

Product Specifications

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

POE-164

Version 2.0

This document contains confidential proprietary information and is property of PLANET. The contents of this document should not be disclosed to unauthorized persons without the written consent of PLANET.

Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2013/3/20	Marc Liao	Initial Release
Version 2.0	2015/7/20	Marc Liao	Chipset Changed (SI3461 to Microsemi PD69101)

Author:	Marc Liao	Editor:	Kent Kang
Reviewed By:	Kent Kang	Approved By:	Tom Shih

1. PRODUCT DESCRIPTION



PLANET **POE-164** IEEE 802.3at Gigabit High Power over Ethernet Plus Injector with **universal 100-240V AC input**. The key features of the POE-164 are as follows:

- **IEEE 802.3at/802.3af Power over Ethernet compliant**
- **Maximum 30W output power support**
- **10/100Mbps duplex mode support**

PLANET POE-164 is a **Single-Port, Mid-span IEEE 802.3at High Power over Ethernet Plus Injector** with a maximum of up to **30 watts** of power output over Ethernet cables. It is designed specifically to meet the demand of higher power required network equipments such as PTZ (Pan, Tilt & Zoom) network cameras, PTZ speed-dome cameras, 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 Plus Injector** is an ideal solution for higher power required network devices that can be powered directly via the RJ45 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 equipment support of a maximum 15.4-watt input power to a device. The purpose of IEEE 802.3af Power over Ethernet standard is to provide enough power to VoIP telephony systems, Wi-Fi networking and wireless AP environments where electrical outlets cannot be found.

The IEEE 802.3af Power over Ethernet Standard has become popular with network-powered applications. With many critical applications appearing, the IEEE 802.3af PoE standard may not meet the demand for higher power. Hence, the **IEEE 802.3at Power over Ethernet Plus** is defined to allow the delivery of a maximum of up to 30 watts of input power to each PoE device. The **IEEE 802.3at Power over Ethernet Plus** is an ideal solution to meet high power requirements directly via the RJ45 interface. Possessing stronger power capability than the existing Power over Ethernet Injectors, the POE-164 provides 10/100/1000Mbps Ethernet connection ability and compatibility with PLANET latest IEEE 802.3 Gigabit High Power over Ethernet Splitter, **POE-162S, with DC 12V/24V output**. It is also compatible with the existing **POE-151S and POE-152S** IEEE 802.3af Power over Ethernet Splitters to provide a maximum of up to 15.4 watts of power output.

Quick and Easy High Power PoE Network Deployment

The POE-164 is the **Mid-span IEEE 802.3at Gigabit High Power over Ethernet Plus Injector** which provides **DC 53V** over Ethernet cables. With Cat.5/5e/6 cable inserted into the DC voltage of the POE-164, it allows 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 Gigabit High Power over Ethernet Plus Injector. The connected IEEE 802.3at Gigabit High Power over Ethernet splitter will divide the digital data and the power into two selectable DC outputs (**12V DC** and **24V DC**).

Cost-effective and Easy Cabling Installation

With IEEE 802.3at Gigabit High Power over Ethernet devices installed, the system administrator can use only one single RJ45 Ethernet cable to carry both power and data to each device. Besides, by connecting the POE-164 and the POE-162S high power PoE splitter, its benefits are cost saving, easy networking planning and high reliability. With the installation of IEEE 802.3at compliant devices, the POE-164 when worked with the POE-162S can keep the connection steady while migrating or splitting the power and the Ethernet digital packets. It thus reduces cables, eliminating the need for electrical outlets, and most of all, reduces installation time.

2. PRODUCT FEATURES

- **Interface**
 - 2 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+ compliant
 - Compatible with IEEE 802.3af splitter devices
 - Support PoE power up to 30 watts for each PoE port
 - Up to 1 IEEE 802.3at devices powered
 - Provides DC 53V power over RJ45 Ethernet cable to device with Ethernet port
 - Auto-detection of POE IEEE 802.3at equipment and devices that could be 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 SPECIFICATIONS

3.1 MAIN COMPONENTS

PoE Power IC: Microsemi PD69101 x1

3.2 FUNCTION SPECIFICATIONS

Product		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) EIA/TIA-568 100-ohm STP (100m)
Data Rate		10/100Mbps
Unit Output Voltage		DC 53V, 0.6A
Power Requirements		100-240V AC, 50/60Hz, 0.75A
Power Consumption		30 watts (max.)
Number of Devices can be powered		1
Power over Ethernet		
PoE Standard		IEEE 802.3at High 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 802.3at High Power over Ethernet Plus IEEE 802.3af Power over Ethernet

3.3 PHYSICAL SPECIFICATIONS:

Dimensions:

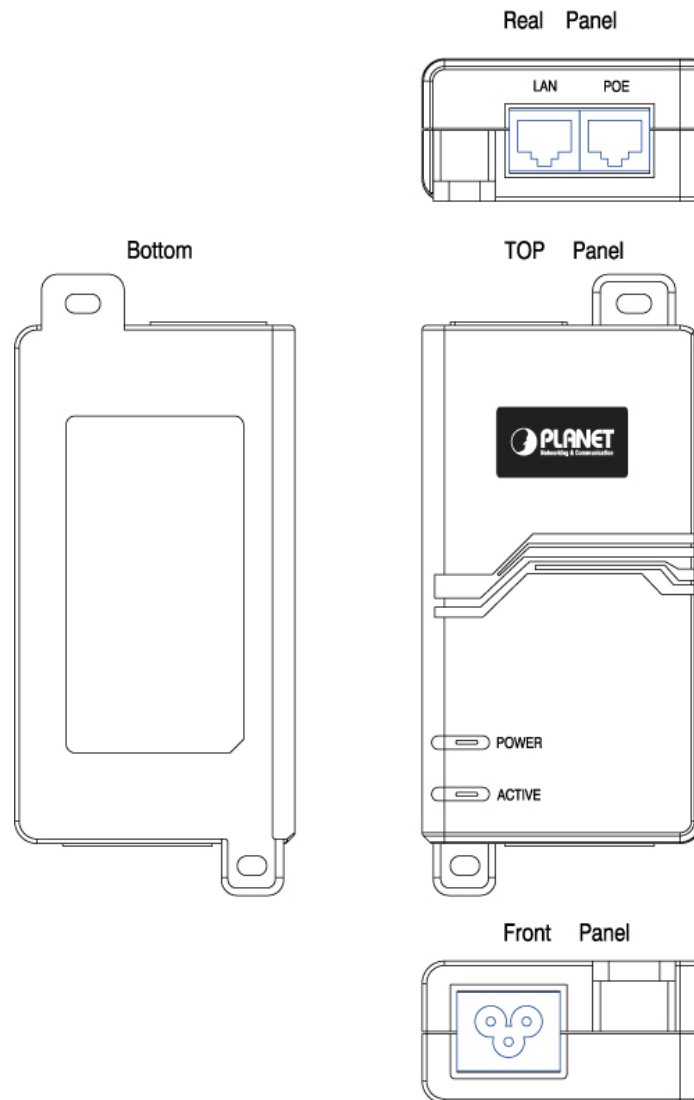
115 x 62.5 x 31 mm (W x D x H)

Weight:

182g

■ Product Outlook

The POE-164 provides one 100-240V AC input socket on the front panel, two LEDs (System POWER and PoE ACTIVE) on the top and two RJ45 ports (POE port and LAN port) on the rear panel.



■ LED Definition

The LED definition of the POE-164 is shown below:

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.

3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

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

Storage:

Temperature: -10°C ~ 70 degrees 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 RELIABILITY

MTBF > 50,000 hrs @ 25 degrees C

3.8 BASIC PACKAGING

- POE-164 x 1
- User's Manual x 1
- AC Power Cord x 1

3.9 PACKING DIMENSIONS

Dimensions: 160 (W) x 98 (D) x 86mm (H)
Weight: 410g
50pcs in one carton