Industrial 4-Port 10/100/1000BASE-T + 2-Port 100/1G/2.5GBASE-X SFP Ethernet Switch

Flexible, Reliable and Industrial-grade Network Distance Extension Solution

PLANET IGS-620TF is an **Industrial 6-port full Gigabit Ethernet Switch** providing non-blocking wire-speed performance and great flexibility for Gigabit Ethernet extension in harsh industrial environment. It provides **4-port 10/100/1000BASE-T** RJ45 copper and **2 extra 100/1000/2500BASE-X SFP** fiber optic interfaces delivered in an IP30 rugged strong case with redundant power system. The IGS-620TF is well suited for applications like deploying surveillance system, and securing control and wireless service in climatically demanding environments with wide temperature range from **-40 to 75 degrees C**.

Fiber Optic Link Capability Enables Extension of Network Deployment

The two SFP ports are compatible with **100BASE-FX**, **1000BASE-X** and **2500BASE-X** SFP (small form factor pluggable) fiber-optic transceivers. The fiber optic uplink capability guarantees the throughput to all nodes hooked into the network and the Gigabit Ethernet distance can be extended from 300 meters (Multi-mode fiber cable) to 10/20/30/40/50/70/120 kilometers (Single-mode fiber cable). The Fast Ethernet distance can also be extended from 2km (Multi-mode fiber cable) to 20/40/60 kilometers (Single-mode fiber cable). They are well suited for applications within the factory data centers and distributions.

Physical Port

- Four 10/100/1000BASE-T RJ45 ports with auto MDI / MDI-X function
- Two SFP interfaces, supporting 100/1000/2500BASE-X transceiver type auto detection

Fiber Port Redundancy

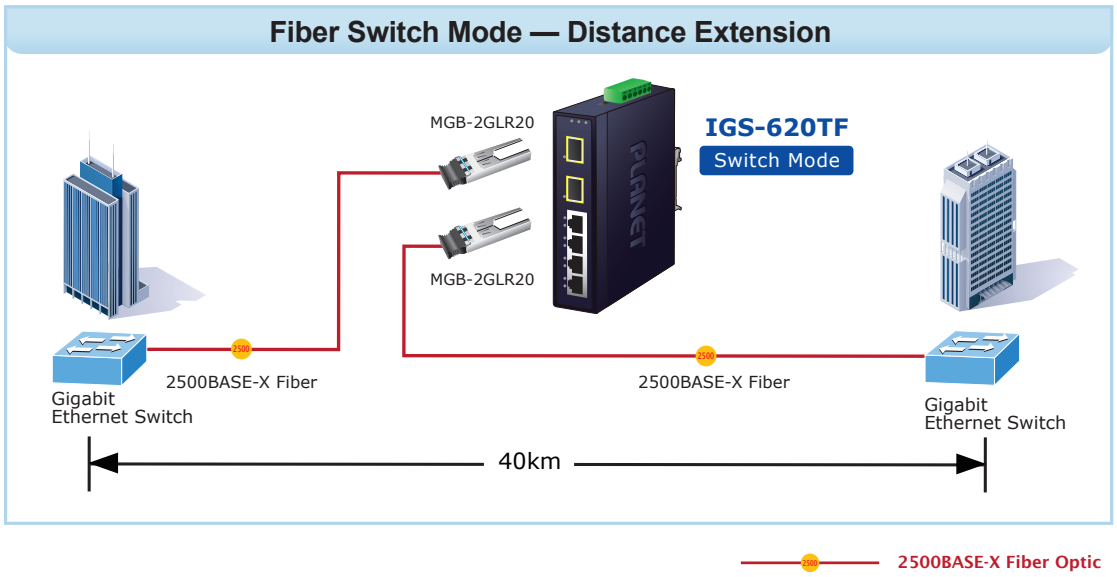
- Automatically detects link status and redundancy on dual ports with the same connector type.
- Only primary port is active at a time, while the backup port is blocked.
- When primary port link failure occurs, the traffic will swap to backup port automatically.
- Once the primary-port status is back to link up, the traffic will swap from backup port to primary port.

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
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- 9K Jumbo Frame size support
- Backplane (Switching Fabric): 18Gbps
- Integrated address look-up engine, supporting 4K absolute MAC addresses
- Automatic address learning and address aging
- IEEE 802.1Q VLAN transparency
- CSMA/CD Protocol

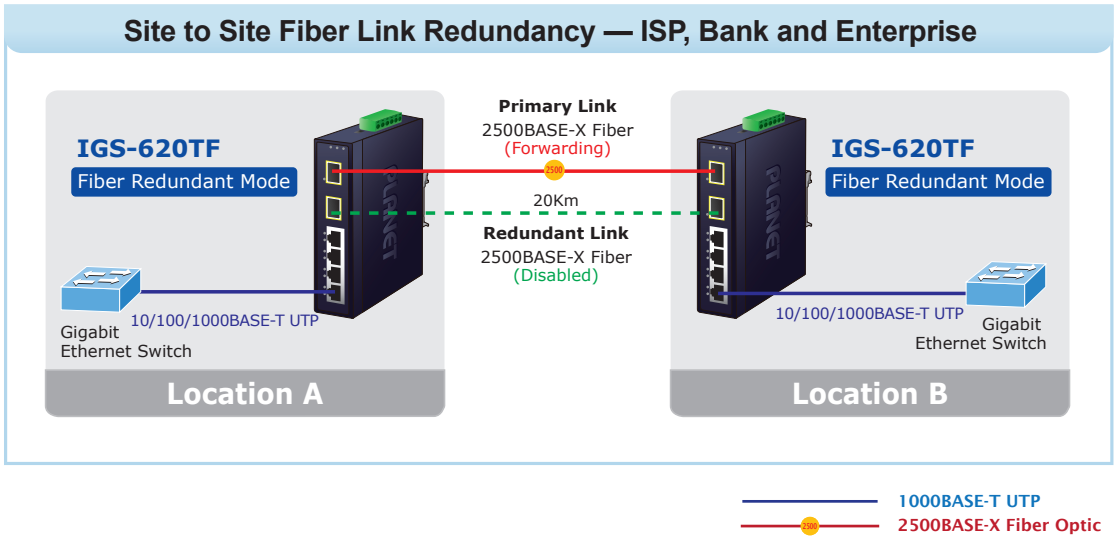
Industrial Case and Installation

- Slim IP30 metal case protection
- DIN-rail, wall-mount or side wall-mount design for redundant power design
  - 12 to 48V DC, redundant power with reverse polarity protection
  - AC 24V power adapter acceptable
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature



Adjustable 6-Port Switch Mode or 4 + 2 Fiber Redundant Mode

The two SFP ports allow to change the operation mode with its built-in DIP switch. Via the built-in DIP switch, the IGS-620TF can be configured as **6-port Ethernet switch or 4+2 fiber redundant mode**. With the 6-port switch mode, the IGS-620TF can operate in Store-and-Forward mechanism with high performance; on the other hand, when in the 4+2 fiber redundant mode, it provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant mode also 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 IGS-620TF is equipped with the slim-type IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IGS-620TF 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 IGS-620TF can be placed in almost any difficult environment. The IGS-620TF also allows either DIN-rail or wall mounting for efficient use of cabinet space.

Convenient and Reliable Power System

To enhance the operating reliability and flexibility, the IGS-620TF 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.

Flexible and Easy Installation with Limited Space

The compact-sized IGS-620TF is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN rail, thereby making its usability more flexibly and easily in any space-limited location.

DIN-rail Mounting

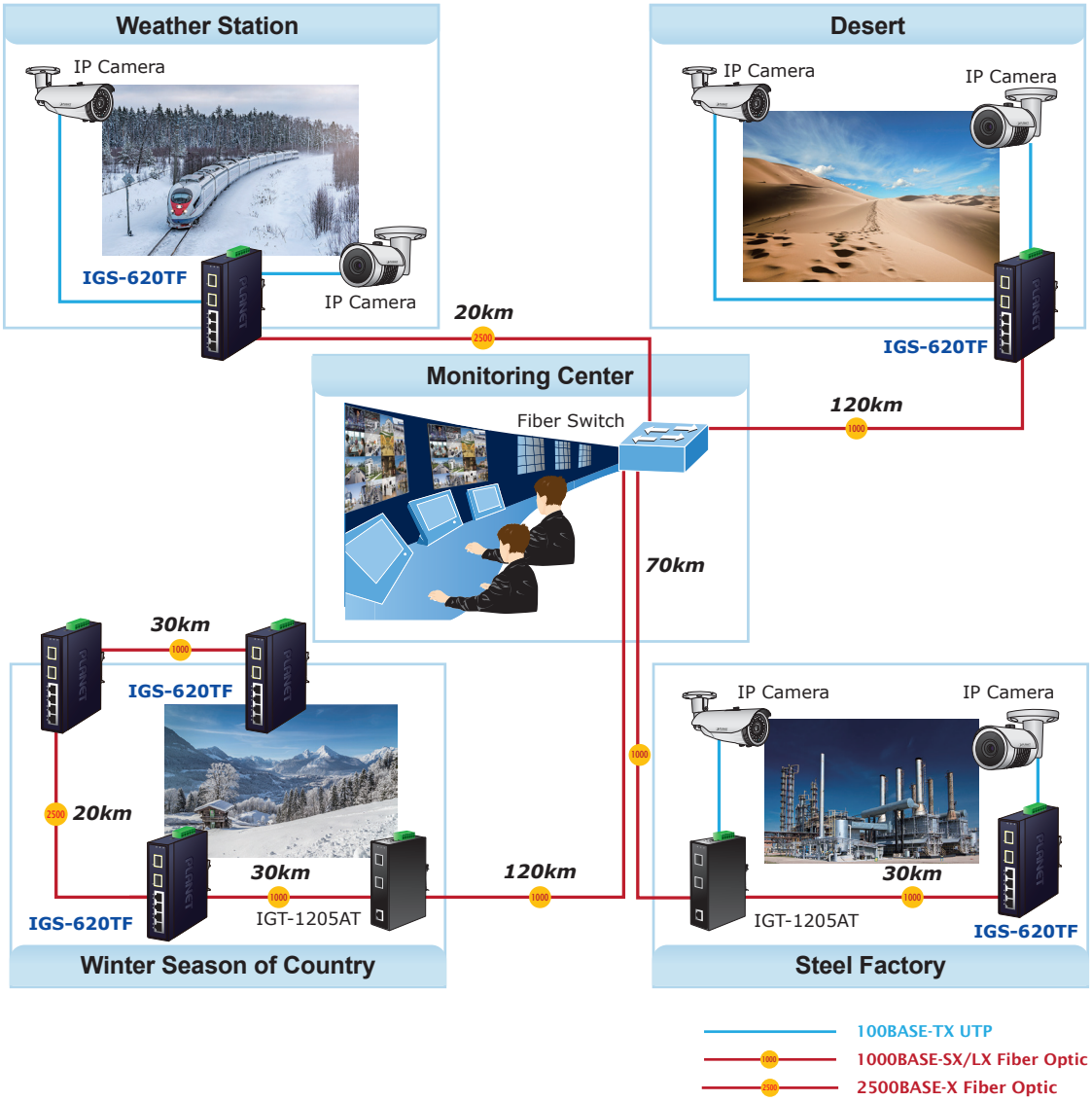
Wall Mounting

Side Wall Mounting
(Space saving)

Applications

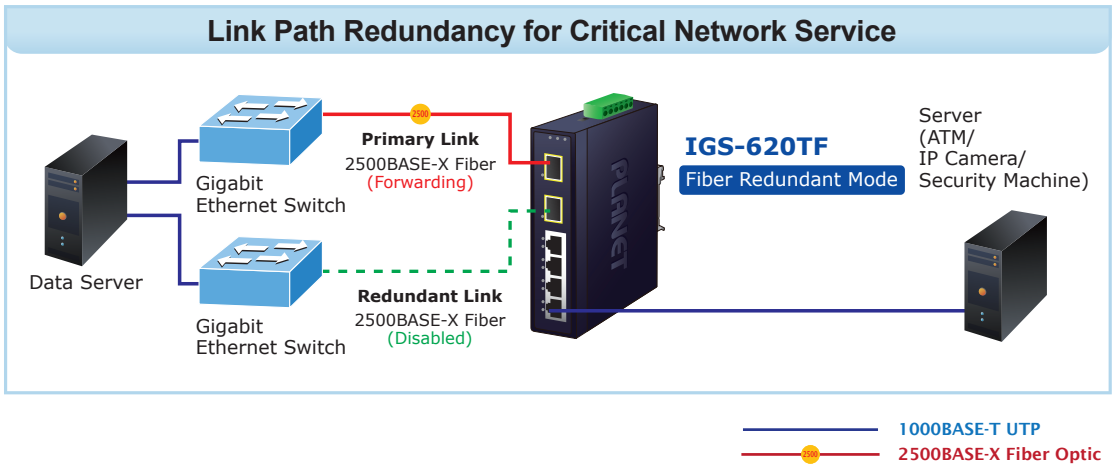
Hardened Environment Application

The IGS-620TF Industrial Gigabit Ethernet Switch 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 IGS-620TF is also compatible with 100Mbps, 1000Mbps and 2500Mbps SFP transceivers to provide a strong, stable and long-distance connection and flexible industrial networking deployment.



Redundancy Application

The IGS-620TF Industrial Gigabit Ethernet Switch 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.

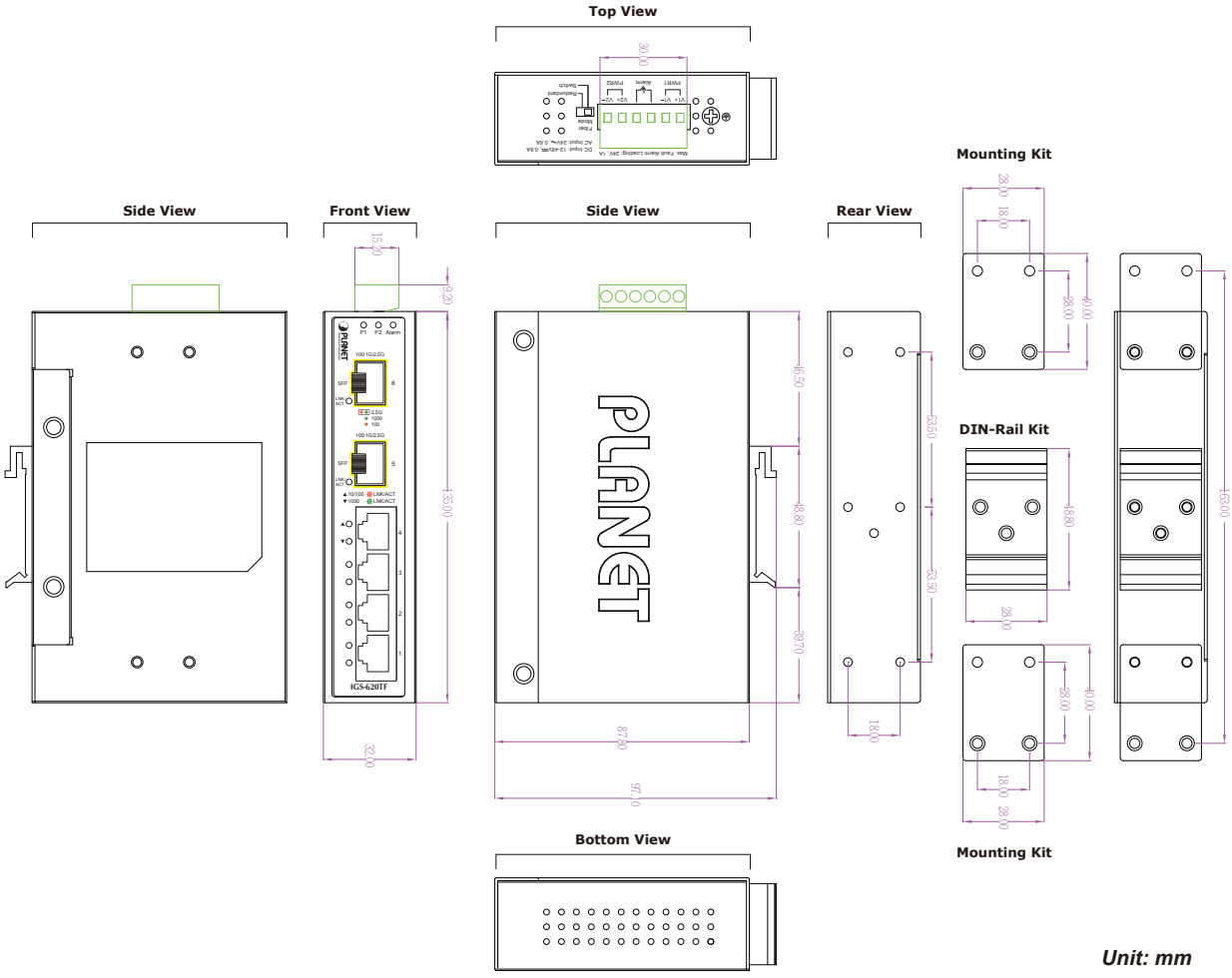


Product Specifications

Model	IGS-620TF		
Hardware Specifications			
Copper Ports	4 x 10/100/1000BASE-T RJ45 TP Auto-MDI/MDI-X, auto-negotiation		
SFP Slots	2 x 100/1G/2.5GBASE-X SFP interfaces Supports auto detection		
DIP Switch	DIP	Position	Function
	DIP-1	ON	Fiber Redundant
		OFF (default)	Switch 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		
ESD Protection	6KV DC		
Enclosure	IP30 type metal case		
Installation	DIN-rail kit and wall-mount ear		
Dimensions (W x D x H)	32 x 87 x 135mm		
Weight	425g		
Power Requirements	DC 12~48V or AC 24V Redundant power with reverse polarity protection		
Power Consumption / Dissipation	7.5watts / 26BTU		
LED	3 x LED for System and Power: ■ Green: DC Power 1 ■ Green: DC Power 2 ■ Red: Alarm 2 x LED for Per Copper Port (Port-1~Port-4): ■ Green: 1G LNK/ACT ■ Amber:100 LNK/ACT 1 x LED for Per SFP interface (Port-5 and Port-6) ■ Green + Amber: 2.5G LNK/ACT ■ Green: 1G LNK/ACT ■ Amber:100 LNK/ACT		
Switch Specifications			
Switch Processing Scheme	Store-and-Forward		
Switch Fabric	18Gbps		
Throughput (packet per second)	13.39Mpps@64bytes		
Address Table	4K entries		
Jumbo Frame	9216 bytes		
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex		

Standards Conformance	
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX IEEE 802.3x Full-Duplex Flow Control IEEE 802.1p Class of Service
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32(Free fall) IEC60068-2-27(Shock) IEC60068-2-6(Vibration)
Environment	
Operating	Temperature: -40 ~ 75 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

Dimensions



Ordering Information

IGS-620TF	Industrial 4-Port 10/100/1000BASE-T + 2-Port 100/1G/2.5GBASE-X SFP Ethernet Switch

Available 100Mbps Modules

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 degrees C)
MFB-TF20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km (-40 ~ 75 degrees C)

Available 1000Mbps Modules

MGB-GT	SFP-Port 1000 BASE-T Module
MGB-LX	SFP-Port 1000 BASE-LX mini-GBIC module - 20km
MGB-SX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m
MGB-SX2	SFP-Port 1000 BASE-SX mini-GBIC module - 2km
MGB-L40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km
MGB-L80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km
MGB-L120	SFP-Port 1000 BASE-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km
MGB-LA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km
MGB-LB80	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km
MGB-TSX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m (-40 ~ 75 degrees C)
MGB-TSX2	SFP-Port 1000 BASE-SX mini-GBIC module – 2km (-40 ~ 75 degrees C)
MGB-TL40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km (-40 ~ 75 degrees C)
MGB-TL80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km (-40 ~ 75 degrees C)
MGB-TLA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40 ~ 75 degrees C)
MGB-TLB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40 ~ 75 degrees C)
MGB-TLA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40 ~ 75 degrees C)
MGB-TLB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km(-40 ~ 75 degrees C)
MGB-TLA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40 ~ 75 degrees C)
MGB-TLB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40 ~ 75 degrees C)
MGB-TLA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40 ~ 75 degrees C)
MGB-TLB80	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km (-40 ~ 75 degrees C)

Available 2500Mbps Modules

MGB-2GTSR	2.5G SFP Transceiver (Multi-mode, 850nm, DDM, -40~75°C) - 300m
MGB-2GTLA20	2.5G SFP Transceiver (WDM, TX:1310nm RX:1550nm, DDM, -40~75°C) - 20km
MGB-2GTLB20	2.5G SFP Transceiver (WDM, TX:1550nm RX:1310nm, DDM, -40~75°C) - 20km

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