

**IEEE 802.3af**  
**4-Port Power over Ethernet Injector Hub**

**POE-400**  
**User's Manual**



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## WEEE Warning



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

## Revision

PLANET IEEE 802.3af Power over Ethernet Injector Hub User's manual

**FOR MODEL:** POE-400

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# 1. INTRODUCTION

## 1.1 Checklist

Thank you for purchasing our POE-400 IEEE 802.3af Power over Ethernet Injector Hub, your Power over Ethernet Injector Hub package shall contains following contents:

**Check the contents of your package for following parts:**

- Power over Ethernet Injector Hub x1
- User's manual CD x1
- Power Adapter x1
- Power cord x 1

If any of these pieces 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.

## 1.2 About the Power over Ethernet Injector Hub

The PLANET POE-400 is a 4-Port IEEE 802.3af Power over Ethernet injector hub complied with IEEE 802.3, IEEE 802.3u and IEEE 802.3af standards. Equipped with 4 10/100Base-TX Fast Ethernet ports, the POE-400 supports full 48VDC power for any remote IEEE 802.3af powered device (PD) like Wireless LAN Access Point, IP phone, and LAN Camera. Supporting power supply of 70 watts, POE-400 provides sufficient power to the 4 remote devices.

There are 8 RJ-45 STP ports on POE-400. Half of the ports on right panel function as **"Data"** and the other half on left panel function as **"Data and Power"**. Each of the **"Data and Power"** port as an injector which inserts DC Voltage into the CAT 5 cable allowing the cable between the Injector and Splitter to transfer data and power simultaneously.

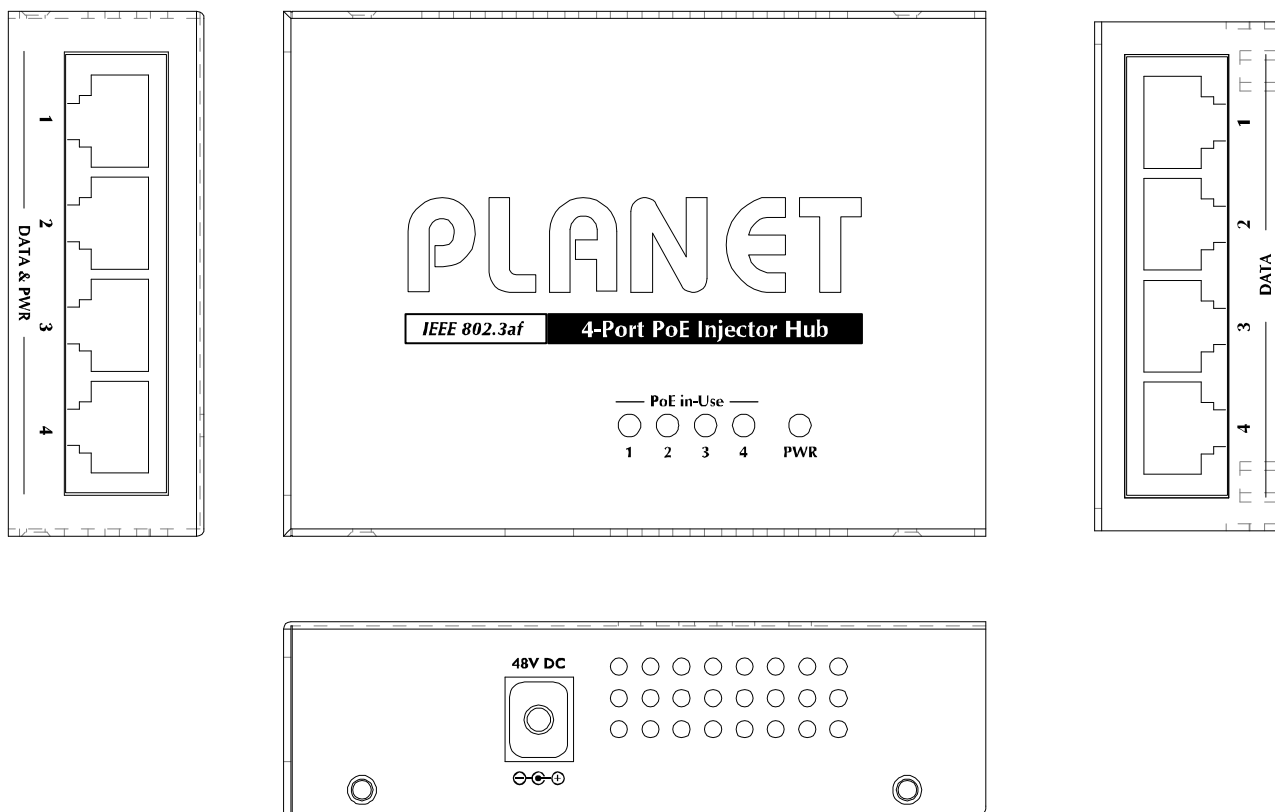
## 1.3 Features

- ◆ Complies with IEEE 802.3, IEEE 802.3u, 10/100Base-TX
- ◆ Complies with IEEE 802.3af, 48VDC power over unused twisted-pair wires
- ◆ 4-Port IEEE 802.3af in-line mid-span power injector box
- ◆ Full power support for per POE port
- ◆ Circuit protection prevent power interference between ports
- ◆ LED indicator power input indication
- ◆ Desktop palm size

## 1.4 Specification

Model	POE-400
Ethernet Connector	8-Port RJ-45 STP with 4-Port <b>"Data"</b> and 4-Port <b>"Data and Power"</b>
Ethernet Data rate	10/100Mbps( vary on Ethernet device attached)
Input voltage	DC 48V, 1.5A
Number of device can be powered	4
Ethernet cable	TIA/EIA-568, Category 5/5e cable
LED indicator	1 x power, 4 x POE ready / in-use
Operating environment	0~50 Degree C, 5%~90%RH
Storage environment	-20~70 Degree C, 5%~90%RH
Dimension (H x W x D)	26 x 70 x 97mm
Weight	220g
Emission	FCC Class B, CE mark
Standard Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3af Power over Ethernet

## 1.5 Product Outlook



### LED definition:

LED	Color	Function
Power	Green	Lights to indicate that the POE-400 has power.
PoE ready / in-use	Green	Lights to indicate the port is providing 48VDC in-line power.

## 2. HARDWARE INSTALLATION

This product provides two different running speeds – 10Mbps, 100Mbps, in the same device and automatically distinguishes the speed of incoming connection.

This section describes the hardware features of POE-400. Before connecting any network device to the POE-400, read this chapter carefully.

### 2.1. Before Installation

Before your installation, it is recommended to check your network environment. If there is any IEEE 802.3af devices need to power on, the POE-400 can provide you a way to supply power for this Ethernet device conveniently and easily. The POE-400 equips with an AC-DC adapter with DC 48V 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 802.3af networked device, the POE-400 and POE-152S can provide you a way to supply DC power for this Ethernet device conveniently and easily.

The 10Mbps or 100Mbps speed, duplex mode from Data port of POE-400 depends on which Ethernet device attached.

## 2.2 POE-400 and POE-152S, the IEEE 802.3af Injector / Splitter and equipment installation

For the places hard to find the power inlet, the POE-400 provide the easiest way to power your Ethernet devices such as PLANET IEEE 802.3af Power over Ethernet Splitter( POE-152S) with Internet Camera (ICA-210 ) or Wireless Access Point (WAP-4060PE) installed in the small office.

To control the power system of your networking devices, the POE-400 can directly co-work with PLANET ICA-100PE and POE IP Phone VIP-153PT to build VoIP telephony network in the office. Besides, the POE-400 can be directly deployed to connect the third party IEEE 802.3af devices like Cisco AP and POE switches installed 100 meters away.

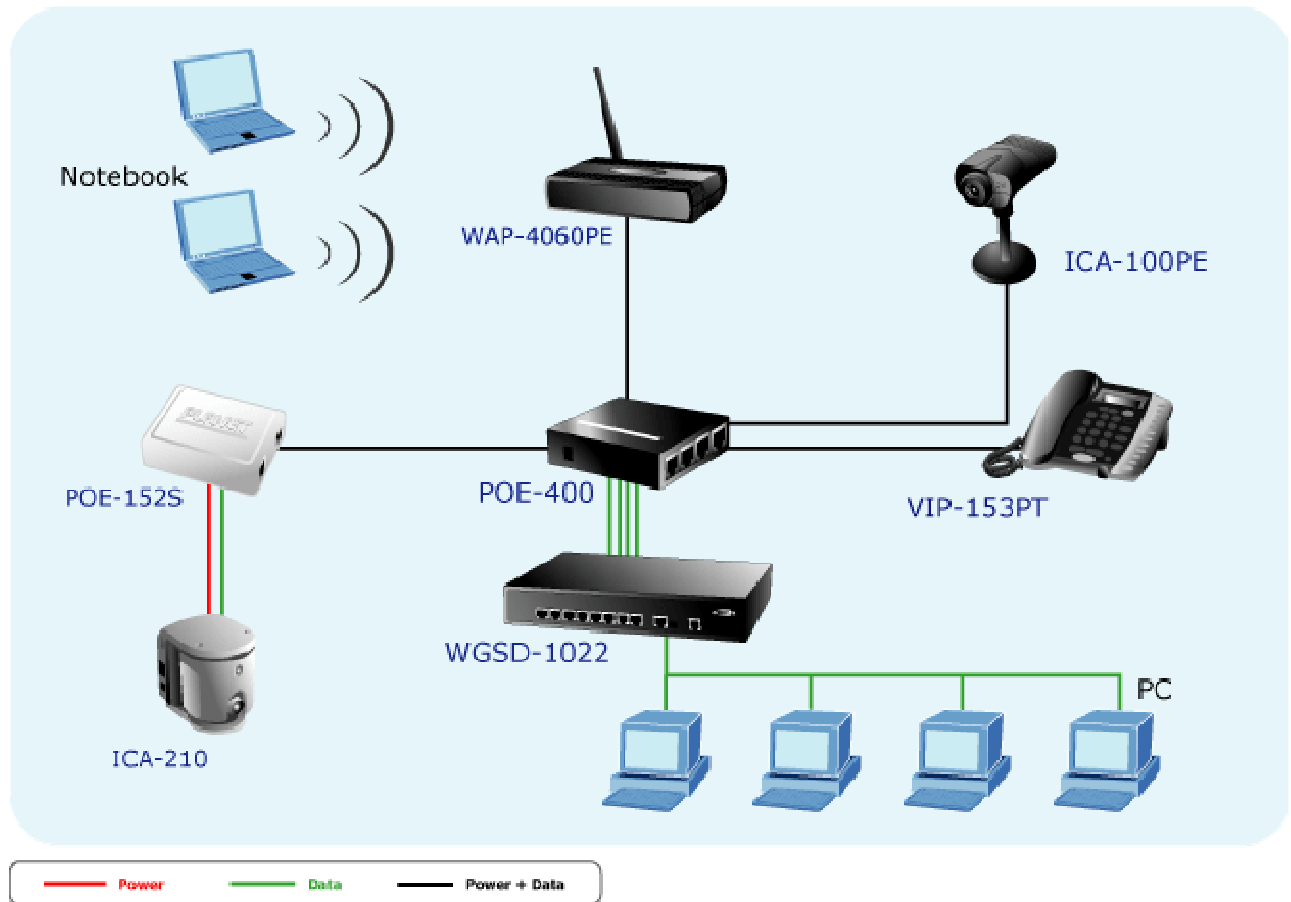


Figure 1: Connection architecture over POE-400

### **Notice:**

1. According to IEEE 802.3af standard, the POE-400 will not inject power to the cable if not connecting to IEEE 802.3af devices.
2. Due to the capability of IEEE 802.3af standard, the POE-400 can directly connect with any IEEE 802.3af end-nodes.

### 3. TROUBLESHOOTING

This chapter contains information to help you solve problems. If the Switch is not functioning properly, make sure the Ethernet Switch was set up according to instructions in this manual.

#### **How to let my non IEEE 802.3af network devices can work with POE-400?**

Solution:

You can use PLANET Power over Ethernet Splitter, such as PLANET POE-152S to work as a power transformer between POE-400 and non IEEE 802.3af devices. Two types of POE-152S are available for different voltage, 5V DC and 12V DC.

#### **The PoE LED is not lit**

Solution:

Check the cable connection between POE-400 and IEEE 802.3af device.

#### **Why I connect my PoE device to POE-400 and it cannot power on?**

Solution:

1. Please check the cable type of the connection from POE-400 to the other end. The cable should be an 8-wire UTP, Category 5/5e, EIA568 cable within 100 meters. A cable with only 4-wire, short loop or over 100 meters, all will affect the power supply.
2. Please check and assure the device that fully complied with IEEE 802.3af standard.



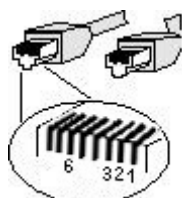
## APPENDIX A NETWORKING CONNECTION

### A.1 Switch's RJ-45 Pin Assignments

10/100Mbps, 10/100Base-TX

RJ-45 Connector pin assignment		
Contact	MDI Media Dependant Interface	MDI-X Media Dependant Interface -Cross
1	Tx + (transmit)	Rx + (receive)
2	Tx - (transmit)	Rx - (receive)
3	Rx + (receive)	Tx + (transmit)
4, 5	IEEE 802.3af DC 48V	
6	Rx - (receive)	Tx - (transmit)
7, 8	IEEE 802.3af DC 0V	

### A.2 RJ-45 cable pin assignment



#### The standard RJ-45 receptacle/connector

There are 8 wires on a standard UTP/STP cable and each wire is color-coded. The following shows the pin allocation and color of straight cable and crossover cable connection:



Figure A-1: Straight-Through and Crossover Cable

Please make sure your connected cables are with same pin assignment and color as above picture before deploying the cables into your network.