1. Package Contents

Thank you for purchasing PLANET POE-175-95 Single-port 10/100/1000Mbps 802.3bt PoE++ Injector.

Please unpack the box of the device carefully, and the box should contain the following items:

802.3bt PoE injector x 1	User's manual x 1
	
AC power cord x 1	Ground cable x 1
	

If any item is found missing or damaged, please contact your local reseller for replacement.

2. Product Features

- **Interface**
  - 2 RJ45 interfaces
    - 1-port **Data input**
    - 1-port **Data + Power** output
  - 1 AC 100-240V input power socket
  - 1 DIP switch for selecting BT, UPoE or Legacy mode
- **Power over Ethernet**
  - Complies with IEEE 802.3af/at/bt PoE end-span/mid-span PSE
  - Supports PoE power up to 95 watts for PoE port
  - Auto-detection of PoE IEEE 802.3af/at/bt devices that may be damaged by incorrect installation
  - Monitor the status of the total PoE usage in real time
  - Remote power feeding up to 100m
- **Hardware**
  - All-in-one compact size design
  - Internal power supply
  - LED indicators for power, PoE-in-Use and maximum PoE usage

3. Product Specifications

Product		POE-175-95
Hardware Specifications		
Interface	Input Port	1 x RJ45 STP Data In
	Output Port	1 x RJ45 STP PoE (Data + Power) Out
	AC Socket	1 x AC input socket
	DIP Switch	BT, UPoE or Legacy BT Mode
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
LED Indicators		PWR x 1 (Green) PoE-in-Use x 1 (Green) PoE Max x 1 (Green)
Data Rate		10/100/1000Mbps
Dimensions (W x D x H)		170 x 100 x 40 mm
Weight		443g
Unit Output Voltage		DC 54V
Power Requirements		AC 100-240V, 1.8A max.
Power Consumption		Max. 1 watts/3.41 BTU (No Loading) Max.111 watts/378.5 BTU (Full loading)
No. of Devices that Can be Powered		1
Power over Ethernet		
PoE DIP Switch		IEEE 802.3af/at/bt PSE UPoE Legacy BT
PoE Power Output Budget		DC 54V / 95-watt PoE via 4-pair
PoE Power Output		Max. 95W@1 m cable Max. 73W@100 m cable
PoE Power Supply Type		End-span + Mid-span
Power Pin Assignment		Pair 1 End-span: 1/2 (-), 3/6 (+) Pair 2 Mid-span: 4/5 (+), 7/8 (-)
Standards Conformance		
Standards Compliance		IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3bt 4-pair Power over Ethernet Type 4 IEEE 802.3at Power over Ethernet Plus IEEE 802.3af Power over Ethernet
Regulatory Compliance		FCC Part 15 Class A, CE
Surge Protection		Difference Mode: ±2KV, Common mode: ±4KV
Electrostatic standard		Contact 6KV, air 8KV
Environment		
Operating Temperature		0 ~ 50 degrees C
Storage Temperature		-40 ~ 70 degrees C

4. Product Outlook

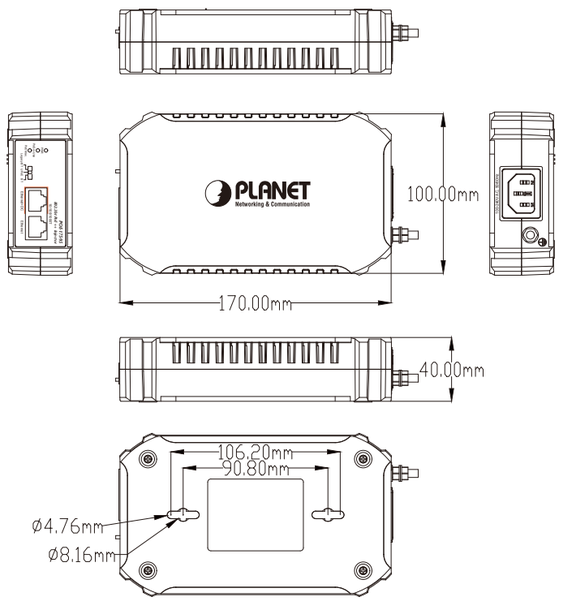


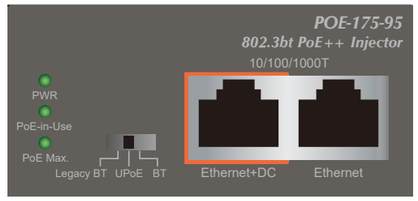
Figure 1: Dimensions

Operating Humidity	5 ~ 90%, relative humidity, non-condensing
Storage Humidity	5 ~ 90%, relative humidity, non-condensing

Caution

1. As IEEE 802.3bt device provides high power, please use high-quality network cable and RJ45 connector.
2. The maximum PoE output power depends on the cable length and the quality of cable.

LED Indicators:



LED	Color	Function
PWR	Green	**Lights** to indicate the device has power.
PoE-in-Use	Green	**Lights** There is a PoE PD connected to the port, which supplies power. **Blinks** Indicates the port's power supply is abnormal. **Off** No PoE powered device (PD) connected.
Max. PoE Usage	Green	**Lights** Indicating the output power reaches 80%

5. Hardware Installation

The following section describes the hardware features of the POE-175-95. Before connecting any network device to it, please read this chapter carefully.

5.1 PoE Injector Grounding

A good grounding system is the groundwork for the smooth and safe operation of the POE-175-95, and an excellent way to prevent lightning strikes and resistance to interference. Please follow the POE-175-95's grounding specification instructions to ensure a good grounding system.

■ Proper Grounding

When using an AC power source, the device must be grounded with the green and yellow ground cables; otherwise, shock hazards may occur when insulation resistance between the internal power supply and the PoE Injector degrades.

■ Lightning and Grounding Protection

The lightning protection system is an independent system consisting of a lightning rod, conductor and connection joint with the grounding system. The grounding system usually is shared with the ground reference, and green and yellow ground cables. Lightning and grounding protection is a building requirement, not a specific requirement of the PoE Injector.

The POE-175-95 provides chassis grounding post on its rear side. Chassis grounding protection should be properly connected to the grounding connector.

The ground cabling procedure is as follows:

Step 1 : Remove the nuts from the rear PoE Injector where the grounding posts are.

Step 2 : Wrap one end of the green and yellow grounding cables to the grounding posts.

Step 3 : Tighten the grounding post nut well.

Step 4 : Attach the other end of the grounding cable to the grounding connector.

Note

The grounding cable should be made of a good conductor, and the diameter should be determined by the possible maximum current that may pass through. Bare conductor cabling is forbidden.

Ground resistance value: The combined grounding resistance should be less than 1 ohm.

5.2 Before Installation

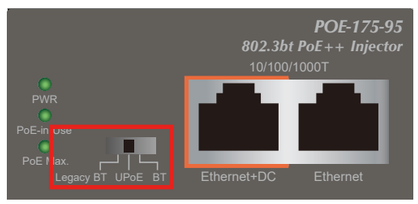
Before your installation, it is recommended to check your network environment. If there is any IEEE 802.3bt device that needs to be powered on and works normally, the POE-175-95 provides you with a way out to supply power to this Ethernet device conveniently and easily.

It is equipped with an AC power cord with 100-240V AC input and injects DC 54V power into the pin of the twisted-pair cable (pair 1/2 [-], 3/6 [+] and pair 4/5 [+], 7/8 [-]).

5.3 Selectable Standard IEEE 802.3bt, UPoE or Legacy mode

The POE-175-95 provides power to those powered devices which do not fully follow the IEEE 802.3af/at/bt standard. The UPoE and Legacy bt modes provide the PD with 60 to 95 watts of power output voltage.

Modes	Descriptions
BT mode	Powered devices that fully support IEEE 802.3bt standards with output budget of 90W.
UPoE mode	Powered devices that support Cisco UPoE with output budget of 95W.
Legacy BT	Powered devices that support capacitive or resistance electronic tag with output budget of 90W.



5.4 POE-175-95 Installation

1. Connect the AC power cord to the **"AC slot"** of the POE-175-95; the **"PWR"** LED will be steadily on.
2. Connect a standard Ethernet cable from an Ethernet switch or PC workstation to the **"Ethernet"** port of the POE-175-95.
3. Connect the long cable to the **"Ethernet+DC"** port.
4. Due to the capability of IEEE 802.3af/at/bt Power over Ethernet, the POE-175-95 can directly connect with any IEEE 802.3af/at/bt-compliant end nodes, such as PTZ (pan, tilt, zoom) network cameras, color touch screen Voice over IP (VoIP) telephones and multi-channel wireless LAN access points.

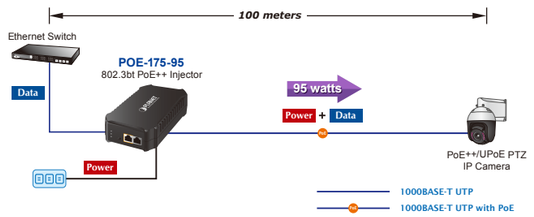


Figure 2: Architecture of connected IEEE 802.3af/at/bt devicea

Once the POE-175-95 detects the existence of an IEEE 802.3af/at/bt device, the **PoE-in-Use** LED indicator will be steadily on to show it is providing power.

Note

1. According to IEEE 802.3af/at/bt Power over Ethernet, the POE-175-95 will not inject power to the cable if not connected to IEEE 802.3af/at/bt-compliant device.
2. Depending on the length of cable, the PoE power received by a PD is different.

5.5 POE-175-95 and POE-173S Installation

1. Connect DC plug from **"DC Out"** of the POE-173S to a remote device.
2. Connect the AC power cord to the **"AC slot"** of the POE-175-95; the **"PWR"** LED will be steadily on.
3. Connect a standard Ethernet cable from an Ethernet switch or PC workstation to the **"Ethernet"** port of the POE-175-95.
4. Connect a standard Ethernet cable from **"Ethernet+DC"** port of the POE-175-95 to the **"PoE In"** port of the POE-173S. The **"30W"**, **"60W"** or **"90W+"** LED of the POE-173S and the **"PoE-in-Use"** LED of the POE-175-95 will light up continuously.
5. Connect a standard Ethernet cable from the **"Ethernet"** port of the POE-173S to the remote Ethernet device.
6. The remote device will be turned on and connected.

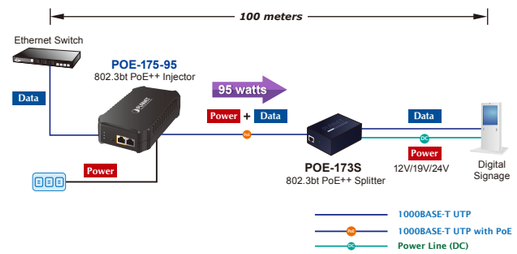


Figure 3: Architecture of connected POE-175-95 and POE-173S

Note

Please ensure the POE-173S output voltage is correct before applying power to the remote device.

PLANET Networking & Communication

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User's Manual

www.PLANET.com.tw

Single-Port 10/100/1000Mbps 802.3bt PoE++ Injector

POE-175-95

PLANET Technology Corp.
10F., No. 96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan
2351-AF0650-004

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

Energy Saving Note of the Device
This power required device does not support Standby mode operation. For energy savings, please remove the power cable to disconnect the device from the power circuit. Without removing the power cable, the device will still consume power from the power source. In view of Saving the Energy and reducing the unnecessary power consumption, it is strongly suggested to remove the power cable from the device if this device is not intended to be active.

Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource at the 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?method=category&c1=2

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

PLANET Networking & Communication

EC Declaration of Conformity

For the following equipment:

*Type of Product : Single-Port 10/100/1000Mbps 802.3bt PoE Injector

*Model Number : POE-175-95

* Produced by:
Manufacturer's Name : **Planet Technology Corp.**
Manufacturer's Address : 10F., No.96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan

is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility Directive on 2014/30/EU and Low Voltage Directive 2014/35/EU.
For the evaluation regarding the EMC, the following standards were applied:

EN 55032	2015+AC:2016, CLASS A
EN 61000-3-2	2014
EN 61000-3-3	2013
EN 55024	2010+A1:2015
EN 62368-1	2014

Responsible for marking this declaration if the:
☒ **Manufacturer** ☐ **Authorized representative established within the EU**
Authorized representative established within the EU (if applicable):
Company Name: **Planet Technology Corp.**
Company Address: **10F., No.96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan**
Person responsible for making this declaration
Name, Surname **Jonas Yang**
Position / Title : **Director**

Taiwan *Place*

8th Jan., 2019 *Date*

Legal Signature

PLANET TECHNOLOGY CORPORATION
e-mail: sales@planet.com.tw http://www.planet.com.tw
10F., No.96, Minquan Rd., Xindian Dist., New Taipei City, Taiwan Tel:886-2-2219-9518 Fax:886-2-2219-9528