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

Enhanced from the current highly-praised version, PLANET POE-E304 **Version 3**, 1-Port 802.3bt PoE++ to 4-Port 802.3af/at Gigabit PoE Extender adopts **Airoha LAN controller solution**. It come with original stable performance and one brand-new built-in solid DIP switch function with advanced features as follows:

- Operates as switch architecture in the “Standard” operation mode
- The “VLAN” mode operate as a Port-based VLAN isolation architecture
- The ”Extend” mode makes port-1 to port-4, operates on a per-port basis at 10Mbps duplex operation but can transmit data over 250 meters distance

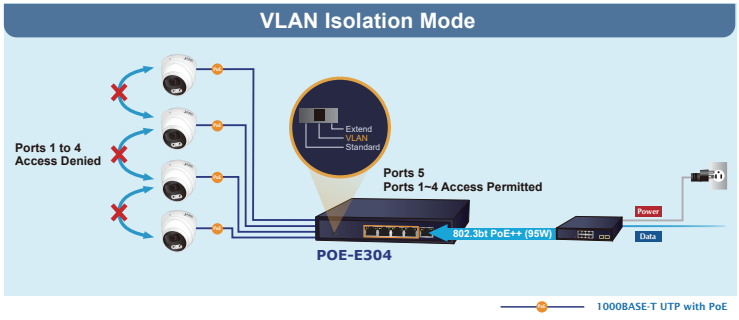
PoE Solution for Long-reach Distance

PLANET POE-E304 is a 1-Port 802.3bt PoE++ to 4-Port 802.3af/at Gigabit PoE Extender designed especially for the point to multipoint PoE application. The POE-E304 can obtain a maximum of 95-watt PoE power from IEEE 802.3bt PoE++ input port and supplies a maximum of 65-watt PoE power budget for 4 PoE output ports, extending both the reach of **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 250m where up to 4 powered devices (PDs) can be powered 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.

DIP Switch for Operation Mode Selection

The POE-E304 offers **“Standard”**, **“VLAN”** or **“Extend”** mode. The POE-E304 operates as a normal Gigabit Ethernet Switch in the **"Standard"** operation mode.

The **"VLAN"** operation mode features port-based VLAN function that can help to prevent the connected clients’ multicast or broadcast storm from influencing each other.



Physical Port

- **Five 10/100/1000BASE-T** Gigabit RJ45 interfaces
  - 1-port **data** + **power input**
  - 4-port **data** + **power output**

Power over Ethernet

- 1-port data + power input
  - Complies with 802.3bt Power over Ethernet Plus Plus 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 95 watts
- 4-port data + power output
- Complies with IEEE 802.3af/at PoE/end-span PSE
- Up to 4 IEEE 802.3af/at devices powered
- Supports PoE power up to 30 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

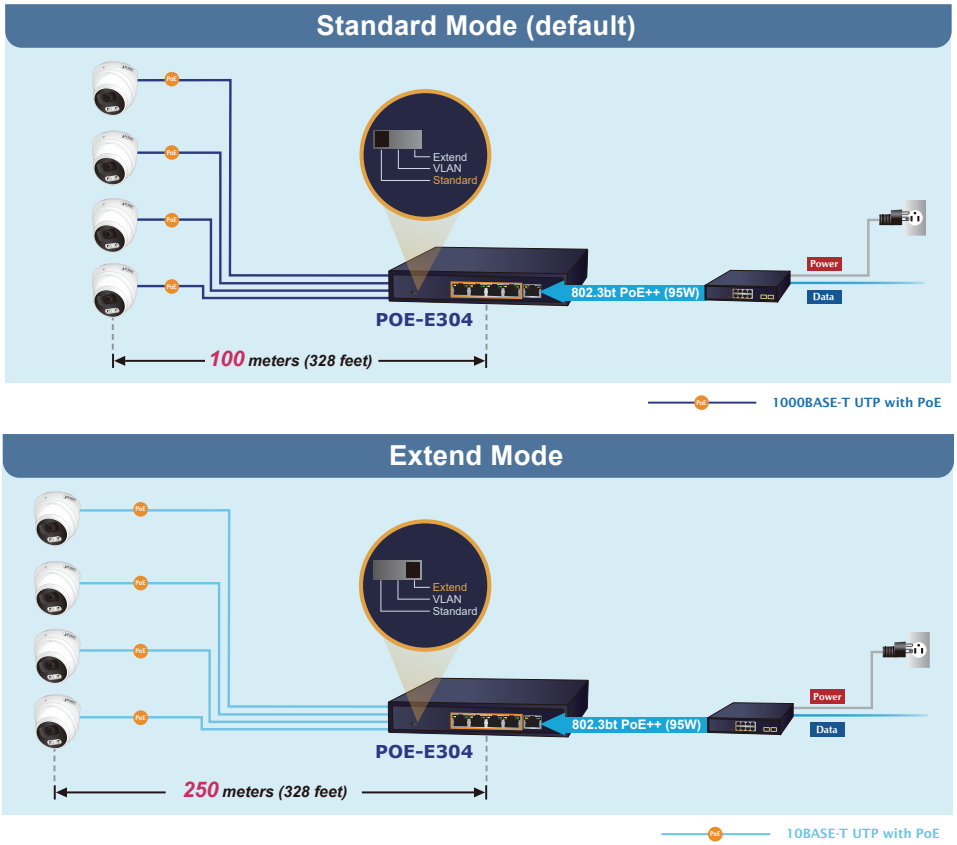
Layer 2 Features

- Hardware-based 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X
- 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
- Integrates address look-up engine, supporting 2K absolute MAC addresses
- 16K jumbo frame support
- Supports ESD protection
  - Contact Discharge 6KV DC
  - Air Gap Discharge 8KV DC
- Automatic address learning and address aging

Case and Installation

- Made of metal, desktop size design
- DIP switch for multi-operation mode options (Standard/ VLAN/Extend) selection
- 0 to 50 degrees C operating temperature
- No external power cable required for installation
- Wall-mountable, Plug and Play installation

In the "**Extend**" operation mode, the POE-E304 operates on a per-port basis at 10Mbps duplex operation but can transmit data over a distance of up to 250 meters overcoming the 100m limit on Ethernet UTP cable. With this brand-new feature, the POE-E304 provides an additional solution for distance extension, thus saving the cost of Ethernet cable installation.



DIP Switch Mode	Function
Standard(default)	This mode makes the POE-E304 operate as a general switch and all ports operate at 10/100/1000Mbps auto-negotiation.
VLAN	This mode makes the POE-E304 operate as a VLAN isolation switch and 1. Port 1 to port 4 will isolate respectively. 2. Port 1 to port 4 can only communicate with port 5 (uplink port)
Extend	This mode makes the POE-E304 operate as a distance extension switch and port 1 to port 4 can only transmit distance of 250m at speed of 10Mbps.

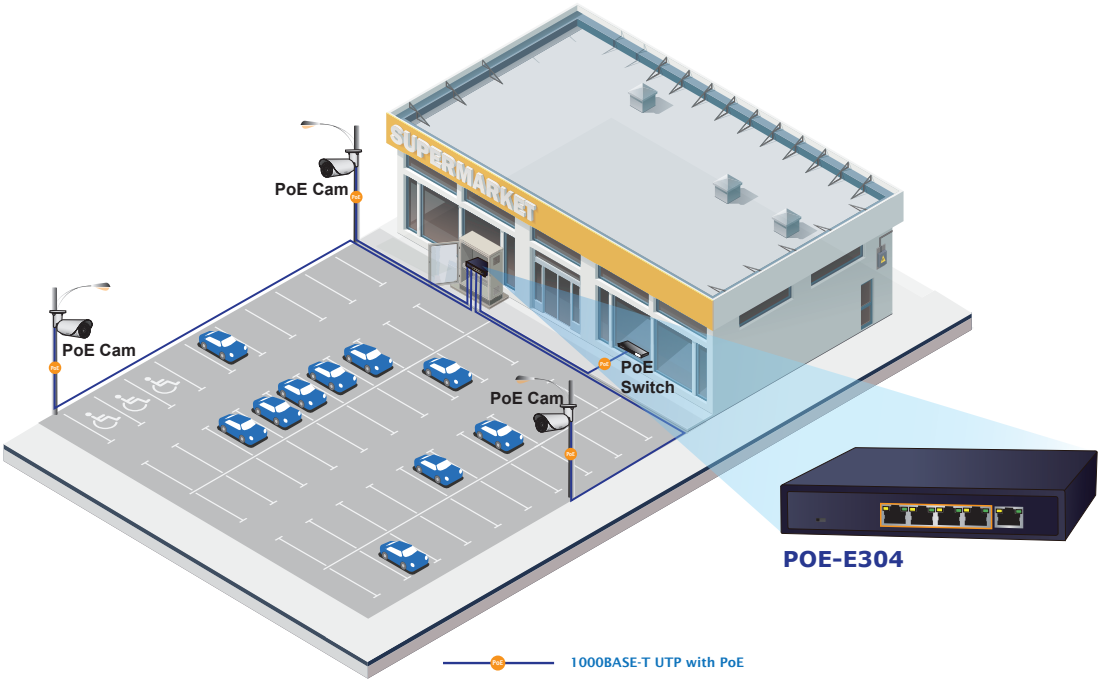
Plug and Play, Easy Cabling Installation

The POE-E304 can be easily installed by way of Plug and Play. It is used between a power source equipment (PSE) and the 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 250 meters. The POE-E304 is designed in a compact box containing 5 RJ45 ports, of which 1 "**PoE IN**" port functions as **PoE (Data and Power) input** and 4 **"PoE OUT"** ports on the other side functions as **PoE (Data and Power)** output. The **"PoE OUT"** port is also the power injector where DC voltage is transmitted over Cat. 5/5e/6 cable, and data and power are simultaneously transferred between the PSE and PD.

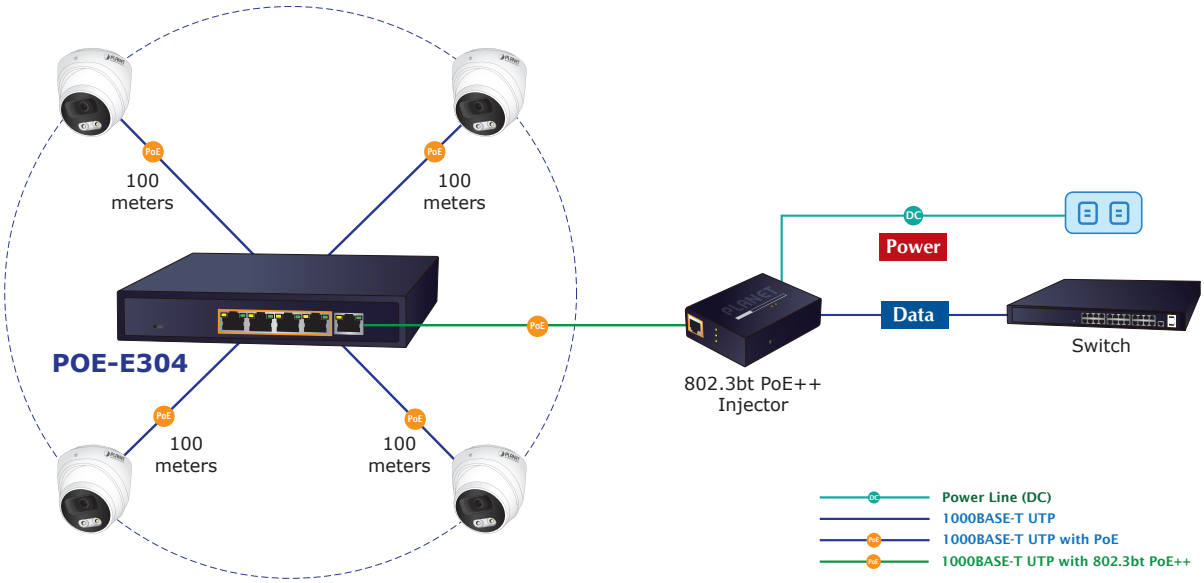
Applications

One Power Source for Multi Powered Devices

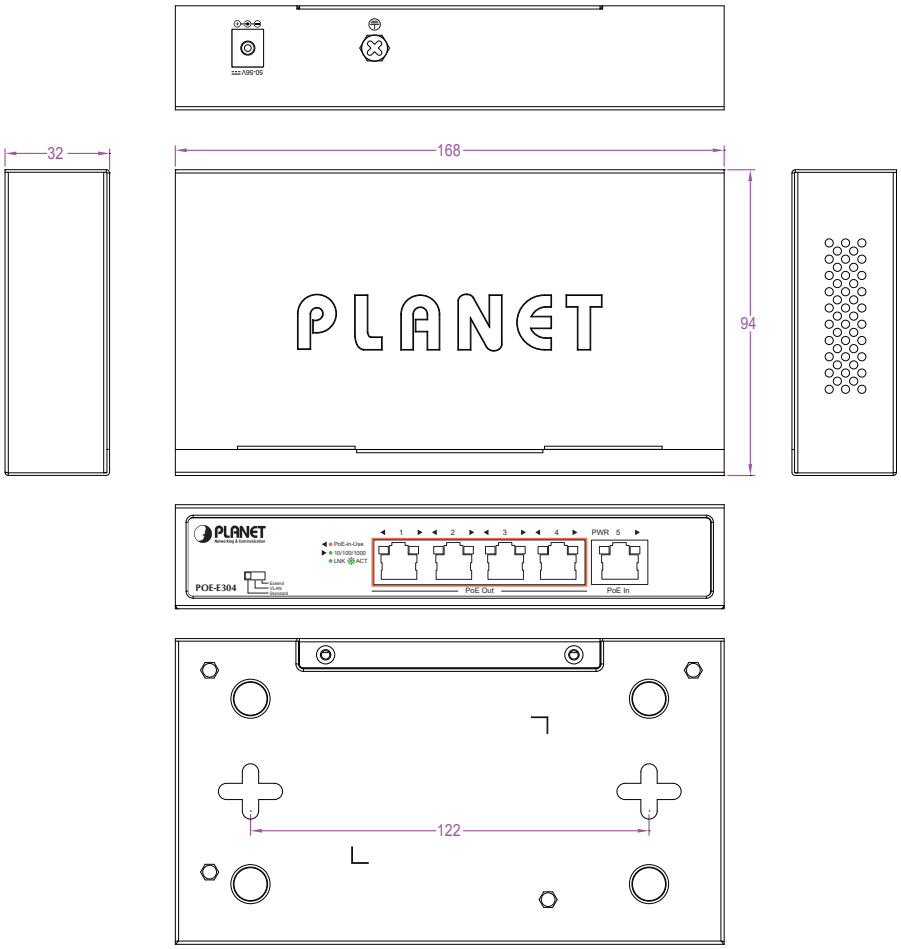
Is 100-meter cable long enough for a wide range of IP surveillance deployments? The answer is certainly not. To achieve the benefits of IP surveillance where IP cameras are installed in a remote location, PLANET POE-E304 is very useful for expanding the network already set up without worrying about the cabling distance limitation. In contrast, the conventional networking does not have the flexibility of network expansion.



The POE-E304 1-Port 802.3bt PoE++ to 4-Port 802.3af/at Gigabit PoE Extender requires very little installation time and does not require any additional setup or programming by using standard RJ45 cable from power sourcing device, such as 802.3bt PoE++ injector supplying 802.3bt PoE++ power, to the POE-E304 and converting power for 4 powered devices that are IEEE 802.3af/at PoE standard compliant, meaning any additional power adapter for IP cameras and wireless access points is not necessary.



Three-view Diagram



Dimensions (W x D x H): 168 x 94 x 32 mm

Product Specifications

Model	POE-E304
Hardware Specifications	
Network Connector	**PoE In Port** - 1 x 10/100/1000BASE-T Ethernet with 802.3bt PoE++ "**Data** + **DC**" in - Auto MDI/MDI-X, auto-negotiation RJ45 connector **PoE Out Port** - 4 x 10/100/1000BASE-T Ethernet with IEEE 802.3af/at PoE "Data + DC" out - Auto MDI/MDI-X, auto-negotiation RJ45 connector
Switch Architecture	Store-and-Forward switch architecture
MAC Address Table	2K MAC address table with auto learning function
Packet Buffer	1 Mbits
Switch Fabric	10Gbps
Switch Throughput	7.44Mpps @ 64Bytes
Flow Control	IEEE 802.3x pause frame for full duplex Back pressure for half duplex
Jumbo Frame	16Kbytes
Enclosure	Metal case
Installation	Desktop/Wall mountable
Dimensions (W x D x H)	168 x 94 x 32 mm
Weignt	415g
ESD Protection	±8KV air gap discharge ±6KV contact discharge
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	Max. 1.1 watts / 3.75 BTU (Power on without any connection) Max. 69.3 watts / 236 BTU (Full loading with 802.bt PoE++ Switch Input)
LED	**System** PWR(**Amber**) **PoE Input Port (Port 5):** 10/100/1000 LNK/ACT(**Green**) **PoE Output Ports (Ports 1~4):** 10/100/1000 LNK/ACT(**Green**) PoE: Power-in-use (**Amber**)
DIP Switch	Multi-operation mode options (Standard/VLAN/Extend) selection
Power over Ethernet	
PoE Standard	**PoE in Port** IEEE 802.3bt PoE++ Type 4 standard PD IEEE 802.3at PoE+ end-span/mid-span PD **Per PoE out Port** IEEE 802.3at Power over Ethernet Plus end-span PSE
PoE Power	**PoE in Port** 50~56V DC, max. 95 watts **Per PoE out Port** 49~55V 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(+)
PoE Power Budget	65 watts (max.) @ 802.3bt PoE++ Type 4 input
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3x Flow Control IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus IEEE 802.3az Energy Efficient Ethernet(EEE)
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 802.3bt PoE++ to 4-Port 802.3af/at Gigabit PoE Extender

Related Products

POE-171A-60	Single-Port Multi-Gigabit 802.3bt PoE++ Injector (60 Watts)
POE-171A-95	Single-Port 10/100/1000Mbps 802.3bt PoE Injector (95 Watts)
POE-175-95	One-Port 10/100/1000Mbps 802.3bt PoE++ Injector (95 watts, internal power)
POE-176-95	Single-Port 10Gbps 95-watt 802.3bt PoE++ Injector
GUP-805A-60W	100/1000BASE-X SFP to 10/100/1000BASE-T 802.3bt PoE++ Media Converter (60 Watts)
GUP-805A-95W	100/1000BASE-X SFP to 10/100/1000BASE-T 802.3bt PoE++ Media Converter (95 Watts)
GS-4210-8UP2S	8-Port 10/100/1000T 802.3bt PoE + 2-Port 100/1000X SFP Managed Ethernet Switch
GS-4210-8UP2X	8-Port 10/100/1000T 802.3bt PoE + 2-Port 10G SFP+ Managed Ethernet Switch
GS-4210-16UP8T4X	16-Port 10/100/1000T 802.3bt PoE + 8-Port 10/100/1000T + 4-Port 10G SFP+ Managed Ethernet Switch
GS-4210-24UP4X	24-Port 10/100/1000T 802.3bt PoE + 4-Port 10G SFP+ Managed Ethernet Switch

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