1. Package Contents

Thank you for purchasing PLANET compact industrial 100/1000X to 10/100/1000T 802.3at PoE+ Media Converter, IGTP-815AT. In the following sections, the term **"Industrial PoE+ Media Converter"** means the IGTP-815AT.

Open the box of the Industrial PoE+ Media Converter and carefully unpack it. The box should contain the following items:

Industrial PoE+ Media Converter x 1	User's Manual x 1	Wall-mount Kit x 1
DIN-rail Kit	RJ45 Dust Cap x 1	SFP Dust Cap x 1

If any of these are missing or damaged, please contact your dealer immediately; if possible, retain the carton including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair.

2. Product 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 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) 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	**System ON without loading** DC 48V: 0.96W/3.27BTU DC 56V: 1.12W/3.82BTU **Full loading with PoE** 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
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	
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
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: 5~95% (non-condensing) Storage: 5~95% (non-condensing)

3. Hardware Introduction

3.1 Three-View Diagram

The three-view diagram of the Industrial **PoE+** Media Converter consists of Ethernet interfaces and one **removable 2-pin terminal block**. The LED indicators are also located on the front panel.
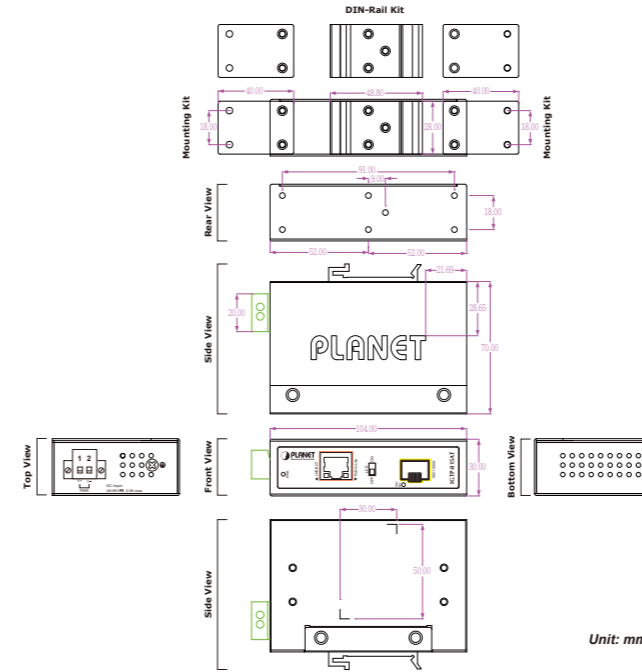

Unit: mm

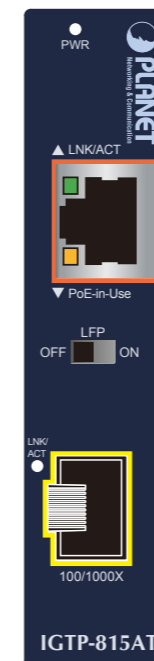**Figure 1:** IGTP-815AT Three-View Diagram

➢ **Front View**

Figure 2: IGTP-815AT Front View

3.2 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 PoE power to remote powered device.
		Off: Indicates that the port is not providing PoE power to remote powered device.

➢ **Gigabit Fiber Interface**

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

3.3 Wiring the Power Inputs

The 2-contact terminal block connector on the top panel of Industrial PoE+ Media Converter is used for 48~56V DC power inputs. Please follow the steps below to insert the power wire.
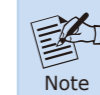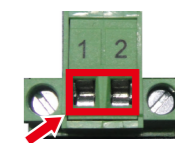
⚠ **Caution** — When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER.
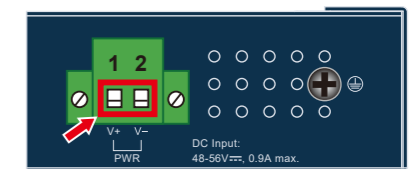
2. Tighten the wire-clamp screws for preventing the wires from loosening.

Note
1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. The DC power input range is 48V ~ 56V DC.

4. Hardware Installation

This section describes the functionalities of the Industrial PoE+ Media Converter's components and guides you to installing it on the DIN rail and wall. Please read this chapter completely before continuing.

Note — This following pictures guide you to installing the device, and the device is not IGTP-815AT.

4.1 DIN-rail Mounting Installation

4.2 Wall-mount Plate Mounting

4.3 Side Wall-mount Plate Mounting

Caution — You must use the screws supplied with the wall-mounting brackets. Damage caused to the parts by using incorrect screws would invalidate your warranty.

4.4 Grounding the Device

User **MUST** complete grounding wired with the device; otherwise, a sudden lightning could cause fatal damage to the device. EMD (Lightning) DAMAGE IS NOT CONVERED UNDER WARRANTY.

⏚ **Earth Ground**

DC Input:
48-56V⎓, 0.9A max.
V+ V−
PWR
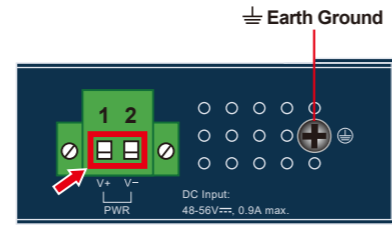
5. Fiber and PoE Installation

The IGTP-815AT is flexible enough to extend the distance from 220m to 120km. It depends on the 1000BASE-X or 100BASE-FX SFP transceivers. The SFP transceivers are hot-pluggable and hot-swappable. You can plug in and out the transceiver to/from any SFP port without having to power down the Industrial 802.3at PoE+ Media Converter.

If there is any IEEE 802.3at/802.3af devices needed to power on, the IGTP-815AT can provide you a way to supply power for this Ethernet device conveniently and easily.

The IGTP-815AT needs DC 48-56V input and it injects the DC power into the pin of the twisted pair cable (Pins 1, 2, 3 and 6).

PoE
IP Camera

DC 48~56V
Power

Data   Data   Power

IGTP-815AT

Fiber Switch

550m / 20km   100m

Monitoring Center

── 1000BASE-SX/LX Fiber-optic
── 1000BASE-T UTP with PoE
── Power Line (DC)

6. Link Fault Pass through

The LFP function includes Link Loss Carry Forward (LLCF), Link Loss Return (LLR) and the DIP switch design. LLCF and LLR can immediately alert administrators about the issue of the link media and provide efficient solution to monitor the network. The DIP switch provides the disabling or enabling of the LFP function.

Remote Link Normal

Copper Cable   PoE IP Camera

Copper Cable

Fiber Cable

LFP Enabled   LFP Enabled

Monitoring Center

Remote Link Broken

Copper Cable   PoE IP Camera

❸ Fiber Link Down   Copper Cable

❺ Copper Link Down   ❶ Copper Link Broken

Fiber Cable

❹ LFP disconnects Copper Link   LFP Enabled   LFP Enabled   ❷ LFP disconnects Fiber Link

Monitoring Center
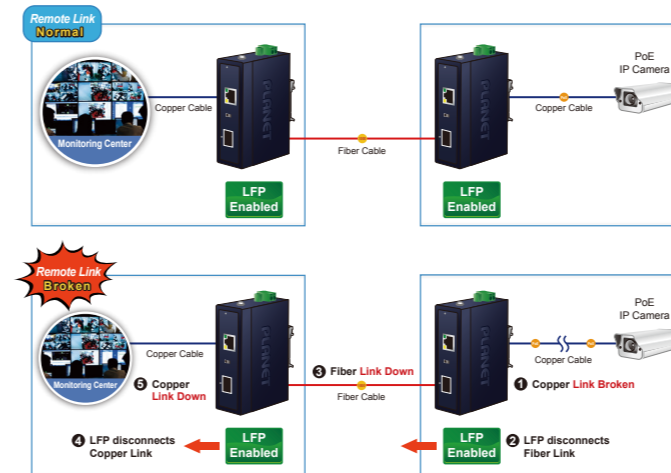
Note — LFP function is turned off by default. This feature can also be turned on via the DIP switch. If you are not familiar with the network installation and for diagnostic purpose (i.e. check which end is broken), you can turn it on. Otherwise, please keep it in the default position.

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

► **IGTP-815AT**

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Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource on PLANET web site first to check if it could solve your issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQs:
http://www.planet.com.tw/en/support/faq.php

Switch support team mail address:
support_switch@planet.com.tw