1000Base-SX / LX to 10/100/1000Base-T 802.3at PoE Industrial Media Converter

The PLANET IGTP-80xT series Industrial Gigabit Media Converter combines Ethernet media conversion from **1000Base-X to 10/100/1000Base-T** with **802.3at High Power over Ethernet (PoE)** injector delivered in an **IP30** rugged strong case. Particularly designed for network equipments requiring sufficient and reliable power input, the IGTP-80xT series supports up to **30 Watts** of power output and data transmission both delivered to remote powered devices over a single Ethernet cable. Its 1000Base-X fiber optic uplink port provides long distance, high speed and stable data transmission to remote core network. The special and convenient power system of the IGTP-80xT series supports **24/48 VDC** power inputs for power redundancy and operational flexibility. Being able to operate under the temperature range from **-40 to 75 Degree** C allows the IGTP-80xT series to be placed in almost any difficult environment.

Fiber-Optical Link Capability Extend the Range of Network Deployment

The maximum distance between the PoE PSE (Power Sourcing Equipment) to PD (Powered Device) via Ethernet cable is 100 meters. To extend the PoE deployment range, the IGTP-80xT series is integrated with Fiber interface for farther distance applications. The IGTP-80xT series and its respective fiber connecting type include:

- IGTP-802T: SC type Multi-mode Fiber Interface, transmission distance up to 220m & 550m
- IGTP-802TS: SC Type Single mode Fiber Interface, transmission distance up to 10km
- IGTP-805AT: SFP slot supporting 100Base-FX / 1000Base-X Multi / Single Mode SFP module, transmission distance up to 120km (Vary on SFP module)

With the long Fiber distance support, the IGTP-80xT series still sustains the transmission performance as high as 1000Mbps. It works in high performance Store and Forward mechanism, and also can prevent packet loss with IEEE 802.3x Flow Control and the **LFP (Link Fault Pass Through function)** function in the DIP Switch design. Furthermore, it can immediately alarm the administrators the issue from the link media and provide efficient solution to monitor the network power usage.

Plug and Play High Power Sourcing Solution

Complied with brand-new **IEEE 802.3at High Power over Ethernet** technology, the IGTP-80xT series provides up to **30 watts** output power that doubles PoE power than conventional **802.3af PoE** currently. It is also backward compatible with 802.3af PoE standards to allow users 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 series shall reduce cables 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 High Power PoE usage with common used 24V DC or 48V DC power input in transportation and industrial-level applications, the IGTP-80xT series adapts **24/48V to 52V** power boost technology to solving power source issue but no need of special power supplies. The IGTP-80xT series provides an integrated power supply with a wide range of voltages (24V / 48V DC) for worldwide operability. It also provides dual-redundant, reversible polarity 24V / 48V DC power supply inputs for high availability applications.

Environmentally Hardened Design for Industrial PoE Networks

The IGTP-80xT series is specifically designed with durable components and strong housing case to operate reliably in electrically harsh and climatically demanding environments like plant floors or in curb side traffic control cabinets. The IGTP-80xT series is packaged in a compact, IP30 rugged strong case that allows either DIN-Rail or Wall mounting for efficient use of cabinet space. With IP30 rugged strong case protection and PoE design, the IGTP-80xT series is ideal for service providers, campus and public area to deploy the 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 Degree C, so it can be placed in almost any location.

Data Sheet

KEY FEATURES

PHYSICAL PORT

- 1-Port 10/100/1000Mbps RJ-45 interface, auto-negotiation and auto MDI / MDI-X
  - 1-Port Data + Power output, 802.3af / 802.3at PoE standard compatible
  - 10/100/1000Base-T: 1-Port Cat. 5/5e/6 UTP cable, up to 100 meters
- 1-Port Gigabit Fiber Interface
  - IGTP-802T: SC Fiber Interface
  - IGTP-802TS: SC Fiber Interface
  - IGTP-805AT: LC Fiber Interface (Vary on SFP Module, 100/1000 dual mode support)

HARDWARE

- LED Indicators
  - System: Power 1, Power 2 and Fault LED
  - Fiber port: LNK / ACT
  - 10/100/1000Base-T port: LNK / ACT, PoE In-use
- DIP switch: LFP (Link Fault Pass-through) mode selection

IEEE 802.3AF / 802.3AT POE

- Complies with IEEE 802.3af and IEEE 802.3at standard, End-Span PSE
- 24V / 48V DC Power Input for PoE
- Provides DC 52V power over RJ-45 Ethernet cable to devices with Ethernet port
- Supports PoE Power up to 30 Watts for PoE port
- Auto-detect of PoE IEEE 802.3at / IEEE 802.3af equipments, protecting the devices from being damaged by incorrect installation
- Remote power feeding up to 100m
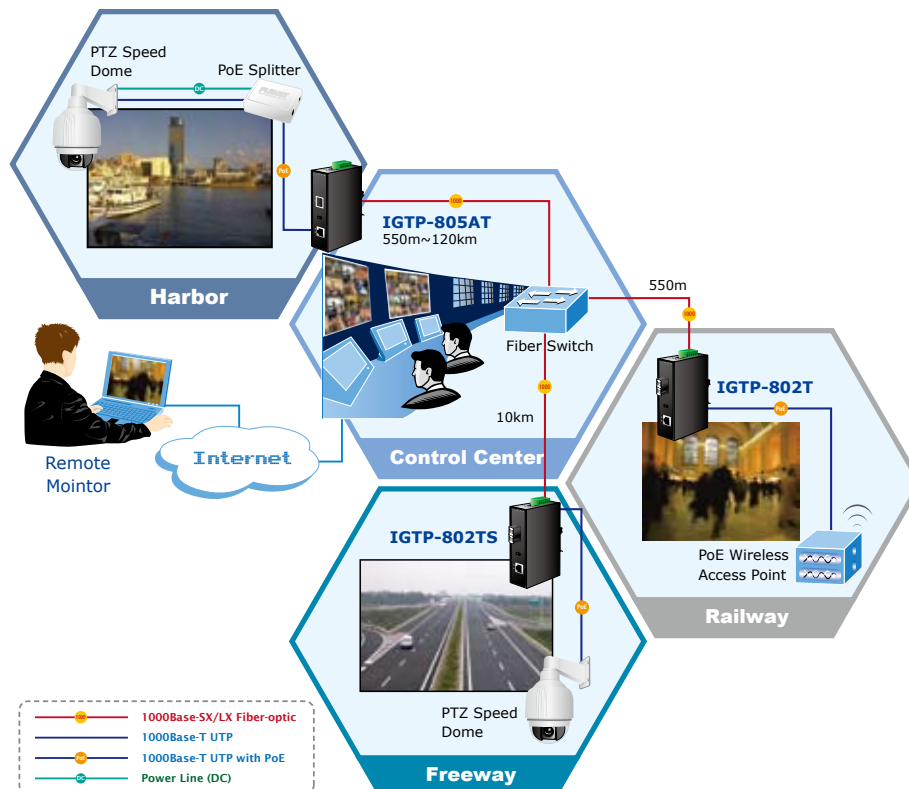- IEEE 802.3at / IEEE 802.3af Splitter devices compatible

INDUSTRIAL CASE / INSTALLATION

- IP-30 Aluminum metal case protection
- DIN Rail and Wall Mount Design
- 24 and 48V DC, redundant power with polarity reverse protect function and connective removable terminal block for master and slave power
- Supports EFT protection 6000 VDC for power line
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 Degree C operating temperature

APPLICATIONS

Flexible and User-friendly PoE Deployment with Gigabit Fiber Extension

For the places difficult to find the power outlet, the IGTP-80xT series provides the easiest way to power network equipments 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) wireless LAN access points and other Network devices that need higher power to function normally. For instance, users can flexibly install the security IP Camera, Wireless Access Point and other IEEE 802.3at / IEEE 802.3af compliant network equipments in the public areas such as stations, freeway, airports and campus for surveillance and wireless roaming needs.

1000Base-SX/LX Fiber-optic	
1000Base-T UTP	
1000Base-T UTP with PoE	
Power Line (DC)	

SPECIFICATION

Product	1000Base-SX / LX to 10/100/1000Base-T 802.3at PoE Industrial Media Converter		
Model	IGTP-802T	IGTP-802TS	IGTP-805AT
Hardware Specification			
10/100/1000Base-T Port	1-Port RJ-45 interface, auto-negotiation and auto MDI / MDI-X		
1000Base-X Fiber Interface	SC	SC	SFP (LC)
Fiber Cable	Multi-mode: 50/125 μm or 62.5/125 μm optic fiber	Single-mode: 9/125 μm optic fiber	Vary on SFP Module
Cable Distance	220m & 550m	10km	Vary on SFP Module
Optical Frequency	850nm	1310nm	
Switch Throughput (Packet Per Second)	Max. -4dBm Min. -9.5dBm	Max. -3dBm Min. -9.5dBm	
Receive Sensitivity	-13.5dBm	-14.4dBm	
Maximum Input power	-18dBm	-20dBm	
IEEE 802.3at / 802.3af PoE Port	1, End-Span, 1/2(+), 3/6(-)		
LED Indication	**System**: Power 1, Power 2 and Fault LED (Green) **Fiber port**: LNK / ACT (Green) **10/100/1000Base-T port**: LNK / ACT, PoE In-use (Green / Orange)		
LFP DIP Switch	ON / OFF		
Flow Control	Back pressure for half duplex, IEEE 802.3x Pause Frame for full duplex		
Maximum Frame Size	9216 bytes		
Power Requirement	24 and 48V DC, redundant power with polarity reverse protect function		
Enclosure	IP30 Aluminum metal case		
Dimension (W x D x H)	135 x 87 x 32mm		
Weight	IGTP-802T / IGTP-802TS: 510g IGPT-805AT: 500g		
Installation	DIN rail kit and wall mount ear		
ESD Protection	6KV DC		
EFT Protection	6KV DC		
Alarm	Provides one relay output for power fail Alarm Relay current carry ability: 1A @ DC 24V		
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		
Network 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 optic fiber Single-mode: 9/125μm optic fiber		
Power Consumption	24V: 33 Watts / 112BTU, 48V: 31 Watts / 105BTU (With PoE)		
Power over Ethernet			
PoE Standard	IEEE 802.3af / 802.3at High Power over Ethernet / PSE		
PoE Power Supply Type	End-Span		
PoE Power Output	52V DC. 15.4 Watts 52V DC. 30 Watts		
Power Pin Assignment	1/2(+), 3/6(-)		
PoE Budget	30 Watts		
Standards Conformance			
Standards Compliance	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX / FX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-SX / LX Gigabit Ethernet IEEE 802.3x Full-Duplex Flow Control IEEE 802.3af Power over Ethernet IEEE 802.3at High Power over Ethernet		
Stability Testing	IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)		

Data Sheet

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

AVAILABLE MODULES FOR IGTP-805AT

MGB-GT	SFP-Port 1000Base-T Module
MGB-SX	SFP-Port 1000Base-SX mini-GBIC module - 550m
MGB-LX	SFP-Port 1000Base-LX mini-GBIC module - 10km
MGB-L30	SFP-Port 1000Base-LX mini-GBIC module - 30km
MGB-L50	SFP-Port 1000Base-LX mini-GBIC module - 50km
MGB-L70	SFP-Port 1000Base-LX mini-GBIC module - 70km
MGB-L120	SFP-Port 1000Base-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 40km
MGB-TLX	SFP-Port 1000Base-LX mini-GBIC module - 10km (-40~75°C)
MGB-TSX	SFP-Port 1000Base-SX mini-GBIC module - 550m (-40~75°C)
MGB-TL30	SFP-Port 1000Base-LX mini-GBIC module - 30km (-40~75°C)
MGB-TL70	SFP-Port 1000Base-LX mini-GBIC module - 70km (-40~75°C)
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°C)
MFB-TF20	SFP-Port 100Base-FX Transceiver (1310nm) - 20km (-40~75°C)

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