

IEEE 802.3at Gigabit High Power over Ethernet Injector

POE-161 User's Manual Version 1.1

2. Product Features

POE-161:

- Interface
 - ◆ 2-Port RJ-45 interfaces
 - ◆ 1-Port Data + Power output
 - ◆ 1-Port Data input
 - ◆ 1 DC 56V input power socket
- PoE
 - ◆ Gigabit High Power over Ethernet Mid-Span PSE
 - ◆ IEEE 802.3at POE compliant
 - ◆ IEEE 802.3af splitter devices compatible
 - ◆ Support PoE Power up to 30 Watts for PoE port
 - ◆ Up to 1 IEEE 802.3at devices powered
 - ◆ Provides DC 56V power over RJ-45 Ethernet cable to device with Ethernet port
 - ◆ Auto-detect of POE IEEE 802.3at equipment and devices from being damaged by incorrect installation
 - ◆ Remote power feeding up to 100m
- Hardware
 - ◆ Plastic case
 - ◆ LED indicators for Power LED and PoE In-use

1. Package Content

Thank you for purchasing PLANET IEEE 802.3at High Power over Ethernet Injector, POE-161. Terms of "802.3at PoE Injector" in following section of this User's Manual means the POE-161.

Upon open the box of the IEEE 802.3at High Power over Ethernet Injector and carefully unpack it. The box should contain the following items:

POE-161:

- The IEEE 802.3at Gigabit High Power over Ethernet Injector x 1
- User's Manual x 1
- DC 56V Power Adapter x 1
- 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 against to repack the product in case there is a need to return it to us for repair.

3. Product Specification

Product	POE-161	
Hardware Specification		
Interface	"Data" Input Port	1 x RJ-45 STP
	"PoE (Data+Power)" Output Port	1 x RJ-45 STP
	DC 56V Input power socket	1
LED Indicator	System: Power x 1 (Green) PoE Port: PoE in Use x 1 (Green)	
Network Cable	10Base-T: 2-Pair UTP Cat. 3, 4, 5, up to 100m (328ft) 100Base-TX: 2-Pair UTP Cat. 3, 4, 5, up to 100m (328ft) 1000Base-T: 2-Pair UTP Cat. 5, 5e, 6 up to 100m (328ft) EIA/TIA- 568 100-ohm STP (100m)	
Data Rate	10/100/1000Mbps	
Dimension (W x D x H)	95 x 70 x 25 mm	
Weight	83g	
Unit Input Voltage	DC 56V, 0.53A	
Power Requirement	100-240V AC, 50/60Hz	
Power Consumption	30 Watts max.	

Standard Compliance

- ◆ IEEE 802.3 10Base-T
- ◆ IEEE 802.3u 100Base-TX
- ◆ IEEE 802.3ab 1000Base-T
- ◆ IEEE 802.3at Power over Ethernet
- ◆ FCC Part 15 Class A, CE

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



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

Number of device can be powered	1
Operating Temperature	0 ~ 50 Degree C
Storage Temperature	-10 ~ 70 Degree C
Humidity	5 ~ 95% (Non-condensing)
Power over Ethernet	
PoE Standard	IEEE 802.3at High Power over Ethernet / Mid-Span PSE
PoE Power Output	DC 56V / 30 Watts
PoE Power Supply Type	Mid-Span
Power Pin Assignment	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 802.3at Power over Ethernet
Regulation Compliance	FCC Part 15 Class A, CE

4. Product Outlook

Figure 1: shows a front panel of 802.3at PoE Injector.

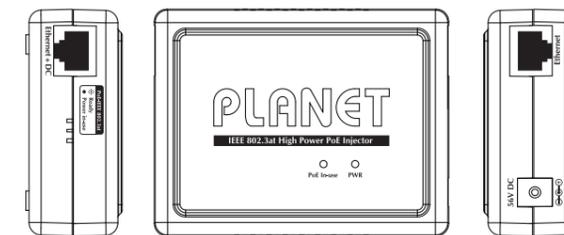


Figure1: POE-161 Outlook

LED Indicators

LED	Color	Function
PWR	Green	Lights to indicate that the POE-161 has power.
PoE In-use	Green	Lights to indicate the port is providing 56V DC in-line power.

5. Hardware Installation

This IEEE 802.3at Gigabit High Power over Ethernet Injector provides three different running speeds – 10Mbps, 100Mbps and 1000Mbps in the same device and automatically distinguishes the speed of incoming connection. Please refer to following sections for detail information about IEEE 802.3at Gigabit High Power over Ethernet Injector.

5-1 POE-161:

The following section describes the hardware features of POE-161. Before connecting any network device to the POE-161, read this chapter carefully.

Before Installation

Before your installation, it is recommended to check your network environment. If there is any IEEE 802.3at devices need higher power to power on and work normally, the POE-161 can provide you a way to supply power for this Ethernet device conveniently and easily. The POE-161 equips with an AC-DC adapter with DC 56V input and injects this DC power into the pin of the twisted pair cable (pair 4, 5 and pair 7, 8).

If there is very difficult to find a power socket for AC-DC Adapter of your non IEEE 802.3at networked device, the POE-161 and POE-162S can provide you a way to supply DC power for this Ethernet device conveniently and easily.

Note
The POE-161 and POE-162S can be installed in pair. However, the use of third-party device is allowed if the device complied with IEEE 802.3at Power over Ethernet.

POE-161, the Injector Installation

1. Connect the AC adapter to "DC 56V" of POE-161. The power LED will be steady on.
2. Connect a standard network cable from Switch/workstation to "Ethernet" port of POE-161.
3. Connect the long cable that will be used to connect to the remote device to the port "Ethernet + DC".
4. Connect with IEEE 802.3at devices, due to the capability of IEEE 802.3at Power over Ethernet, the POE-161 can directly connect with any IEEE 802.3at end-nodes such as PTZ (Pan, Tilt & Zoom) network cameras, PTZ Speed Dome, color touch- screen Voice over IP (VoIP) telephones, multi- channel wireless LAN access points where support IEEE 802.3af In-line Power over Ethernet port. The screen in Figure 2 appears.

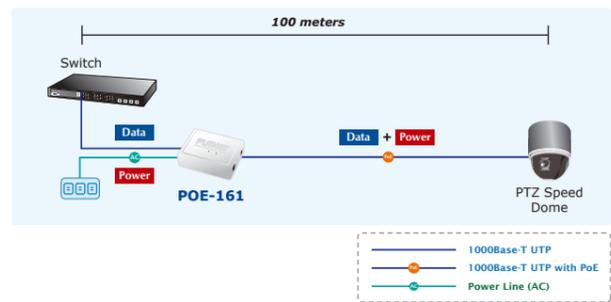


Figure 2: Connection to IEEE 802.3at device

Once POE-161 detects the existence of an IEEE 802.3at device, the POE In-use LED indicator will be steady on to shows it is providing power.

Note

1. Since the POE-161 PoE port supports 56V DC PoE power output, please check and assure the Powered Device (PD) acceptable DC power range is from 52 to 56V DC. Otherwise, it will damage the Powered Device (PD).
2. If the connected device is not fully complying with IEEE 802.3at Power over Ethernet or in-line power device, the LED indicator of POE-161 will not be steady on.

POE-161 and POE-162S, the IEEE 802.3at Injector Splitter Installation

1. Connect the AC adapter to "DC 56V" of POE-161. The power LED will be steady on.
2. Connect a standard network cable from "Ethernet+DC" port of POE-161 to "PoE In" port of POE-162S. The POE In-use LED of POE-161 / POE-162S will light on continuance.
3. Connect a standard network cable from Switch/workstation to "Ethernet" port of POE-161.
4. Connect the UTP cable in the package from "Ethernet" port of POE-162S to the RJ-45 port of remote device.
5. Adjust proper DC power output and connect DC plug from "DC OUT" of POE-162S to remote device.
6. Power on the remote device and its power LED indicator will remains on.

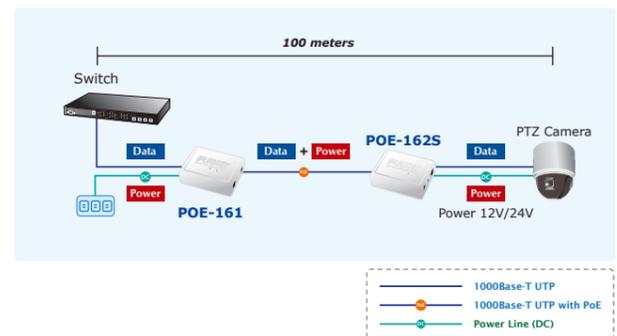


Figure 3: Connection architecture over POE-161/POE-162S

Note

1. According to IEEE 802.3at Power over Ethernet, the POE-161 will not inject power to the cable if not connecting to IEEE 802.3at devices.
2. Please ensure the output voltage is correct before applying power to remote device.



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2350-AF0280-001

Energy Saving Note of the Device
This power required device does not support Stand by mode operation. For energy saving, please remove the DC-plug or push the hardware Power Switch to OFF position to disconnect the device from the power circuit. Without remove the DC-plug or switch off the device, the device will still consuming power from the power circuit. In the view of Saving the Energy and reduce the unnecessary power consuming, it is strongly suggested to switch off or remove the DC-plug for the device if this device is not intended to be active.

Customer Support

Thank you for purchase PLANET products. You can browse our online FAQ resource at the PLANET Web site first to check if it could solve you 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

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IEEE 802.3at 30 Watts Gigabit High Power over Ethernet Injector
Advanced Gigabit High PoE Power Scheme



POE-161

User's Manual

802.3at 30W PoE 10M/100M 1000M Plug & Play Wall mountable



EC Declaration of Conformity

For the following equipment:
*Type of Product : IEEE 802.3at High Power over Ethernet Injector (25 Watts)
*Model Number : POE-161

* 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:

EN 55022 (CLASS A: 2006 + A1:2007)	EN 50130-4 (1995+A1:1998+A2:2003)
EN 61000-3-2 (2006)	EN 61000-4-2 (1995)
EN 61000-3-3 (1995+A1:2001+A2:2005)	EN 61000-4-3 (1996)
EN 55024 (1998+A1:2001+A2:2003)	EN 61000-4-4 (1995)
IEC 61000-4-2 (2008)	EN 61000-4-5 (1995)
IEC 61000-4-3 (2008)	EN 61000-4-6 (1996)
IEC 61000-4-4 (2004)	EN 61000-4-6 (1996)
IEC 61000-4-5 (2005)	EN 61000-4-11 (1994)
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 27. Aug. 2010
Place Date Legal Signature