

## 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.



### 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 slot, 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

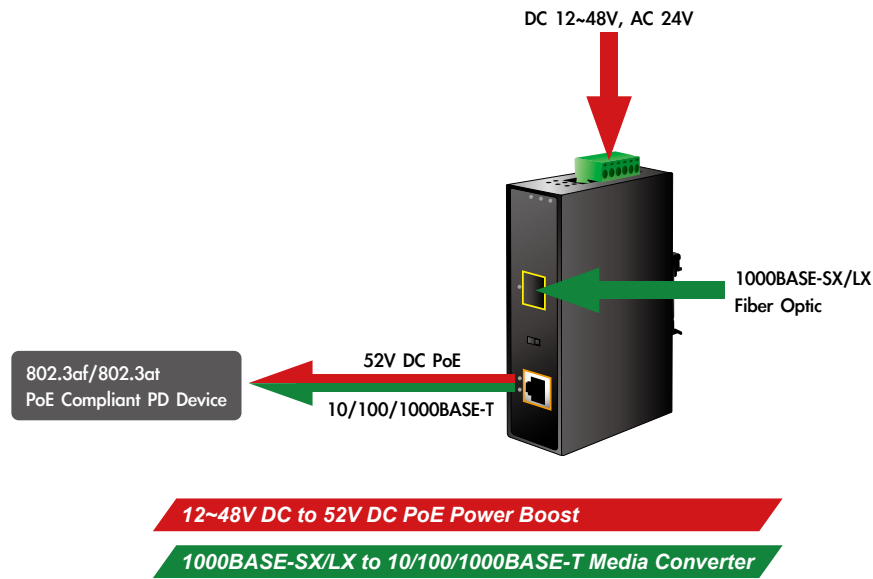
- Supports auto-negotiation and 10/100Mbps half/full duplex and 1000Mbps full duplex mode on RJ45 port
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)

### Hardware

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

### Industrial Case and Installation

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



#### 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 10km.
- 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 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

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.

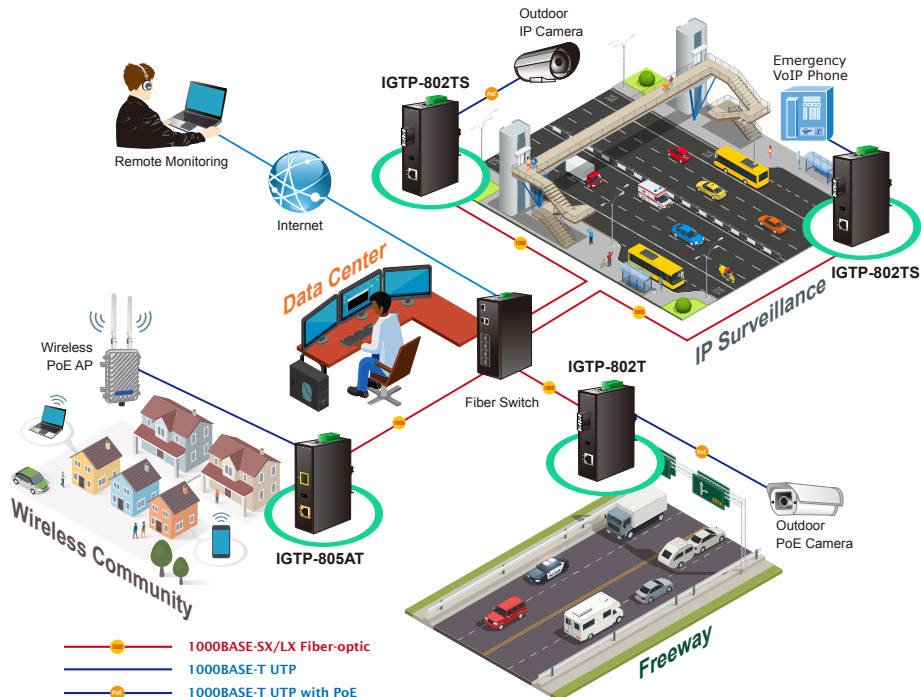
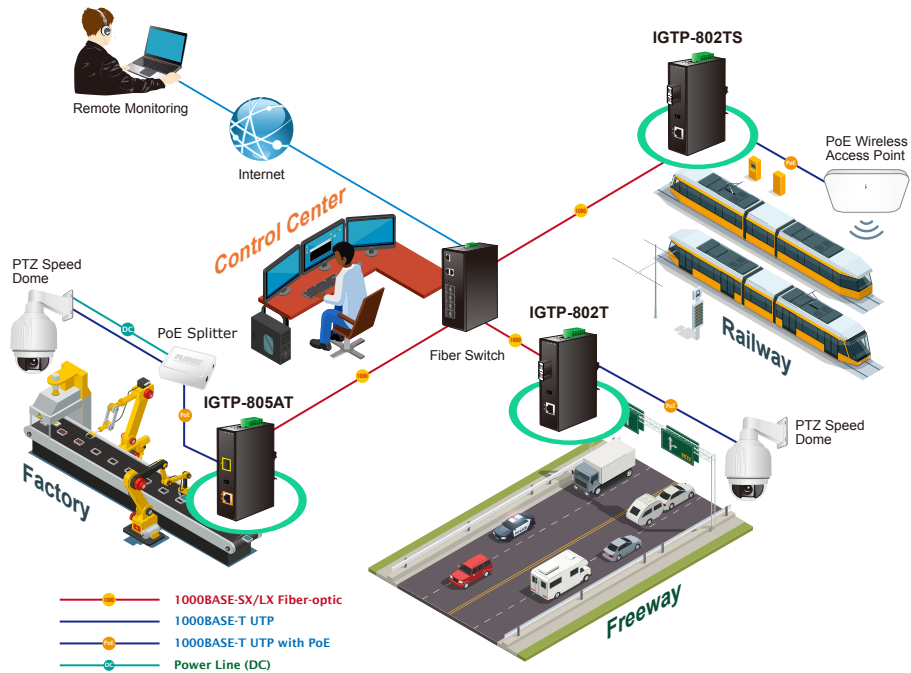
#### Environmentally Hardened Design for Industrial PoE Networks

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.



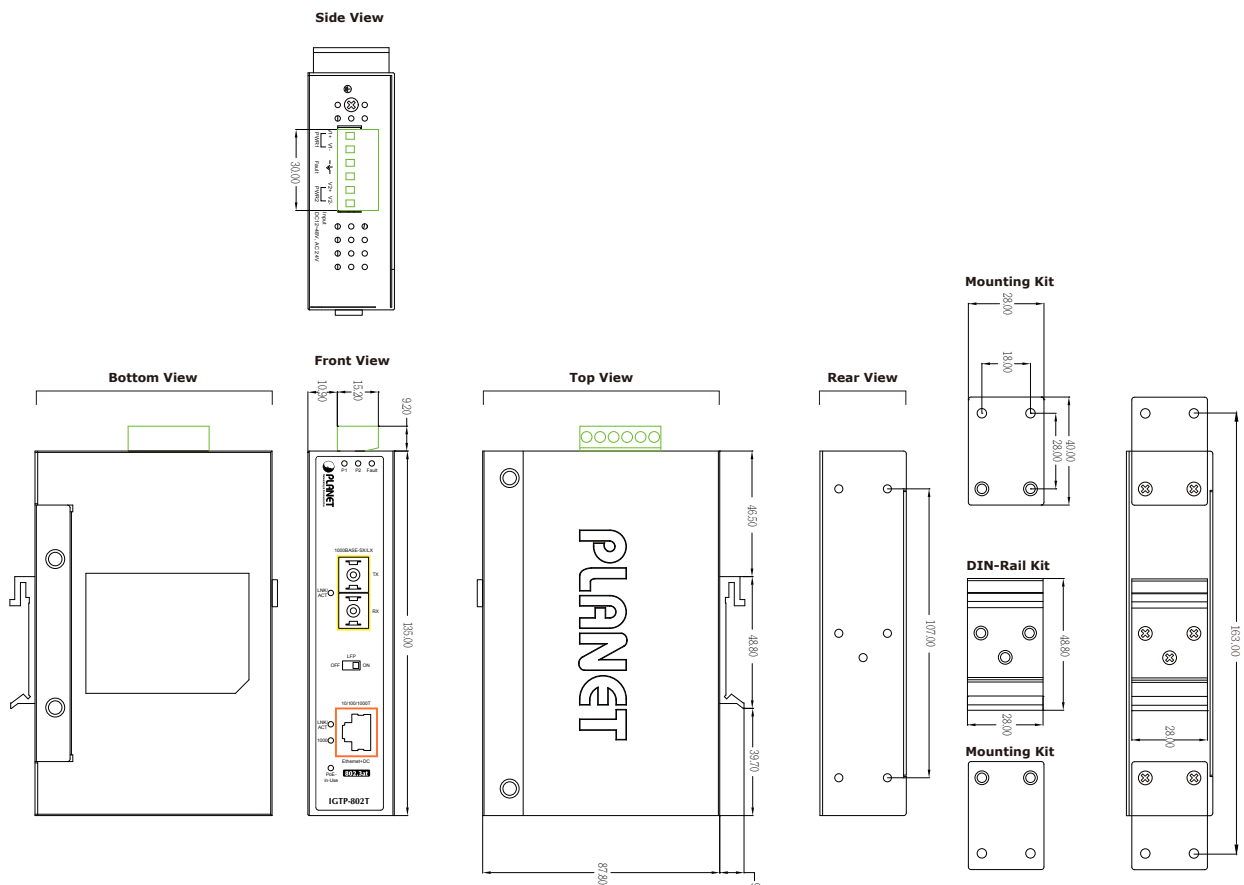
## Specifications

Product	IGTP-802T	IGTP-802TS	IGTP-805AT
<b>Hardware Specification</b>			
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	10km	
Fiber Optical Frequency	850nm	1310nm	
Launch Power	Max. -4dBm Min. -9.5dBm	Max. -3dBm Min. -9.5dBm	
Receive Sensitivity	-13.5dBm	-14.4dBm	
Maximum Input Power	-18dBm	-20dBm	
<b>Power over Ethernet</b>			
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		
<b>Hardware Specifications</b>			
Speed	<b>Twisted-pair:</b> 10/20Mbps for half/full duplex 100/200Mbps for half/full duplex 1000/2000Mbps for full duplex <b>Fiber Optic:</b> 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 and Fault LED (Green) Fiber 1000BASE-X: LNK/ACT (Green) TP 10/100/1000BASE-T: LNK/ACT, 1000 (Green) PoE: Power-in-use (Orange)		
Dimensions (W x D x H)	135 x 87 x 32 mm		
Weight	510g		500g
Unit Input Voltage	12 ~ 48V DC 24V AC		
Power Consumption	<b>24V:</b> 4.3watts/14BTU, <b>48V:</b> 4.8watts/16BTU (without PoE) <b>24V:</b> 33watts/112BTU, <b>48V:</b> 31watts/105BTU (with PoE)		
Link Fault Passthrough DIP Switch	ON/OFF		
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	<b>10/100/1000BASE-T:</b> 2-pair UTP Cat. 3, 4, 5, 5e, 6 (maximum 100 meters) EIA/TIA-568 100-ohm STP (maximum 100 meters) <b>100BASE-FX/1000BASE-SX/LX:</b> Multi-mode: 50/125µm or 62.5/125µm optical fiber Single-mode: 9/125µm optical fiber		
<b>Standards Conformance</b>			
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
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
<b>Environment</b>	
Temperature	Operating: -40~75 degrees C Storage: -40~85 degrees C
Humidity	Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing)

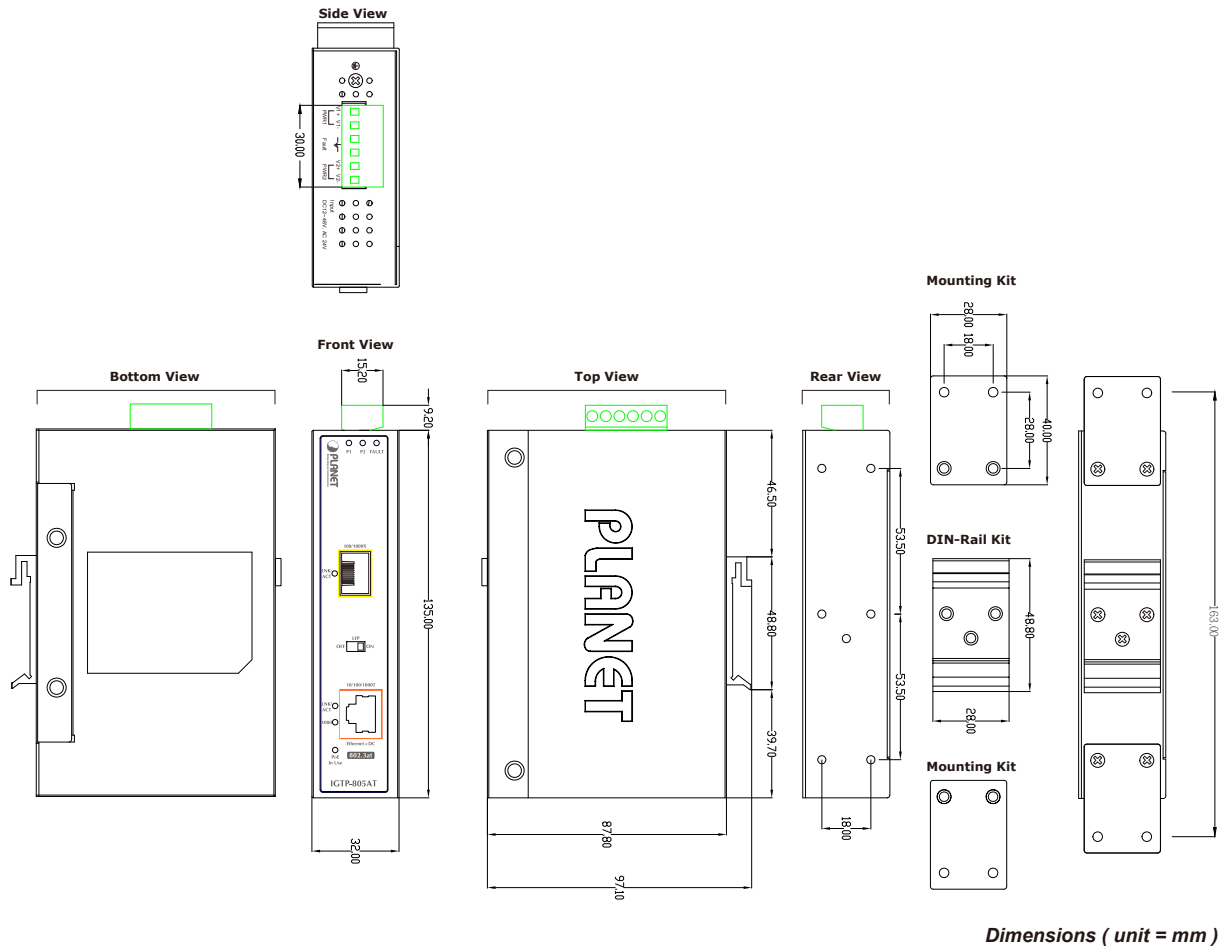
## Dimensions

### IGTP-802T/IGTP-802TS Multi View Drawing



Dimensions (unit = mm)

IGTP-805AT Multi View Drawing



## Ordering Information

IGTP-802T	1000BASE-SX to 10/100/1000BASE-T <b>802.3at PoE+</b> Industrial Media Converter (SC,MM) -550m
IGTP-802TS	1000BASE-LX to 10/100/1000BASE-T <b>802.3at PoE+</b> Industrial Media Converter (SC,SM) -10km
IGTP-805AT	1000BASE-SX /LX to 10/100/1000BASE-T <b>802.3at PoE+</b> Industrial Media Converter (mini-GBIC, SFP)

## Related Products

ICA-2250VT	Industrial PoE Plus Outdoor IR IP Camera
ICA-E3550V	5 Mega-pixel Bullet IR PoE IP Camera
ICA-4200V	Full HD 20M IR Vari-focal Dome IP Camera
ICA-E5550V	5 Mega-pixel Vandalproof IR PoE IP Camera
ICA-E8550	5 Mega-pixel Outdoor IR PoE Fisheye IP Camera
ICA-HM620	2 Mega-pixel PoE Plus Speed Dome Internet Camera
POE-162S	IEEE 802.3at Gigabit High Power over Ethernet Splitter
POE-E201	IEEE 802.3at Power over Ethernet Extender
WDAP-1750AC	1750Mbps 802.11ac Dual Band Wall-mount Enterprise Wireless Access Point
WNAP-C3220A	802.11n Wireless Ceiling-mount PoE Access Point
WNAP-W2201A	802.11n 300Mbps In-Wall Access Point w/USB Charger (EU Type)
WDAP-W7200AC	1200Mbps 802.11ac Dual Band Wall-mount Wireless Access Point
ICF-1800	HD Touch Screen Android Multimedia Conferencing Phone
VIP-5060PT	Professional HD PoE IP Phone (6-Line)

## SFP Gigabit Modules are available for the IGTP-805AT

### Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	1000	Copper	--	100m	--	0 ~ 60 °C
MGB-SX	1000	LC	Multi Mode	550m	850nm	0 ~ 60 °C
MGB-SX2	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 °C
MGB-LX	1000	LC	Single Mode	10km	1310nm	0 ~ 60 °C
MGB-L30	1000	LC	Single Mode	30km	1310nm	0 ~ 60 °C
MGB-L50	1000	LC	Single Mode	50km	1550nm	0 ~ 60 °C
MGB-L70	1000	LC	Single Mode	70km	1550nm	0 ~ 60 °C
MGB-L120	1000	LC	Single Mode	120km	1550nm	0 ~ 60 °C
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 75 °C
MGB-TLX	1000	LC	Single Mode	10km	1310nm	-40 ~ 75 °C
MGB-TL30	1000	LC	Single Mode	30km	1310nm	-40 ~ 75 °C
MGB-TL70	1000	LC	Single Mode	70km	1550nm	-40 ~ 75 °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-LA10 MGB-LB10	1000	WDM (LC)	Single Mode	10km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 °C
MGB-LA20 MGB-LB20	1000	WDM (LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 °C
MGB-LA40 MGB-LB40	1000	WDM (LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 °C
MGB-LA60 MGB-LB60	1000	WDM (LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 °C
MGB-TLA10 MGB-TLB10	1000	WDM (LC)	Single Mode	10km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 °C
MGB-TLA20 MGB-TLB20	1000	WDM (LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 °C
MGB-TLA40 MGB-TLB40	1000	WDM (LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 °C
MGB-TLA60 MGB-TLB60	1000	WDM (LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 °C

### Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MFB-FX	100	LC	Multi Mode	2km	1310nm	0 ~ 60 °C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60 °C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60 °C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60 °C
MFB-F120	100	LC	Single Mode	120km	1310nm	0 ~ 60 °C
MFB-TFX	100	LC	Multi Mode	2km	1310nm	-40 ~ 75 °C
MFB-TF20	100	LC	Single Mode	20km	1310nm	-40 ~ 75 °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-FA20 MFB-FB20	100	WDM (LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 °C
MFB-TFA20 MFB-TFB20	100	WDM (LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 °C
MFB-TFA40 MFB-TFB40	100	WDM (LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 °C