

## Industrial 10/100/1000BASE-T to 100/1000BASE-X SFP Media Converter



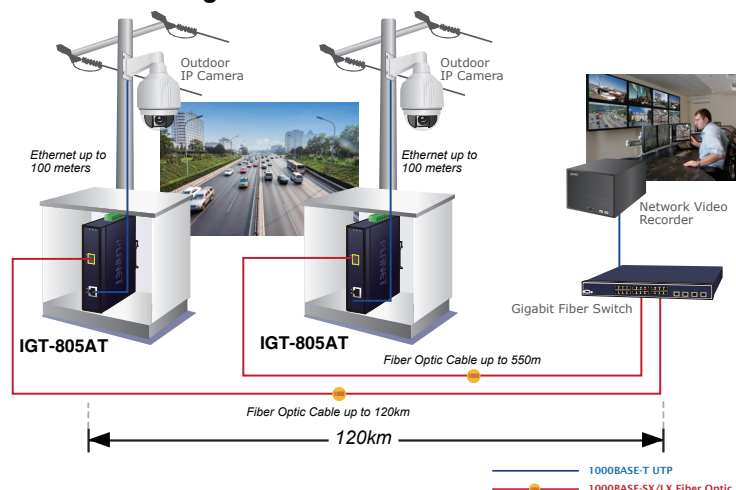
### Flexible, Reliable and Industrial-grade Network Distance Extension Solution

PLANET IGT-805AT 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** RJ45 copper and one **100/1000BASE-X SFP** fiber optic interface delivered in an IP30 rugged strong case with redundant power system. The IGT-805AT 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**. With 9K jumbo frame feature support, the IGT-805AT can handle extremely large amounts of data transmission in a secure topology linking to a backbone or high-power servers.

### Fiber-Optic Link Capability Enables Extension of Network Deployment

The mini-GBIC SFP slots built in the IGT-805AT support dual speed as it features 100BASE-FX and 1000BASE-SX/LX SFP (Small Form-factor Pluggable) fiber-optic modules. Now the administrator can flexibly choose the suitable SFP transceiver according to not only the transmission distance, but also the transmission speed required. The distance can be extended from 550 meters to 2km (multi-mode fiber) and up to 10/20/40/60/80/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

### Extending Ethernet Distance



### Physical Port

- 1-port 10/100/1000BASE-T RJ45 with auto MDI/MDI-X function
- 1 SFP interface, 100/1000BASE-X dual mode (auto detection)

### Layer 2 Features

- IEEE 802.3/802.3u/802.3ab/802.3z Ethernet standard compliant
- Supports auto-negotiation and 10/100Mbps half/full duplex and 1000Mbps full duplex mode
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- 9K jumbo frame size support
- LFP (Link Fault Passthrough) and FEF (Far End Fault) function support
- Automatic address learning and address aging

### Industrial Case and Installation

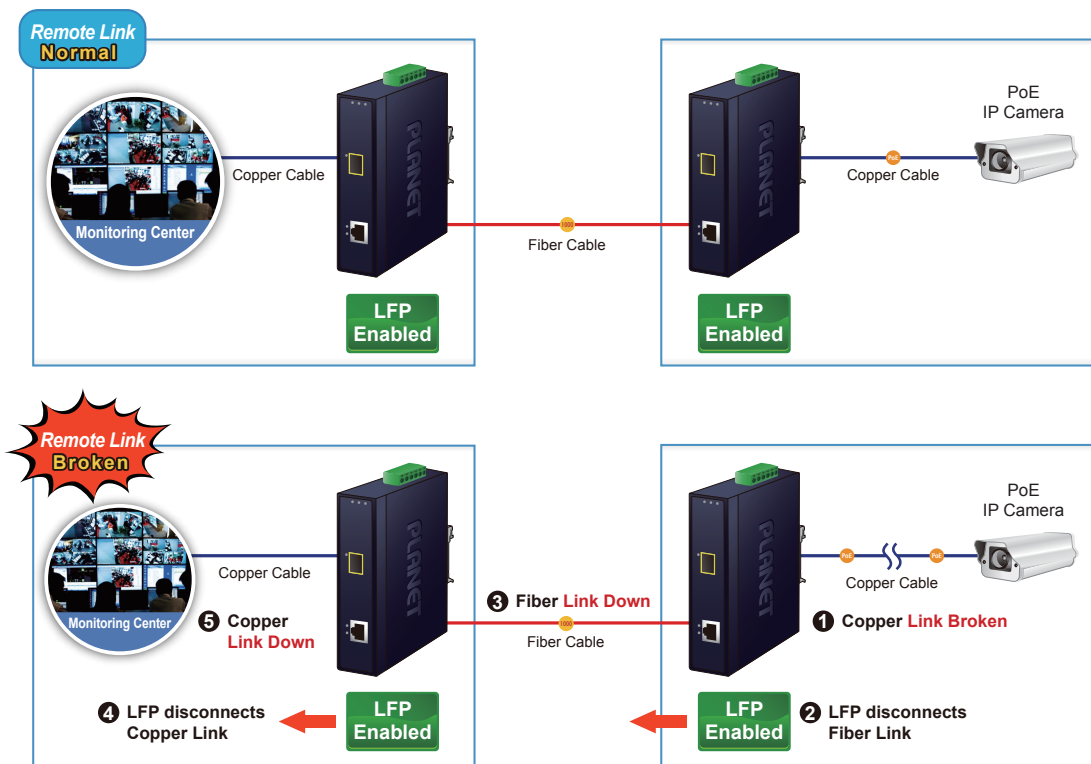
- Slim-type IP30 metal case
- DIN-rail and wall-mount designs
- Redundant power design
  - 12 to 48V DC, redundant power with reverse polarity protection
  - AC 24V power adapter acceptable
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

### Enhanced Smart Management Features

The IGT-805AT provides auto MDI/MDI-X on its TP port and built-in **Link Fault Pass-through function (LFP)**. The LFP function includes **Link Loss Carry Forward (LLCF)** and **Link Loss Return (LLR)**, both of which can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the net.

- 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.

Therefore, the IGT-805AT greatly supports the administrators to manage the network efficiently.



### Environmentally Hardened Design

The IGT-805AT is equipped with the slim-type IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IGT-805AT provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curbside traffic control cabinets. Being able to operate under the temperature range from -40 to 75 degrees C, the IGT-805AT can be placed in almost any difficult environment. The IGT-805AT also allows either DIN rail or wall mounting for efficient use of cabinet space.

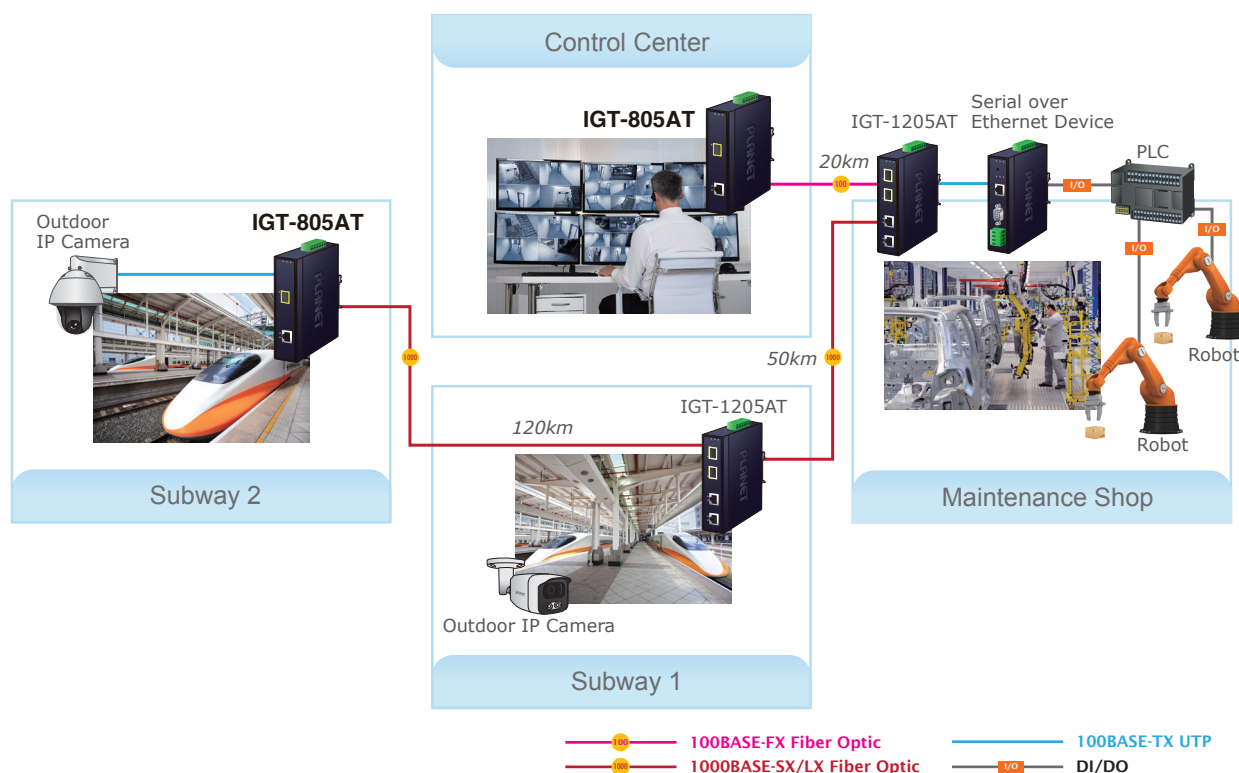
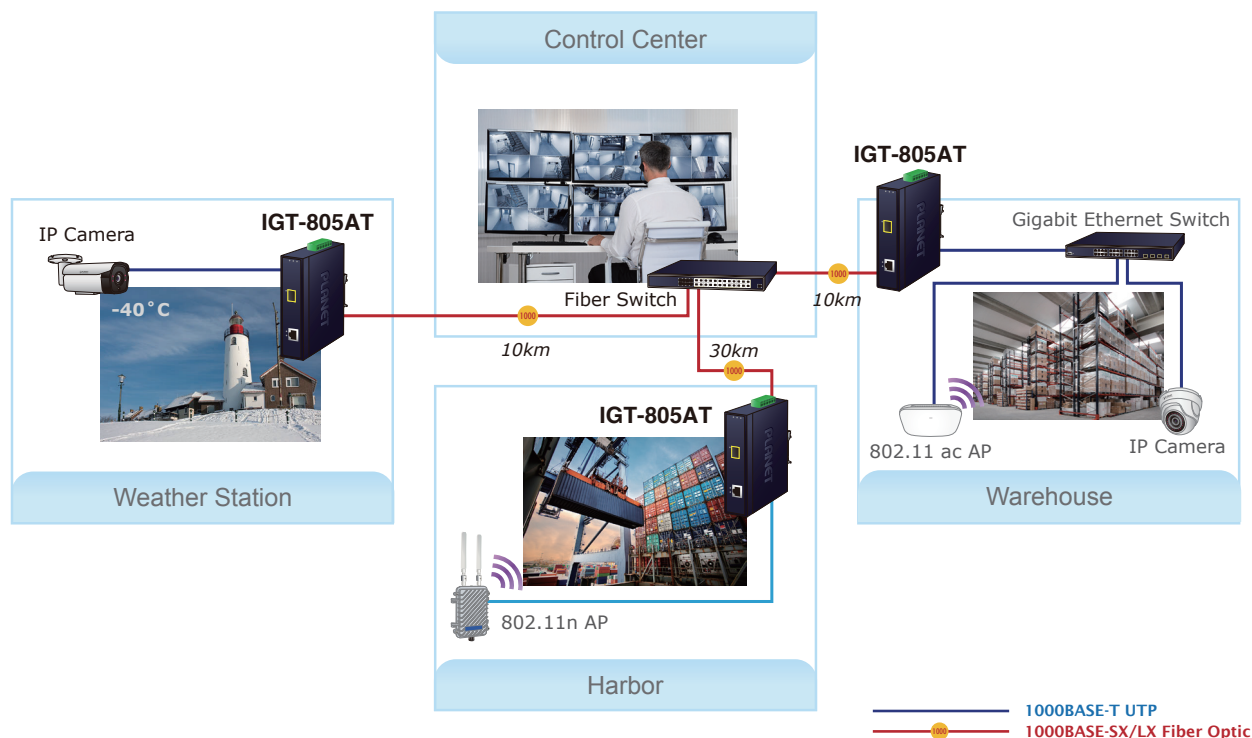
### Convenient and Reliable Power System

To enhance the operation reliability and flexibility, the IGT-805AT 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.

## Applications

### Hardened Environment Application

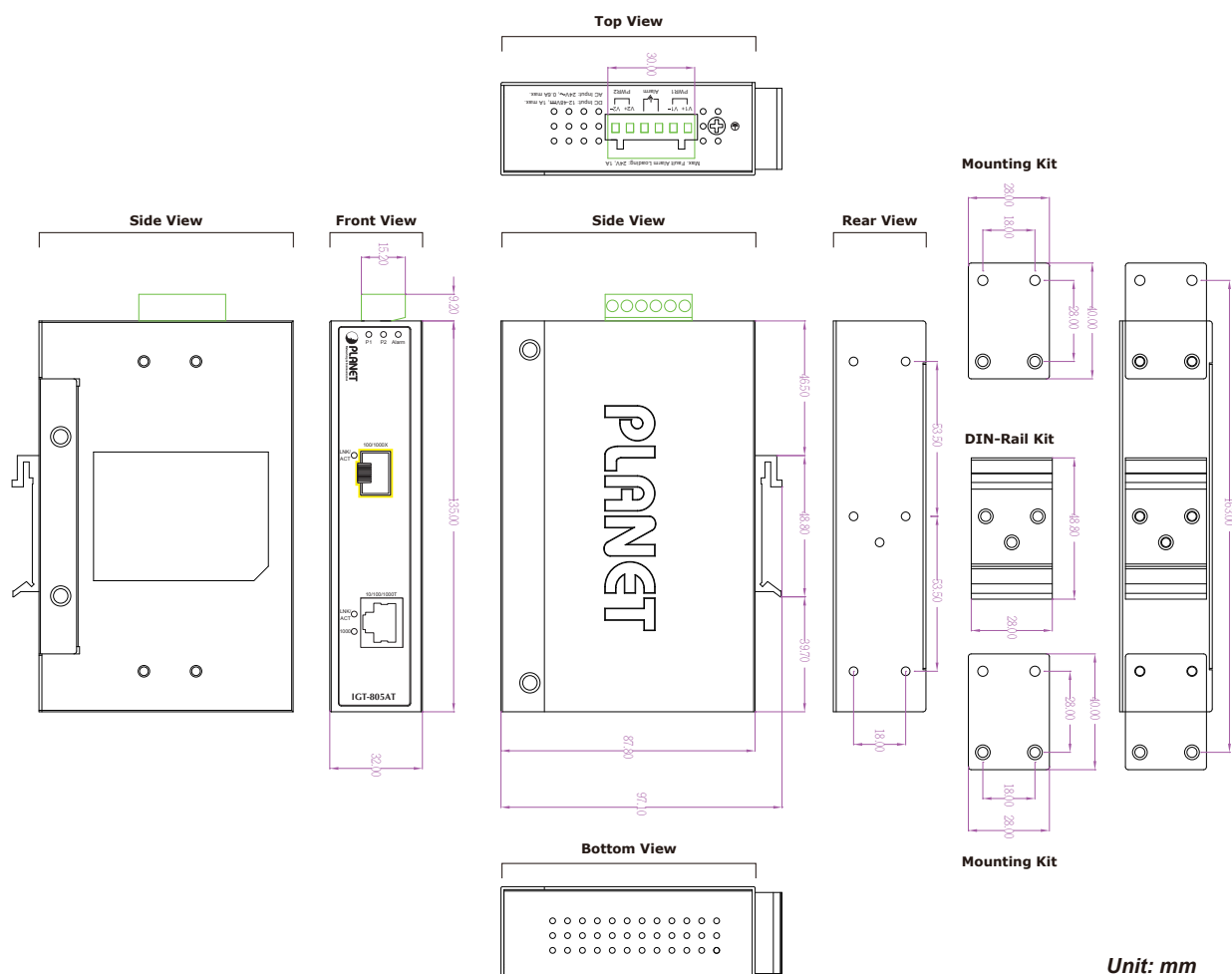
PLANET IGT-805AT Industrial Gigabit Media Converter offers full port Gigabit speed. It provides very high reliability and security features to make sure the continuous operation in harsh environments such as transportations, factories, outdoors and places where extremely low or high temperatures can be experienced. Moreover, the IGT-805AT is also compatible with **100Mbps** and **1000Mbps** SFP transceivers to provide a strong, stable and long-distance connection and flexible industrial networking deployment.



## Product Specifications

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                           | IGT-805AT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hardware Specifications</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Copper Interface                | 1 x 10/100/1000BASE-T RJ45 TP<br>Auto-MDI/MDI-X, auto-negotiation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Fiber Optic Interface           | 1 x 1000BASE-SX/LX/BX SFP interface.<br>Compatible with 100BASE-FX SFP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Connector                       | Removable 6-pin terminal block<br>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<br>Alarm relay current carry ability: 1A @ DC 24V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| LED                             | 3 x LED for System and Power:<br><ul style="list-style-type: none"> <li>■ Green: DC Power 1</li> <li>■ Green: DC Power 2</li> <li>■ Red: Power Alarm</li> </ul> 2 x LED for Per Copper Port:<br><ul style="list-style-type: none"> <li>■ Green: LNK/ACT</li> <li>■ Green: 1000 LNK/ACT</li> </ul> 1 x LED for Per mini-GBIC Interface<br><ul style="list-style-type: none"> <li>■ Green: LNK/ACT</li> </ul>                                                                                                                                                                                         |
| 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 135 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Weight                          | 395g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Power Requirements              | DC 12~48V, redundant power with reverse polarity protection function.<br>AC 24V power adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Power Consumption / Dissipation | 2.6 watts/8.8BTU (DC 48V)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Converter Specifications</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Flow Control                    | Back pressure for half duplex.<br>IEEE 802.3x pause frame for full duplex                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Fabric                          | 4Gbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Throughput (packet per second)  | 2.97Mpps@64bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum Transmission Unit       | 9216 bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Network Cables                  | <b>10/100/1000BASE-T:</b><br>Cat3, 4, 5, 5e, 6 UTP cable (100 meters, max.)<br>EIA/TIA-568 100-ohm STP (100 meters, max.)<br><b>1000BASE-SX :</b><br>50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 550m (varying on SFP module)<br><b>1000BASE-LX :</b><br>9/125µm single-mode fiber optic cable, up to 10/20/40/60/80/120 kilometers (varying on SFP module)<br><b>100BASE-FX :</b><br>50/125µm or 62.5/125µm multi-mode fiber optic cable, up to<br>2 kilometers (varying on SFP module)<br>9/125µm single-mode fiber optic cable, up to 20/40/60 kilometers (varying on SFP module) |
| <b>Standards Conformance</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Standards Compliance            | IEEE 802.3 Ethernet<br>IEEE 802.3u Fast Ethernet<br>IEEE 802.3ab Gigabit Ethernet<br>IEEE 802.3z Gigabit Ethernet<br>IEEE 802.3x full-duplex flow control                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Regulatory Compliance           | FCC Part 15 Class A, CE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Stability Testing               | IEC 60068-2-32 (free fall)<br>IEC 60068-2-27 (shock)<br>IEC 60068-2-6 (vibration)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Environment</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Environment</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Operating                       | Temperature: -40 ~ 75 degrees C<br>Relative Humidity: 5 ~ 95% (non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Storage                         | Temperature: -40 ~ 75 degrees C<br>Relative Humidity: 5 ~ 95% (non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## IGT-805AT Dimensions



Unit: mm

## Ordering Information

|           |                                                                    |
|-----------|--------------------------------------------------------------------|
| IGT-805AT | Industrial 10/100/1000BASE-T to 100/1000BASE-X SFP Media Converter |
|-----------|--------------------------------------------------------------------|

## Related Products

|                        |                                                                              |
|------------------------|------------------------------------------------------------------------------|
| IGT-815AT              | Industrial 10/100/1000BASE-T to 100/1000BASE-X SFP Media Converter           |
| IGTP-80xT Series       | 1000BASE-SX / LX to 10/100/1000BASE-T 802.3at PoE Industrial Media Converter |
| MGB-Series Transceiver | 1000BASE-SX/LX SFP Transceiver                                               |
| MFB-Series Transceiver | 100BASE-FX SFP Transceiver                                                   |

## Available 100Mbps Modules for IGT-805AT

|          |                                                                      |
|----------|----------------------------------------------------------------------|
| 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 IGT-805AT

|           |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| 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 ~ 85 degrees C)                  |
| MGB-TSX2  | SFP-Port 1000 BASE-SX mini-GBIC module - 2km (-40 ~ 85 degrees C)                   |
| MGB-TLX   | SFP-Port 1000 BASE-LX mini-GBIC module - 20km (-40 ~ 85 degrees C)                  |
| MGB-TL40  | SFP-Port 1000 BASE-LX mini-GBIC module - 40km (-40 ~ 85 degrees C)                  |
| MGB-TL80  | SFP-Port 1000 BASE-LX mini-GBIC module - 80km (-40 ~ 85 degrees C)                  |
| MGB-TLA10 | SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40 ~ 85 degrees C) |
| MGB-TLB10 | SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40 ~ 85 degrees C) |
| MGB-TLA20 | SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40 ~ 85 degrees C) |
| MGB-TLB20 | SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km (-40 ~ 85 degrees C) |
| MGB-TLA40 | SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40 ~ 85 degrees C) |
| MGB-TLB40 | SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40 ~ 85 degrees C) |
| MGB-TLA80 | SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40 ~ 85 degrees C) |
| MGB-TLB80 | SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km (-40 ~ 85 degrees C) |

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IGT-805AT