

Industrial 1-/2-port 10/100/1000T to 2-port 100/1000/2500X SFP Media Converter



Flexible, Reliable and Industrial-grade Network Distance Extension Solution

PLANET IGT-x205AT 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 or two 10/100/1000BASE-T** RJ45 copper port and **two 100/1000/2500BASE-X SFP** fiber optic interfaces delivered in an IP30 rugged strong case with redundant power system. The IGT-x205AT 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-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 20/40/80/120 kilometers (Single-mode fiber cable), and also the Fast Ethernet distance can 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

- 1- or 2-port 10/100/1000BASE-T RJ45 with auto MDI / MDI-X function
- 2-port SFP, supporting 100/1000/2500BASE-X transceiver type auto detectio

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 back up port automatically.
- Once the primary port status is back to link up, the traffic will swap from backup port to primary port.

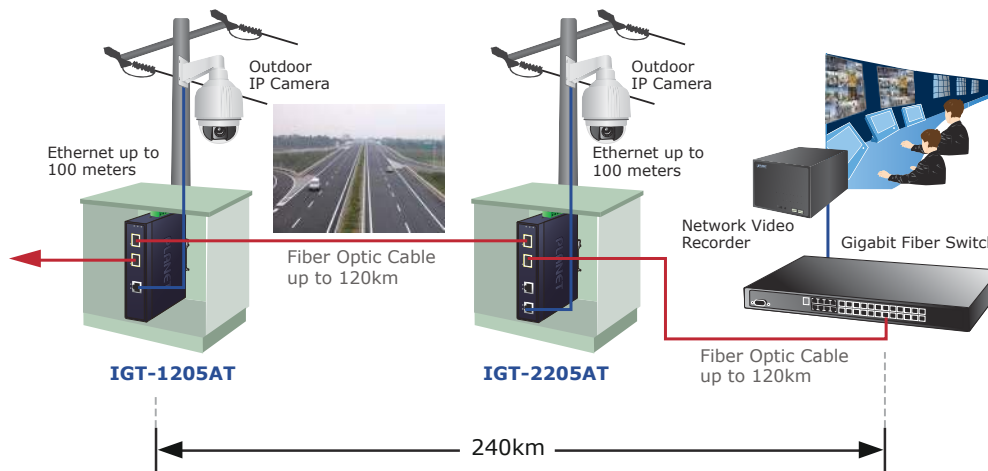
Layer 2 Features

- 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
- Integrated address look-up engine, supporting 4K absolute MAC addresses
- Automatic address learning and address aging

Industrial Case and Installation

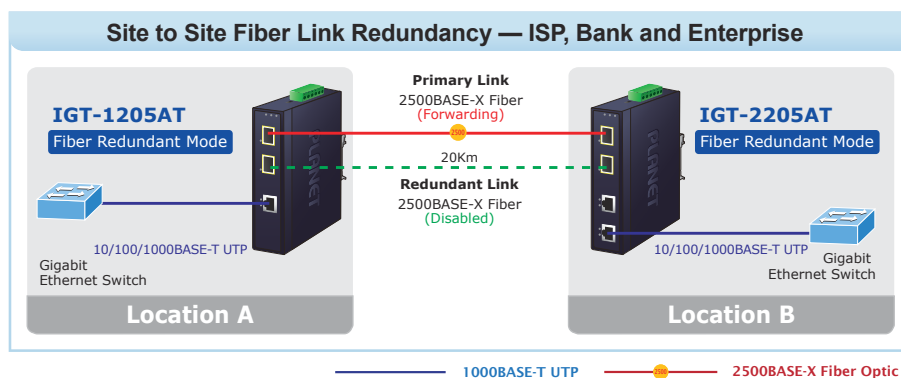
- Slim IP30 metal case protection
- DIN-rail, wall-mount or side wall-mount design for redundant power design
- Redundant Power Design
 - 12 to 48V DC, redundant power with reverse polarity protection function
 - AC 24V power adapter acceptable
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75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

Extending Ethernet Distance



Adjustable 3-/4-Port Switch Mode or 2 Fiber Redundant Mode

Via the built-in DIP switch, the two SFP fiber interfaces of the IGT-x205AT 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-x205AT is equipped with the slim-type IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IGT-x205AT 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-x205AT can be placed in almost any difficult environment. The IGT-x205AT 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-x205AT 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

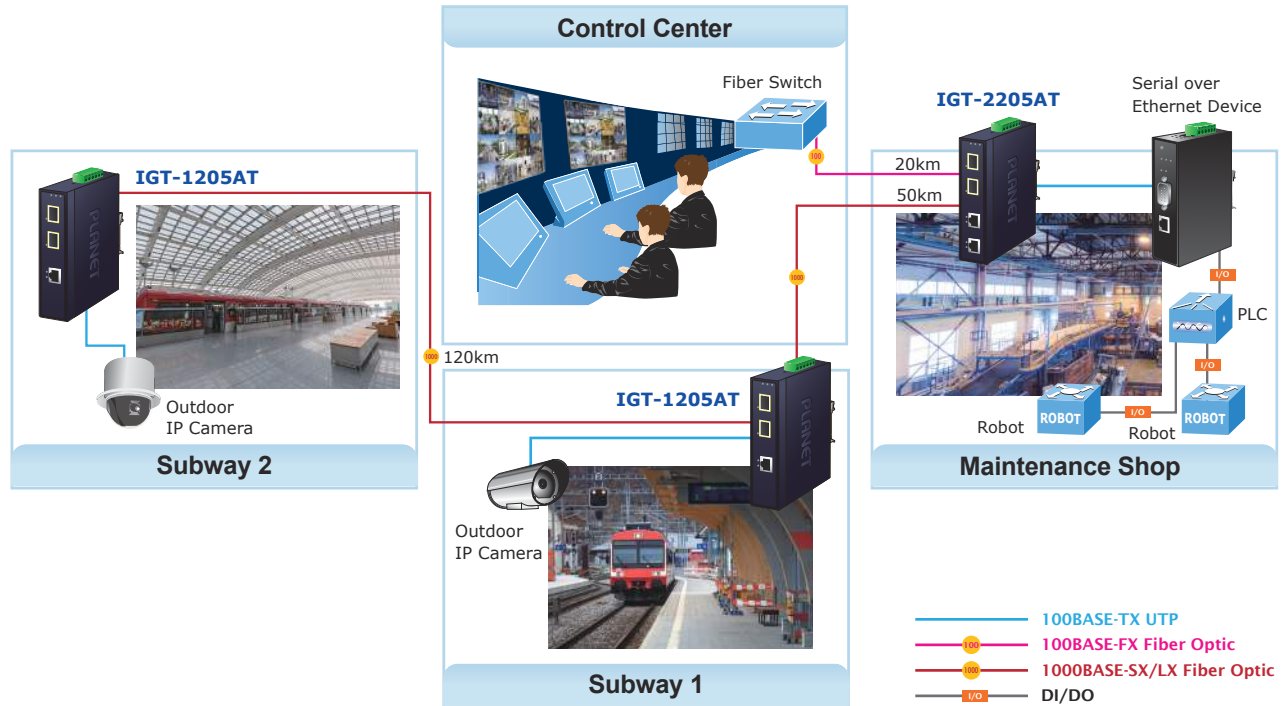
The compact-sized IGT-x205AT is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN rail, thereby making its usability more flexible and easier in any space-limited location.



Applications

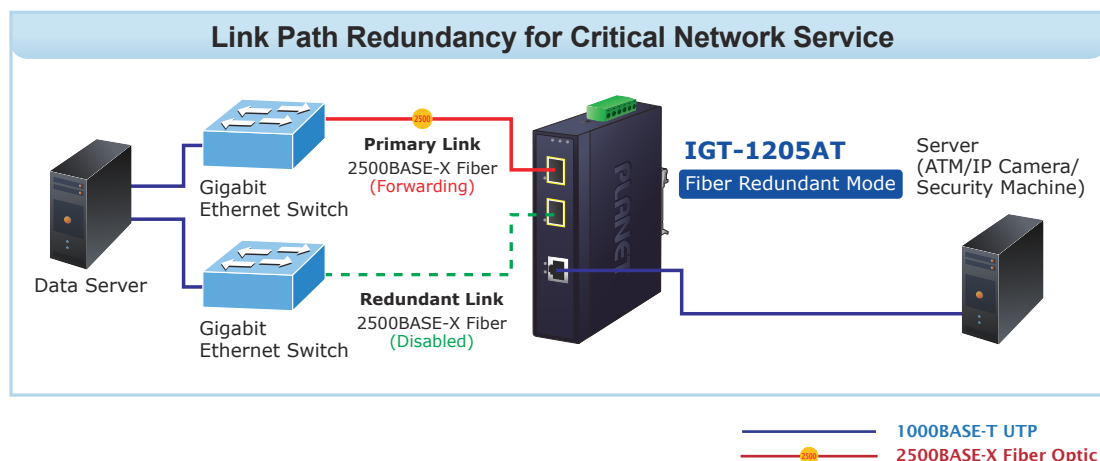
Hardened Environment Application

PLANET IGT-x205AT 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-x205AT is also compatible with **100/1000/2500Mbps** SFP transceivers to provide a strong, stable and long-distance connection and flexible industrial networking deployment.



Redundancy Application

The IGT-x205AT 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.

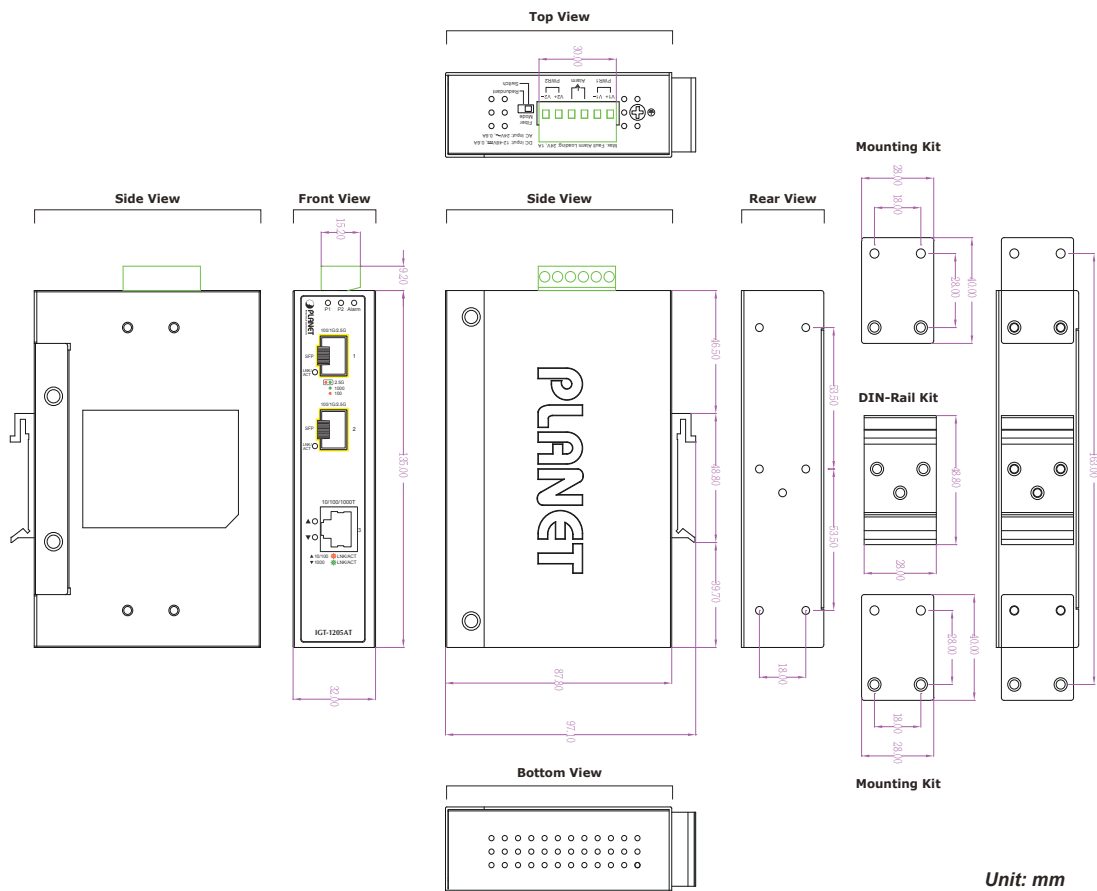


Specifications

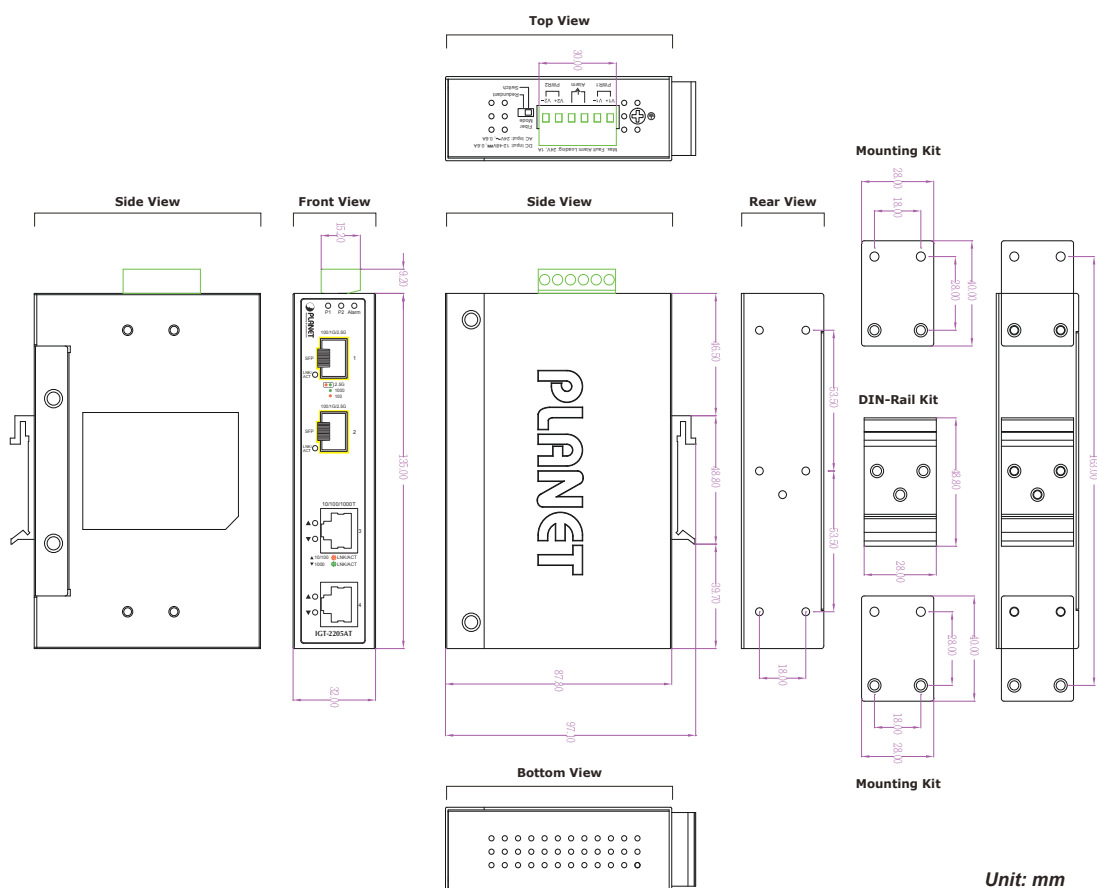
Model		IGT-1205AT	IGT-2205AT
Hardware Specifications			
Copper Interface	1 x 10/100/1000BASE-T RJ45		2 x 10/100/1000BASE-T RJ45
Fiber Optic Interfaces	2 x 100/1G/2.5GBASE-X SFP interfaces (Port-1 and Port-2) Supports auto detection		
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2		
LED	System and Power: ■ Green: Power 1 ■ Green: Power 2 ■ Red: Alarm		
	Per Copper Port (Port-3~Port-4): ■ Green: 1G LNK/ACT ■ Amber:100 LNK/ACT		
	SFP interface (Port-1~ Port-2) ■ Green + Amber: 2.5G LNK/ACT ■ Green: 1G LNK/ACT ■ Amber:100 LNK/ACT		
DIP Switch	Position		Function
	ON		Fiber Redundancy
	OFF (default)		Switch Mode
Alarm	Provides one relay output for power failure Alarm Relay current carry ability: 1A @ DC 24V		
Power Requirements	DC 12~48V or AC 24V Redundant power with reverse polarity protection		
Power Consumption / Dissipation	4.8 watts/16BTU	4.92 watts/16.9BTU	
Dimensions (W x D x H)	32 x 87 x 135mm	32 x 87 x 135mm	
Weight	412g	419g	
Enclosure	IP30 type metal case		
Installation	DIN-rail kit and wall-mount ear		
ESD Protection	6KV DC		
Switching Specifications			
Processing Scheme	Store-and-Forward		
Fabric	12Gbps	14G	
Throughput (packet per second)	8.93Mpps@64bytes	10.42Mpps@64bytes	
Flow Control	Back pressure for half duplex. IEEE 802.3x pause frame for full duplex		
Address Table	4K entries		
Jumbo Frame	9216bytes		
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			
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C		
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)		

Dimensions

■ IGS-1205AT



■ IGS-2205AT



Ordering Information

IGT-1205AT	Industrial 10/100/1000BASE-T to 2-Port 100/1G/2.5GBASE-X SFP Media Converter
IGT-2205AT	Industrial 2-Port 10/100/1000BASE-T to 2-Port 100/1G/2.5GBASE-X SFP Media Converter

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 2.5Gbps Modules

MGB-2GTSR	2.5G SFP Transceiver (Multi-mode, 850nm, DDM) - 300m
MGB-2GTLR2	2.5G SFP Transceiver (Single-mode, 1310nm, DDM) - 2km
MGB-2GTLR20	2.5G SFP Transceiver (Single-mode, 1310nm, DDM) - 20km
MGB-2GTLA20	2.5G SFP Transceiver (WDM, TX:1310nm RX:1550nm, DDM) - 20km
MGB-2GTLB20	2.5G SFP Transceiver (WDM, TX:1550nm RX:1310nm, DDM) - 20km
MGB-2GSR	2.5G SFP Transceiver (Multi-mode, 850nm, DDM) - 300m
MGB-2GLR2	2.5G SFP Transceiver (Single-mode, 1310nm, DDM) - 2km
MGB-2GLR20	2.5G SFP Transceiver (Single-mode, 1310nm, DDM) - 20km
MGB-2GLA20	2.5G SFP Transceiver (WDM, TX:1310nm RX:1550nm, DDM) - 20km
MGB-2GLB20	2.5G SFP Transceiver (WDM, TX:1550nm RX:1310nm, DDM) - 20km

PLANET Technology Corporation

11F., No.96, Minquan Rd., Xindian Dist., New Taipei City 231,
Taiwan (R.O.C.)

Tel: 886-2-2219-9518

Email: sales@planet.com.tw

Fax: 886-2-2219-9528

www.planet.com.tw



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