

1. Package Content

Thank you for purchasing PLANET IEEE 802.3at High Power over Ethernet Injector, POE-163 and POE-164.

Model	LAN Port Speed	PoE Standard	PoE Budget
POE-163	10/100/1000Mbps	802.3at/af	30Watts
POE-164	10/100Mbps		

Terms of **"802.3at PoE Injector"** in following section of this User's Manual means the POE-163 and POE-164.


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:

- ◆ The IEEE 802.3at High Power over Ethernet 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 against to repack the product in case there is a need to return it to us for repair.

- 1 -

- ❑ IEEE 802.3at High Power over Ethernet
- ❑ IEEE 802.3af Power over Ethernet
- ❑ FCC Part 15 Class B, CE

 Note	<p>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.</p> <p>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</p>
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3. Product Specification

Product	POE-163	POE-164
Hardware Specification		
Interface	"Data" Input Port	1 x RJ-45 STP
	"PoE (Data + Power)" Output Port	1 x RJ-45 STP
	AC Input power socket	1

- 3 -

2. Product Features

Interface

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

Power over Ethernet

- ❑ High Power over Ethernet Mid-Span PSE
- ❑ IEEE 802.3at PoE compliant
- ❑ Backward compatible with IEEE 802.3af PD device
- ❑ Support PoE Power up to 30 Watts for PoE port
- ❑ Auto-detect of PoE IEEE 802.3at/af equipment and devices from being damaged by incorrect installation
- ❑ Remote power feeding up to 100m

Hardware

- ❑ Plastic case
- ❑ LED indicators for Power LED and Active LED (PoE ready / In-use)

Standard Compliance

- ❑ IEEE 802.3 10Base-T
- ❑ IEEE 802.3u 100Base-TX
- ❑ IEEE 802.3ab 1000Base-T (**POE-163 only**)

- 2 -

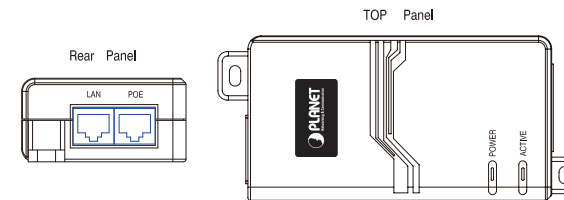
LED Indicator	System: Power x 1 (Green) PoE Port: Active, PoE ready / In Use x 1 (Green)	
Network Cable	10Base-T: 2-Pair UTP Cat. 3, 4, 5, up to 100m (328ft) 100Base-TX: 2-Pair UTP Cat. 3, 4, 5, up to 100m (328ft) 1000Base-T: 2-Pair UTP Cat. 5, 5e, 6 up to 100m (328ft) (POE-163 only) EIA/TIA- 568 100-ohm STP (100m)	
Data Rate	10/100/1000Mbps	10/100Mbps
Dimension (W x D x H)	115 x 62.5 x 31 mm	
Weight	177g	
Unit Output Voltage	DC 53V, 0.6A	
Power Requirement	100-240V AC, 50/60Hz, 0.75A	
Power Consumption	30 Watts max.	
Number of device can be powered	1	
Operating Temperature	0 ~ 50 Degree C	
Storage Temperature	-10 ~ 70 Degree C	
Operating Humidity	5 ~ 95%, Relative Humidity, non-condensing	
Storage Humidity	5 ~ 95%, Relative Humidity, non-condensing	
Power over Ethernet		
PoE Standard	IEEE 802.3at High Power over Ethernet / Mid-Span PSE	

- 4 -

PoE Power Output	DC 53V / 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 (POE-163 only) IEEE 802.3at High Power over Ethernet IEEE 802.3af Power over Ethernet
Regulation Compliance	FCC Part 15 Class B, CE

4. Product Outlook

Figure 1: shows overviews of 802.3at PoE Injector.



- 5 -

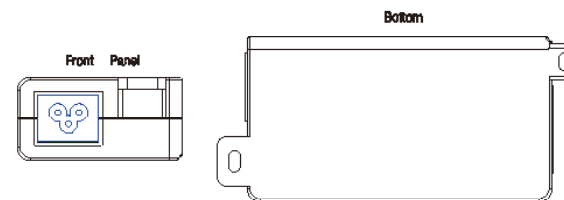


Figure 1: POE-163 / POE-164 Outlook

LED Indicators

LED	Color	Function
POWER	Green	Lights to indicate that the 802.3at PoE Injector has power.
ACTIVE	Green	Slow blinks to indicate the port is not providing 53V DC in-line power. Lights to indicate the port is providing 53V DC in-line power.

- 6 -

5. Hardware Installation

The following section describes the hardware features of 802.3at PoE Injector. Before connecting any network device to the 802.3at PoE Injector, read this chapter carefully.


This POE-163 provides three different running speeds - 10Mbps / 100Mbps / 1000Mbps and the POE-164 provides two different running speeds - 10Mbps / 100Mbps in the same device for

automatically distinguishes the speed of incoming connection. Please refer to following sections for detail information about IEEE 802.3at High Power over Ethernet Injector.

5-1 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 802.3at PoE Injector can provide you a way to supply power for this Ethernet device conveniently and easily. The 802.3at PoE Injector equips with an AC power cord with 100-240V AC input and injects DC 53V 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 802.3at PoE Injector and POE-162S can provide you a way to supply DC power for this Ethernet device conveniently and easily.

 Note	<p>The 802.3at PoE Injector 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.</p>
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The 802.3at PoE Injector Installation

1. Connect the AC power cord to **"AC slot"** of

- 7 -

802.3at PoE Injector; the **"POWER"** LED will be steady on.

2. Connect a standard network cable from Switch / workstation to **"LAN"** port of 802.3at PoE Injector.
3. Connect the long cable that will be used to connect to the remote device to the port **"POE"**.
4. Connect with IEEE 802.3at / 802.3af devices, due to the capability of IEEE 802.3at / 802.3af Power over Ethernet, the 802.3at PoE Injector can directly connect with any IEEE 802.3at / 802.3af 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 802.3at / 802.3af In-line Power over Ethernet port. The screen in Figure 2 appears.

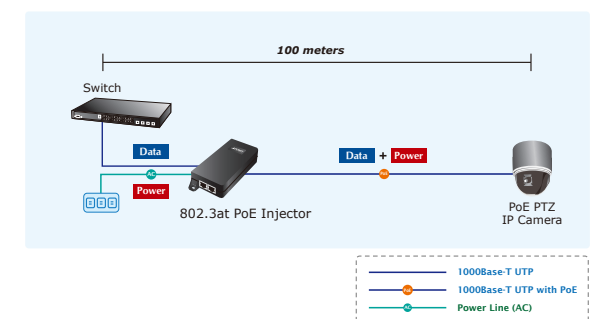


Figure 2: Connection to IEEE 802.3at / 802.3af Devices

- 8 -

The ACTIVE LED slow blinks to indicate the port is not providing 53V DC in-line power, once 802.3at PoE Injector detects the existence of an IEEE 802.3at / 802.3af device, the ACTIVE LED indicator will be steady on to shows it is providing power.



1. Since the 802.3at PoE Injector PoE port supports 53V DC PoE power output, please check and assure the Powered Device (PD) acceptable DC power range is 53V DC. Otherwise, it will damage the Powered Device (PD).
2. 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 802.3at PoE Injector will not be steady on.

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

1. Connect the AC power cord to "AC slot" of 802.3at PoE Injector; the "POWER" LED will be steady on.
2. Connect a standard network cable from "POE" port of 802.3at PoE Injector to "PoE In" port of POE-162S. The "ACTIVE" LED of 802.3at PoE Injector and POE In-use LED of POE-162S will light on continuance.
3. Connect a standard network cable from Switch / workstation to "LAN" port of 802.3at PoE Injector.

- 9 -

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.

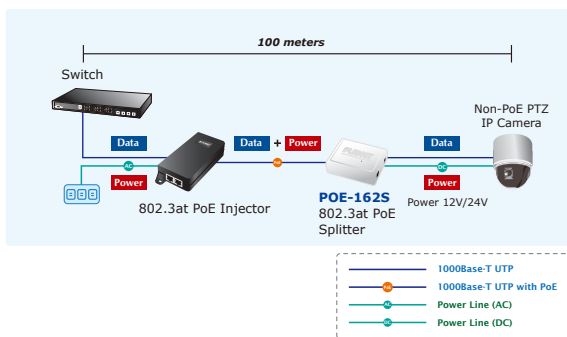


Figure 3: Connection architecture over 802.3at PoE Injector / POE-162S



1. According to IEEE 802.3at / 802.3af Power over Ethernet, the 802.3at PoE Injector will not inject power to the cable if not connecting to IEEE 802.3at / 802.3af devices.
2. Please ensure the POE-162S output voltage is correct before applying power to remote device.

- 10 -

The 802.3at PoE Injector and POE-E201, the IEEE 802.3at PoE Extender Installation

1. Connect the AC power cord to "AC slot" of 802.3at PoE Injector; the "POWER" LED will be steady on.
2. Connect a standard network cable from "POE" port of 802.3at PoE Injector to the "IN" port of POE-E201.
3. The 802.3at PoE Injector delivers both Ethernet Data and PoE power over UTP cable to the POE-E201 and the "ACTIVE" LED of 802.3at PoE Injector and "PoE IN" LED of POE-E201 will light on continuance.
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 802.3at 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 steady, ON to shows it is providing power.

- 11 -

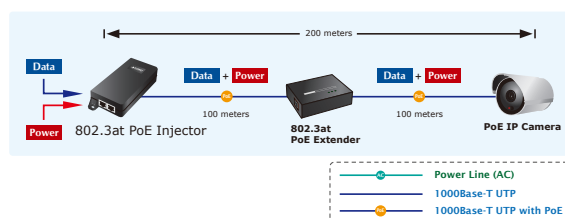


Figure 4: Connection architecture over 802.3at PoE Injector / POE-E201



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 steady on.
2. According to IEEE 802.3at / 802.3af standard, the POE-E201 will not inject power to the cable if not connecting to a standard IEEE 802.3at / 802.3af device.

- 12 -



PoE Injector

POE-163 / POE-164

www.PLANET.com.tw

High Power over Ethernet Injector



PLANET Technology Corp.
2351-AF0410-000



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



EC Declaration of Conformity

For the following equipment:

*Type of Product : Single-Port 10/100/1000Mbps IEEE 802.3at PoE+ Injector (30Watts)
Single-Port 10/100Mbps IEEE 802.3at PoE+ Injector (30Watts)
*Model Number : POE-163, POE-164

* 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

29th March, 2013
Date

Kent Kang
Legal Signature

PLANET TECHNOLOGY CORPORATION

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- 13 -