

Industrial 10/100/1000T to 2 100/1000X SFP Media Converter



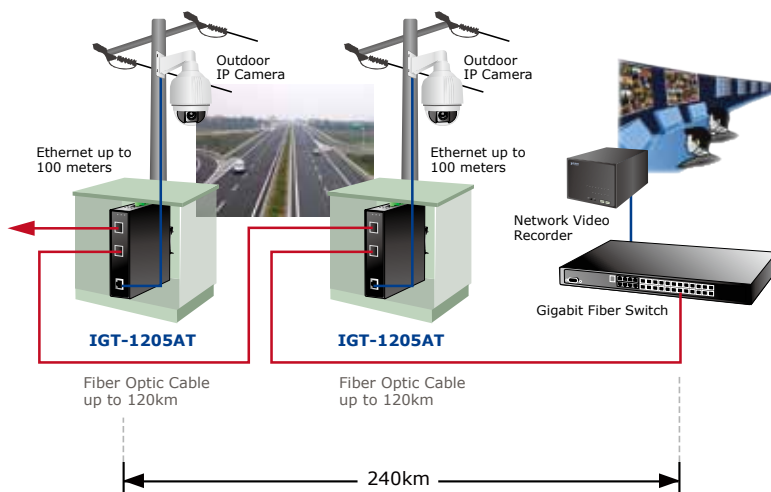
Flexible, Reliable and Industrial-grade Network Distance Extension Solution

PLANET IGT-1205AT is an Industrial Gigabit Media Converter providing non-blocking wire-speed performance and great flexibility for Gigabit Ethernet extension in harsh industrial environment. It is equipped with one 10/100/1000Base-T RJ-45 copper and two 100/1000Base-X SFP fiber optic interfaces delivered in an IP30 rugged strong case with redundant power system. The IGT-1205AT is well suited for applications in deploying surveillance system, and securing control and wireless service in climatically demanding environments with wide temperature range from -40 to 75 degrees C.

Fiber-Optical Link Capability Enables Extension of Network Deployment

The two SFP slots are compatible with 100Base-FX or 1000Base-SX / LX / WDM through SFP (Small Form Factor Pluggable) fiber-optic transceivers. The fiber optical uplink capability guarantees the throughput to all nodes hooked into the network and the Gigabit Ethernet distance can be extended from 550 meters (Multi-Mode fiber cable) up to 10/20/30/40/50/70/120 kilometers (Single-Mode fiber cable), also the Fast Ethernet distance can be extended from 2km (Multi-Mode fiber cable) up to 20/40/60 kilometers (Single-Mode fiber cable). They are well suited for applications within the factory data centers and distributions.

Extending Ethernet Distance



Physical Port

- 1-port 10/100/1000Base-T RJ-45 with auto MDI / MDI-X function
- 2-port SFP slot interface, SFP supports 1000Base-X and 100Base-FX transceiver via DIP switch configured

Fiber Port Redundancy

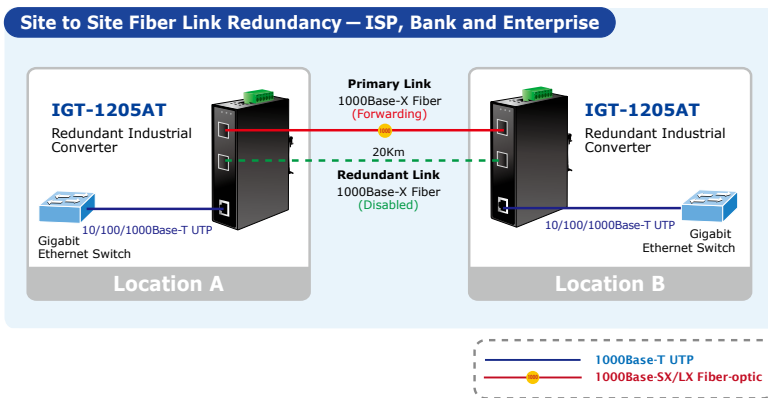
- Supports Auto-negotiation and 10/100Mbps half / full duplex and 1000Mbps full duplex mode
- High performance Store and Forward architecture, runt/ CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Prevents packet loss with back pressure (Half-Duplex) and IEEE 802.3x PAUSE frame flow control (Full-Duplex)
- 9K Jumbo Frame Size support
- Integrated address look-up engine, support 1K absolute MAC addresses
- Automatic address learning and address aging

Layer 2 Features

- Supports Auto-negotiation and 10/100Mbps half / full duplex and 1000Mbps full duplex mode
- High performance Store and Forward architecture, runt/ CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Prevents packet loss with back pressure (Half-Duplex) and IEEE 802.3x PAUSE frame flow control (Full-Duplex)
- 9K Jumbo Frame Size support
- Integrated address look-up engine, support 1K absolute MAC addresses
- Automatic address learning and address aging

Adjustable 3-Port Switch Mode or 2 Fiber Redundant Mode

Via the built-in DIP switch, the two SFP fiber interfaces of IGT-1205AT can be configured as Ethernet switch mode or Fiber Redundant mode. With the Ethernet switch mode, it can operate in Store-and-Forward mechanism with high performance; with the 2-port Fiber redundant mode, it provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant mode supports auto-recovering function. If the destination port of a packet is link-down, it will forward the packet to the other port of the backup pair.



Environmentally Hardened Design

The IGT-1205AT is equipped with the slim-type IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IGT-1205AT provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb side traffic control cabinets. Being able to operate under the temperature range from -40 to 75 degrees C, the IGT-1205AT can be placed in almost any difficult environment. The IGT-1205AT also allows either DIN rail or wall mounting for efficient use of cabinet space.

Convenient and Reliable Power System

To enhance the operation reliability and flexibility, the IGT-1205AT is equipped with two DC power input connectors for redundant power supply installation. It also possesses an integrated power supply source with wide-ranging voltages (12 to 48V DC or 24V AC) for worldwide high availability applications requiring dual or backup power inputs.

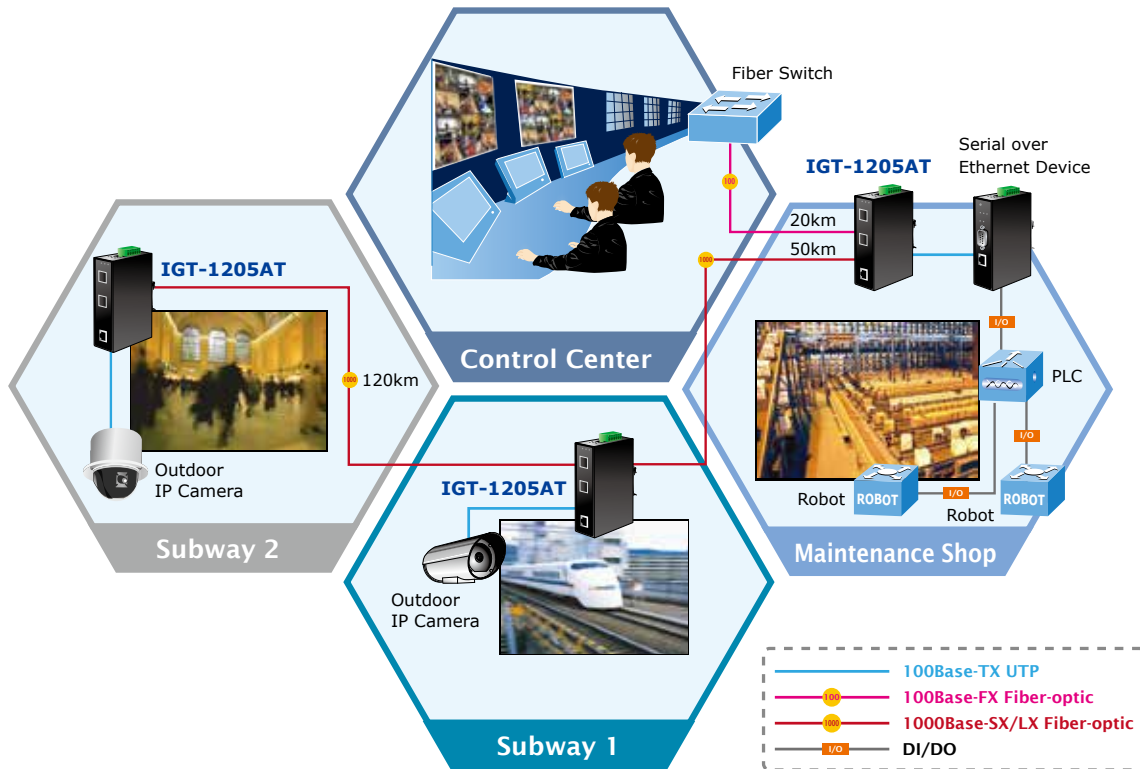
Industrial Case / Installation

- Slim IP30 metal case protection
- DIN Rail and Wall Mount Design
- Redundant Power Design
- 12 to 48V DC, redundant power with polarity reverse protect function
- AC 24V power adapter acceptable
- Supports EFT protection 6000 VDC for power line
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Application

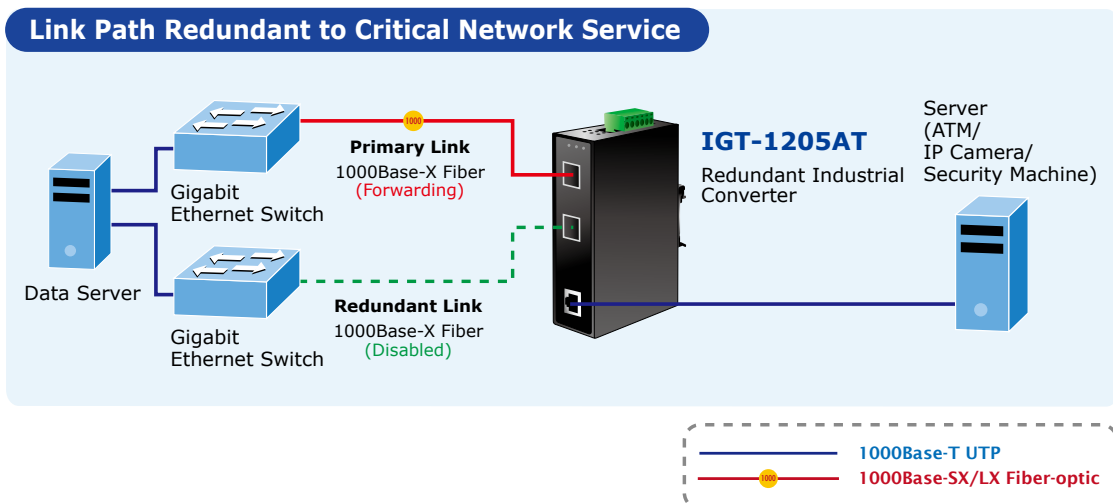
Hardened Environment Application

The IGT-1205AT industrial Gigabit Media Converter offers full port Gigabit speed. It provides very high reliability and security features to make sure the continuous operation in harsh environments such as control cabinet of transportation, factory, outdoors and places where extreme low or high temperatures can be experienced. Moreover, the IGT-1205AT is also compatible with 100Mbps and 1000Mbps SFP transceivers to provide a strong, stable and long-distance connection and flexible industrial networking deployment.



Redundancy Application

The IGT-1205AT industrial Gigabit Media Converter provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant-mode supports auto-recover function. If the destination port of a packet is link-down, it forwards the packet to the other port of the backup pair.

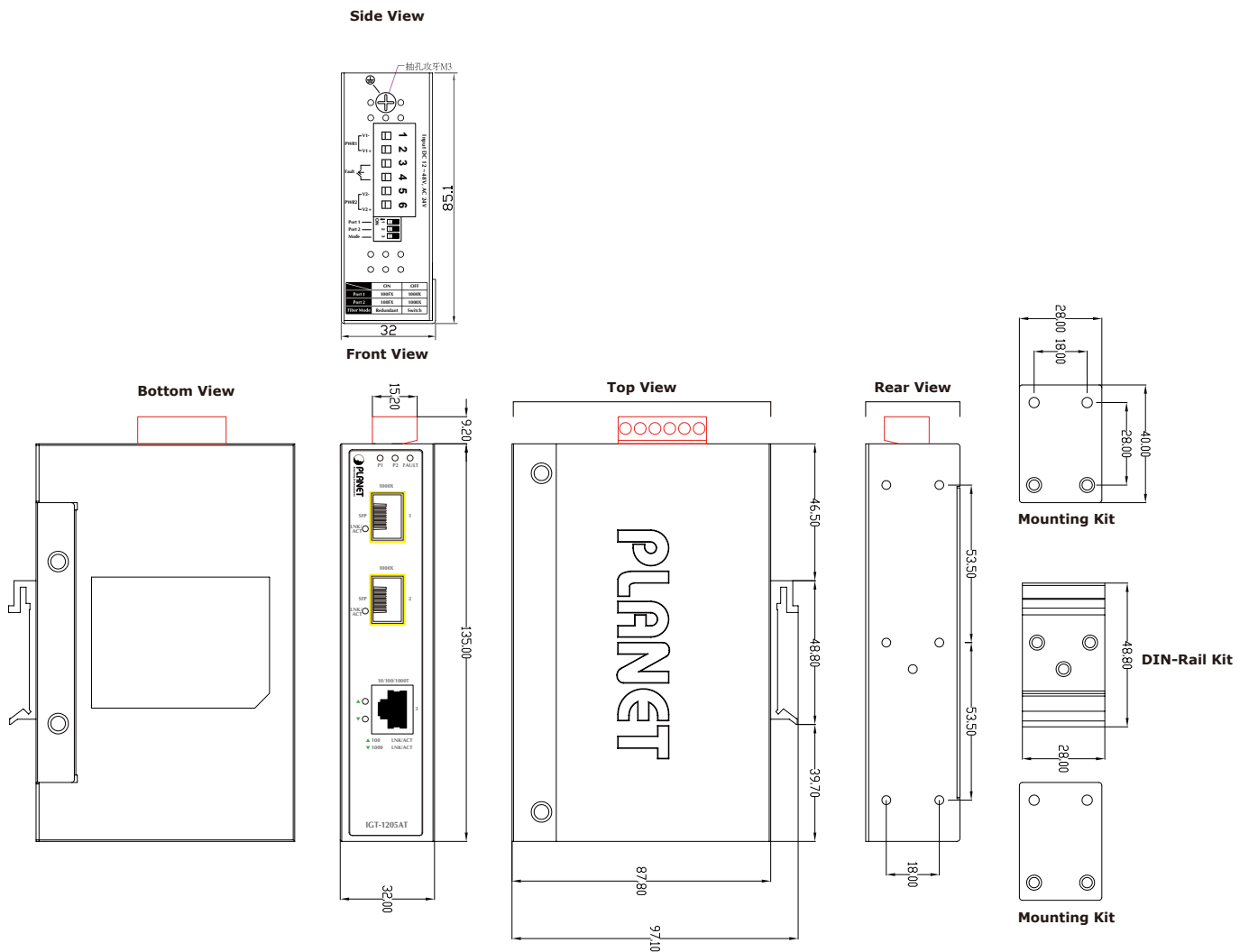


Product Specifications

Model	IGT-1205AT	
Hardware Specifications		
Copper Ports	1 x 10/100/1000Base-T RJ-45 TP Auto-MDI/MDI-X, Auto-Negotiation	
SFP / mini-GBIC Slots	2 1000Base-SX/LX/BX SFP interfaces (Port-1 and Port-2) Compatible with 100Base-FX SFP	
DIP Switch	<ul style="list-style-type: none"> ▪ DIP-1: SFP Port 1 1000Base-X (default) / 100Base-FX ▪ DIP-2: SFP Port 2 1000Base-X (default)/ 100Base-FX ▪ DIP-3: Switch mode / Fiber Redundant mode 	
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2	
Alarm	Provides one relay output for power failure Alarm Relay current carry ability: 1A @ DC 24V	
LED	3 x LED for System and Power: <ul style="list-style-type: none"> ▪ Green: DC Power 1 ▪ Green: DC Power 2 ▪ Green: Power Fault 2 x LED for Per Copper Port: <ul style="list-style-type: none"> ▪ Green:1000 LNK/ACT ▪ Orange:100 LNK/ACT 1 x LED for Per mini-GBIC interface (Port-1 and Port-2) <ul style="list-style-type: none"> ▪ Green: LNK/ACT 	
ESD Protection	6KV DC	
EFT Protection	6KV DC	
Enclosure	IP30 type metal case	
Installation	DIN rail kit and wall mount ear	
Dimensions (W x D x H)	135 x 87 x 32mm	
Weight	505g	
Power Requirements	DC 12~48V or AC 24V Redundant power with polarity reverses protection function	
Power Consumption / Dissipation	4.8 watts/16BTU	
Cable	Twisted-Pair	10Base-T: 2-Pair UTP CAT. 3, 4, 5, up to 100 meters 100Base-TX: 2-Pair UTP CAT. 5, 5e up to 100 meters 1000Base-T: 4-Pair UTP CAT. 5e, 6 up to 100 meters
	Fiber-Optic Cable	<ul style="list-style-type: none"> ▪ 1000Base-SX : 50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 550m ▪ 1000Base-LX : 9/125µm single-mode fiber optic cable, up to 10/20/30/40/50/70/120 kilometers (vary on SFP module) ▪ 100Base-FX : 50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 2 kilometers 9/125µm single-mode fiber optic cable, up to 20/40/60 kilometers (vary on SFP module)
Switch Specification		
Switch Processing Scheme	Store-and-Forward	
Address Table	1K entries	
Flow Control	Back pressure for half duplex IEEE 802.3x Pause Frame for full duplex	
Switch fabric	6Gbps	
Throughput (packet per second)	4.46Mpps@64bytes	
Maximum Transmit Unit	9216 bytes	
Speed	SX/LX: 2000Mbps (full-duplex) FX: 200Mbps (full-duplex) TP: 10/20Mbps, 100/200Mbps, 2000Mbps	
Standards Conformance		
Standards Compliance	IEEE 802.3 Ethernet / 10Base-T IEEE 802.3u Fast Ethernet / 100Base-TX IEEE 802.3ab Gigabit Ethernet / 1000Base-T IEEE 802.3z Gigabit Ethernet / 1000Base-SX/LX IEEE 802.3x Full-Duplex Flow Control	

Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32(Free fall)
	IEC60068-2-27(Shock)
	IEC60068-2-6(Vibration)
Environment	
Temperature	Operating: -40~75 degrees C
	Storage: -40~75 degrees C
Humidity	Operating: 5~95% (Non-condensing)
	Storage: 5~95% (Non-condensing)

Dimensions



Dimensions (unit = mm)

Ordering Information

IGT-1205AT Industrial 10/100/1000T to 2 100/1000X SFP Media Converter

Related SFP Transceivers

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	1550nm	0 ~ 60°C
MFB-TFX	100	LC	Multi Mode	2km	1310nm	-40 ~ 75°C
MFB-TF20	100	LC	Single Mode	20km	1550nm	-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	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60°C
MFB-FB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60°C
MFB-TFA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75°C
MFB-TFB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75°C
MFB-TFA40	100	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75°C
MFB-TFB40	100	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75°C

Gigabit Ethernet Transceiver (1000Base-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Wavelength
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-L40	1000	LC	Single Mode	40km	1550nm	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-TL50	1000	LC	Single Mode	50km	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	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60°C
MGB-LB10	1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	0 ~ 60°C
MGB-LA20	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60°C
MGB-LB20	1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60°C
MGB-LA40	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60°C
MGB-LB40	1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	0 ~ 60°C
MGB-LA60	1000	WDM(LC)	Single Mode	60km	1310nm	1550nm	0 ~ 60°C
MGB-LB60	1000	WDM(LC)	Single Mode	60km	1550nm	1310nm	0 ~ 60°C
MGB-TLA10	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB10	1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	-40 ~ 75°C
MGB-TLA20	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB20	1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75°C
MGB-TLA40	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB40	1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75°C
MGB-TLA60	1000	WDM(LC)	Single Mode	60km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB60	1000	WDM(LC)	Single Mode	60km	1550nm	1310nm	-40 ~ 75°C