

Product Specifications

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

IGT-815AT

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2019/07/01	Marc	Initial release

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Reviewed By:		Approved By:	Kent Kang

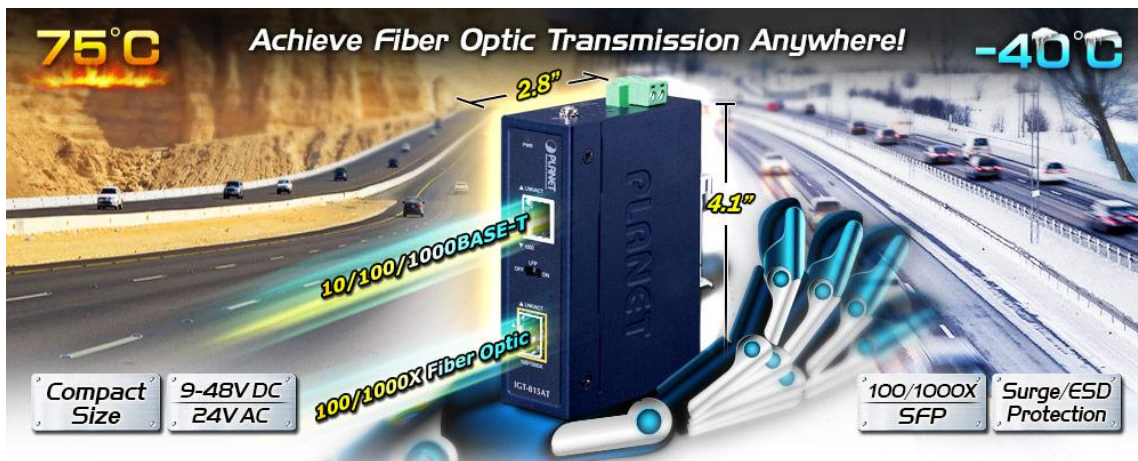
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1. PRODUCT DESCRIPTION

Compact Size for More Practicability and Convenience

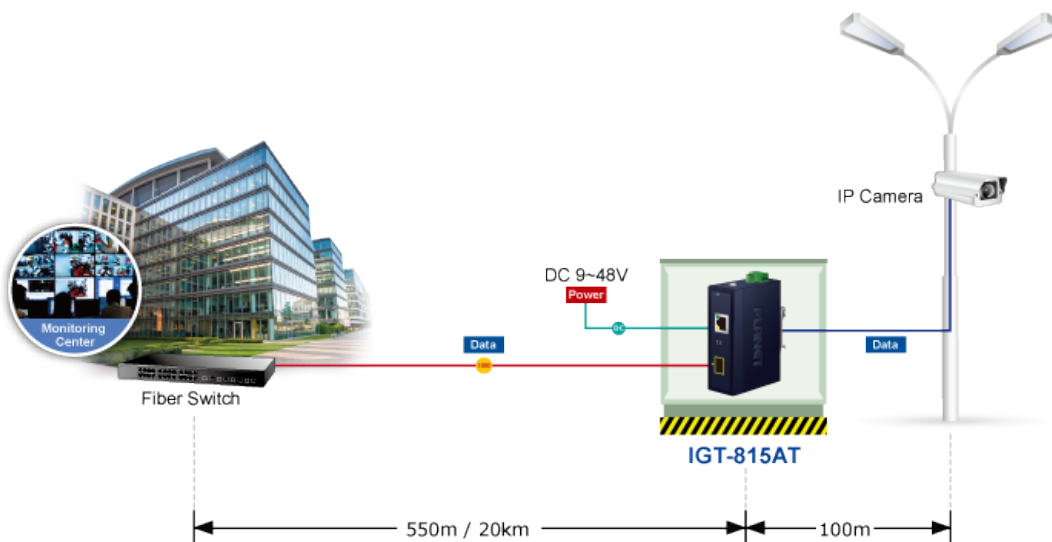
PLANET IGT-815AT is an industrial-grade Gigabit Media Converter, featuring one **100/1000BASE-X SFP fiber port** and one **10/100/1000BASE-T copper port** in an IP30-rated rugged but compact-size case. Being able to operate under the temperature ranging from **-40 to 75 degrees C**, the IGT-815AT provides 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 and power transmission.



Fiber-optic Link Capability Extends the Range of Network Deployment

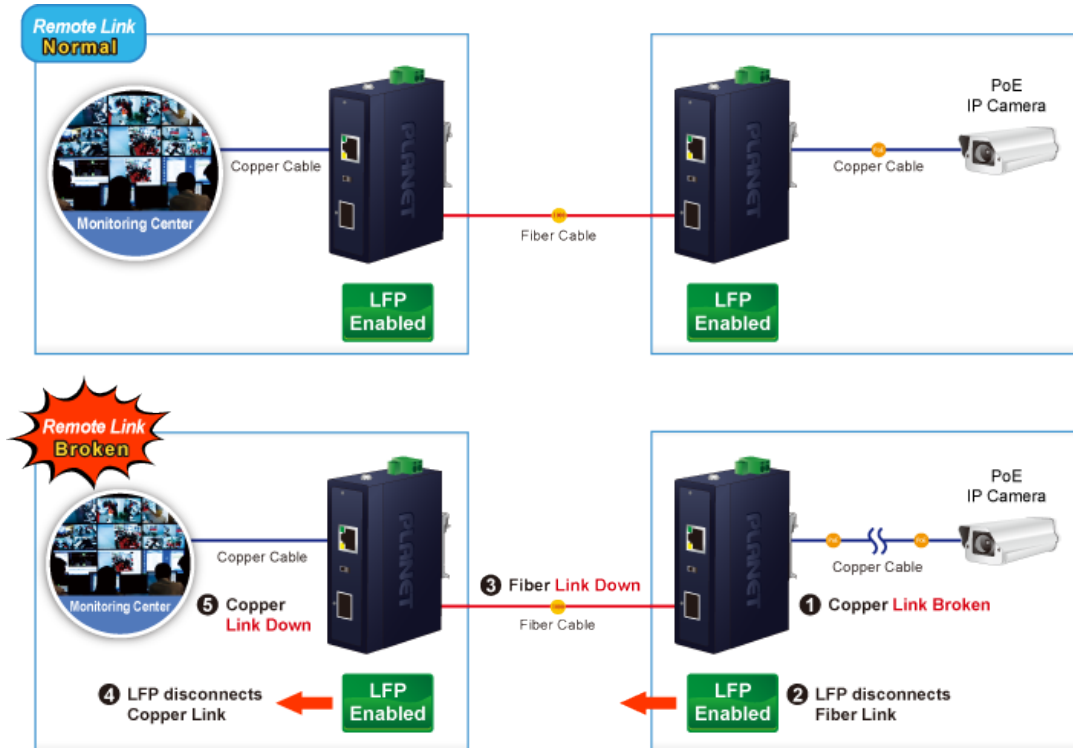
The maximum distance between two IP devices via Ethernet UTP cable is 100 meters. To flexibly extend the deployment range of IP devices, the IGT-815AT's SFP slot supporting 100BASE-FX/1000BASE-X, SFP modules, and more can reach a transmission distance of up to 120km.



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Interactive Network Detection

The IGT-815AT can support **LFP** (Link Fault Passthrough) function via its built-in DIP switch. It can immediately alarm the administrators the issue from the link media and provide efficient solution to monitor the remote network.



Small but 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 flexibly and easily in any space-limited location.

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Din-rail mounting



Wall mounting



**Wall mounting
(Space saving)**

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2. PRODUCT FEATURES

Physical Port

- 1-port 10/100/1000BASE-T RJ45
- One SFP slot, 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)

Hardware

- DIP switch: LFP (Link Fault Passthrough) mode selection

Industrial Case and Installation

- IP30 metal case
- DIN-rail and wall-mount designs
- 9V~48V 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

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3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENT

Converter Controller	Realtek RTL8213I	
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3.2 FUNCTION 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 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), 1000 speed (amber)
Power Requirements	DC 9~48V, supports reverse polarity protection AC 24V
Power Consumption	System ON without loading DC 9V: 0.54W/1.84BTU DC 24V: 0.24W/0.81BTU DC 48V: 0.24W/0.81BTU Full loading DC 9V: 1.98W/6.75BTU DC 24V: 1.92W/6.55BTU DC 48V: 1.92W/6.55BTU
DIP Switch	Link Fault Passthrough Enable/Disable
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

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	Single-mode: 9/125µm optical fiber
Standards Conformance	
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
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)

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3.3 PHYSICAL SPECIFICATIONS:

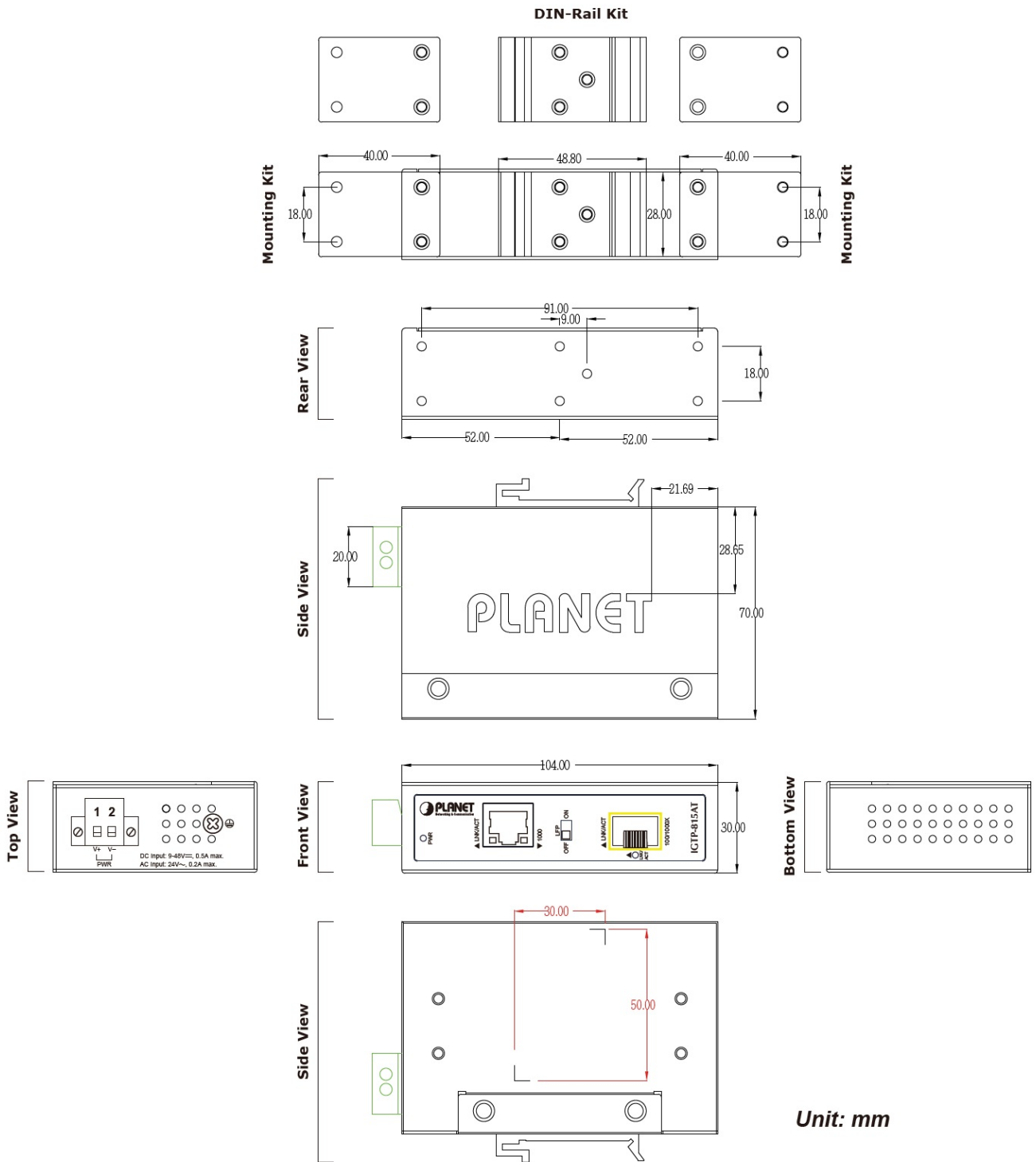
■ **Dimensions:**

30 x 70 x 104 mm (W x D x H)

■ **Weight:**

251g

■ **Diagram**



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LED Definition:



■ **System**

LED	Color	Function
PWR	Green	Lights to indicate the Industrial Media Converter has power.

■ **Gigabit TP Interface**

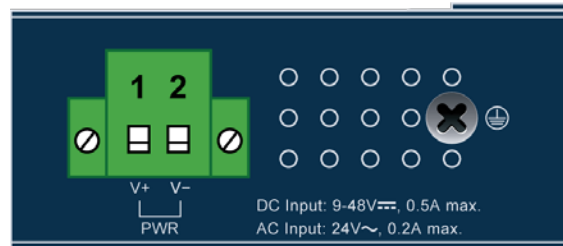
LED	Color	Function
TP LNK/ACT	Green	Lit: Indicates that the Copper Port is successfully connecting to the network at 10/100/1000Mbps.
		Blinks: Indicates the Copper Port is receiving or sending data.
1000	Amber	Lit: Indicates that the Copper Port is successfully connecting to the network at 1000Mbps.
		Off: Indicates the link through that port is successfully established at 10/100Mbps.

■ **Gigabit Fiber Interface**

LED	Color	Function
Fiber LNK/ACT	Green	Lit: Indicates that the Fiber Optical Port is successfully connecting to the network at 100Mbps or 1000Mbps.
		Blinks: Indicates the fiber optical port is receiving or sending data.

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Top view:



3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

- Temperature: -40 ~75 degrees C
- Relative Humidity: 5% ~ 95% (non-condensing)

Storage:

- Temperature: -40 ~85 degrees C
- Relative Humidity: 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATIONS

Power Requirements: 9~48V DC power with reverse polarity protection; 24V AC power input

Power Consumption:

Condition / Power Input	System ON	Ethernet Full Loading
DC 9V	0.54W/1.84BTU	1.98W/6.75BTU
DC 24V	0.24W/0.81BTU	1.92W/6.55BTU
DC 48V	0.24W/0.81BTU	1.92W/6.55BTU

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

3.7 RELIABILITY

MTBF > 100,000hrs @ 25 degrees C

3.8 BASIC PACKAGING

- The IGT-815AT x 1
- User's Manual x 1
- DIN-rail Kit x 1
- Wall-mounting Kit x 1
- RJ45 Dust Cap x 1
- SFP Dust Cap x 1

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3.9 PACKING INFORMATION

Box Dimensions (W x D x H):	205 × 144 × 46 mm
Weight (gross weight):	357g
Carton Dimensions (W x D x H):	435 × 325 × 280 mm
Carton Weight (gross weight):	7.8kg
Quantity:	20pcs in one carton