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WEEE Warning



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Revision

PLANET IEEE 802.3af Power over Ethernet Splitter

FOR MODELS: POE-151S-5V/9V/12V

Rev: 1.0(December, 2005)

Part No.2010-AF0110-000

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Chapter 1

Introduction

For cost-saving and well power management, PLANET releases a new Power over Ethernet splitter - POE-151S. The POE-151S is an IEEE 802.3af Power over Ethernet device that split the 48V DC over the Ethernet cable into 5V/9V/12V DC power output. Working with the IEEE 802.3af power source equipment (PSE), the POE-151S frees the device deployment from restrictions due to power outlet locations, which eliminate the costs for additional AC wiring and reduces the installation time.

1.1 Packet Contents

Open the box of the POE-151S-5V/9V/12V and unpack it carefully. The box should contain the following items:

- Power over Ethernet Splitter
- DC Plug Cable x 2
- 15cm UTP Straight Network Cable x 1
- User s Manual x 1

If any item is found missing or damaged, please contact your local reseller for replacement. Please 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 Key Features

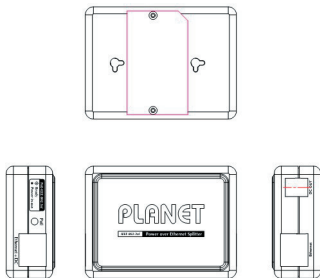
- Complies with IEEE 802.3af, Power over Ethernet and IEEE 802.3/802.3u 10/100Base-TX Ethernet standard
- Splits the 48V DC power over RJ-45 Ethernet cable into different DC output
- LED indicators power input indication
- Distance up to 100 meters
- Choice of splitter for 5V DC, 9V DC or 12V DC

- Auto-detect of POE IEEE 802.3af equipment, protect devices from being damaged by incorrect installation
- Works with EIA568, category 5,4-pair cables for 10Base-T or 100Base-TX

1.3 Technical Specification

Model	POE-151S
Standard	IEEE 802.3af, IEEE 802.3, IEEE 802.3u, 10/100Base-TX
Ethernet Connector	2 x RJ-45 (1 for Data + DC in, 1 for Data out)
Data Rate	10/100Mbps (vary on Ethernet device attached)
Output Voltage/Current	Vary on model: POE-151S-5V: 5VDC, 2A max POE-151S-9V: 9VDC, 1.3A max POE-151S-12V: 12VDC, 1A max
Number of Device can be powered	1
Ethernet Cable	TIA/EIA-568, Category 5/5e cable
LED Indicator	1 x POE ready/in-use
Operating Environment	0~50 Degree C, 5%~90%RH
Storage Environment	-20~70 Degree C, 5%~90%RH
Dimension (W x D x H)	73 x 55 x 24 mm
Emission	FCC Class B, CE mark

1.4 Product Outlook



Chapter 2 Installation

Before your installation, it is recommended to check your network environment. If there is problem for you to install a networked device where it is very difficult to find a power socket for your AC-DC Adapter, the POE-151S should provide you a way to provide DC power for this Ethernet Device conveniently and easily.

The POE-151S separates the power out and provide three kind of power output by different model and it shown as below:

POE-151S-5V: 5VDC/2A

POE-151S-9V: 9VDC/1.3A

POE-151S-12V: 12VDC/1A

 Hint:

Please check the power requirement of the device that is going to get the power from POE-151S. If the power requirement is higher than POE-151S can supply, current overload will shutdown the POE-151S itself. Those will shutdown your device as well.

POE-150 and POE-151S can be installed in pair. However, use of third-party device is allowed if the device complied with IEEE 802.3af standard.

2.1 Hardware Installation

1. Connect a standard network cable from "Ethernet+DC" of POE-150 to "Ethernet+DC" of POE-151S. The POE LED of POE-150S/POE-150 will start to flash continuously.



 Warning:

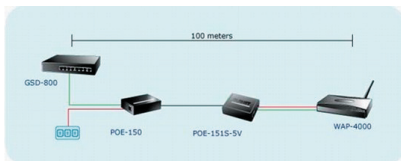
The POE-151S only accept IEEE 802.3af power supply equipment, any other in-line power device sending power through UTP wire connect to POE-151S may cause the POE-151S malfunction.

2. Connect the UTP cable in the package from "Ethernet" of POE-151S to the RJ-45 port of remote device.
3. Connect proper DC plug from "DC OUT" of POE-151S to remote device.

 Caution:

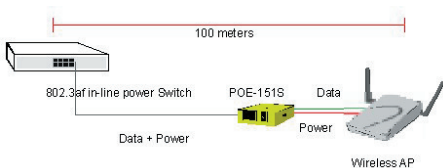
Please ensure the output voltage is correct before applying power to remote device

4. Power on the remote device and the LED indicator on POE-151S will remains on.



2.2 Connect with 802.3af devices

The POE-151S can also provide the alternative to make the non-IEEE 802.3af devices the possibility to connect with an IEEE 802.3af in-line power device like Power over Ethernet Switch, the figure is as below.



 Hint:

Comply with IEEE 802.3af standard, the POE-151S also can co-work with IEEE 802.3af end-span switch that feeding power over pin 1, 2, and 3, 6.

APPENDIX A

RJ-45 pin assignment and cable system

A1 Pin assignment

The following table and diagram show the standard RJ-45 receptacle/ connector and their pin assignments

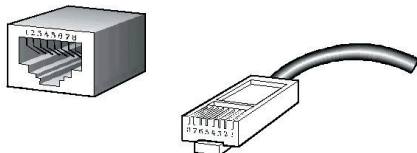
RJ-45 Connector pin assignment		
Con- tact	MDI Media Dependant Interface	MDI-X Media Dependant Interface -Cross
1	Tx + (transmit)	Rx + (receive)
2	Tx - (transmit)	Rx - (receive)
3	Rx + (receive)	Tx + (transmit)
4, 5	Not used	
6	Rx - (receive)	Tx - (transmit)
7, 8	Not used	

Remark:

Gigabit Ethernet is not allowed to use POE-151S product since pair 4,5 and pair 7, 8 are all being used for data transmission in Gigabit Ethernet data transmission. Only 10Base-T and 100Base-TX can apply with POE-151S products.

A2 Cable System

The standard cable, RJ-45 pin assignment



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:

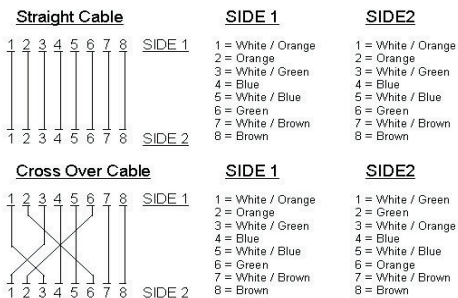


Figure A-1: Straight-Through and Crossover Cable

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

Appendix B: Troubleshooting

1. The device connected to POE-151S cannot be powered?

Answer:

- a. Please check the POE-151S is connect with an IEEE 802.3af complied in-line device like POE-150, and check if the POE LED indicator at POE-151S is steady blink once attach to the IEEE 802.3af in-line power device. Then connect the DC plug cable to the device you would like to power on.
- b. Please check the cable type of the connection from one end to the other end. The cable should be an 8-wire UTP, Category 5 or above, EIA568 cable within 100 meters. A cable with only 4-wire, short loop or over 100 meters, all will affect the power supply.
- c. Please check the power requirement of the device you would like to power and check the label of the POE-151S if it meets the requirement. There are three models of POE-151S for different power output, DC 5V, DC 9 V and DC 12V.
- d. Please check the specification of the powered device. If the device is over the specification of POE-151S, the LED indicator of POE-151S will blink instead of stead green. The maximum currents that POE-151S can supply are: 2A (5V DC), 1.3A (9V DC) and 1A (12V DC).

2. The device can only work at 100Mbps through it is connected to Gigabit Ethernet device?

Answer:

POE-151S will use 4-wire for data transmission (pair 1, 2, pair 3, 6) and 4-wire for power supply (pair 4, 5, pair 7, 8), thus Gigabit Ethernet device connect to POE-151S will not send data over the power wire and the transmit speed shall change to 100Mbps.

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