1. Package Contents

Thank you for purchasing PLANET Industrial 2-port Multi-Gigabit 802.3bt PoE++ Injector Hub, IPOE-270/IPOE-270-12V. In the following sections, the term **"Industrial PoE++ Injector Hub"** means the IPOE-270 or IPOE-270-12V.

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

Industrial PoE++ Injector Hub x 1		User's Manual x 1
		
DIN-rail Kit x 1	RJ45 Dust Caps x 4	Wall-mount Kit x 1
		

If any of these are missing or damaged, please contact your dealer immediately.

2. Product Specifications

Model	IPOE-270	IPOE-270-12V
Hardware Specifications		
Copper Ports	2-pair 10/100/1G/2.5G/5GBASE-T RJ45: • Data input port 1 and PoE output port 1 • Data input port 2 and PoE output port 2	
Connector	Removable 4-pin terminal block Pins 1 and 2 for Power 1; Pins 3 and 4 for Power 2	
LED Indicator	System: Power 1 (Green) Power 2 (Green) PoE Usage: 60W/120W/180W (Amber) 802.3bt PoE++ Port: PoE-in-use x 1 (Green:bt, Amber:at)	
Network Cable	Twisted-pair cable up to 100 meters (328ft) 10BASE-T: 4-pair UTP Cat. 3, 4, 5, 5e, 6 100BASE-TX: 4-pair UTP Cat. 5, 5e, 6 1000BASE-T: 4-pair UTP Cat. 5e, 6 2.5G/5GBASE-T: 4-pair UTP Cat.6, 6A,7	
Data Rate	10/100/1000/2500/5000Mbps	
Power Requirements	**48~56V DC,** redundant power with reverse polarity protection.	**12~56V DC,** redundant power with reverse polarity protection.
Power Consumption (Ethernet Full Loading)	**System ON without loading** 48V DC: 1.4watts/4.7BTU	**System ON without loading** 12V DC: 1.8watts/6.1BTU 24V DC: 2.4watts/8.1BTU 48V DC: 2.4watts/8.1BTU 52V DC: 2.6watts/8.8BTU

Power Consumption (Ethernet Full Loading)	52V DC: 1.5watts/5.1BTU 54V DC: 1.6watts/5.4BTU 56V DC: 1.6watts/5.4BTU **Full loading with PoE** 48V DC (120W PoE Budget): 128watts/436BTU 52V DC (180W PoE Budget): 177watts/603BTU 54V DC (180W PoE Budget): 187watts/638BTU 56V DC (180W PoE Budget): 185watts/631BTU	54V DC: 2.1watts/7.1BTU 56V DC: 2.2watts/7.5BTU **Full loading with PoE** 12V DC (60W PoE Budget): 60watts/204BTU 24V DC (120W PoE Budget): 124watts/423BTU 48V DC (120W PoE Budget): 120watts/409BTU 52V DC (180W PoE Budget): 188watts/641BTU 54V DC (180W PoE Budget): 188watts/641BTU 56V DC (180W PoE Budget): 184watts/627BTU
Dimensions	41 x 70 x 115 mm (W x D x H)	
Weight	284g	387g
Enclosure	IP30 metal case	
Installation	DIN-rail kit and wall-mount kit	
ESD Protection	6KV	
Surge Protection	6KV	
Power over Ethernet		
PoE Standard	IEEE 802.3bt Power over Ethernet Plus Plus, 4-pair PSE Compatible with IEEE 802.3at PoE+ PSE	

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 (max.)	120W@48V DC input 180W@52V/54V/56V DC input	60W@12V DC input 120W@24V/48V DC input 180W@52V/54V/56V DC input
Number of devices that can be powered	2	
Standards Conformance		
Regulatory Compliance	FCC Part 15 Class A, CE	
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)	
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3bz 2.5G/5GBASE-T IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus	
Environment		
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C	
Humidity	Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing)	

3. Hardware Introduction

3.1 Device Front Panel

The front panels of the Industrial PoE++ Injector Hubs consist of Ethernet interfaces and LED indicators.

■ Front View

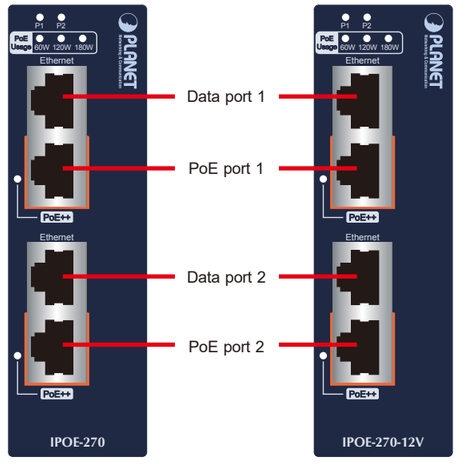


Figure 1:
IPOE-270 Front View

Figure 2:
IPOE-270-12V Front View

■ System LEDs

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.
PoE Usage	Amber	**60W, 120W, 180W** 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.

■ 802.3bt PoE++ TP Interface LEDs

LED	Color	Function
802.3bt PoE++ PoE-in-Use	Green	Lights to indicate that the port is providing 802.3bt PoE++ power to remote powered device.
		Off or blink to indicate that the port is not providing PoE power to remote powered device.
	Amber	Lights to indicate that the port is providing 802.3at PoE+ power to remote powered device.
		Off or blink to indicate that the port is not providing PoE power to remote powered device.

3.2 Device Upper Panel

The upper panels of the Industrial PoE++ Injector Hubs consist of one terminal block connector within two power inputs.

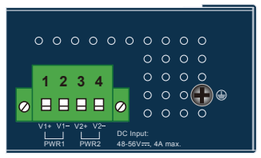


Figure 3: IPOE-270 Top View

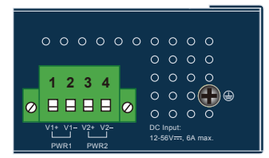


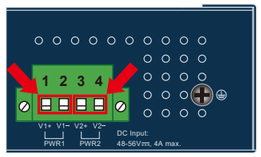
Figure 4: IPOE-270-12V Top View

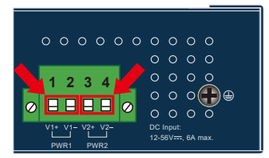
3.3 Wiring the Power Inputs

The terminal block connector on the top panel of Industrial PoE++ Injector Hub is used for two DC redundant power inputs. Please follow the steps below to insert the power wire.

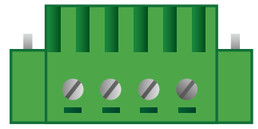
Caution	When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER 1, or contacts 3 and 4 for POWER 2.





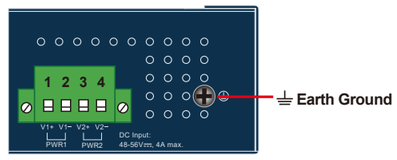
2. Tighten the wire-clamp screws for preventing the wires from loosening.



Note	The wire gauge for the terminal block should be in the range between 12 and 24 AWG.

3.4 Grounding the Device

Users **MUST** complete grounding wired with the device; otherwise, a sudden lightning could cause fatal damage to the device.



Note	EMD (Lightning) DAMAGE IS NOT CONVERED UNDER WARRANTY.

4. Installation

This section guides you to installing the Industrial PoE++ Injector Hub on the DIN rail and wall. Please read this chapter completely before continuing.

Note

In the installation steps below, this manual uses PLANET IGS-801 8-port Industrial Gigabit Switch as an example. The steps for PLANET Industrial Slim-type Switch, Industrial Media/Serial Converter and Industrial PoE devices are similar.

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.

5. Three-View Diagram

■ **IPOE-270**

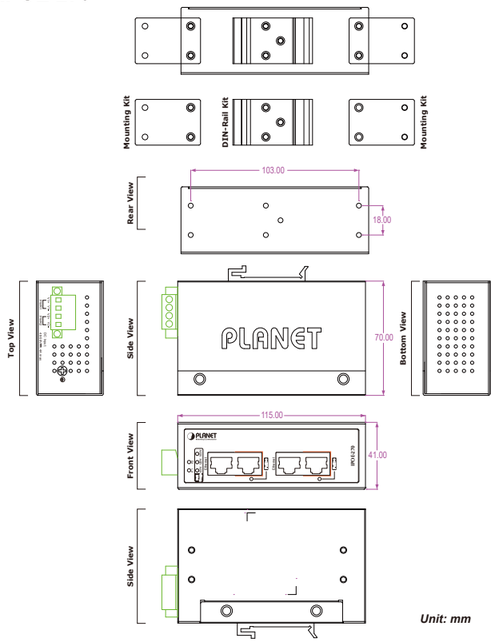


Figure 5: IPOE-270 Three-View Diagram

■ **IPOE-270-12V**

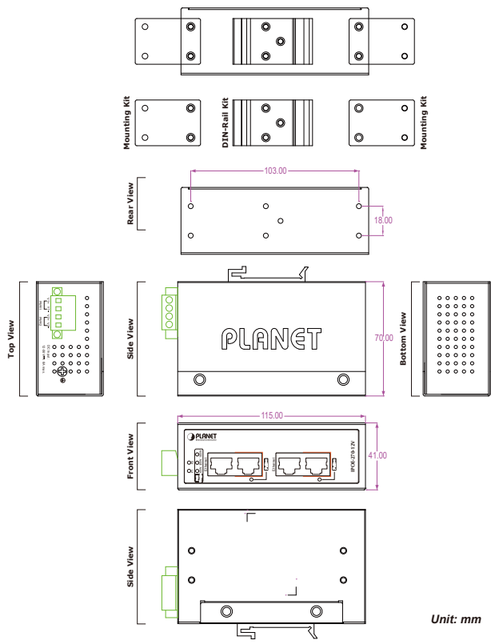


Figure 6: IPOE-270-12V Three-View Diagram

PLANET Networking & Communication

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User's Manual

www.PLANET.com.tw

Industrial 2-Port Multi-Gigabit 802.3bt PoE++ Injector Hub

IPOE-270 Series

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2350-AH8040-000

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

Support team mail address:
support@planet.com.tw

FCC Warning

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WEEE Warning

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.