Industrial 2-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter

PLANET IGUP-1205AT 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-1205AT supports dual 12~56V 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-1205AT 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-1205AT is integrated with fiber interface for farther distance applications. The IGUP-1205AT's fiber connector type is as follows:

■ Two SFP slots 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 IGUP-1205AT still sustains the transmission performance as high as 1000Mbps. It works in the high-performance

Physical Port

- 1-port 10/100/1000BASE-T RJ45 with **IEEE 802.3bt PoE** Injector function
- 2 SFP slots, supporting 1000BASE-X and 100BASE-FX transceiver dual mode

Power over Ethernet

- Complies with IEEE 802.3af/at/bt PoE Plus end-span PSE
- 1 IEEE 802.3af/at/bt 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 equipment and protects devices from being damaged by incorrect installation
- Remote power feeding up to 100m
- IEEE 802.3af/at/bt 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, Fault and PoE usage
  - **Fiber port:** LNK/ACT
  - **10/100/1000BASE-T port:** LNK/ACT, PoE-in-use
- DIP switch: Standard/Legacy mode selectio

Industrial Case and Installation

- IP30 metal case
- DIN-rail and wall-mount designs
- 12 ~ 56V 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

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** technology, the IGUP-1205AT provides up to **95 watts** of PoE output power, tripling that of the earlier 802.3at. 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-1205AT can reduce cable deployment and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place.
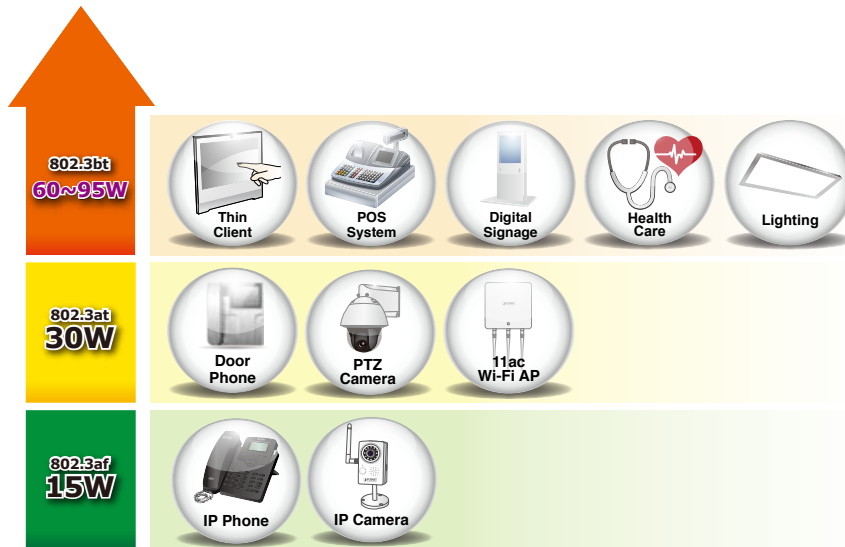
Convenient and Reliable Power System

To facilitate the 802.3bt power PoE++ usage with the commonly-used **12~48V DC** power input for transportation and industrial-level applications, the IGUP-1205AT adopts the **12~48V DC to 56V** 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.
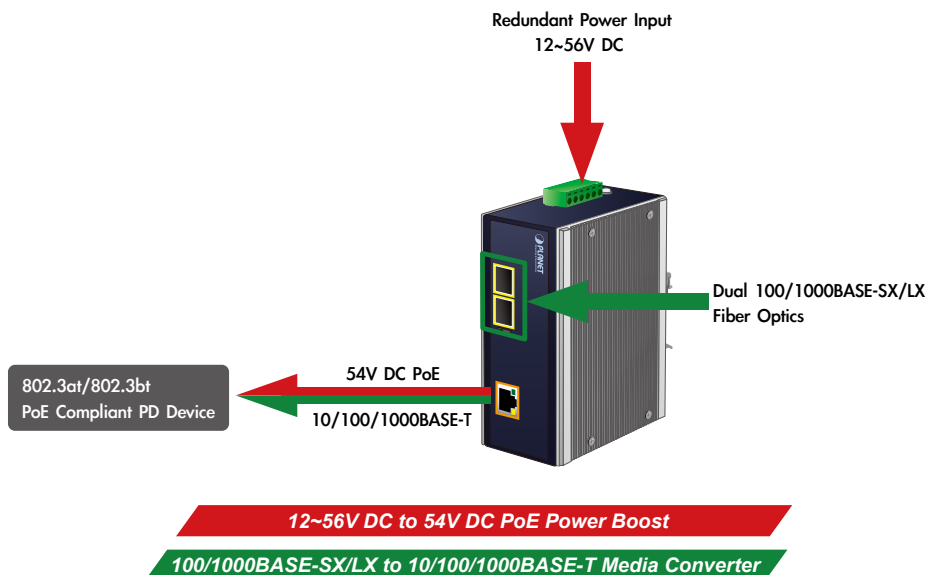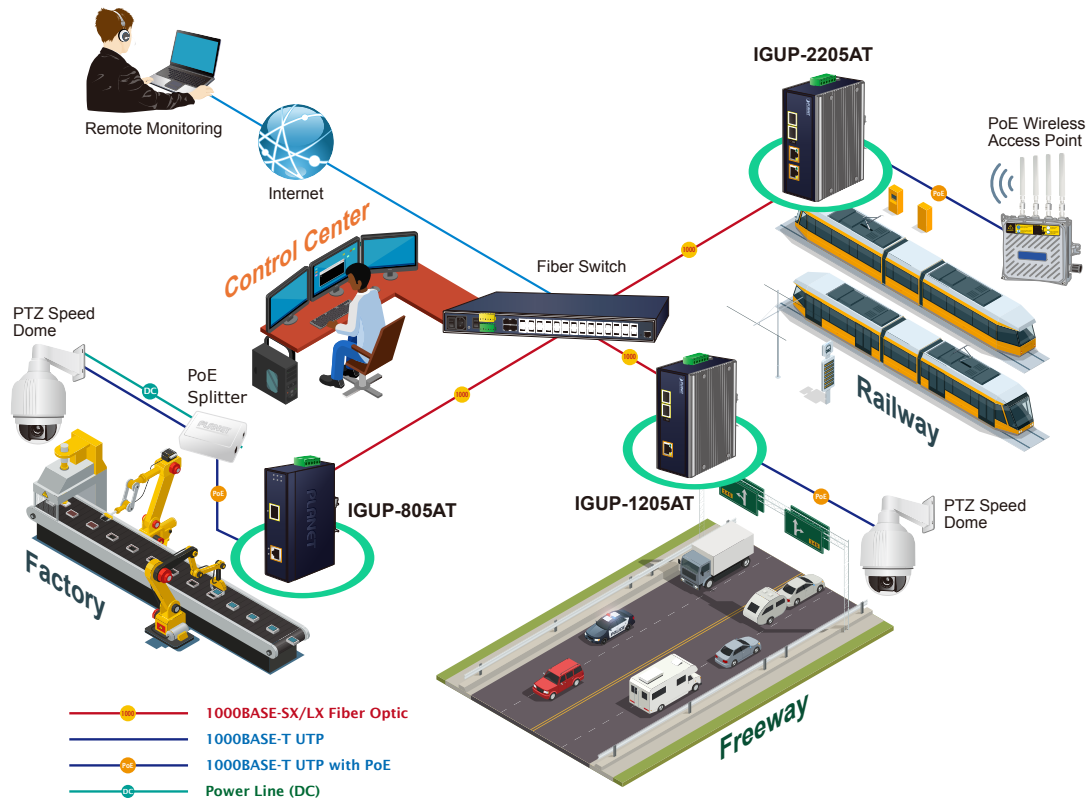

Environmentally Hardened Design for Industrial PoE Networks

The IGUP-1205AT 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 IGUP-1205AT 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-1205AT 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 SFP Fiber Extension

For the places difficult to find the power outlet, the IGUP-1205AT 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 802.3af/at/bt compliant network equipment in the public areas such as stations, freeways, airports and campuses for surveillance and wireless roaming needs.

Specifications

Model	IGUP-1205AT
Hardware Specifications	
Copper Port	1 x 10/100/1000BASE-T
SFP Slot	2 x 1000BASE-SX/LX/BX SFP interface Compatible with 100BASE-FX SFP
Flow Control	Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode
Maximum Frame Size	9K

LED Indicators	System:
	  Power 1 (Green), Power 2 (Green), Fault Alarm (Red)
	PoE Usage: (Amber)
	Fiber:
	  100BASE-X: LNK/ACT (Amber)
	  1000BASE-X: LINK/ACT (Green)
	TP:
	  10/100/1000BASE-T: LNK/ACT (Green)
	  PoE: PoE-in-Use (Amber)

Dimensions (W x D x H)	55 x 85 x 135 mm
Weight	612 g
Power Requirements	DC 12~56V, supports reverse polarity protection

Power Consumption	System ON without loading
	  DC 12V: 4.56W
	  DC 48V: 5.28W
	Full loading with PoE
	  DC 12V: 46.6W
	  DC 48V: 100.3W

DIP Switch	Standard/Legacy mode
Enclosure	IP30 metal case
Installation	DIN-rail kit and wall-mount ear
ESD Protection	6KV DC

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

Power Over Ethernet	
PoE Standard	IEEE 802.3bt Power over Ethernet Plus Plus Type 4
PoE Power Output	Standard (BT) mode: 90W Legacy (PoH) mode: 95W
PoE Power Supply Type	End-span + Mid-span
Power Pin Assignment	Pair 1 End-span: 1/2 (-), 3/6 (+) Pair 2 Mid-span: 4/5 (+), 7/8 (-)
PoE Power Budget	95 watts
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)
Standards Compliance	
Temperature	Operating: -40~75 degrees C Storage: -40~85 degrees C
Humidity	Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing)

IGUP-1205AT Multi View Drawing

Top View

Side View

Front View

Side View

Rear View

Mounting Kit

DIN-Rail Kit

Mounting Kit

Bottom View

Unit: mm
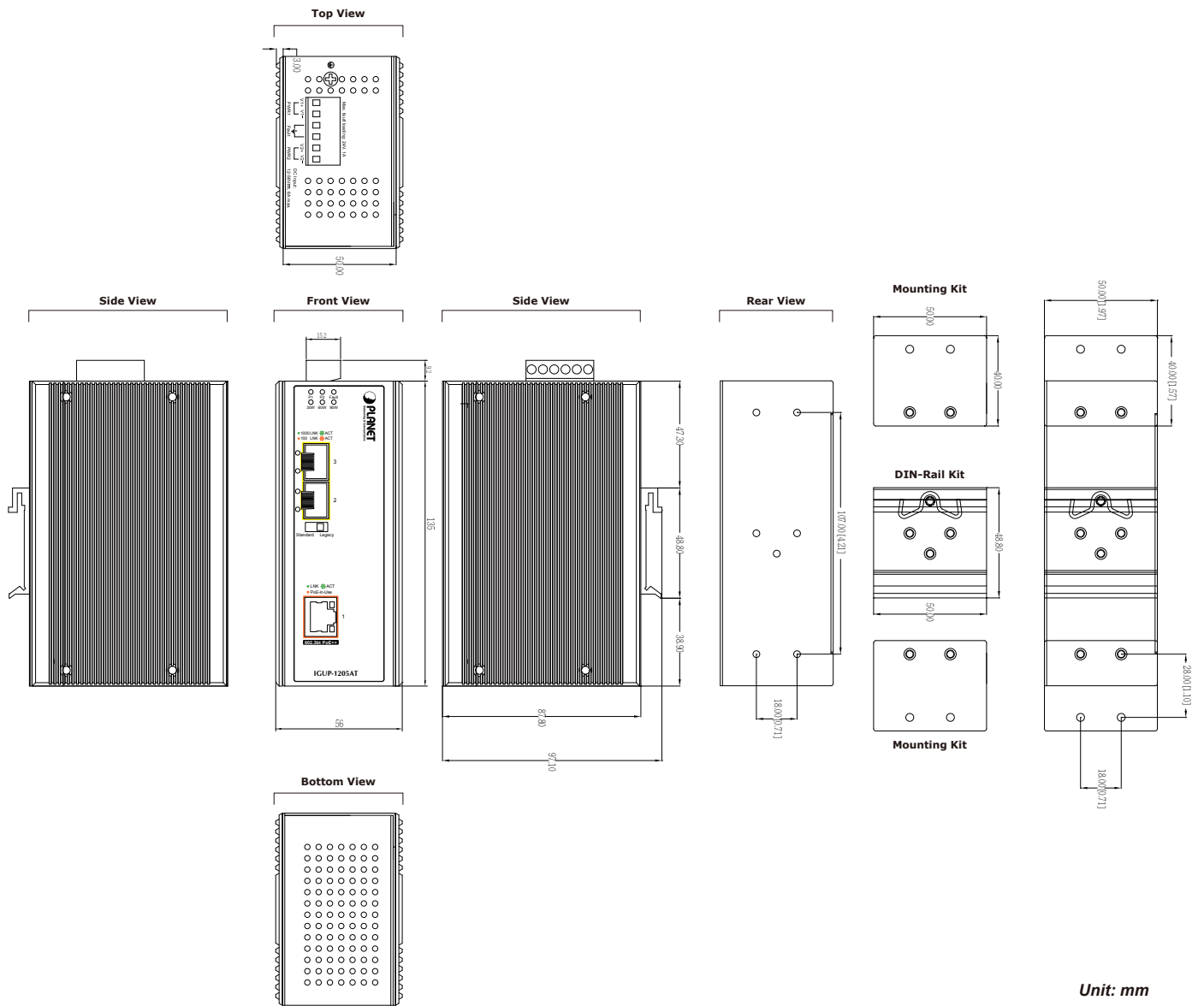
Ordering Information

IGUP-1205AT	Industrial 2-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter

Related Products

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-E6265	2 Mega-pixel IR 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
IPOE-E172	Industrial 1-Port Ultra PoE to 2-Port 802.3bt/at Gigabit PoE Extender
WDAP-1750AC	1750Mbps 802.11ac Dual Band Wall-mount Enterprise Wireless Access Point
WDAP-802AC	1200Mbps Dual Band 802.11ac Outdoor Wireless AP
WAP-552N	5GHz 802.11a/n 300Mbps Outdoor Wireless AP
WAP-252N	2.4GHz 802.11n 300Mbps Outdoor Wireless AP
ICF-1800	HD Touch Screen Android Multimedia Conferencing Phone

SFP Gigabit Modules are available for the IGUP-1205AT

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	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX	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	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	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 MGB-LB10	1000	WDM (LC)	Single Mode	10km	1310nm / 1550nm	1550nm / 1310nm	0 ~ 60 degrees C
MGB-LA20 MGB-LB20	1000	WDM (LC)	Single Mode	20km	1310nm / 1550nm	1550nm / 1310nm	0 ~ 60 degrees C
MGB-LA40 MGB-LB40	1000	WDM (LC)	Single Mode	40km	1310nm / 1550nm	1550nm / 1310nm	0 ~ 60 degrees C
MGB-LA80 MGB-LB80	1000	WDM (LC)	Single Mode	80km	1310nm / 1550nm	1550nm / 1310nm	0 ~ 60 degrees C
MGB-TLA10 MGB-TLB10	1000	WDM (LC)	Single Mode	10km	1310nm / 1550nm	1550nm / 1310nm	-40 ~ 75 degrees C
MGB-TLA20 MGB-TLB20	1000	WDM (LC)	Single Mode	20km	1310nm / 1550nm	1550nm / 1310nm	-40 ~ 75 degrees C
MGB-TLA40 MGB-TLB40	1000	WDM (LC)	Single Mode	40km	1310nm / 1550nm	1550nm / 1310nm	-40 ~ 75 degrees C
MGB-TLA80 MGB-TLB80	1000	WDM (LC)	Single Mode	80km	1310nm / 1550nm	1550nm / 1310nm	-40 ~ 75 degrees 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 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-1205AT