Industrial 1-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter

PLANET IGUP-805AT Industrial Gigabit Media Converter combines Ethernet media conversion (from 1000BASE-X to 10/100/1000BASE-T) with **802.3bt Power over Ethernet Plus Plus (PoE++)** injector function to deliver up to **95 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 IGUP-805AT supports dual **12~54V DC** power inputs 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 IGUP-805AT 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 IGUP-805AT is integrated with fiber interface for farther distance applications. The IGUP-805AT's fiber connector type is as follows:
- One SFP interface supporting 100BASE-FX/1000BASE-X multi/single mode SFP module and transmission distance up to 120km (depending on SFP module)

Physical Port
- One 10/100/1000BASE-T with **IEEE 802.3bt++** Gigabit RJ45 port
- 1 SFP port, supporting 100/100BASE-X transceiver dual mode

Power over Ethernet
- Complies with **IEEE 802.3bt PoE++** Type-4 PSE
- Compatible with IEEE 802.3at/af PoE+ standard
- 1 IEEE 802.3 bt/at/af device powered
- Supports PoE Power up to 95 watts for PoE port
- Provides **DC 54V** power over RJ45 Ethernet cable to PD with Ethernet port
- Auto detects IEEE 802.3bt/at/af equipment and protects devices from being damaged by incorrect installation
- Remote power feeding up to 100m
- Auto detects powered device (PD)

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, Alarm and PoE usage
  - **Fiber port**: LNK/ACT
  - **10/100/1000BASE-T port**: LNK/ACT, PoE-in-use
- DIP switch 1: LFPP (Link Fault Passthrough PoE Control) On/Off
- DIP switch 2: PoE (Legacy / BT) mode selection

Industrial Case and Installation
- IP30 metal case
- DIN-rail, wall-mount or side wall-mount design for redundant power design
- 12 ~ 54V DC 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

With the long fiber distance support, the IGUP-805AT 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. 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 802.3bt Power over Ethernet Plus** Plus technology, the IGUP-805AT provides up to **95 watts** of PoE output power, tripling that of the earlier 802.3at plus. Through the **Legacy** function in the DIP switch design, it is also backward compatible with **802.3af/at 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 IGUP-805AT can reduce cable deployment and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place.
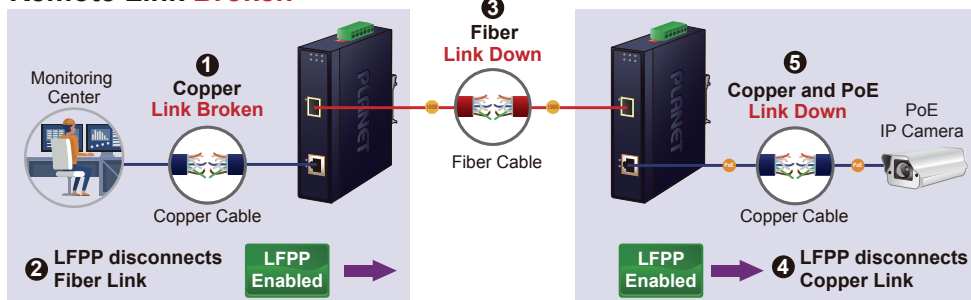

Interactive Network Detection

The IGUP-805AT can support **LFPP** (Link Fault Passthrough PoE Control) function via its built-in DIP switch. It disables PoE port once it detects the fiber optic link is down. It can immediately alarm the administrators the issue from the link media and provide efficient solution to monitor the remote network.
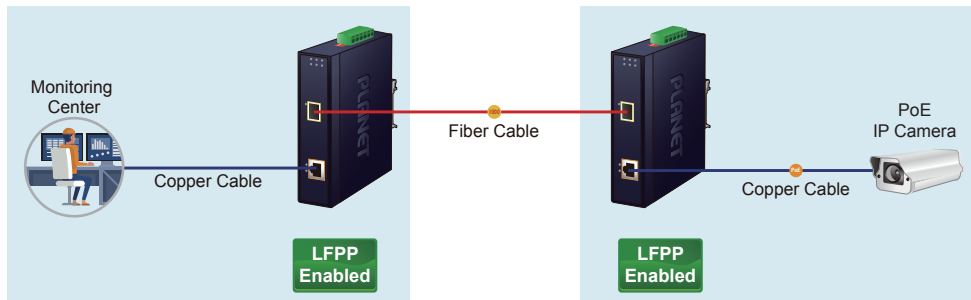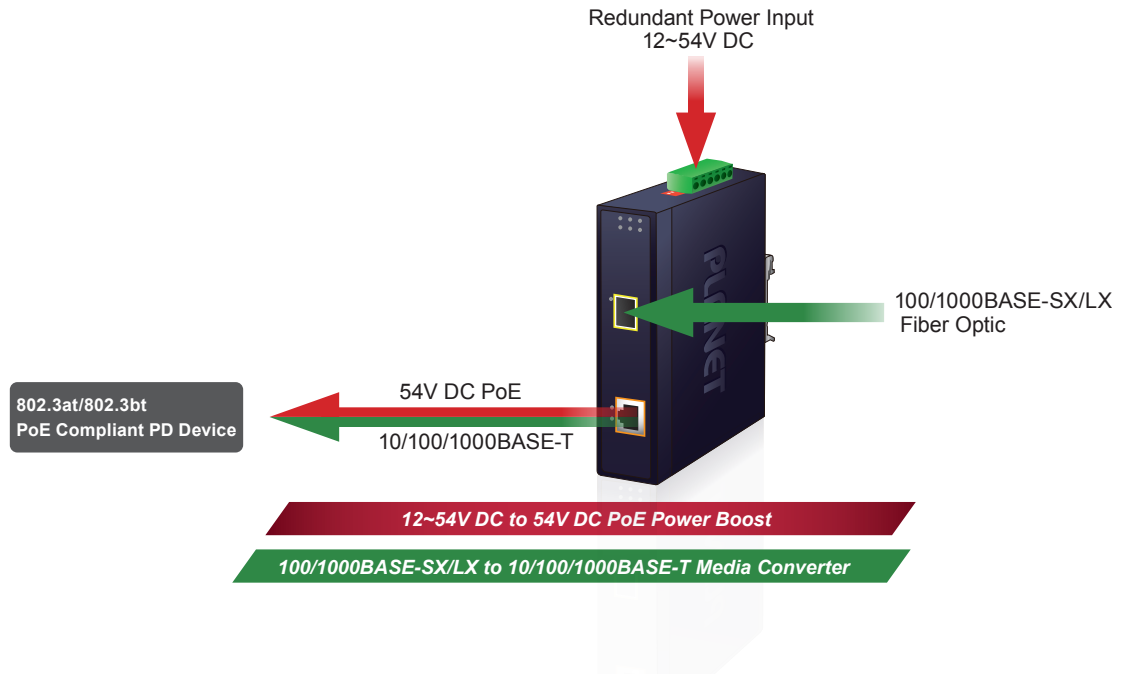
Convenient and Reliable Power System

To facilitate the 802.3bt power PoE++ usage with the commonly-used **12-48V DC** power input for transportation and industrial-level applications, the IGUP-805AT adopts the **12-48V DC to 54V** 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.

Redundant Power Input
12~54V DC

100/1000BASE-SX/LX
Fiber Optic

54V DC PoE

802.3at/802.3bt
PoE Compliant PD Device

10/100/1000BASE-T

12~54V DC to 54V DC PoE Power Boost

100/1000BASE-SX/LX to 10/100/1000BASE-T Media Converter

Environmentally Hardened Design for Industrial PoE Networks

The IGUP-805AT is specifically designed with durable components and strong housing to operate reliably in electrically harsh and climatically demanding environments like plant floors or curbside traffic control cabinets. The IGUP-805AT 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 IGUP-805AT 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.

Optional installation method

| **DIN-rail Mounting** | **Wall Mounting** | **Side Wall Mounting** (Space saving) |
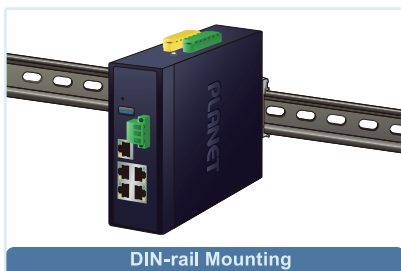
* The above pictures are for illustration only.

Applications

Flexible and User-friendly PoE Deployment with Gigabit SFP Fiber Extension

For the places difficult to find the power outlet, the IGUP-805AT 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 802.3bt/at/af compliant network equipment in the public areas such as stations, freeways, airports and campuses for surveillance and wireless roaming needs.
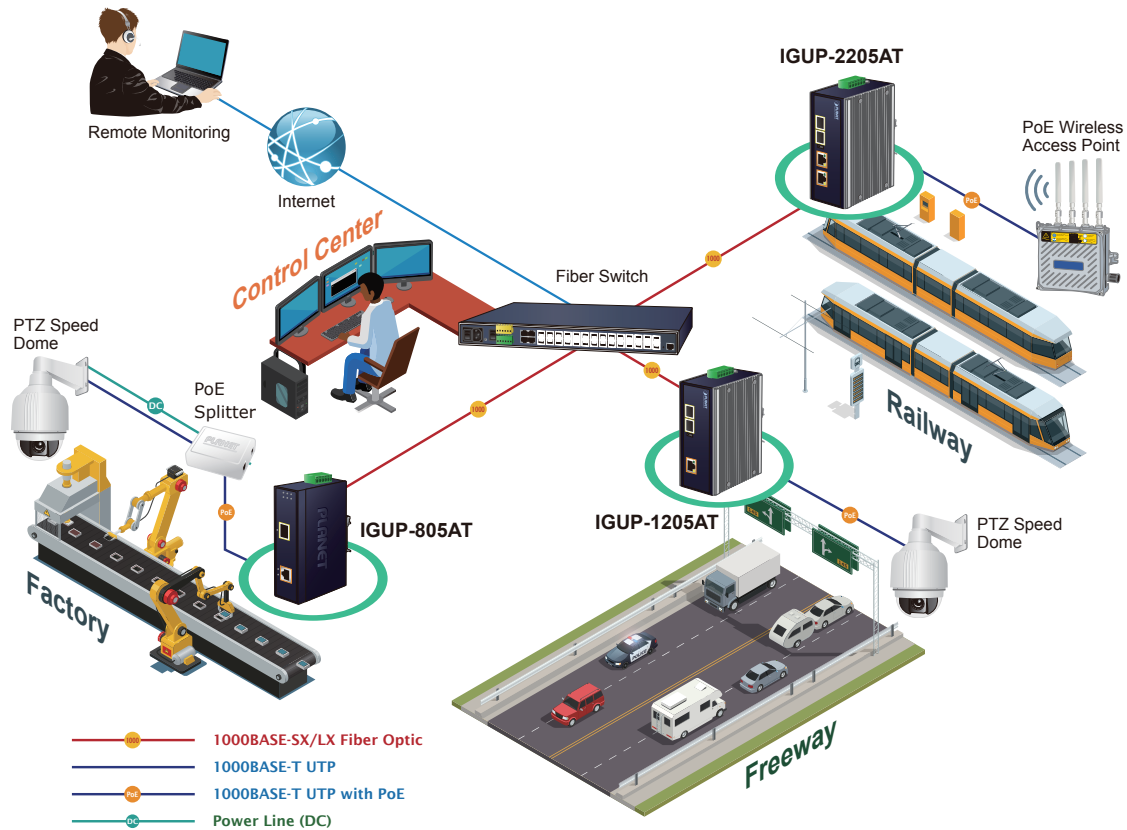
Specifications

Model	IGUP-805AT		
Hardware Specifications			
Copper Port	1 x 10/100/1000BASE-T port		
SFP Port	1 x 1000BASE-SX/LX/BX SFP interface Compatible with 100BASE-FX SFP		
DIP Switch	DIP	ON	OFF
	1	LFPP	Enable	Disable (default)
	2	PoE	Legacy	BT (default)
Dimensions (W x D x H)	32 x 87 x 135 mm		
Weight	447g		
Power Requirements	12-54V DC, Redundant power with reverse polarity protection		

Power Consumption	System ON without loading
	  12V DC: 3.6W
	  54V DC: 4.4W
	Full loading with PoE
	  12V DC: 70W
	  54V DC: 101.3W		

Flow Control	Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode		
Switch Fabric	2Gbps		

Throughput	2.98Mbps@64bytes
Address Table	2k entries
Shared Data Buffer	1M bits
Maximum Frame Size	9K
ESD Protection	6KV DC
Enclosure	IP30 metal case
Installation	DIN-rail kit and wall-mount ear
Power Over Ethernet	
PoE Standard	IEEE 802.3bt Power over Ethernet Plus Plus
PoE Power Output*	802.3bt PoE++ : 95W Legacy mode: 95W
PoE Power Supply Type	End-span + Mid-span
Power Pin Assignment	End-span: 1/2 (-), 3/6 (+); Mid-span: 4/5 (+), 7/8 (-)
PoE Power Budget	95 watts@24-54V DC input 60 watts@12-23V DC input
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 802.3bt Power over Ethernet Plus 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: 5~90% (non-condensing) Storage: 5~90% (non-condensing)

Dimensions

Top View

Side View   **Front View**   **Side View**   **Rear View**

Mounting Kit

DIN-Rail Kit

IGUP-805AT

Mounting Kit

Bottom View

Unit: mm
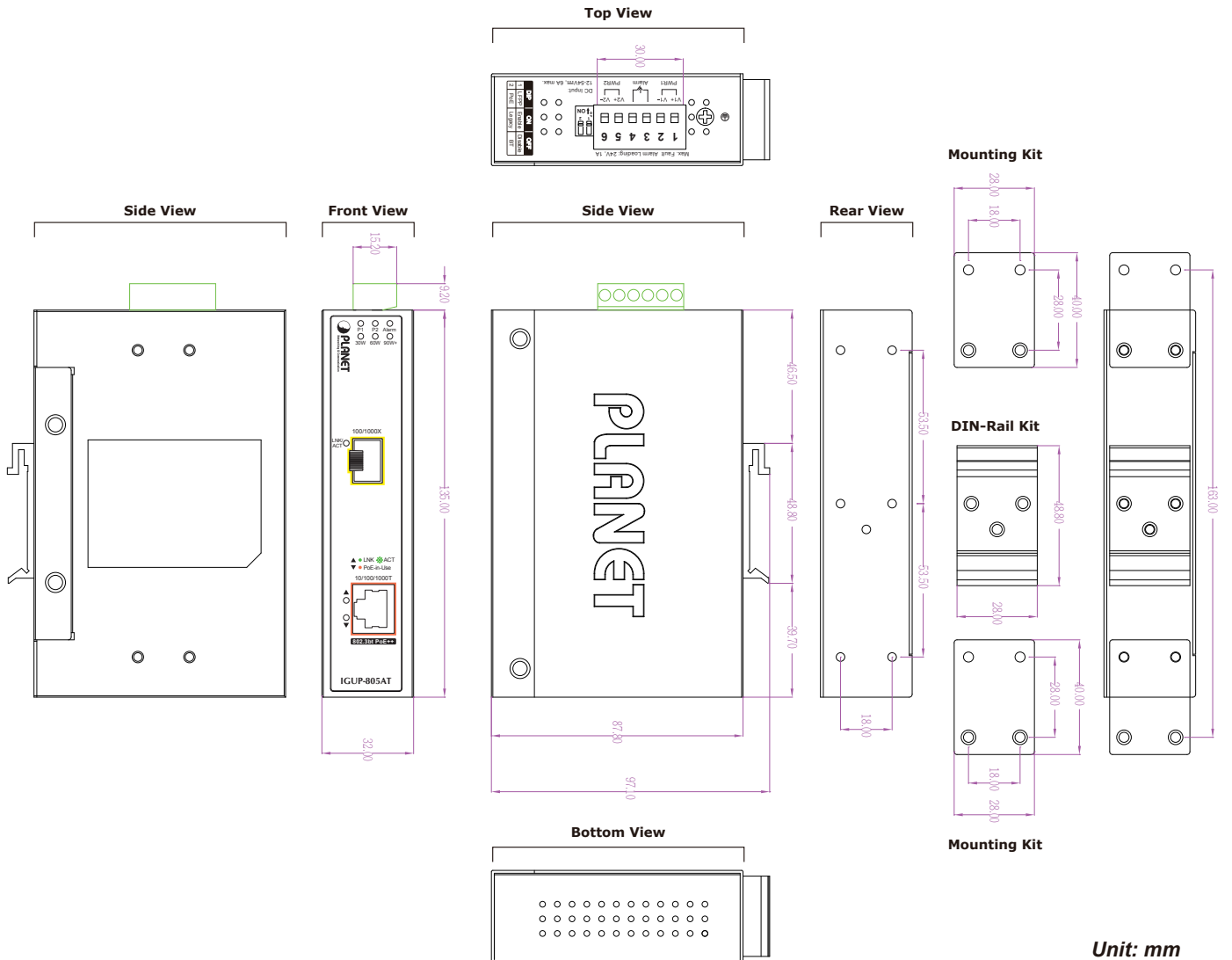
Ordering Information

IGUP-805AT	Industrial 1-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter

Related Products

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
IGTP-815AT	Industrial Compact 100/1000BASE-X to 10/100/1000BASE-T 802.at PoE+ Media Converter
IGTP-805AT	100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter (mini-GBIC, SFP)
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
GTP-805A	100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE Media Converter (mini-GBIC, SFP)
MGB-Series Transceiver	1000BASE-SX/LX SFP Transceiver
MFB Series Transceiver	100BASE-FX SFP Transceiver
ICA-E6260	2 Mega-pixel PoE Plus Speed Dome IP Camera with Extended Support
ICA-HM620	2 Mega-pixel PoE Plus Speed Dome Internet Camera
IPOE-171-60W	Industrial Single-Port 10/100/1000Mbps 802.3bt PoE++ Injector

SFP Modules are available for the IGUP-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 degrees C
MGB-SX(V2)	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2(V2)	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX(V2)	1000	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MGB-L40	1000	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MGB-L80	1000	LC	Single Mode	80km	1550nm	0 ~ 60 degrees C
MGB-L120(V2)	1000	LC	Single Mode	120km	1550nm	0 ~ 60 degrees C
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 75 degrees C
MGB-TSX2	1000	LC	Multi Mode	2km	1310nm	-40 ~ 75 degrees C
MGB-TLX(V2)	1000	LC	Single Mode	20km	1310nm	-40 ~ 75 degrees C
MGB-TL40	1000	LC	Single Mode	40km	1310nm	-40 ~ 75 degrees C
MGB-TL80	1000	LC	Single Mode	80km	1550nm	-40 ~ 75 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-LA10(V2)	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB10(V2)					1550nm	1310nm	
MGB-LA20(V2)	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB20(V2)					1550nm	1310nm	
MGB-LA40(V2)	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB40(V2)					1550nm	1310nm	
MGB-LA80	1000	WDM (LC)	Single Mode	80km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB80					1550nm	1310nm	
MGB-TLA10(V2)	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB10(V2)					1550nm	1310nm	
MGB-TLA20	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB20					1550nm	1310nm	
MGB-TLA40	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB40					1550nm	1310nm	
MGB-TLA80	1000	WDM (LC)	Single Mode	80km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB80					1550nm	1310nm	

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 degrees C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60 degrees C
MFB-F120	100	LC	Single Mode	120km	1310nm	0 ~ 60 degrees C
MFB-TFX	100	LC	Multi Mode	2km	1310nm	-40 ~ 75 degrees C
MFB-TF20	100	LC	Single Mode	20km	1310nm	-40 ~ 75 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-FA20 MFB-FB20	100	WDM (LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
					1550nm	1310nm	
MFB-TFA20 MFB-TFB20	100	WDM (LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
					1550nm	1310nm	
MFB-TFA40 MFB-TFB40	100	WDM (LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
					1550nm	1310nm	

IGUP-805AT