1. Package Content

Thank you for purchasing PLANET Single-Port 10/100/1000Mbps Ultra PoE Injector, POE-173.

Model	LAN Port Speed	PoE Standard	PoE Budget
POE-173	10/100/1000Mbps	Ultra PoE, backward compatible with IEEE 802.3at/af standard	60 watts

The term of **"Ultra PoE Injector"** in the following section of this User's Manual means the POE-173.

The box of the Single-Port 10/100/1000Mbps Ultra PoE Injector should contain the following items:

- ◆ The Single-Port 10/100/1000Mbps Ultra PoE Injector x 1
- ◆ User's Manual x 1
- ◆ AC Power Cord 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 Features

■ Interface

- ☐ 2 x RJ-45 interfaces
  - ✧ 1-Port **Data + Power** output
  - ✧ 1-Port **Data input**
- ☐ 1 x AC 100-240V input power socket

■ Power over Ethernet

- ☐ Ultra Power over Ethernet PSE
- ☐ Up to 60 watts of power on 4-pairs UTP
- ☐ Backward compatible with IEEE 802.3at/af PD device
- ☐ Auto-detection of PoE IEEE 802.3at/af equipment and devices from being damaged by incorrect installation
- ☐ Remote power feeding up to 100m

■ Hardware

- ☐ All-in-one compact size design
- ☐ Internal power supply
- ☐ LED indicators for Power LED and Active LED (PoE ready / In-use)

Note

PSE (Power Sourcing Equipment) is a device (switch, or hub for instance) that will provide power in a PoE setup. The maximum allowed continuous output power per such device in IEEE 802.3af is 15.4 watts, in IEEE 802.3at is 30 watts and Ultra PoE is 60 watts.

PD (Powered Device) such as IP Phones, network cameras or Wireless access points is a PoE-enabled terminal by PSE and thus it consumes energy.

3. Product Specifications

Product		POE-173
Hardware Specifications		
Interface	LAN	1 x RJ-45 STP, **"Data"** Input Port
	POE	1 x RJ-45 STP, **"Data + Power"** Output Port
	AC Connector	1 x AC Input power socket, IEC-320 C6
Network Cable	Ultra PoE (60W)	4-pair UTP Cat. 5, 5e, 6 up to 100m (328ft)
	802.3af / at PoE (15W / 30W)	2-pair UTP Cat. 3, 4, 5, up to 100m (328ft)
LED Indicator		System: Power x 1 (Green) PoE Port: Active, PoE ready / In Use x 1 (Green)
Data Rate		10/100/1000Mbps
Dimensions (W x D x H)		115 x 62.5 x 31 mm
Weight		177g
Unit Output Voltage		DC 50V, 1.2A
Power Requirements		100-240V AC @50/60Hz, 1.5A max.
Power Consumption		60 Watts max.
Operating Temperature		0 ~ 50 degrees C
Storage Temperature		-10 ~ 70 degrees C
Operating Humidity		5 ~ 95%, Relative Humidity, non-condensing
Storage Humidity		5 ~ 95%, Relative Humidity, non-condensing
Power over Ethernet		
PoE Standard		Ultra PoE over 4-pairs UTP, IEEE 802.3at High Power over Ethernet End-Span / Mid-Span PSE
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(-)
PoE Power Output		DC 50V / 60-watt PoE via 4-pairs DC 50V / 30-watt PoE via 2-pairs

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 802.3at Power over Ethernet Plus IEEE 802.3af Power over Ethernet
Regulation Compliance	FCC Part 15 Class B, CE

4. Product Outlook

Figure 1: An overview of Ultra PoE Injector.

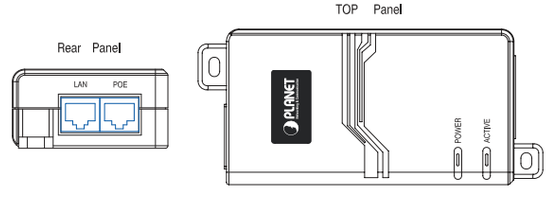
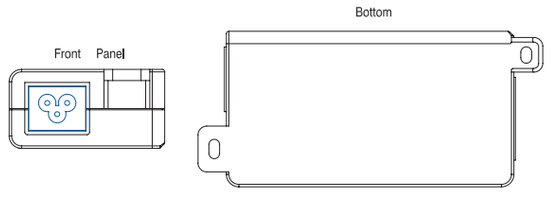


Figure 1: POE-173 Outlook



LED Indicators

LED	Color	Function
POWER	Green	Lights to indicate that the Ultra PoE Injector has power.
ACTIVE	Green	Lights to indicate the port is providing 50V DC in-line power.

5. Hardware Installation

The following section describes the hardware features of Ultra PoE Injector. Before connecting any network device to the Ultra PoE Injector, read this chapter carefully.

This POE-173 provides three different running speeds – 10Mbps / 100Mbps / 1000Mbps for automatically distinguish the speed of incoming connection. Please refer to the following sections for detailed information about Ultra PoE Injector.

5-1. Before Installation

Before installation, it is recommended to check your network environment. If there is any IEEE 802.3at devices that need higher power to power on and work normally, the Ultra PoE Injector can provide you with power for this Ethernet device conveniently and easily. The Ultra PoE Injector is equipped with an AC power cord with 100-240V AC input and injects DC 50V power into the pin of the twisted pair cable (pair 1/2 [+], 3/6 [-] and pair 4/5[+], 7/8[-]).

If there is difficulty in finding a power socket for AC-DC Adapter of your non-PoE network device, the Ultra PoE Injector and POE-171S (Ultra PoE Splitter) can provide you with DC power for this Ethernet device conveniently and easily.

Note

The Ultra PoE Injector and POE-171S can be installed in pair. However, the use of third-party device is allowed if the device complies with IEEE 802.3at Power over Ethernet Plus and a maximum of 30 watts of output capability.

Note

Since the Ultra PoE Injector PoE port supports 50V DC PoE power output, please check and assure the Powered Device's (PD) acceptable DC power range is 50V DC; otherwise, it will damage the Powered Device (PD).

The Ultra PoE Injector Installation

Due to the backward capability of IEEE 802.3at/af PoE standard, the Ultra PoE Injector can directly connect with any IEEE 802.3at/af end-nodes such as PTZ (Pan, Tilt & Zoom) speed dome network cameras, color touch-screen Voice over IP (VoIP) telephones, multi-channel wireless LAN access points. The screen in Figure 2 appears.

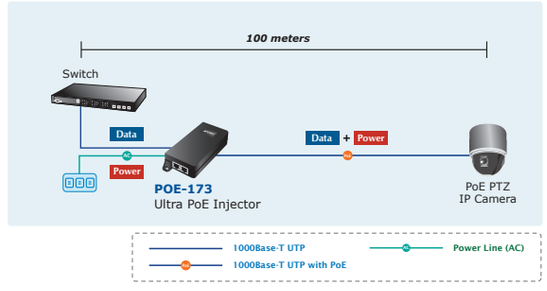


Figure 2: Connection to IEEE 802.3at / 802.3af Powered Devices

1. Connect the AC power cord to **"AC slot"** of Ultra PoE Injector; the **"POWER"** LED will be on steadily.
2. Connect a standard network cable from Switch / workstation to **"LAN"** port of Ultra PoE Injector.
3. Connect the long cable that will be used to connect to the remote PoE PD device to the port **"POE"**.
4. Connect with IEEE 802.3at/af devices

Once Ultra PoE Injector detects the existence of an IEEE 802.3at / 802.3af device, the ACTIVE LED indicator will be on steadily to show it is providing power.

> **Note**
>
> If the connected device is not fully complying with IEEE 802.3at / 802.3af Power over Ethernet or in-line power device, the LED indicator of Ultra PoE Injector will not be on steadily.

The Ultra PoE Injector and Splitter Installation

Below are steps showing how to install the PLANET Ultra PoE Injector (POE-173) and Ultra PoE Splitter (POE-171S) in pair.

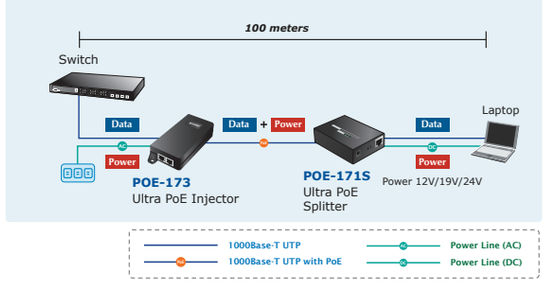


Figure 3: Connection of Architecture over Ultra PoE Injector / POE-171S

1. Connect the AC power cord to **"AC slot"** of Ultra PoE Injector; the **"POWER"** LED will be on steadily
2. Connect a standard network cable from **"POE"** port of Ultra PoE Injector to **"PoE In"** port of POE-171S. The **"ACTIVE"** LED of Ultra PoE Injector and POE In-use LED of POE-171S will light up continuously.
3. Connect a standard network cable from Switch / workstation to **"LAN"** port of Ultra PoE Injector.
4. Connect the UTP cable in the package from **"Ethernet"** port of POE-171S to the RJ-45 port of remote device.
5. Adjust proper DC power output and connect DC plug from **"DC OUT"** of POE-171S to remote device.
6. Power on the remote device and its power LED indicator will remain on.

> **Note**
>
> Please make sure the POE-171S output voltage is correct before applying power to remote device. The POE-171S provides DC12V/19V/24V power output.

The Ultra PoE Injector and PoE Extender Installation

Below are steps showing how to install the PLANET Ultra PoE Injector (POE-173) and 802.3at PoE+ Extender (POE-E201) to extend the distance of networking.

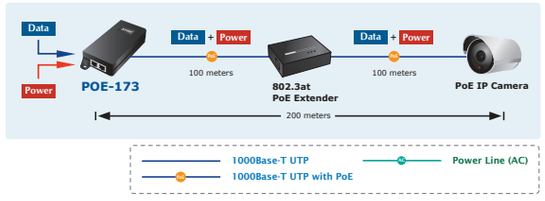


Figure 4: Connection of Architecture over Ultra PoE Injector / POE-E201

1. Connect the AC power cord to **"AC slot"** of Ultra PoE Injector; the **"POWER"** LED will be on steadily.
2. Connect a standard network cable from **"POE"** port of Ultra PoE Injector to the **"IN"** port of POE-E201.
3. The Ultra PoE Injector delivers both Ethernet Data and PoE power over UTP cable to the POE-E201 and the **"ACTIVE"** LED of Ultra PoE Injector and **"PoE IN"** LED of POE-E201 will light up continuously.

4. Connect the additional standard network cable that will be used to connect to the remote **Powered Device (PD)** to the **"OUT"** port of POE-E201.
5. The **"OUT"** port is also the power injectors which transmit DC Voltage to the standard network cable and transfer data and power simultaneously between the Ultra PoE Injector and PD.
6. Once POE-E201 detects the existence of an IEEE 802.3at / 802.3af device, the **"PoE OUT"** LED indicator will be on steadily to show it is providing power.

> **Note**
>
> 1. If the connected device is not fully complying with IEEE 802.3at / 802.3af standard or in-line power device, the PoE OUT LED indicator of POE-E201 will not be on steadily.
> 2. According to IEEE 802.3at / 802.3af standard, the POE-E201 will not inject power to the cable if not connected to a standard IEEE 802.3at / 802.3af device.

PLANET Networking & Communication

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User's Manual

PoE Injector

POE-173

www.PLANET.com.tw

Ultra Power over Ethernet Injector

PLANET Technology Corp.

2351-AF0450-000

60W PoE | 802.3at End-span Mid-span 802.3af | 10M/100M 1000M | PoE | Plug & Play | Wall mountable

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 switch support team.

PLANET online FAQ :
http://www.planet.com.tw/en/support/faq.php?type=2

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

PLANET Networking & Communication

EC Declaration of Conformity

For the following equipment:

*Type of Product : Single-Port 10/100/1000Mbps Ultra PoE Injector (60 Watts)

*Model Number : POE-173

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

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 (2004/108/EC).
For the evaluation regarding the EMC, the following standards were applied:

EN55022	(2006 + A1:2007 + A2:2010)
EN 61000-3-2	(2006 + A1:2009 + A2:2009)
EN 61000-3-3	(2008)
EN55024	(2010)
IEC 61000-4-2	(2008)
IEC 61000-4-3	(2006+A1: 2007 + A2:2010)
IEC 61000-4-4	(2004 + A1:2010)
IEC 61000-4-5	(2005)
IEC 61000-4-6	(2008)
IEC 61000-4-8	(2009)
IEC 61000-4-11	(2004)

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 (R.O.C.)**
Person responsible for making this declaration
Name, Surname **Kent Kang**
Position / Title : **Product Manager**

Taiwan (*Place*) 24th May, 2013 (*Date*) (*Legal Signature*)

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