)	1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	-40 ~ 85 degrees C
MGB-TLA20	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 85 degrees C
MGB-TLB20	1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 85 degrees C
MGB-TLA40	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 85 degrees C
MGB-TLB40	1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 85 degrees C
MGB-TLA60	1000	WDM(LC)	Single Mode	60km	1310nm	1550nm	-40 ~ 85 degrees C
MGB-TLB60	1000	WDM(LC)	Single Mode	60km	1550nm	1310nm	-40 ~ 85 degrees C
MGB-TLA80	1000	WDM(LC)	Single Mode	80km	1490nm	1550nm	-40 ~ 85 degrees C
MGB-TLB80	1000	WDM(LC)	Single Mode	80km	1550nm	1490nm	-40 ~ 85 degrees C
MGB-TLA120	1000	WDM(LC)	Single Mode	120km	1490nm	1550nm	-40 ~ 85 degrees C
MGB-TLB120	1000	WDM(LC)	Single Mode	120km	1550nm	1490nm	-40 ~ 85 degrees C

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