# 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
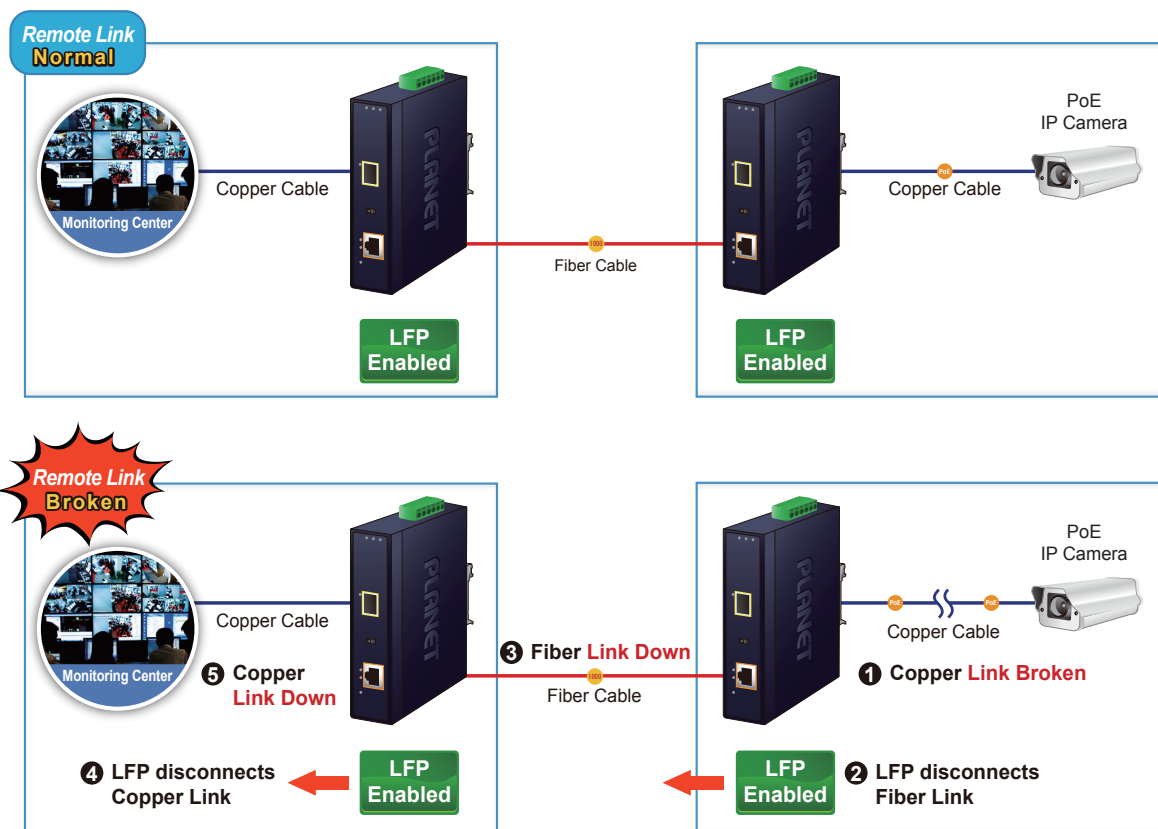
## Plug and Play High Power Sourcing Solution

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.
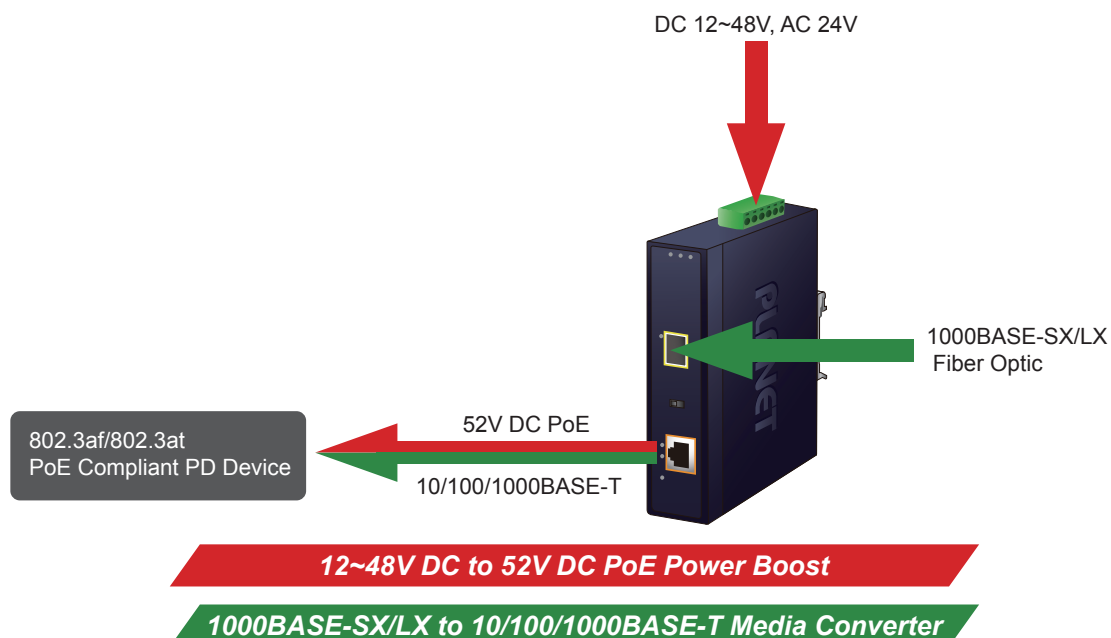
## Environmentally Hardened Design for Industrial PoE Networks

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.



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| —— | 1000BASE-SX/LX Fiber Optic |
| —— | 1000BASE-T UTP |
| —— | 1000BASE-T UTP with PoE |
| —— | Power Line (DC) |