

PoE SERIES USER'S MANUAL

Best viewed at full screen.

OVERVIEW

Power over Ethernet (PoE) is a method whereby power is transmitted to Ethernet-connected equipment (VoIP telephones, WLAN transmitters, security cameras) from the central switch. By using the existing CAT-5 cabling, the need for AC power (and wiring costs) can be eliminated. The switch is also able to control power distribution to the powered devices allowing sophisticated uninterruptible power management for vital systems. Because of avoiding the need for AC power cords, PoE solutions have the following benefits:

Cost savings. PoE significantly reduces the need for electricians to install conduit, electrical wiring, and outlets throughout the facility.

Flexible access point locations. With PoE, you don't need to depend on only locations within short distances from AC outlets.

Higher reliability. Systems with fewer wires tend to be more reliable

Features

1. Comply with IEEE802.3af, Power over Ethernet, IEEE802.3/802.3u 10/100Base-TX
2. Provides 48V DC power over RJ-45 Ethernet cable to device with Ethernet port
3. LED indicators power input indication
4. Distance up to 100 meters
5. Choice of powered device for 5V DC, 9V DC or 12V DC
6. Auto-detect of PoE 802.3af equipment, protect devices from being damaged by incorrect installation
7. Work with EIA568, category 5, 4-pair cables for 10Base-T or 100Base-TX

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1. Unpacking Information

Check List

Carefully unpack the package and check its contents against the checklist.

Package Contents:

1. PSE x 1 and PD x1
2. 48V DC Adaptor x 1
3. DC Plug Cable x 1
4. User's Manual

Please inform your dealer immediately for any missing, or damaged parts.

If possible, retain the carton, including the original packing materials, use them to repack the unit in case there is a need to return for repair.

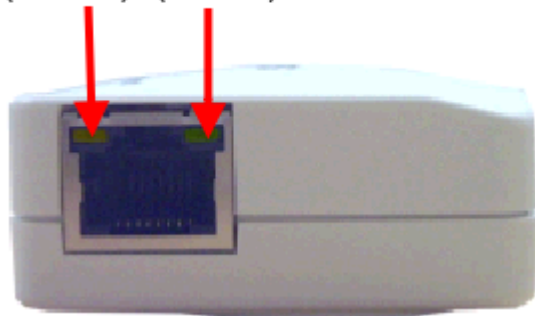
2. Hardware Description

Front Panel of PSE



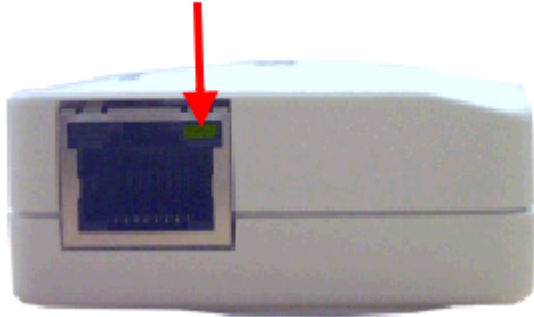
Rear Panel of PSE

LED LED
(Yellow) (Green)



Front Panel of PD

LED
(Green)



Rear Panel of PD



LED Indicator

PSE		PD	
Green	Yellow	Green	Status
OFF	ON	OFF	PSE powered but not connected with PD
Blink	Blink	Blink	PSE connected with PD but without load
ON	OFF	ON	With load

Installation

PSE:

1. Connect a standard network cable from Hub/Switch to “**Ethernet**” port of PSE.
2. Connect the long cable that will be used to connect to remote device to the port “**Ethernet + DC**”.
3. Connect the adaptor to “**48V DC**” of PSE.

PD:

1. Connect the standard network cable from “**Ethernet + DC**” of PSE to “**Ethernet + DC**” of PD.
2. Connect the RJ-45 cable from “**Ethernet**” of PD to the RJ-45 port of remote device.
3. Connect proper DC plug from “**DC OUT**” of PD to remote device.

Appendix A: Product Specification

Specification	
Model	Base Unit Power Over Ethernet(PSE)
<i>Input Specification</i>	
Data Interface	RJ-45 Jack (See Pin Assignment)
Input Voltage	36 ~ 57 Vdc (48V)
Input Current	350mA MAX.
Input	@ Vin=48Vdc
<i>Output Specification</i>	
PD Detection & Classification	IEEE802.3af compliant
PoE Interface	RJ-45 Jack
Output Voltage	48V±10%
Output Current	0.4A MAX
Output Power	15.4W MAX
<i>General Specification</i>	
Operating Temperature	-10°C ~ +60°C
Storage Temperature	-20°C ~ +70°C
Humidity	Up to 90% (non-condensing)
Cooling	Free air convection
Dimension	66(W)mmx56.4mm(L)x25mm(H) (2.6"x 2.2"x 0.98")
LED Display	PoE Not Active (Orange)/PoE Active (Green)

Specification	
Model	10Watt P.O.E Terminal Unit(PD)
<i>Input Specification</i>	
Input Signal	IEEE 802.3af compliant signal from PSE
Data Interface	RJ-45 Jack (See Pin Assignment)
Input Voltage	36 ~ 57 Vdc
Input Current	350mA MAX.
Input	@Vin=48Vdc
<i>Output Specification</i>	
Connect PSE power Interface	DC-Jack
Output Voltage	5Vdc/9Vdc/12Vdc (optional)
Output Voltage Accuracy	±2.0% MAX
Output MAX Current	2000mA for 5V/1100mA for 9V/800mA for 12V
Output Power	10W MAX
<i>General Specification</i>	
Operating Temperature	-10°C ~ +60°C
Storage Temperature	-20°C ~ +70°C
Humidity	Up to 90% (non-condensing)
Cooling	Free air convection
Dimension	66(W)mmx56.4mm(L)x25mm(H) (2.6"x2.2"x0.98")

Appendix B: Troubleshooting

1. The device connected to PD cannot be powered.

Solution:

- a. Please check if PD is connected to IEEE 802.3af complied device. And check if LED on the PD is blinking once connected to IEEE 802.3af complied device.
- b. Please check if the cable type is 8-wire UTP, Category 5, EIA 568 within 100 meters.
- c. Please check if power for PD and device meets requirement.
- d. Please check the specification of the powered device.

2. Can the device only work at 100 Mbps when it is connected to Gigabit Ethernet device?

Solution:

PSE/PD use 4-wire for data transmission (1, 2, 3, 6) and 4-wire for power supply (4, 5, 7, 8). Gigabit Ethernet device connect to Base Unit Power Over Ethernet(PSE)/10Watt P.O.E Terminal Unit(PD) will not send data over power wire.

Appendix C: RJ-45 Connector Pin Assignment

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	48V	
6	Rx - (receive)	TX - (transmit)
7, 8	Ground	

Appendix D: Compliance and Safety Information

FCC Warning

This equipment has been tested to comply with the regulations for a Class A digital device, pursuant to Part 15 of the FCC Rules. These regulations are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment can generate, use, and radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

CE Mark Warning

This is a CE class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Warranty

The original owner that the product delivered in this package will be free from defects in material and workmanship for one year parts after purchase. For the warranty to apply, you must register your purchase by returning the registration card indicating the date of purchase.

There will be a minimal charge to replace consumable components, such as fuses, power transformers, and mechanical cooling devices. The warranty will not apply to any products which have been subjected to any misuse, neglect or accidental damage, or which contain defects which are in any way attributable to improper installation or to alteration or repairs made or performed by any person not under control of the original owner.

The above warranty is in lieu of any other warranty, whether express, implied, or statutory, including but not limited to any warranty of merchantability, fitness for a particular purpose, or any warranty arising out of any proposal, specification, or sample. Shall not be liable for incidental or consequential damages. We neither assumes nor authorizes any person to assume for it any other liability.