

1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter



PLANET IGTP-80xT Industrial Gigabit Media Converter combines Ethernet media conversion (from 1000BASE-X to 10/100/1000BASE-T) with **802.3at Power over Ethernet Plus (PoE+)** injector to deliver both up to 30 watts of power output and high data transmission speed to PDs (powered devices) installed in a remote area where sufficient and reliable power input is required. Its 1000BASE-X fiber optic uplink port provides long distance, high speed and stable data transmission to a remote core network. The special and convenient power system of the IGTP-80xT supports **12~48V DC** power input or **24V AC** power input for power redundancy and operational flexibility.

Being able to operate under the temperature ranging from -40 to 75 degrees C and with an IP30 rugged case, the IGTP-80xT can be placed in almost any difficult environment.

Fiber-optic Link Capability Extends the Range of Network Deployment

The maximum distance between a PoE PSE (power sourcing equipment) and PD via Ethernet cable is 100 meters. To extend the PoE deployment range, the IGTP-80xT is integrated with fiber interface for farther distance applications. The IGTP-80xT's fiber connector type is as follows:

- IGTP-802T Fiber SC connector supporting 1000BASE-SX multi-mode and transmission distance up to 550m.
- IGTP-802TS Fiber SC connector supporting 1000BASE-LX single-mode and transmission distance up to 20km.
- IGTP-805AT SFP slot supporting 100BASE-FX/1000BASE-X multi/single mode SFP module and transmission distance up to 120km (Varying on SFP module).

With the long fiber distance support, the IGTP-80xT still sustains the transmission performance as high as 1000Mbps. It works in the high-performance Store and Forward mechanism, and also can prevent packet loss with IEEE 802.3x flow control and the **LFP (Link Fault Passthrough)** function in the DIP switch design. Furthermore, it can immediately alert the administrators of the broken link and provide efficient solution to monitor the network power usage.

Physical Port

- 1-port 10/100/1000BASE-T RJ45 with IEEE 802.3af /802.3at PoE+ Injector
- 1 1000BASE-SX/LX SC Fiber interface (IGTP-802T/IGTP-802TS)
- 1 SFP port, supporting 1000BASE-X and 100BASE-FX transceiver dual mode (IGTP-805AT)

Power over Ethernet

- Complies with IEEE 802.3at/af PoE Plus end-span PSE
- 1 IEEE 802.3at/af device powered
- Supports PoE Power up to 30.8 watts for PoE port
- Provides DC 52V 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 splitter devices compatible

Layer 2 Features

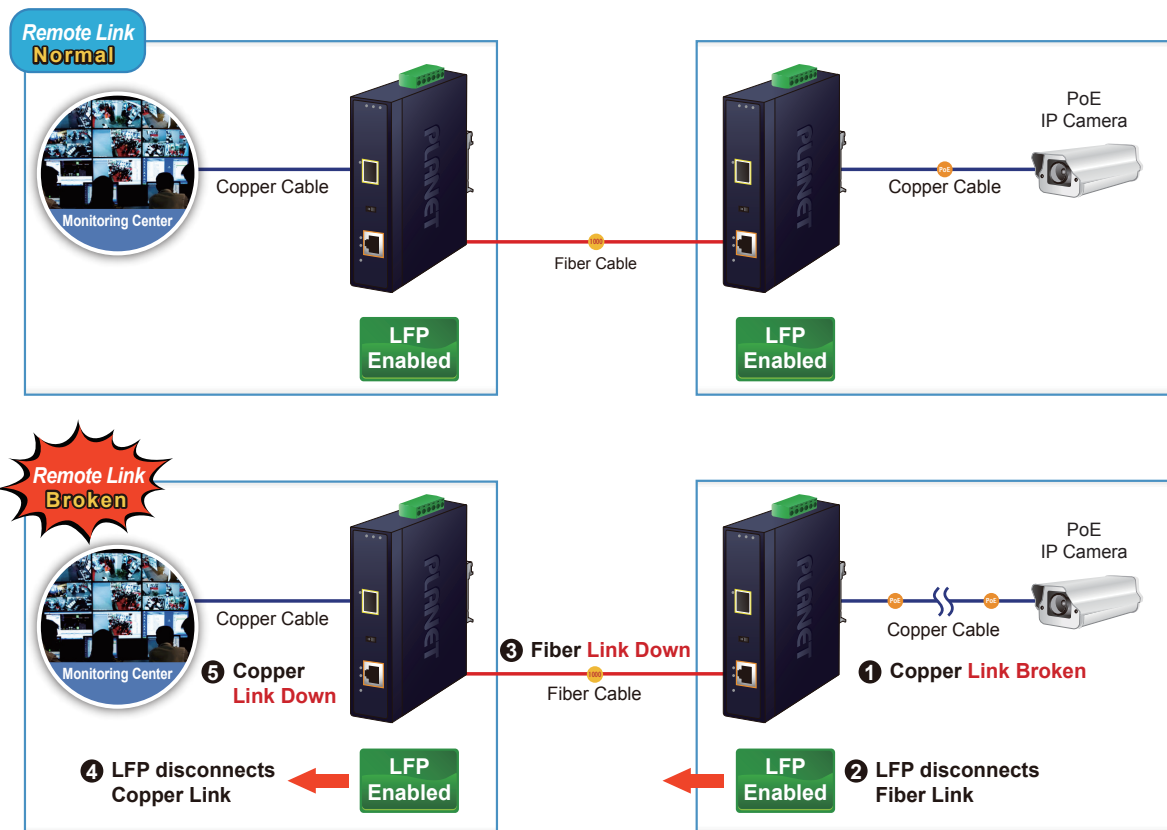
- Supports auto-negotiation and 10/100Mbps half/full duplex and 1000Mbps full duplex mode on RJ45 port
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)

Hardware

- LED Indicators
 - **System:** Power 1, Power 2 (Green) and Alarm LED (Red)
 - **Fiber port:** LNK/ACT (Green)
 - **10/100/1000BASE-T port:** LNK/ACT, 1000 LNK/ACT (Green). PoE: Power-in-use (Amber)
 - DIP switch: LFP (Link Fault Passthrough) and FEF (Far End Fault) mode selection

Industrial Case and Installation

- IP30 metal case
- DIN-rail or wall-mount design
- 12 ~ 48V DC/24V AC redundant power with reverse polarity protection and connective removable terminal block for master and slave power
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

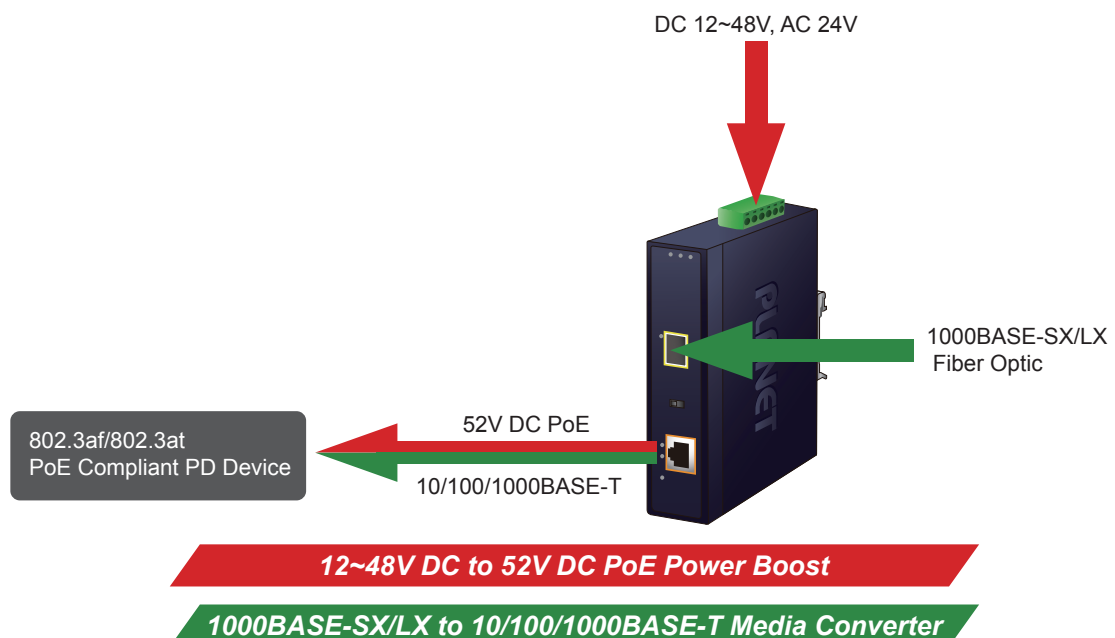


Plug and Play High Power Sourcing Solution

Complying with the **IEEE 802.3at Power over Ethernet Plus** technology, the IGTP-80xT provides up to **30 watts** of PoE output power, doubling that of the earlier 802.3af. It is also backward compatible with **802.3af PoE** standards to allow users to flexibly deploy standard and high powered devices simultaneously with no need of software configuration. With data and Power over Ethernet from one unit, the IGTP-80xT can reduce cable deployment and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place.

Convenient and Reliable Power System

To facilitate the 802.3at power PoE+ usage with the commonly-used **12~48V DC** power input or **24V AC** power input for transportation and industrial-level applications, the IGTP-80xT adopts the **12~48V DC to 52V** power boost technology to solve power source issue but does not require special power supplies. Its wide-ranging voltages design is suitable for worldwide operability with high availability applications requiring dual or backup power inputs.



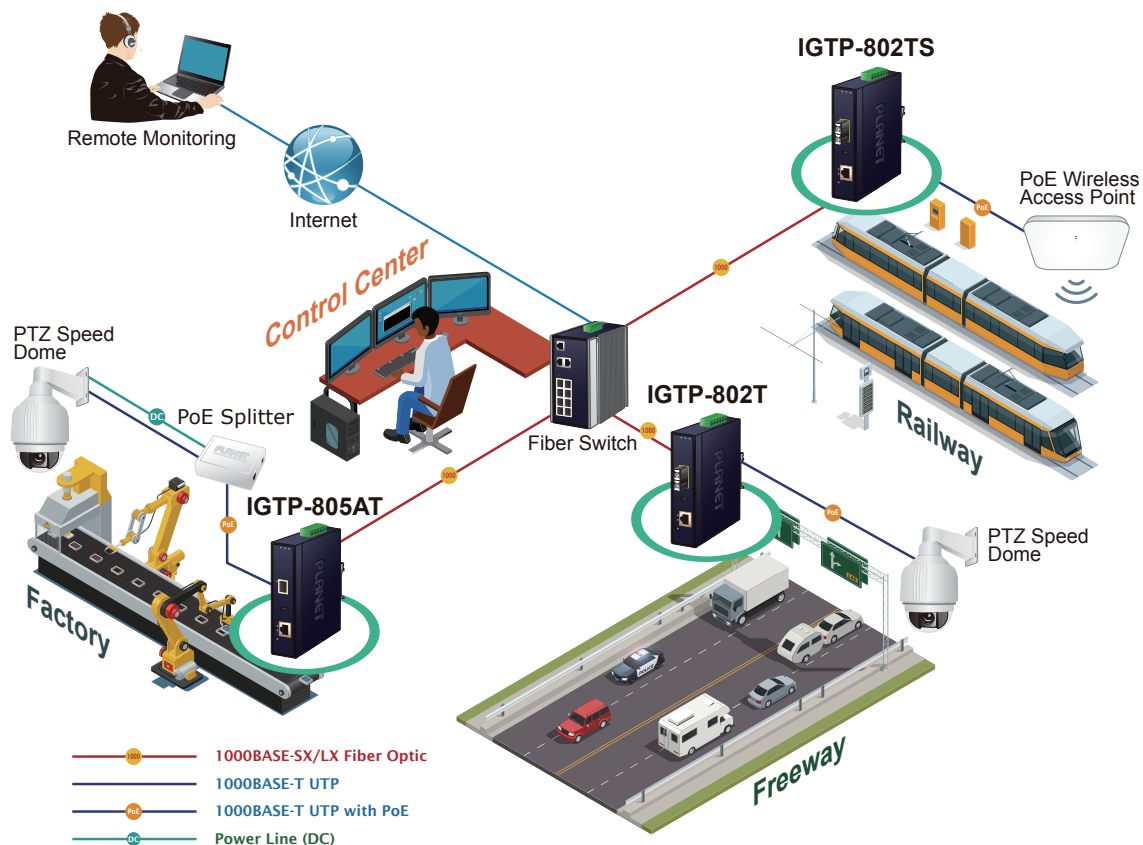
Environmentally Hardened Design for Industrial PoE Networks

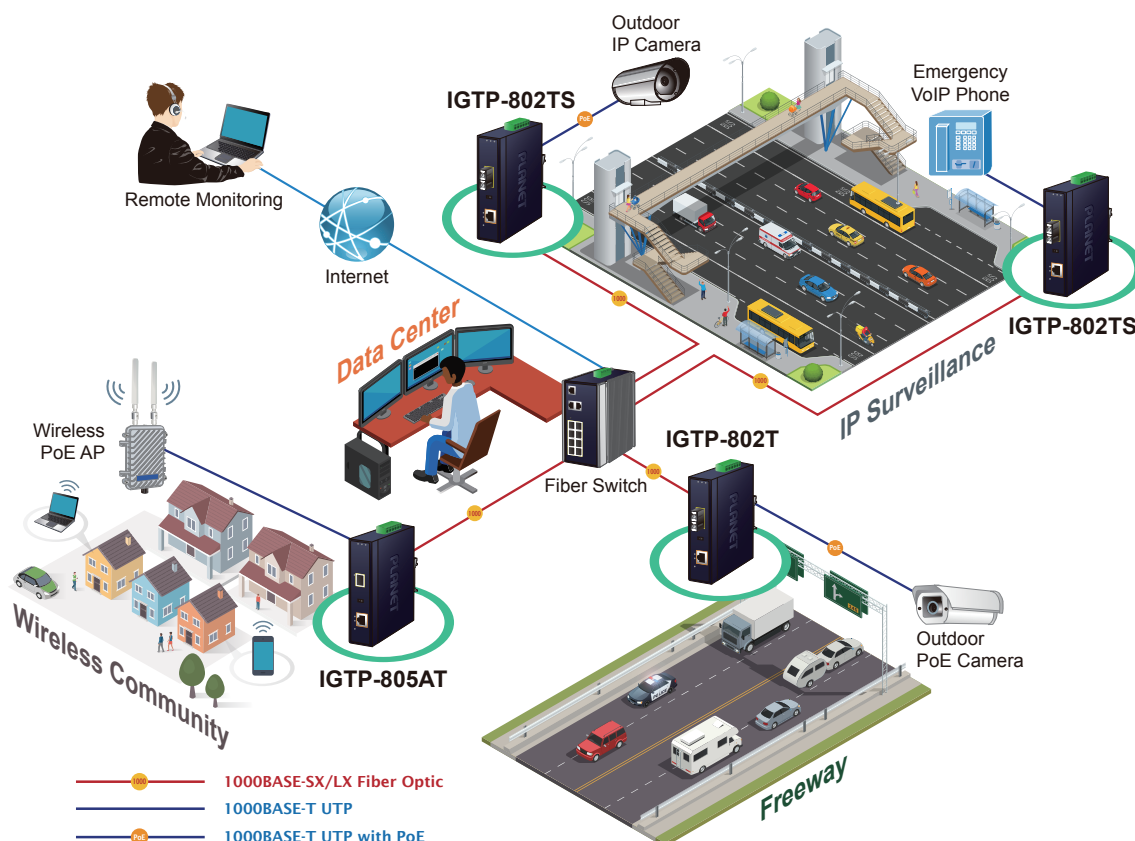
The IGTP-80xT is specifically designed with durable components and strong housing case to operate reliably in electrically harsh and climatically demanding environments like plant floors or curbside traffic control cabinets. The IGTP-80xT is packaged in a compact, IP30 rugged case that allows either DIN-rail or wall mounting to have the efficient use of cabinet space. With IP30 rugged case protection and PoE design, the IGTP-80xT is ideal for service providers, campuses and public areas to deploy PoE wireless access points, IP cameras or IP phones in any places easily and efficiently with cost-effectiveness. It can also operate in wide temperature range of -40 to 75 degrees C, so it can be placed in almost any location.

Applications

Flexible and User-friendly PoE Deployment with Gigabit Fiber Extension

For the places difficult to find the power outlet, the IGTP-80xT 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 802.3at / IEEE 802.3af compliant network equipment in the public areas such as stations, freeways, airports and campuses for surveillance and wireless roaming needs.





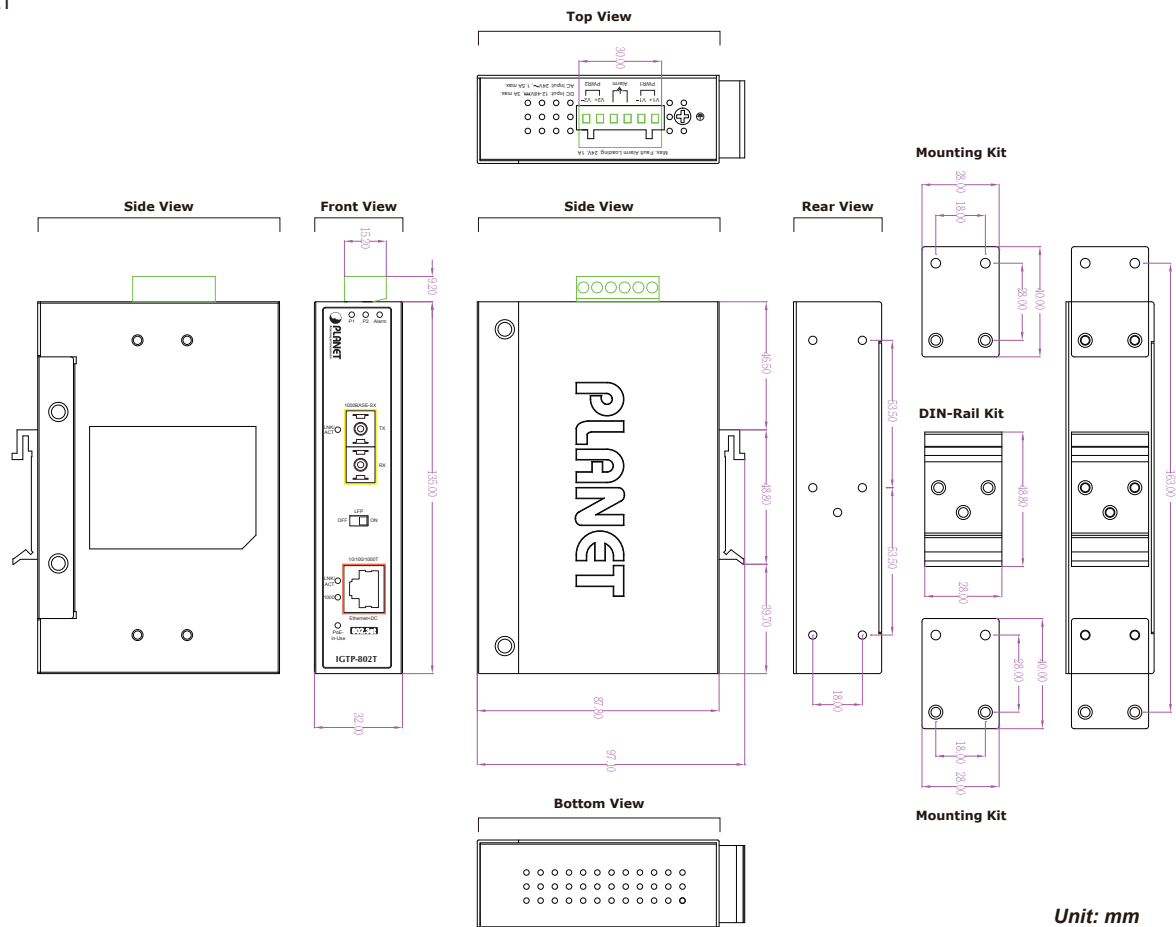
Specifications

Product	IGTP-802T		IGTP-802TS	IGTP-805AT
Ethernet Interface				
Copper	10/100/1000BASE-T Ethernet TP interface. Maximum 100m distance. Auto-negotiation, auto MDI/MDI-X with PoE injector function			
1000BASE-X Fiber-optic Connector Type	SC	SC	SFP (LC)	
Fiber Cable	Multi-mode: 50/125µm or 62.5/125µm optic fiber	Single-mode: 9/125µm optic fiber	Varying on SFP Module	
Fiber Cable Distance	220m & 550m	20km		
Fiber Optical Frequency	850nm	1310nm		
Launch Power	Max. -3dBm Min. -10dBm	Max. -3dBm Min. -9dBm		
Receive Sensitivity	-20dBm	-23dBm		
Maximum Input Power	-3dBm	-3dBm		
Power Over Ethernet				
PoE Standard	IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus			
PoE Power Output	52V DC: 15.4 watts 52V DC: 30 watts			
PoE Power Supply Type	End-span			
Power Pin Assignment	1/2(+), 3/6(-)			
PoE Power Budget	30 watts			
Hardware Specifications				
Speed	Twisted-pair: 10/20Mbps for half/full duplex 100/200Mbps for half/full duplex 1000/2000Mbps for full duplex Fiber Optic: 200Mbps / 2000Mbps for full duplex			
Flow Control	Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode			

Maximum Frame Size	9K	
LED	System: Power 1, Power 2 (Green) and Alarm LED (Red) Fiber 1000BASE-X: LNK/ACT (Green) TP 10/100/1000BASE-T: LNK/ACT, 1000 LNK/ACT (Green) PoE: Power-in-use (Amber)	
Dimensions (W x D x H)	135 x 87 x 32 mm	
Weight	416g	420g
Unit Input Voltage	12 ~ 48V DC 24V AC	
Power Consumption	System on: AC 24V:4.5W/15BTU DC 12V:4.6W/15BTU DC 48V:4.5W/15BTU Full Loading: AC 24V:23.5W/80BTU DC 12V:48W/163BTU DC 48V:47.5W/162BTU	System on: AC 24V:2.8W/9.5BTU DC 12V:2.6W/8.8BTU DC 48V:2.8W/9.5BTU Full Loading: AC 24V:23.1W/78BTU DC 12V:46.8W/159BTU DC 48V:47W/160BTU
DIP Switch	OFF: LFP (Link Fault Passthrough) disable ON: LFP (Link Fault Passthrough) enable FEF (Far End Fault) works with LFP to prevent data loss LFP is turned off by default on the DIP switch.	
Enclosure	IP30 metal case	
Installation	DIN-rail kit and wall-mount ear	
ESD Protection	6KV DC	
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A @ DC 24V	
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	
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 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3az Energy Efficient Ethernet (EEE)	
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: 5~95% (non-condensing) Storage: 5~95% (non-condensing)	

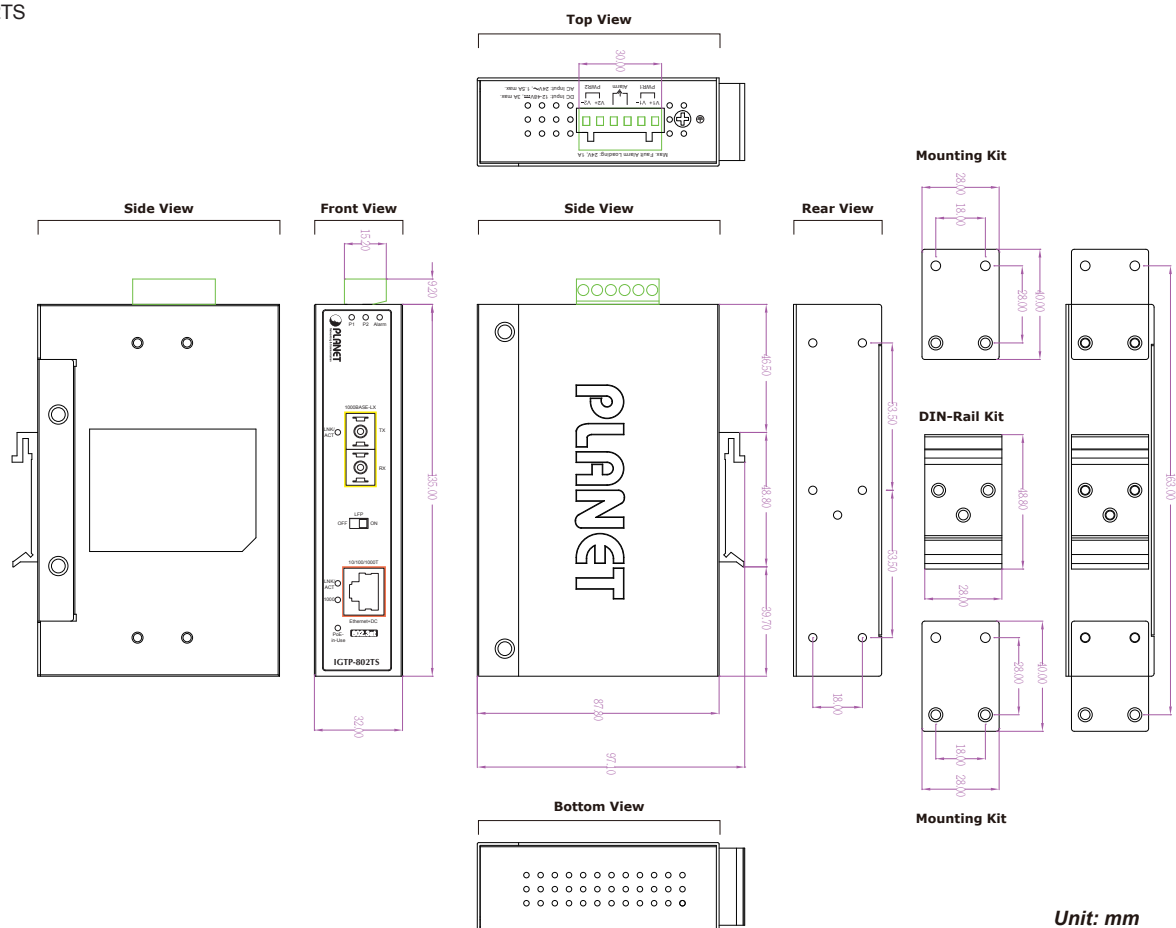
Dimensions

■ IGTP-802T



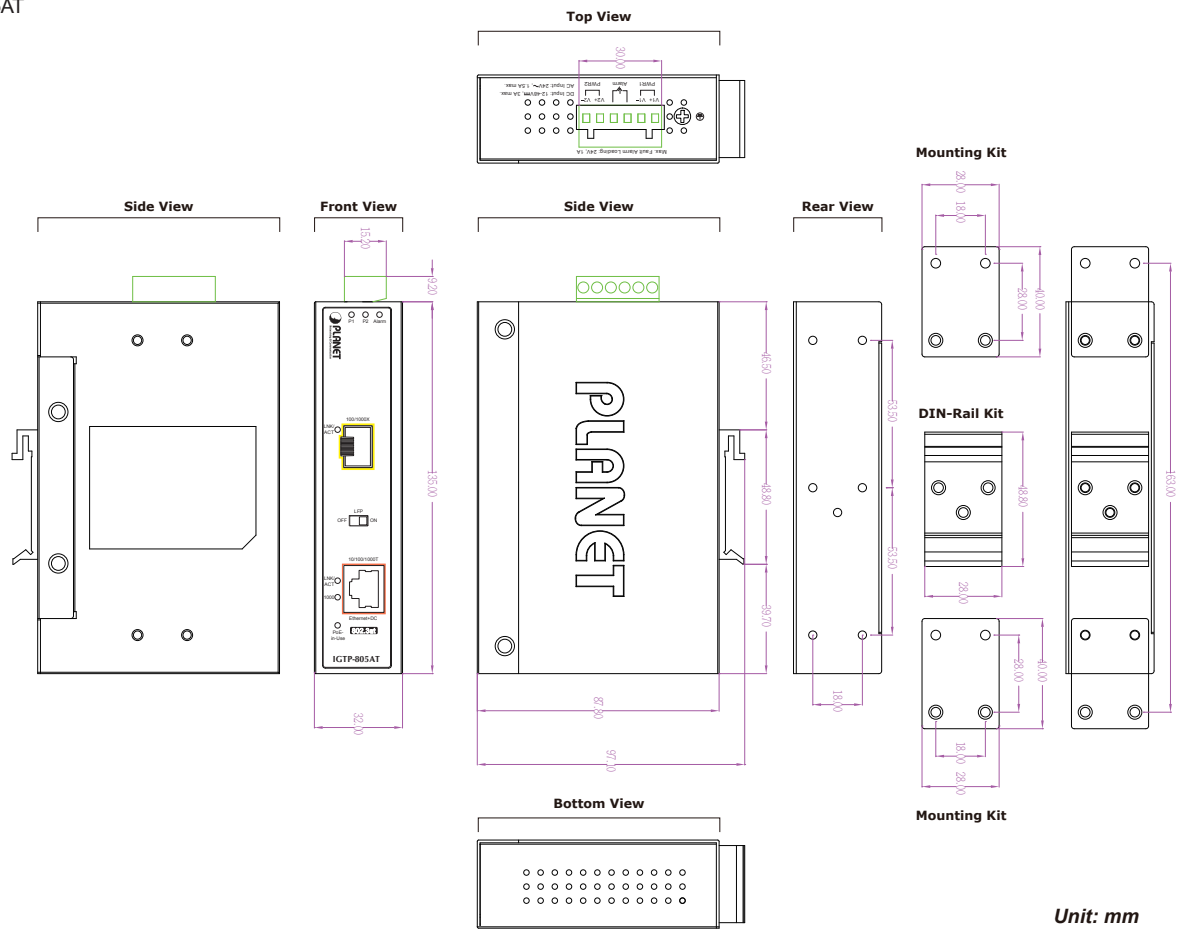
Unit: mm

■ IGTP-802TS



Unit: mm

■ IGTP-805AT



Ordering Information

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
IGTP-805AT	1000BASE-SX /LX to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter (mini-GBIC, SFP)

Related PoE Products

IGTP-825AT	Industrial IP67 1000BASE-X SFP to 10/100/1000BASE-T 802.3at PoE+ Media Converter
IGTP-815AT	Industrial Compact 100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Media Converter
IPOE-162	Industrial IEEE 802.3at Gigabit Power over Ethernet Plus Injector (Mid-span)
IPOE-162S	Industrial IEEE 802.3at Gigabit High Power over Ethernet Splitter
IPOE-165	Industrial IP67 1-Port 802.3at PoE+ Injector
IPOE-260 Series	Industrial 2-port 10/100/1000T 802.3at PoE+ Injector Hub

Available 100Mbps Modules for IGTP-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
MFB-TFX	SFP-Port 100BASE-FX Transceiver (1310nm) - 2km (-40 ~ 75 degrees C)
MFB-TF20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km (-40 ~ 75 degrees C)

Available 1000Mbps Modules for IGTP-805AT

MGB-GT	SFP-Port 1000 BASE-T Module
MGB-LX	SFP-Port 1000 BASE-LX mini-GBIC module - 20km
MGB-SX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m
MGB-SX2	SFP-Port 1000 BASE-SX mini-GBIC module - 2km
MGB-L40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km
MGB-L80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km
MGB-L120	SFP-Port 1000 BASE-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km
MGB-LA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km
MGB-LB80	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km
MGB-TSX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m (-40~75 degrees C)
MGB-TSX2	SFP-Port 1000 BASE-SX mini-GBIC module - 2km (-40~75 degrees C)
MGB-TL40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km (-40~75 degrees C)
MGB-TL80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km (-40~75 degrees C)
MGB-TLA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40~75 degrees C)
MGB-TLB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40~75 degrees C)
MGB-TLA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40~75 degrees C)
MGB-TLB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km (-40~75 degrees C)
MGB-TLA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40~75 degrees C)
MGB-TLB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40~75 degrees C)
MGB-TLA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40~75 degrees C)
MGB-TLB80	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km (-40~75 degrees C)

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IGTP-802T/IGTP-802TS/IGTP-805AT

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