

## 1. Package Contents

Thank you for purchasing PLANET compact industrial 100/1000X to 10/100/1000T 802.3bt PoE++ Media Converter series, IGUP-1205AT and IGUP-2205AT. In the following section, the term **"Industrial PoE++ Media Converter"** means the IGUP-1205AT or IGUP-2205AT.

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

1. Industrial PoE++ Media Converter x 1
2. User's Manual x 1
3. DIN-rail Kit
4. Wall-mount Kit
5. Dust Cap (Please refer to the table below.)

	RJ45 Dust Cap	SFP Dust Cap
IGUP-1205AT	1	2
IGUP-2205AT	2	2

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.

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Weight	612 g	665 g
Power Requirements	12-56V DC, supports reverse polarity protection	
Power Consumption	System ON without loading 12V DC: 4.56W 48V DC: 5.28W	System ON without loading 12V DC: 4.56W 48V DC: 5.28W
	Full loading with PoE 12V DC: 46.6W 48V DC: 100.3W	Full loading with PoE 12V DC: 67.44W 48V DC: 205W
DIP Switch	Standard/Legacy mode	
Enclosure	IP30 metal case	
Installation	DIN-rail kit and wall-mount kit	
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 802.3bt Power over Ethernet Plus Plus	
PoE Power Output	Standard (BT) mode: 90W Legacy (PoH) mode: 95W	

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## 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 6-pin terminal block**. The LED indicators are also located on the front panel.

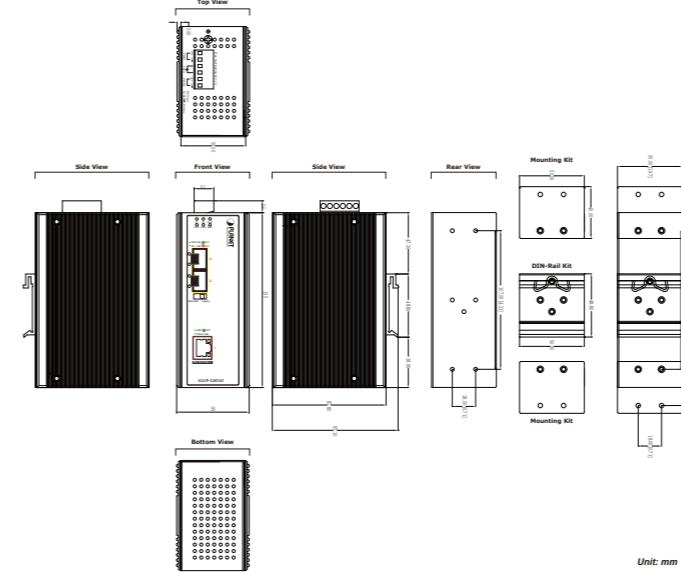


Figure 1: IGUP-1205AT Three-View Diagram

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### ■ Front View



Figure 3: IGUP-1205AT/IGUP-2205AT Front View

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## 2. Product Specifications

Model	IGUP-1205AT	IGUP-2205AT
Hardware Specifications		
Copper Port	1 x 10/100/1000BASE-T	2 x 10/100/1000BASE-T
SFP Slots	2 x 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 1 (Green), Power 2 (Green), Fault Alarm (Red)	
	PoE Usage: IGUP-1205AT: 30W/60W/90W (Amber) IGUP-2205AT: 60W/120W/180W (Amber)	
Fiber:	100BASE-X: LNK/ACT (Amber) 1000BASE-X: LINK/ACT (Green)	
	TP: 10/100/1000BASE-T: LNK/ACT (Green) PoE: PoE-in-Use (Amber)	
Dimensions (W x D x H)	55 x 85 x 135 mm	

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PoE Power Supply Type	End-span + Mid-span
Power Pin Assignment	End-span: 1/2 (-), 3/6 (+); Mid-span: 4/5 (+), 7/8 (-)
PoE Power Budget	95 watts@ 24-56V DC input 30 watts@ 12V DC input
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 IEEE 802.3bt Power over Ethernet Plus Plus IEEE 802.3az Energy Efficient Ethernet (EEE)
	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
Stability Testing	
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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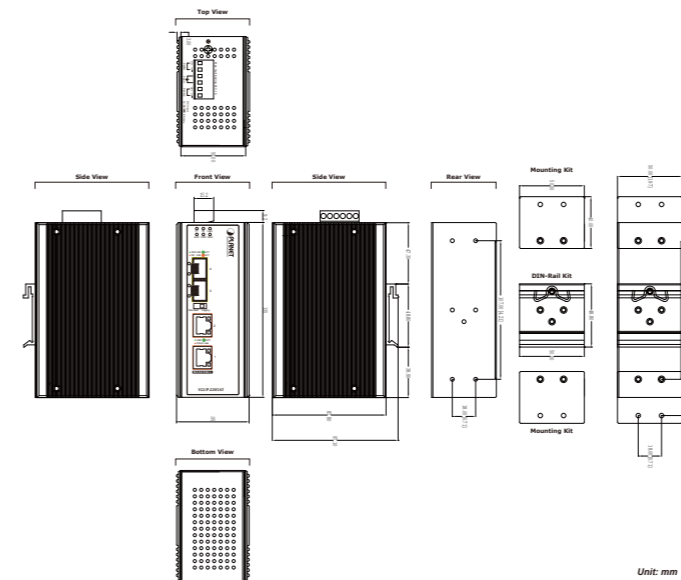


Figure 2: IGUP-2205AT Three-View Diagram

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### 3.2 LED Definition:

#### ■ System

LED	Color	Function
P1	Green	Lights to indicate DC power input 1 has power.
P2	Green	Lights to indicate DC power input 2 has power.
Fault	Red	Lights to indicate that DC power has failed.
PoE Usage	Amber	<b>IGUP-1205AT (30W, 60W, 90W)</b> Lights to indicate the system consumes over 30-/60-/90-watt PoE power budget. Blinks to indicate the system consumes less 30-/60-/90-watt PoE power budget.
		<b>IGUP-2205AT (60W, 120W, 180W)</b> Lights to indicate the system consumes over 60-/120-/180-watt PoE power budget. Blinks to indicate the system consumes less 60-/120-/180-watt PoE power budget.

#### ■ Gigabit TP Interface

LED	Color	Function
TP LNK/ACT	Green	Lights to indicate that the copper port is successfully connecting to the network at 10/100/1000Mbps.
		Blinks to indicate the copper port is receiving or sending data.
PoE-in-Use	Amber	Lights to indicate that the port is providing 54V DC to remote powered device.
		Off to indicate that the port is not providing 54V DC to remote powered device.

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## ■ Gigabit Fiber Interface

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

## 3.3 Wiring the Power Inputs

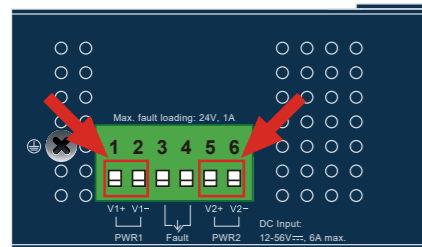
The 6-contact terminal block connector on the top panel of Industrial PoE++ Media Converter is used for two 12-56V DC redundant power inputs. Please follow the steps below to insert the power wire.



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.

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1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER 1, or 5 and 6 for Power 2.



2. Tighten the wire-clamp screws for preventing the wires from loosening.



1 2 3 4 5 6  
Power 1 - Fault Power 2  
+ - + -

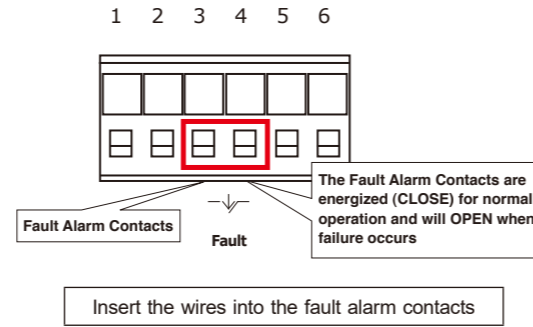


1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG
2. The DC power input range is 12-56V DC.

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## 3.4 Wiring the Fault Alarm Contact

The fault alarm contacts are in the middle of the terminal block connector as the picture shows below. Inserting the wires, the Industrial Ethernet Extender will detect the fault status of the power failure and then forms an open circuit. The following illustration shows an application example for wiring the fault alarm contacts.



1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. Alarm relay circuit accepts up to 24V DC, 1A.

## 3.5 Grounding the Device

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

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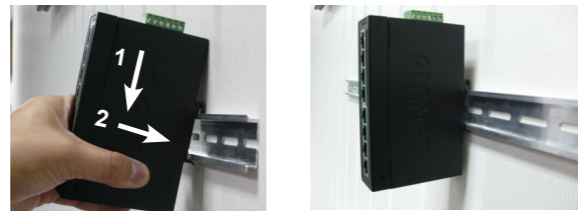
## 4. Hardware Installation

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.



This following picture tells the user how to install the device, and the device is not IGUP-1205AT or IGUP-2205AT.

### 4.1 DIN-rail Mounting Installation



### 4.2 Wall-mount Plate Mounting



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Industrial 2-Port 100/1000X SFP to 1-/2-Port 10/100/1000T  
802.3bt PoE++ Media Converter

IGUP-1205AT/IGUP-2205AT



## PLANET Technology Corp.

10F., No. 96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan

Warning:  
This device is compliant with Class A of CISPR 32.  
In a residential environment this device may cause radio interference.  
2350-AH1350-000



## 4.3 Side Wall-mount Plate Mounting



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

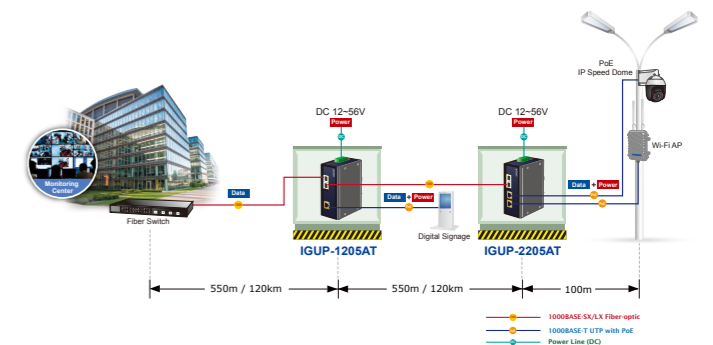
## 5. Fiber and PoE Installation

The IGUP-1205AT/IGUP-2205AT is flexible enough to extend the distance from 550m 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 802.3bt PoE++ Media Converter.

If there is any IEEE 802.3af/IEEE 802.3at/IEEE 802.3bt devices needed to power on, the IGUP-1205AT/IGUP-2205AT can provide you a way to supply power for this Ethernet device conveniently and easily.

The IGUP-1205AT/IGUP-2205AT needs 12-56V DC input and it injects the DC power into the pin of the twisted pair cable (Pins 1, 2, 3 and 6).

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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 support team.

PLANET online FAQs:

<http://www.planet.com.tw/en/support/faq.php>

Support team mail address:

[support@planet.com.tw](mailto:support@planet.com.tw)

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