

## Industrial Compact 100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Media Converter



### Ruggedly Built for Harsh Environments

PLANET IGTP-815AT is the smallest, industrial-grade Gigabit PoE+ Media Converter, featuring one **100/1000BASE-X SFP fiber port** and one **10/100/1000BASE-T 802.3at PoE+ copper port** in an IP30-rated rugged but compact-size case. Being able to operate under the temperature ranging from **-40 to 75 degrees C**, the IGTP-815AT provides reliable, stable and continuous long-range data transmission and can be installed in any harsh environment without taking space into consideration.



As the trend for an IIoT (Industrial Internet of Things) infrastructure is gradually in demand, the IGTP-815AT is especially designed to make the deployment of an industrial network easy as it comes with a Plug and Play feature. Besides, it is stable and reliable when it comes to fast data and power transmission.

### IEEE 802.3at PoE Plus

Complying with the **IEEE 802.3at Power over Ethernet Plus (PoE+)** standard, the IGTP-815AT forwards Gigabit speed Ethernet data transmission and provides a maximum of **36-watt** power output over an additional 100m UTP cable to a 802.3af/at PoE PD (powered device) installed in a remote area where sufficient and reliable power input is required. Users can easily upgrade their current networks without the need of software configuration.

### Physical Port

- 1-port 10/100/1000BASE-T RJ45 with **IEEE 802.3at PoE+** injector function
- One SFP slot, supporting 1000BASE-X and 100BASE-FX transceiver dual mode

### Power over Ethernet

- Complies with IEEE 802.3at PoE Plus end-span PSE
- 1 IEEE 802.3at/af device powered
- Supports PoE Power up to 36 watts for PoE port
- Provides DC 48~56V power over RJ45 Ethernet cable to PD with Ethernet port
- Auto detects IEEE 802.3at/af equipment and protects devices from being damaged by incorrect installation
- Remote power feeding up to 100m
- IEEE 802.3at/af PoE 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

- DIP switch: LFP (Link Fault Passthrough) and FEF (Far End Fault) mode selection

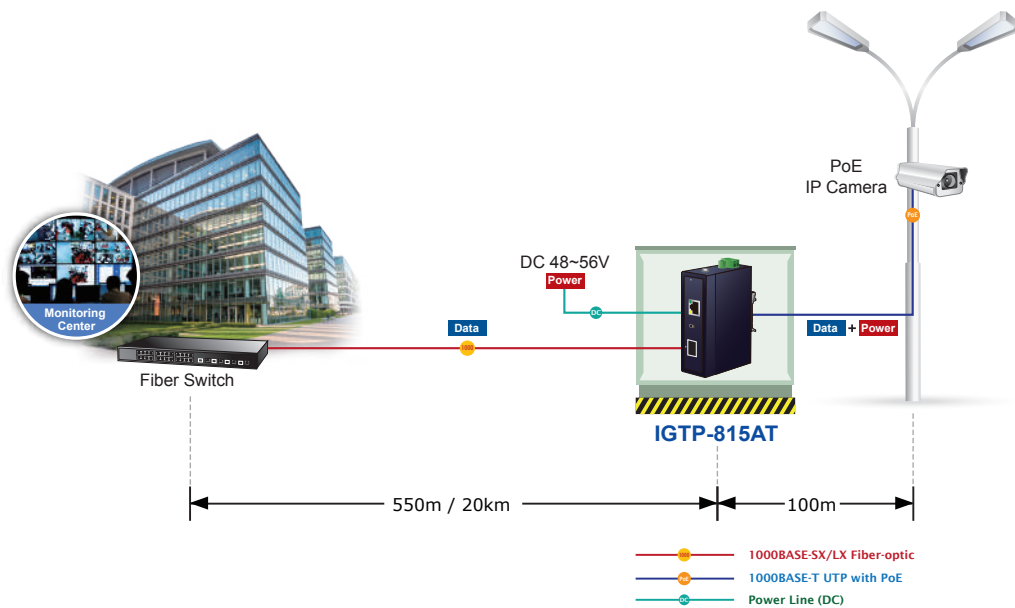
### Industrial Case and Installation

- IP30 metal case
- DIN-rail and wall-mount designs
- 48V~56V DC power with reverse polarity protection
- Connective removable terminal block
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature
- Free fall, shock-proof and vibration-proof for industries



**Fiber-optic Link Capability Extends the Range of Network Deployment**

The maximum distance between a PoE PSE (power sourcing equipment) and a PD via Ethernet UTP cable is 100 meters. To flexibly extend the PoE deployment range, the IGTP-815AT's SFP slot supporting 100BASE-FX/1000BASE-X, SFP modules, and more can reach a transmission distance of up to 120km.

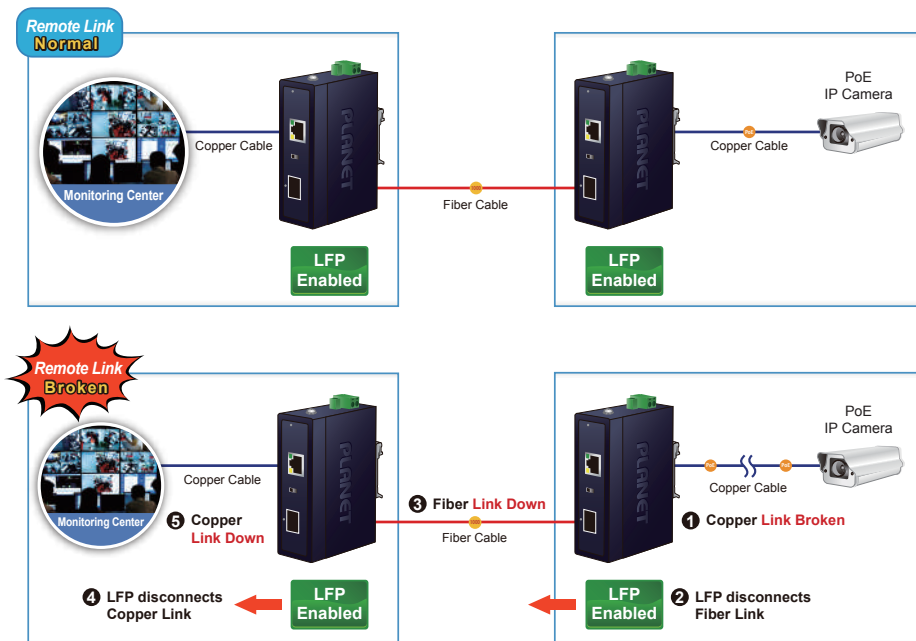


**Interactive Network Detection**

The IGTP-815AT can support LFP (Link Fault Passthrough) function via its built-in DIP switch. The LFP function includes Link Loss Carry Forward (LLCF) and Link Loss Return (LLR):

- LLCF means when a device connected to the converter and the TP line loses the link, the converter's fiber port will disconnect the link of transmission.
- LLR means when a device connected to the converter and the fiber line loses the link, the converter's fiber port will disconnect the link of transmission

Both of which can immediately alarm the administrators the issue from the link media and provide efficient solution to monitor the remote network.



### Environmentally Hardened Design

The IGTP-815AT 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. With wide operating temperature range of -40 to 75 degrees C, the IGTP-815AT is ideal for service providers, campuses and public areas to deploy outdoor PoE wireless access points, outdoor IP cameras or IP phones in any places easily and efficiently.

### Robust Protection

The IGTP-815AT provides contact discharge of  $\pm 6\text{KV}$  DC and air discharge of  $\pm 8\text{KV}$  DC for Ethernet ESD protection. It also supports  $\pm 6\text{KV}$  surge immunity to improve product stability and protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

### Flexible and Easy Installation with Limited Space

The compact sized IGTP-815AT 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



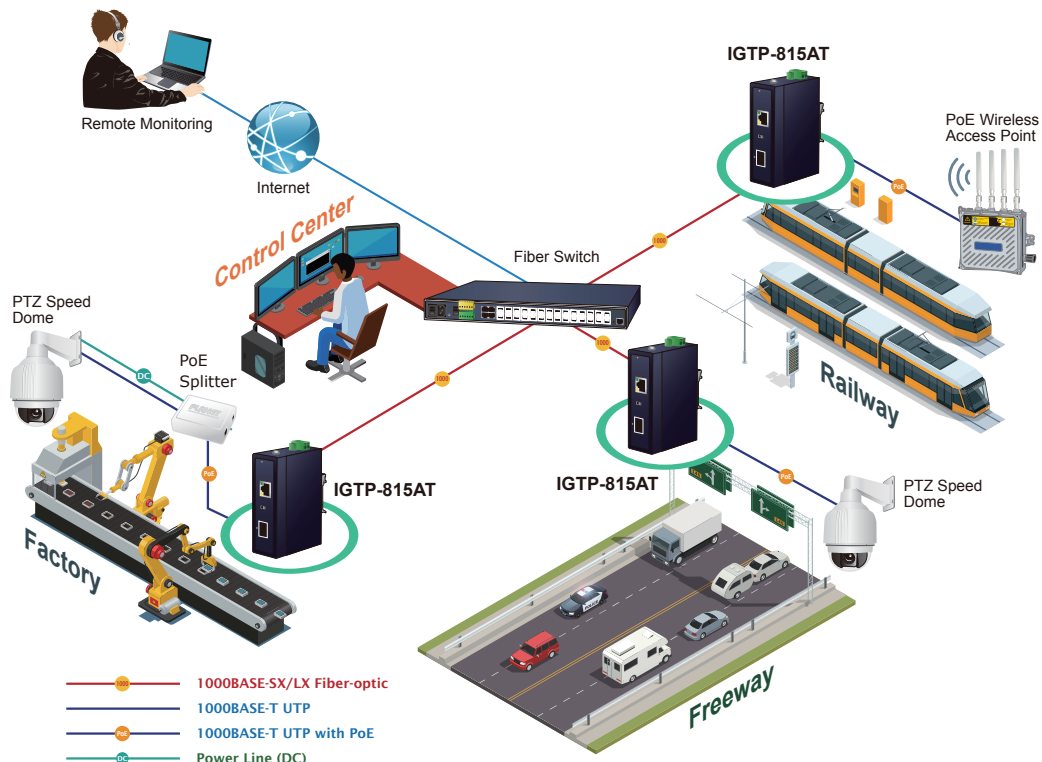
Side Wall Mounting  
(Space saving)

## Applications

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

For the places difficult to find the power outlet, the IGTP-815AT 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.

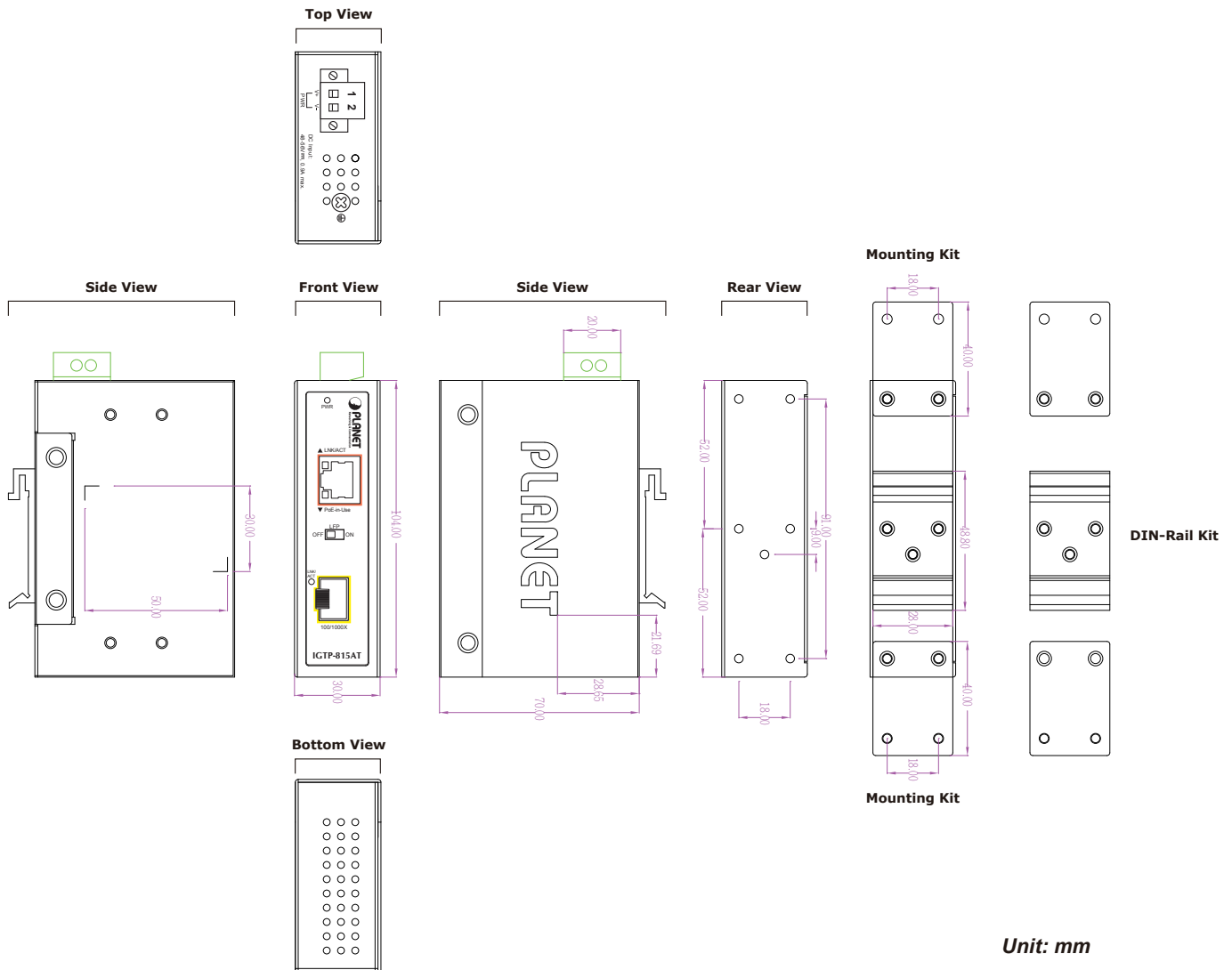
For instance, users can flexibly install security IP camera, wireless access point and other IEEE 802.3af/at compliant network equipment in the public areas such as stations, freeways, airports and campuses for surveillance and wireless roaming needs.



## Product Specifications

Model	IGTP-815AT
<b>Hardware Specifications</b>	
Copper Port	10/100/1000BASE-T Ethernet TP interface. Maximum 100m distance. Auto-negotiation, auto MDI/MDI-X with PoE injector function
SFP Slot	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	System: Power (green) Fiber 100/1000BASE-X: LNK/ACT (green) TP 10/100/1000BASE-T: LNK/ACT(green) PoE: Power-in-use (Amber)
Dimensions (W x D x H)	30 x 70 x 104 mm
Weight	231g
Power Requirements	DC 48~56V, supports reverse polarity protection (>51V DC for PoE+ output recommended)
Power Consumption	<b>System ON without loading</b> DC 48V: 0.96W/3.27BTU DC 56V: 1.12W/3.82BTU <b>Full loading with PoE</b> DC 48V:35W/119BTU(PoE:30W) DC 56V:42W/143BTU(PoE: 36W)
DIP Switch	Off: LFP (Link Fault Passthrough) disable On: LFP (Link Fault Passthrough) enable FEF (Far End Fault) works with LFP to prevent data loss The DIP switch is turned off by default.
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
<b>Power Over Ethernet</b>	
PoE Standard	IEEE 802.3at Power over Ethernet Plus
PoE Power Output	48~56V DC: 36 watts max.
PoE Power Supply Type	End-span
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Budget	36 watts
<b>Standards Conformance</b>	
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 802.3az Energy Efficient Ethernet (EEE)
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)
<b>Standards Conformance</b>	
Temperature	Operating: -40~75 degrees C Storage: -40~85 degrees C
Humidity	Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing)

## Dimensions



## Ordering Information

IGTP-815AT	Industrial Compact 100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Media Converter
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## Related Products

IGTP-805AT	100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter (mini-GBIC, SFP)
IGTP-825AT	Industrial IP67 1000BASE-X SFP to 10/100/1000BASE-T 802.3at PoE+ Media Converter
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) -- 20km
GTP-805A	100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE Media Converter (mini-GBIC, SFP)
IGUP-805AT	Industrial 1-Port 100/1000X SFP to 1-Port 10/100/1000T 802.3bt PoE++ Media Converter
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
MGB-Series Transceiver	1000BASE-SX/LX SFP Transceiver
MFB Series Transceiver	100BASE-FX SFP Transceiver

## Available 100Mbps Modules for IGTP-815AT

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 for IGTP-815AT

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)