

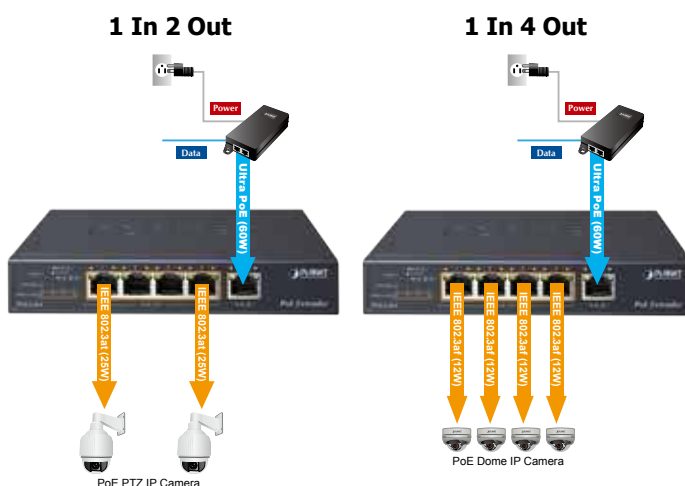
1-Port Ultra PoE to 4-Port 802.3af/at Gigabit PoE Extender



PoE Solution for Breaking RJ45 100m Limitation

PLANET POE-E304 is a 1-port 60W Ultra PoE to 4-port 802.3af/at Gigabit PoE Extender designed especially for point to multipoint PoE applications. The POE-E304 can obtain a maximum of 60-watt PoE power from Ultra PoE input port and supplies a maximum of 55-watt PoE power budget for four PoE output ports, extending both the **Gigabit Ethernet Data** and **IEEE 802.3af/802.3at Power over Ethernet** over the standard 100m (328 ft.) Cat. 5/5e/6 UTP cable to up to 200m powered devices at the same time.

The POE-E304 provides a simple solution for adding PoE ports without running more cabling and achieves more flexible network applications without requiring an external power adapter.



Physical Port

- 5-port 10/100/1000BASE-T Gigabit RJ45 interface
 - 1-port data + power input
 - 4-port data + power output

Power over Ethernet

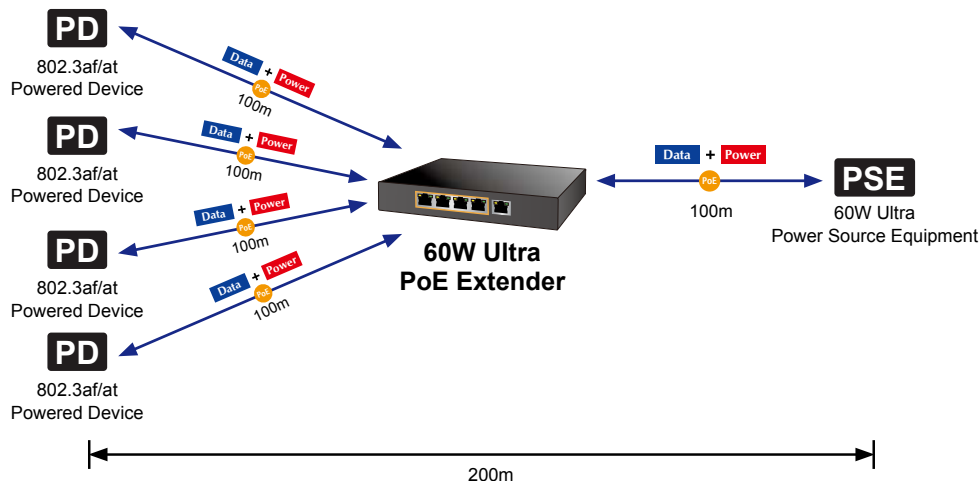
- 1-port data + power input
 - Complies with ultra Power over Ethernet end-span and mid-span PD
 - Complies with IEEE 802.3at Power over Ethernet Plus end-span / mid-span PD
 - Supports PoE input power up to 60 watts
- 4-port data + power output
 - Complies with IEEE 802.3af/IEEE 802.3at Power over Ethernet end-span PSE
 - Up to 4 IEEE 802.3af/802.3at devices powered
 - Supports PoE power up to 30.8 watts for each PoE port
 - Auto detects powered device (PD)
- Extends the range of PoE to an additional 100 meters (328ft.)
- Forwards both Ethernet data and PoE power to remote device

Layer 2 Features

- Hardware based 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X
- Integrates address look-up engine, supporting 2K absolute MAC addresses
- 9K Jumbo packet support
- IEEE 802.1Q VLAN transparency
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- IEEE 802.3x flow control for full duplex operation and backpressure for half duplex operation
- Automatic address learning and address aging
- Case and Installation
- No external power cable installation required
- Made of metal, desktop size design
- Wall-mountable, Plug-and-Play installation
- 0 ~ 50 degrees C operating temperature

Plug and Play Installation

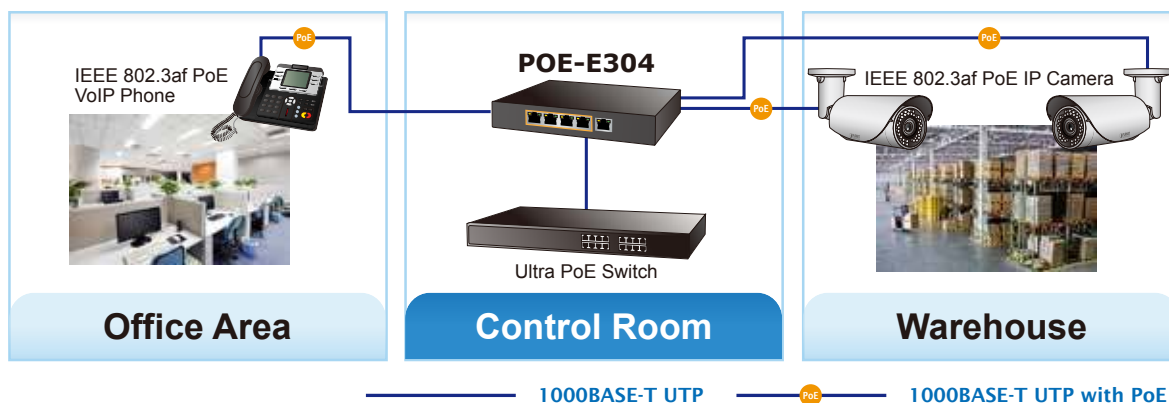
The POE-E304 is quite easy to be installed by simple plug and play. It is used between a power source equipment (PSE) and a powered device (PD). The POE-E304 injects power to the PD without affecting the data transmission performance. The POE-E304 offers a cost-effective and quick solution to doubling the standard range of PoE from 100 to 200 meters. The POE-E304 is designed in a compact box containing five RJ45 ports, of which one "PoE IN" port functions as **PoE (Data and Power) input** and the other four "PoE OUT" ports function as **PoE output**. The "PoE OUT" port is also the power injector that transmits DC voltage over the Cat5/5e/6 cable and transfers data and power simultaneously between the PSE and PD.



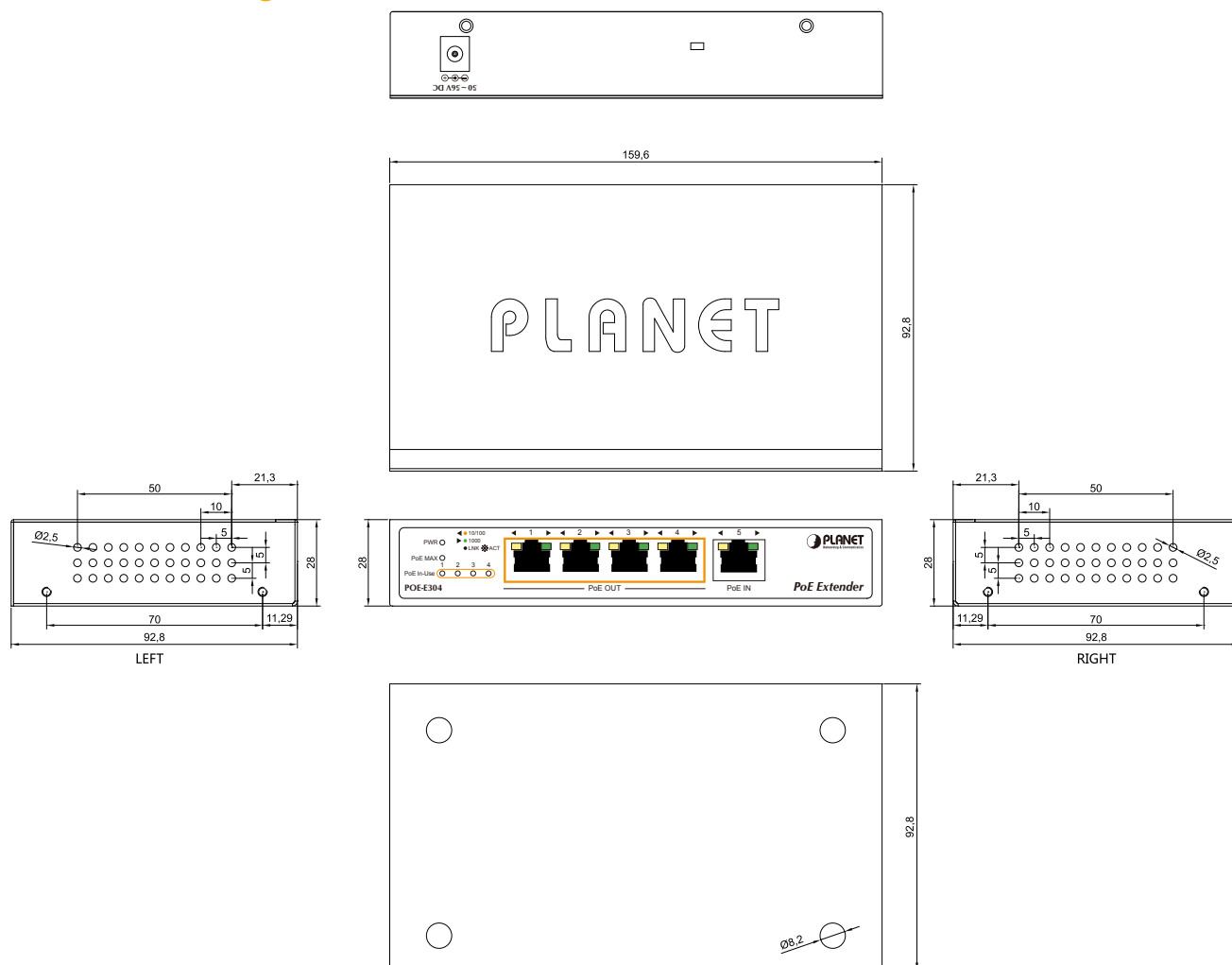
Application

One Power Sourcing for Multiple Powered Devices Solution

Is 100-meter cable long enough for a wide range of IP surveillance network deployments? The answer is certainly not. To achieve the benefits of IP surveillance and the long-distance IP camera distribution, PLANET POE-E304 is quite a useful Gigabit PoE extender if users have most of their network already set up, and hope to expand network communications and overcome cable distance limitations offering connections to devices in locations where traditional networking does not allow.



Three-view Diagram



Specifications

Product	1-port Ultra PoE to 4-port 802.3af/at Gigabit PoE Extender
Product	POE-E304
Hardware Specifications	
Network Connector	PoE In Port 1 x 10/100/1000BASE-T Ethernet with Ultra PoE "Data + DC" in, auto MDI/MDI-X, auto-negotiation RJ45 connector PoE Out Port 4 x 10/100/1000BASE-T Ethernet with IEEE 802.3at/802.3af PoE "Data + DC" out, auto MDI/MDI-X, auto-negotiation RJ45 connector
Data Rate	10/100/1000Mbps
Switch Architecture	Store-and-Forward
MAC Address Table	2K
Data Buffer	2Mbits
Switch Fabric	10Gbps
Switch Throughput	7.44Mpps @ 64 bytes
Jumbo Frame	9K
Flow Control	IEEE 802.3x pause frame for full duplex Back pressure for half duplex
LED Indicators	PoE In Port 10/100 LNK/ACT (orange), 1000 LNK/ACT (green) PoE Out Port 1 to Port 4 10/100 LNK/ACT (orange), 1000 LNK/ACT (green) PoE-in-Use (orange) PoE Max. (orange)
Protection	ESD (Ethernet): 6KV Surge (EFT for power): 2KV

Enclosure	Metal
Installation	Desktop/Wall mountable
Dimensions (W x D x H)	160 x 92.5 x 28 mm
Weight	370g
Power Requirements	PoE In: IEEE 802.3bt or 4-pair 802.3at PoE+ compliant with voltage within 50V-56V DC External DC: 50~56V DC
Power Consumption	4 watts/13.7BTU (System on with PoE input) 6 watts/20.6BTU (Ethernet full loading without PoE function) 60 watts/205.9BTU (Full loading with PoE function)
Network Cable	10BASE-T: 4-pair UTP Cat5 up to 100m (328ft) 100BASE-TX: 4-pair UTP Cat5 up to 100m (328ft) 1000BASE-T: 4-pair UTP Cat5e, 6, up to 100m (328ft) EIA/TIA-568 100-ohm STP (100m, 328ft)
Power over Ethernet	
PoE Standard	PoE In Port Ultra Power over Ethernet end-span/mid-span PD class 4 PD Per PoE Out Port IEEE 802.3at Power over Ethernet Plus end-span PSE IEEE 802.3af Power over Ethernet end-span PSE
PoE Power	PoE In Port 50~56V DC, max. 60 watts Per PoE Out Port 44~55V DC, max. 30.8 watts
Power Pin Assignment	PoE In Port 1/2 (+), 3/6 (-); 4/5 (+), 7/8 (-) or 1/2(-), 3/6(+); 4/5(+), 7/8(-) Per PoE Out Port 1/2 (+), 3/6 (-), end-span (Type A)
PoE Power Budget	50 watts (max.) @ Ultra PoE input 20 watts (max.) @ IEEE 802.3at PoE+ input
Standard Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Standard Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3x Flow Control
Environment	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

Ordering Information

POE-E304	1-port Ultra PoE to 4-port 802.3af/at Gigabit PoE Extender
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Related Products

IPOE-E174	1-port Ultra PoE to 4-port 802.3af/at Gigabit PoE Extender
POE-E201	IEEE 802.3at Power over Ethernet Extender
POE-E202	1-port 802.3at PoE+ to 2-port 802.3af/at Gigabit PoE Extender

Power over Ethernet Budget

The following table lists how many PoE devices can be powered by POE-E304:

Power Source	PoE Output Budget*	Max. Number of PDs supported	
PLANET Ultra PoE PSE	55 watts max.	Class 4 PD@25-watt	2 units
		Class 3 PD@15-watt	3 units
		Class 2 PD@7-watt	4 units
IEEE 802.3at PoE+ PSE	25 watts max.	Class 4 PD@25-watt	1 unit
		Class 3 PD@15-watt	1 unit
		Class 2 PD@7-watt	3 units
PLANET 56VDC PSE	55 watts max.	Class 4 PD@25-watt	2 units
		Class 3 PD@15-watt	3 units
		Class 2 PD@7-watt	4 units

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POE-E304