

Product Specifications

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

IGTP-815AT

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2019/6/11	Marc	Initial release

Author:	Marc Liao	Editor:	Marc Liao
Reviewed By:		Approved By:	Kent Kang

1. PRODUCT DESCRIPTION

Ruggedly Built for Harsh Environments

PLANET IGS-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.



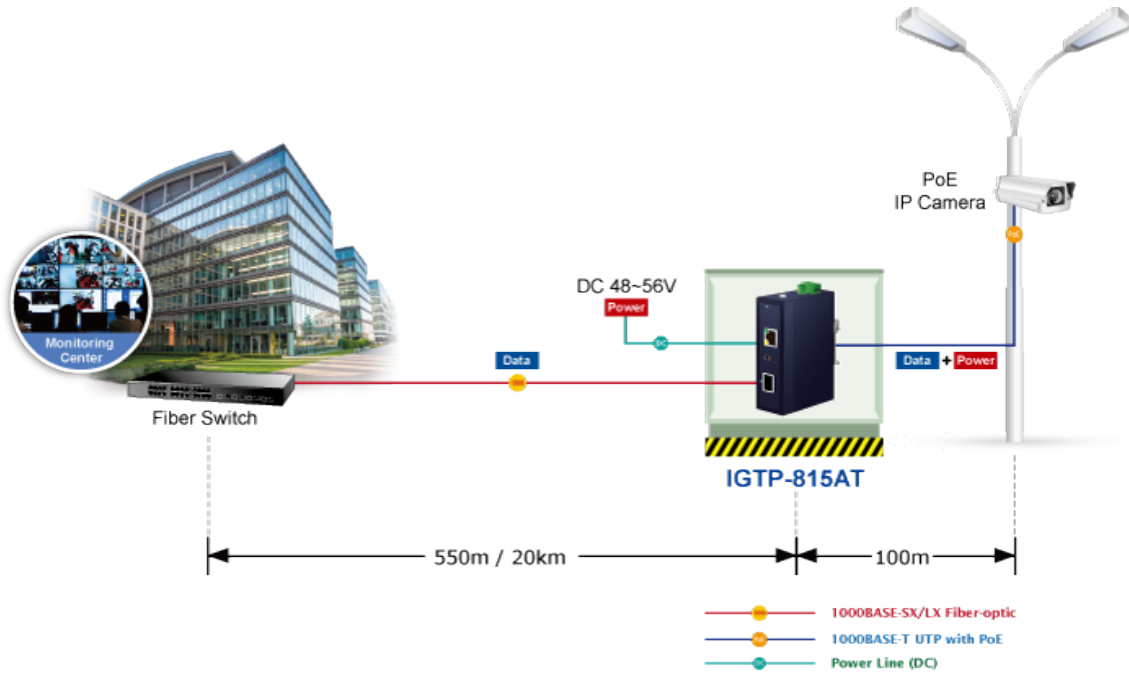
IEEE 802.3at PoE Plus

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.



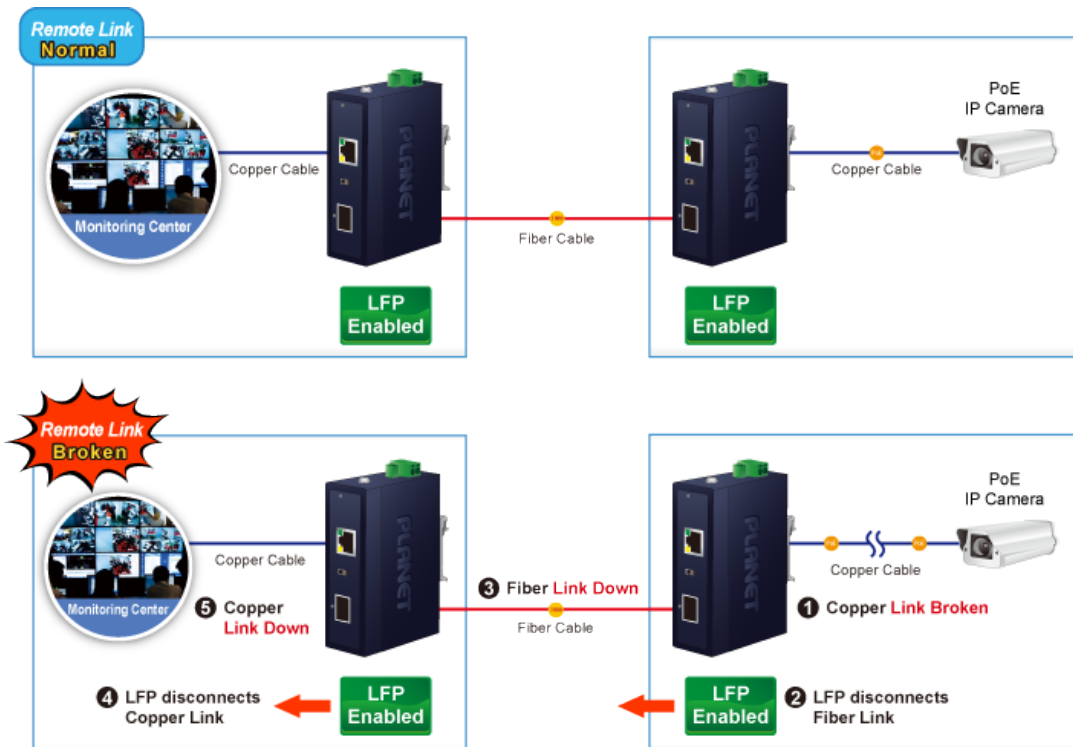
Fiber-optic Link Capability Extends the Range of Network Deployment

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. 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 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



**Wall mounting
(Space saving)**

2. PRODUCT FEATURES

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) 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

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

Converter Controller	Realtek RTL8213I	
PoE PSE	Microchip PD69101	x 1

3.2 FUNCTION SPECIFICATIONS

Model	IGTP-815AT
Hardware Specifications	
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)
Power Requirements	DC 48~56V, supports reverse polarity protection (>51V DC for PoE+ output recommended)
Power Consumption	System ON without loading DC 48V: 0.96W/3.27BTU DC 56V: 1.12W/3.82BTU Full loading with PoE DC 48V:36.48W/124BTU(PoE:30W) DC 56V:43.12W/147BTU(PoE 36W)
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

	Single-mode: 9/125µm optical fiber
Power Over Ethernet	
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
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 IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)

3.4 PHYSICAL SPECIFICATIONS:

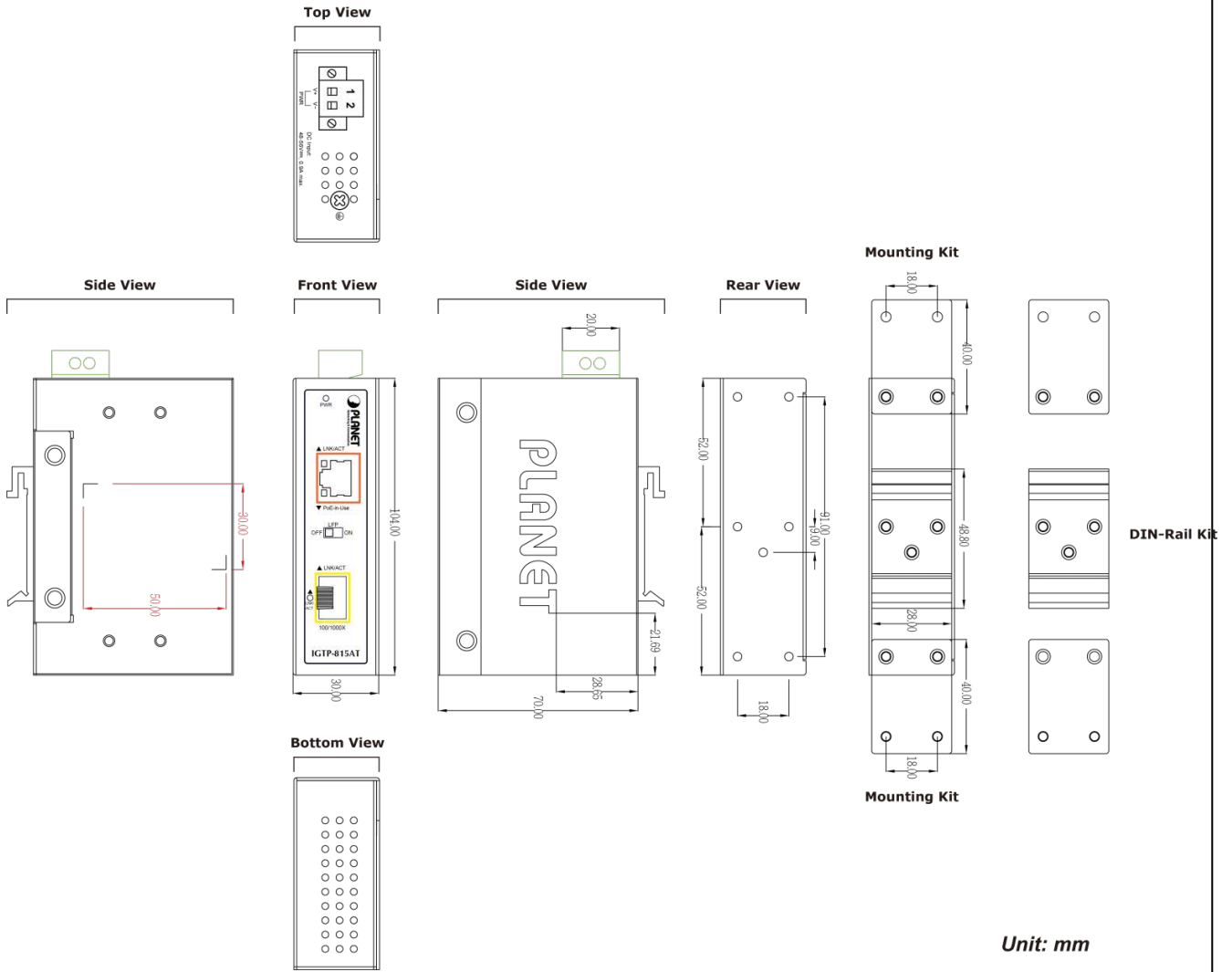
■ **Dimensions:**

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

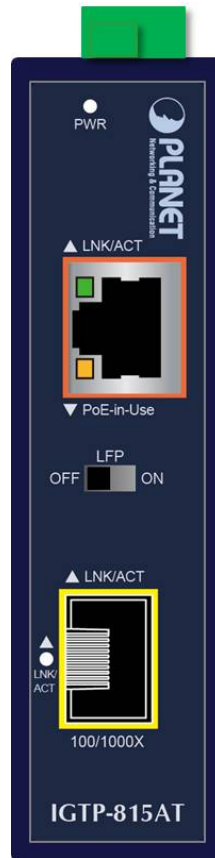
■ **Weight:**

251g

■ **Diagram**



LED Definition:



■ **System**

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

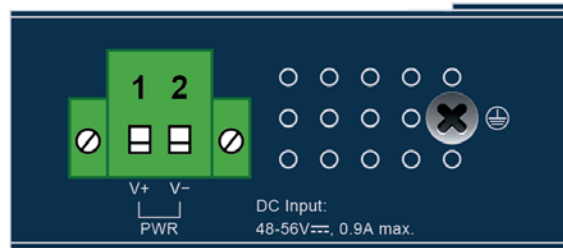
■ **Gigabit TP Interface**

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.
PoE-in-Use	Amber	Lit: Indicates that the port is providing DC 48 to 56V power to remote powered device.
		Off: Indicates that the port is not providing DC power to remote powered device.

■ **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.

Top view:



3.5 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)

3.6 ELECTRICAL SPECIFICATIONS

Power Requirements: 48~56V DC power with reverse polarity protection

Power Consumption:

Condition Power Input	System ON	Ethernet + PoE (30W) Full Loading	Ethernet + PoE (36W) Full Loading
DC 48V	0.96W/3.27BTU	36.48W/124BTU	N/A
DC 52V	N/A	N/A	N/A
DC 56V	1.12W/3.82BTU	36.9W/125BTU	43.12W/147BTU

3.7 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

3.8 RELIABILITY

MTBF > 100,000hrs @ 25 degrees C

3.9 BASIC PACKAGING

- The IGTP-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

3.10 PACKING INFORMATION

Box Dimensions (W x D x H):	205 × 144 × 46 mm
Weight (gross weight):	352g
Carton Dimensions (W x D x H):	435 × 325 × 280 mm
Carton Weight (gross weight):	7.8kg
Quantity:	20pcs in one carton