

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



Compact Size for More Practicability and Convenience

PLANET IGT-815AT is an Industrial-grade Gigabit Media Converter, featuring one **100/1000BASE-X SFP fiber port** and one **10/100/1000BASE-T 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 IGT-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 IGT-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 transmission.

Fiber-optic Link Capability Extends the Range of Network Deployment

The maximum distance between two IP devices via Ethernet UTP cable is 100 meters. To flexibly extend the deployment range of IP devices, the IGT-815AT's SFP slot supporting 100BASE-FX/1000BASE-X, SFP modules, and more can reach a transmission distance of up to 120km.

Physical Port

- 1-port 10/100/1000BASE-T RJ45
- One SFP port, supporting 1000BASE-X and 100BASE-FX transceiver dual mode

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)
- LFP (Link Fault Passthrough) and FEF (Far End Fault) function support

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
- 9 to 48V DC power with reverse polarity protection (AC 24V power adapter acceptable)
- 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



■ LLR means when a device is connected to the converter and the fiber line loses the link, the converter's fiber port will disconnect the link of transmission

Remote Link Normal

Monitoring Center

Copper Cable

PLANET

Fiber Cable

PLANET

Copper Cable

IP Camera

LFP Enabled

LFP Enabled

Remote Link Broken

Monitoring Center

Copper Cable

PLANET

Fiber Cable

PLANET

Copper Cable

IP Camera

1 Copper Link Broken

2 LFP disconnects Fiber Link

3 Fiber Link Down

4 LFP disconnects Copper Link

LFP Enabled

LFP Enabled

1000BASE-SX/LX Fiber-optic

1000BASE-T UTP

Environmentally Hardened Design

The IGT-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 IGT-815AT is ideal for service providers, campuses and public areas to deploy outdoor wireless access points, outdoor IP cameras or IP phones in any places easily and efficiently.

Robust Protection

The IGT-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 IGT-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 flexible and easier in any space-limited location.



DIN-rail Mounting



Wall Mounting



**Side Wall Mounting
(Space saving)**

Wide Range of Power Usages

The IGT-815AT supports a wide range of voltages for worldwide operation. It also offers a reverse polarity input of 9V DC to 48V DC for high availability applications.

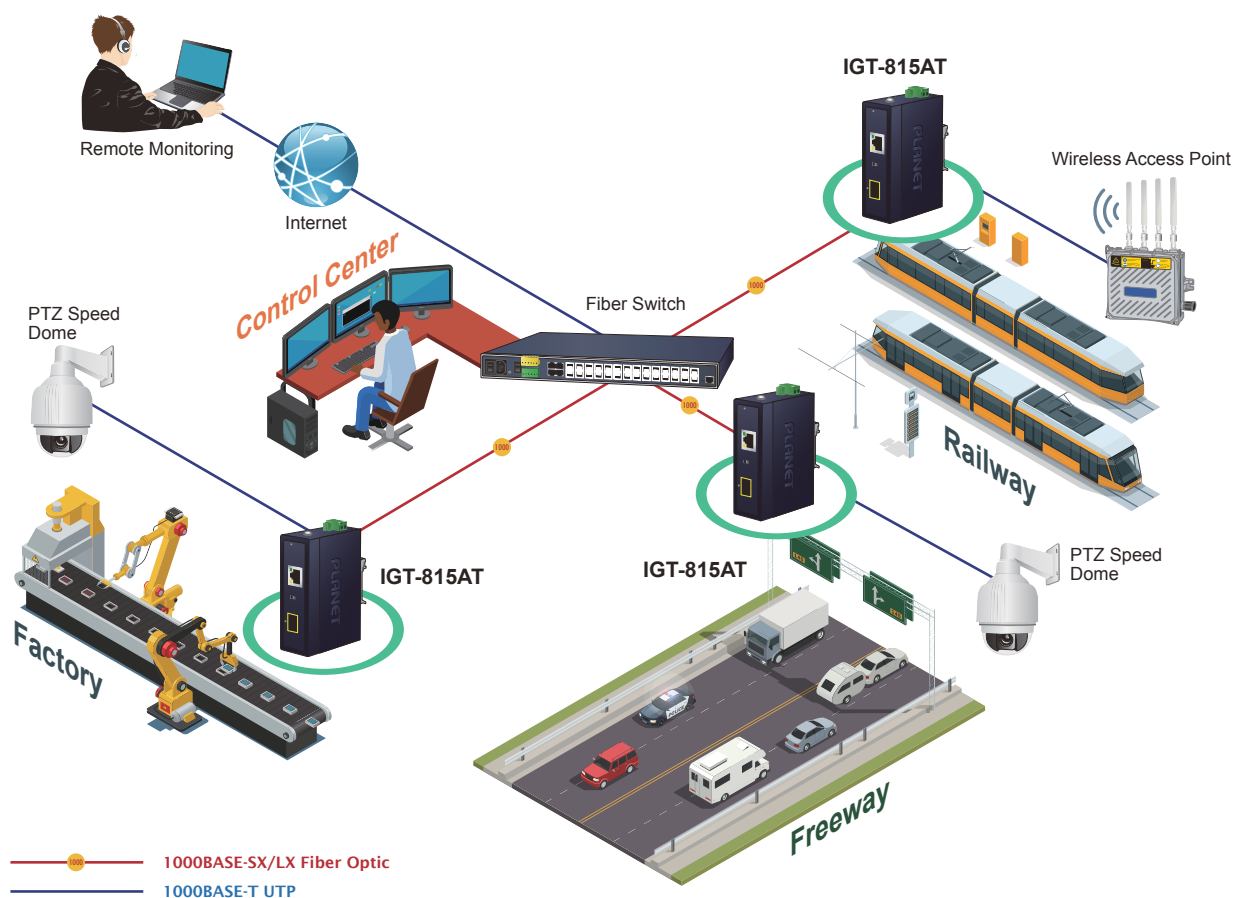
Applications

High Reliability and Security

PLANET IGT-815AT 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-815AT is also compatible with **100Mbps** and **1000Mbps SFP transceivers** to provide a strong, stable and long-distance connection and flexible industrial networking deployment.

Fiber-optic Networking for ISPs, Enterprises, and Homes

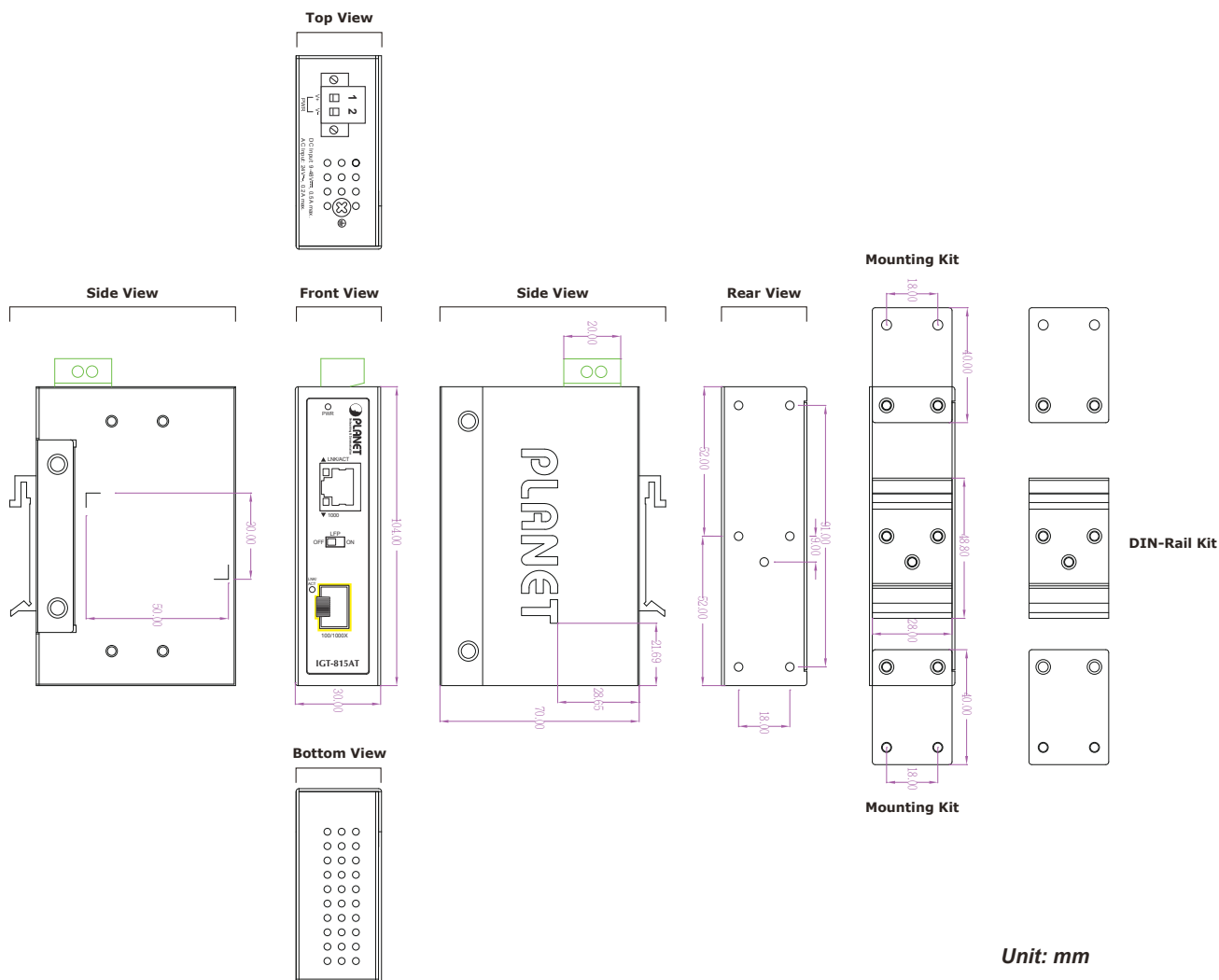
With stable performance of data transmission and easy installation, the IGT-815AT Industrial Media Converter can build an ISP network solution of FTTH (Fiber to the Home), FTTC (Fiber to the Curb) for ISPs, or FTTB (Fiber to the Building) for enterprises with small office network environment.



Product Specifications

Model	IGT-815AT
Hardware Specifications	
Copper Port	10/100/1000BASE-T Ethernet TP interface. Maximum 100m distance. Auto-negotiation, auto MDI/MDI-X
SFP Port	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), 1000 LNK/ACT (amber)
Dimensions (W x D x H)	30 x 70 x 104 mm
Weight	221g
Power Requirements	DC 9~48V, supports reverse polarity protection AC 24V
Power Consumption	System ON without loading DC 9V: 0.55W/1.87BTU DC 12V: 0.54W/1.84BTU DC 24V: 0.52W/1.77BTU DC 36V: 0.5W/1.7BTU DC 48V: 0.52W/1.77BTU AC 24V: 0.5W/1.7BTU Full loading DC 9V: 1.76W/6BTU DC 12V: 1.77W/6BTU DC 24V: 1.63W/5.56BTU DC 36V: 1.65W/5.62BTU DC 48V: 1.68W/5.73BTU AC 24V: 2.8W/9.5BTU
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
Standards Conformance	
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 802.3az Energy Efficient Ethernet (EEE)
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
Environment	
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

IGT-815AT	Compact Industrial 100/1000BASE-X to 10/100/1000BASE-T Media Converter
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Related Products

IGT-805AT	Industrial 10/100/1000BASE-T to 100/1000BASE-X SFP Media Converter
IGT-905A	Industrial 10/100/1000BASE-T to 100/1000BASE-X Managed Media Converter
IGT-1205AT	Industrial 10/100/1000BASE-T to 2-port 100/1000BASE-X SFP Media Converter
IGT-2205AT	Industrial 2-port 10/100/1000T to 2-port 100/1000/2500X SFP Media Converter
IGTP-805AT	100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Industrial Media Converter (mini-GBIC, SFP)
IGTP-815AT	Industrial Compact 100/1000BASE-X to 10/100/1000BASE-T 802.3at PoE+ Media Converter
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 IGT-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 IGT-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)