

# Product Specification

## IEEE 802.3at High Power over Ethernet Injector (Mid-Span)

### POE-164

Version 1.0

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#### Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2013/3/20	Marc Liao	Initial Release

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## 1. PRODUCT DESCRIPTION



The PLANET IEEE 802.3at High Power over Ethernet Injector product with **universal 100-240V AC input – POE-164**. The following Key features of POE-164 showed as below:

- **IEEE 802.3at / 802.3af Power over Ethernet Compliant**
- **Maximum 30W Output Power Support**
- **10/100Mbps Duplex Mode Support**

The POE-164 is a **Single-Port, Mid-Span IEEE 802.3at High Power over Ethernet Injector** with maximum up to **30 Watts** of power output over Ethernet cables. It is designed specifically to fill the demand of higher power required network equipments such as **PTZ (Pan, Tilt & Zoom) network cameras, PTZ Speed Dome**, color touch- screen / Video and Voice over IP (VoIP) telephones, multi- channel (11a / b / g / n) wireless LAN access points and other Network devices that need higher power to work normally. The **POE-164 IEEE 802.3at High Power over Ethernet Injector** is an ideal solution that enables network device with high power demand can be powered directly via the RJ-45 Port interface without the need to install power outlets and electrical cabling.

### **IEEE 802.3at Power over Ethernet Compliant**

The IEEE 802.3 Power over Ethernet was defined by the IEEE® 802.3 committee, within which the IEEE 802.3af PoE standard was announced in 2003 defining the PoE equipments support of maximum 15.4 Watts input power to per device. The purpose of IEEE 802.3af Power over Ethernet standard is to provide enough power to VoIP Telephony systems, WiFi Networking, Wireless AP environment that hard to find power outlet.

The IEEE 802.3af Power over Ethernet Standard has become popular yet the PoE demand still grows for increasing network-powered applications. With many critical applications appears, the IEEE 802.3af PoE standard may not afford the trend of higher power demand. Hence, the **IEEE 802.3at Power over Ethernet** is defined to allow delivery of maximum up to 30 Watts input power to per PoE device. The **IEEE 802.3at Power over Ethernet** is an ideal solution to fulfill the high power requirements directly via the RJ-45 Port interface. Possessing stronger power capability than the existing Power over Ethernet Injectors, the POE-164 provides 10/100Mbps Ethernet connection ability and compatible with PLANET latest IEEE 802.3 High Power over Ethernet Splitter-**POE-162S with DC 12V / 24V output**, also compatible with existence IEEE 802.3af Power over Ethernet Splitters to provide maximum up to 15.4 Watts power output, like **POE-151S and POE-152S**.

## Quick and Easy High Power PoE Network Deployment

The POE-164 is a **Mid-Span IEEE 802.3at High Power over Ethernet Injector** which provides **DC 53V** over Ethernet cables. The POE-164 inserts DC Voltage into Cat.5/5e/6 cable, allowing the cable between the Injector (**POE-164**) and Splitter (**POE-162S**) to transfer data and power simultaneously for up to 100 meters. The POE-164 delivers the Ethernet digital data with power over the twisted pair cables as an IEEE 802.3at High Power over Ethernet Injector, and the connected POE-162S (IEEE 802.3at High Power over Ethernet splitter) shall separate the digital data and the power into two selectable DC outputs (**12V DC / 24V DC**).

## Cost Effective and Easy Cabling Installation

With IEEE 802.3at High Power over Ethernet devices installed, the system administrator can use only one single RJ-45 Ethernet cable to carry both power and data to each device. Besides, by connecting POE-164 and the high power PoE splitter POE-162S, you could also have benefits of cost saving, easy for networking planning and high reliability. Upon IEEE 802.3at compliant devices installation, the POE-164 work together with POE-162S can keep the connection while migrating or splitting the power and the Ethernet digital packets. It thus reduces cables, eliminates the need for dedicated electrical outlets on the wall, ceiling or any unreachable place, and most of all, reduces installation time. The high Power over Ethernet solution frees the Security IP Camera and wireless AP deployment from restrictions of power outlet locations.

## 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
  - 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 53V 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 Active LED (PoE ready / In-use)

### 3. PRODUCT SPECIFICATION

#### 3.1 MAIN COMPONENT

PoE Power IC: **CONFIDENTIAL**

#### 3.2 FUNCTION SPECIFICATION

<b>Product</b>	<b>POE-164</b>	
<b>Hardware Specification</b>		
<b>Interface</b>	“Data” Input Port	1 x RJ-45 STP
	“PoE (Data + Power)” Output Port	1 x RJ-45 STP
	AC Input power socket	1
<b>LED Indicator</b>	System: Power x 1 <b>(Green)</b> PoE Port: Active, PoE ready / In Use x 1 <b>(Green)</b>	
<b>Network Cable</b>	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) EIA/TIA- 568 100-ohm STP (100m)	
<b>Data Rate</b>	10/100Mbps	
<b>Unit Output Voltage</b>	DC 53V, 0.6A	
<b>Power Requirement</b>	100-240V AC, 50/60Hz, 0.75A	
<b>Power Consumption</b>	30 Watts max.	
<b>Number of device can be powered</b>	1	
<b>Power over Ethernet</b>		
<b>PoE Standard</b>	IEEE 802.3at High Power over Ethernet / Mid-Span PSE	
<b>PoE Power Output</b>	DC 53V / 30 Watts	
<b>PoE Power supply Type</b>	Mid-Span	
<b>Power Pin Assignment</b>	4/5(+), 7/8(-)	
<b>Standards Conformance</b>		
<b>Standards Compliance</b>	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3at High Power over Ethernet IEEE 802.3af Power over Ethernet	

#### 3.3 PHYSICAL SPECIFICATIONS:

**Dimensions:**

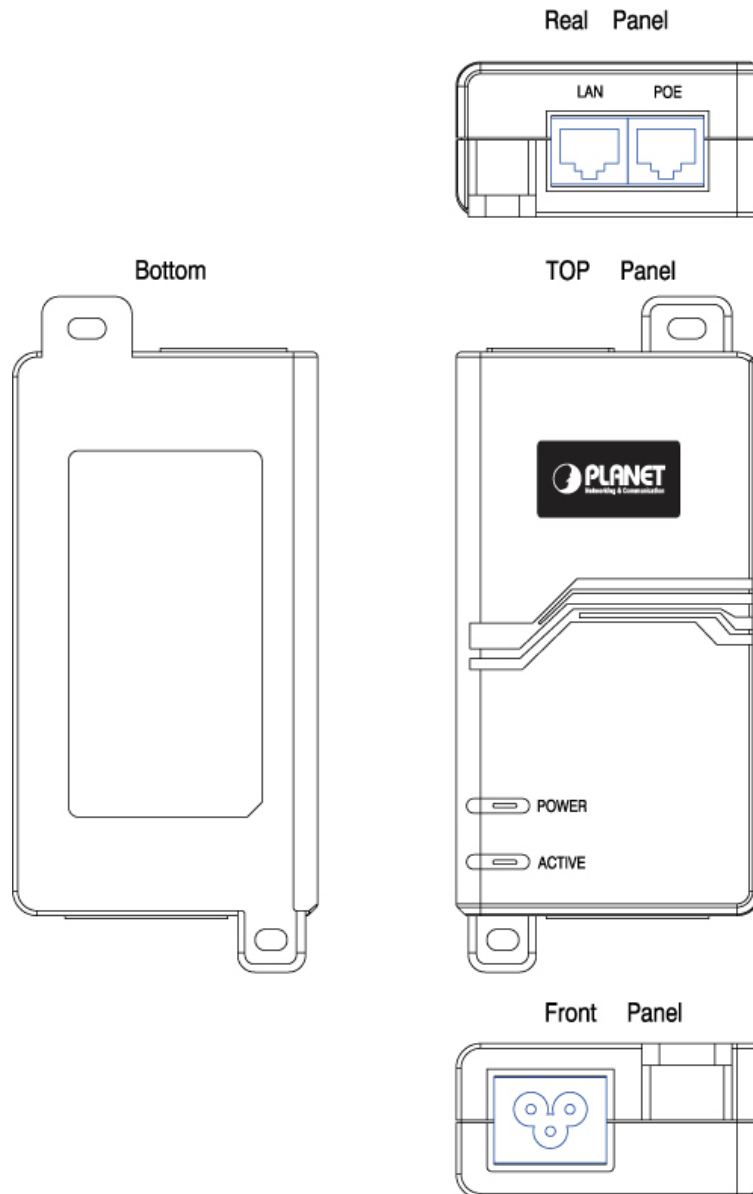
115 x 62.5 x 31 mm (W x D x H)

**Weight:**

177g

## ■ Product Outlook

The POE-164 provide one 100-240V AC input socket on front panel, two LEDs (System POWER and PoE ACTIVE ) at top side and two RJ-45 ports (POE port and LAN port) at rear panel.



## ■ LED Definition

The LED Definition of the POE-164 is shown as below:

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.

### 3.4 ENVIRONMENTAL SPECIFICATION

**Operating:**

**Temperature:** 0°C ~ 50 Degree C  
**Relative Humidity:** 5% ~ 95% (non-condensing)

**Storage:**

**Temperature:** -10°C ~ 70 Degree C  
**Relative Humidity:** 5% ~ 95% (non-condensing)

### 3.5 ELECTRICAL SPECIFICATION

**Input Voltage:** 100-240V AC, 50/60Hz, 0.75A

### 3.6 REGULATORY COMPLIANCE

FCC Part 15 Class B, CE

### 3.7 REALIABILITY

MTBF > 50,000 hrs @ 25 Degree C

### 3.8 BASIC PACKAGING

- POE-164 X1
- User's Manual X1
- AC Power Cord X1

### 3.9 PACKING DIMENSION

**Dimension:** TBD  
**Weight:** TBD  
50pcs in one carton