1. Package Contents

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

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

"802.3at PoE Injector" used in this user's manual refers to the POE-163/POE-164.

Unpack the box of the IEEE 802.3at High Power over Ethernet Injector carefully and 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 again to repack the product in case there is a need to return it to us for repair.

2. Product Features

- Interface
  - 2-port RJ45 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 Plus compliant
  - Backward compatible with IEEE 802.3af PD device
  - Supports PoE Power up to 30 watts for PoE port
  - Auto-detects PoE IEEE 802.3at / 802.3af equipment and devices for preventing damage from 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)

3. Product Specifications

Product		POE-163	POE-164
Hardware Specifications			
Interface	"Data" Input Port	1 x RJ45 STP	
	"PoE (Data + Power)" Output Port	1 x RJ45 STP	
	AC Input Power Socket	1	
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
Dimensions (W x D x H)		115 x 62.5 x 31 mm	
Weight		177g	
Unit Output Voltage		DC 53V, 0.6A	
Power Requirements		100-240V AC, 50/60Hz, 0.75A	

4. Product Outlook

Figure 1: shows an overview of the 802.3at PoE Injector.

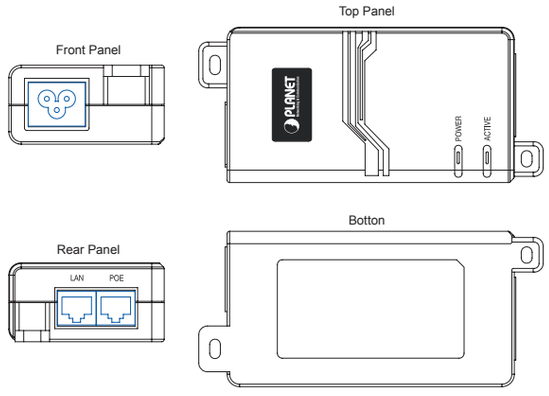

Figure 1: POE-163 / POE-164 Outlook

LED Indicators

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

- IEEE 802.3af Power over Ethernet (802.3at Type 1)
- IEEE 802.3at Power over Ethernet (802.3at Type 2)
- FCC Part 15 Class B, CE

Note

PSE (Power Sourcing Equipment) is a device (switch, or hub for instance) that will provide power in a PoE setup. The maximum continuous output power allowed for each IEEE 802.3at/IEEE 802.3af device is 30W/15.4W.
PDs (Powered Devices) like IP phones, network cameras and wireless access points, etc. are PoE-enabled terminals and thus they are power sourcing equipment (PSE).

Power Consumption	30 Watts max.
Number of devices that can be powered	1
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	IEEE 802.3at Power over Ethernet Plus / Mid-span PSE
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 802.3af Power over Ethernet (802.3at Type 1) IEEE 802.3at Power over Ethernet (802.3at Type 2)
Regulation Compliance	FCC Part 15 Class B, CE

5. Hardware Installation

The following section describes the hardware features of the 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 detailed information about the IEEE 802.3at 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 that need higher power to power on and work normally, the 802.3at PoE Injector can provide you with power for this Ethernet device easily. The 802.3at PoE Injector is equipped 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 a power socket for the AC-DC adapter of your non IEEE 802.3at networked device is not available, the 802.3at PoE Injector and POE-162S can provide you with DC power for this Ethernet device easily.

Note

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.

The 802.3at PoE Injector Installation

1. Connect the AC power cord to the "AC slot" of the 802.3at PoE Injector; the "POWER" LED will be steadily on.
2. Connect a standard network cable from a switch / workstation to the "LAN" port of the 802.3at PoE Injector.
3. And connect the Injector to a remote device like a PoE PTZ IP camera over the UTP cable.

** The 802.3at PoE Injector can directly connect with any IEEE 802.3at / 802.3af end-nodes, such as PTZ IP and speed dome cameras, color touch-screen Voice over IP (VoIP) telephones, multi-channel wireless LAN access points, etc. The installation is shown in Figure 2 below.

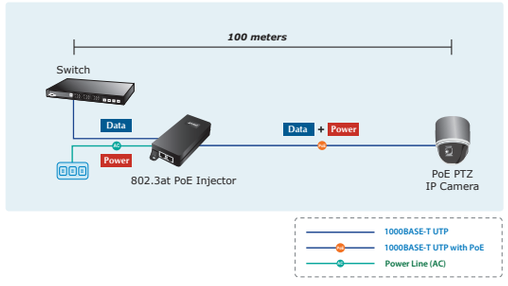

Figure 2: Connection to IEEE 802.3at / 802.3af Devices

When the ACTIVE LED blinks slowly, it indicates the port is not providing 53V DC in-line power. Once the 802.3at PoE Injector detects the existence of an IEEE 802.3at / 802.3af device, the ACTIVE LED indicator will be steadily on to show it is providing power.

Note

1. Since the 802.3at PoE Injector PoE port supports 53V DC PoE power output, please check and assure the powered device's (PD) acceptable DC power range is 53V DC. Otherwise, it will damage the 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 the 802.3at PoE Injector will not be steadily 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 the 802.3at PoE Injector; the **"POWER"** LED will be steadily on.
2. Connect a standard network cable from the **"POE"** port of the 802.3at PoE Injector to the **"PoE In"** port of the POE-162S. The **"ACTIVE"** LED of the 802.3at PoE Injector and PoE-in-use LED of the POE-162S will continue to be lit.
3. Connect a standard network cable from a switch / workstation to the **"LAN"** port of the 802.3at PoE Injector.
4. Connect the UTP cable in the package from the **"Ethernet"** port of the POE-162S to the RJ45 port of a remote device.
5. Adjust the proper DC power output and connect the DC plug from the **"DC OUT"** of the POE-162S to a remote device.
6. Power on the remote device and its power LED indicator will remain on.

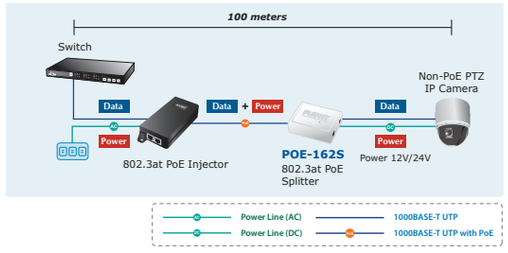

Figure 3: Connection architecture over 802.3at PoE Injector / POE-162S

Note

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

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

1. Connect the AC power cord to the **"AC slot"** of the 802.3at PoE Injector; the **"POWER"** LED will be steadily on.
2. Connect a standard network cable from the **"POE"** port of the 802.3at PoE Injector to the "IN" port of the 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 the 802.3at PoE Injector and the **"PoE IN"** LED of the POE-E201 will continue to be lit.
4. Connect an additional standard network cable that will be used to connect from the **"OUT"** port of the POE-E201 to a remote **Powered Device (PD)**.
5. The **"OUT"** port of the power injector transmits DC voltage over the standard network cable and transfers data and power simultaneously between the 802.3at PoE Injector and the PD.

6. Once the POE-E201 detects the existence of an IEEE 802.3at / 802.3af device, the **"PoE OUT"** LED indicator will be steadily on to show it is providing power.

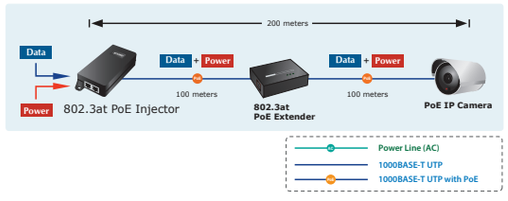

Figure 4: Connection architecture over 802.3at PoE Injector / POE-E201

Note

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

PLANET Networking & Communication

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User's Manual

PoE Injector

POE-163 / POE-164

www.PLANET.com.tw

High Power over Ethernet Injector

PLANET Technology Corp.
2351-AF0410-001

802.3at Mid-span 802.3af | 30W PoE | 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 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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PLANET Networking & Communication

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*) *Legal Signature*

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