

Product Specifications

Single-Port 10/100/1000Mbps 802.3bt PoE++ Injector (95 Watts, internal PWR)

POE-175-95

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2018/6/21	Keithy Lin	Initial release

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Reviewed by:	Jonas Yang	Approved by:	Kent Kang

1. PRODUCT DESCRIPTION



Advanced 802.3bt Ultra PoE Network Solution

PLANET POE-175-95 is a Single-Port, 802.3bt Power over Ethernet Injector with a maximum of up to 95 watts of power output over Ethernet cables.



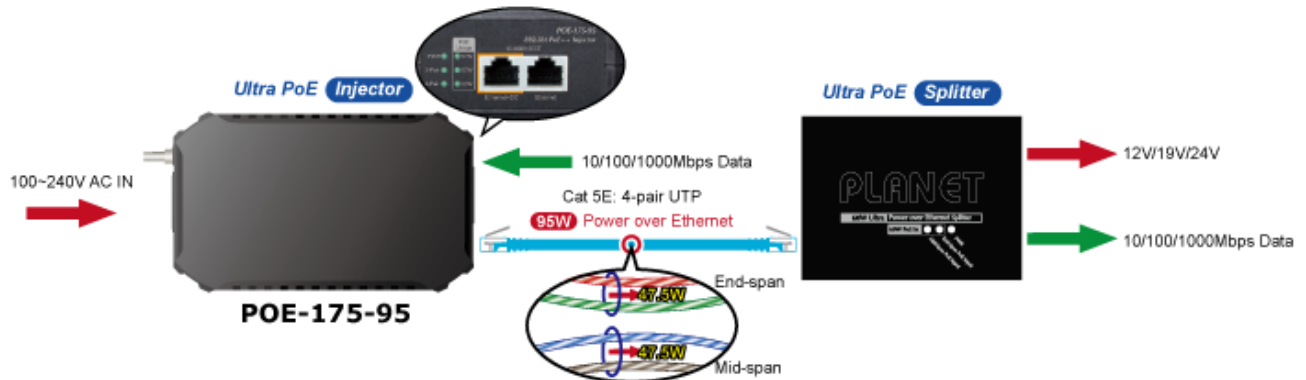
It is designed specifically to meet the demand for growing higher power required network equipment such as:

- ▶ PTZ speed dome camera
- ▶ All-in-one touch PC
- ▶ Remote digital signage display
- ▶ Other network devices that need higher power to work normally

The POE-175-95 delivers the Ethernet digital data with 54V DC power over the twisted-pair cables as a 95-watt Power over Ethernet Injector, and the connected ultra Power over Ethernet splitter, the POE-172S, will separate the digital data and the power into three optional outputs (12V/19V/24V DC) with distance up to 100 meters.

95 watts of Power over 4-pair UTP

The POE-175-95 and POE-172S Ultra PoE solutions use the same cabling standard such as IEEE 802.3af/at PoE. Instead of delivering power over 2-pair twisted UTP – be it end-span (Pins 1, 2, 3 and 6) or mid-span (Pins 4, 5, 7 and 8), it provides the capability to source up to 95 watts of power by using all the four pairs of standard Cat. 5e/Cat. 6 Ethernet cabling.



PoE Standard	IEEE 802.3af (802.3at Type 1)	IEEE 802.3at (802.3at Type 2)	IEEE 802.3bt (802.3bt type 3)	IEEE 802.3bt (802.3bt Type 4)	PoH (Power over HD-BASE-T)
Maximum Power delivered by PSE	15.4 watts	30 watts	60 watts	90 watts	95 watts
Power Available at PD	12.95 watts	25.5 watts	51 watts	71 watts	72 watts
Voltage Range	48V	50~57V	50~57V	52~57V	52~57V
Twisted-pair Used	2-pair		4-pair	4-pair	4-pair
Supported Modes	End-span or Mid-span		End-span + Mid-span	End-span + Mid-span	End-span + Mid-span
Supported Cabling	Cat. 3/5/5e/6		Cat. 5e/6	Cat. 5e/6	Cat. 5e/6

Intelligent LED Indicator for Real-time PoE Usage

The POE-175-95 helps users to monitor the current status of PoE power usage easily and efficiently via its advanced LED indication. “PoE Power Usage” displayed on the front panel of the POE-175-95 has three LED indicators of different power usages. Via the power usage LED, the POE-175-95 enables the administrator to monitor the status of the power usage of the connected PDs in real time.

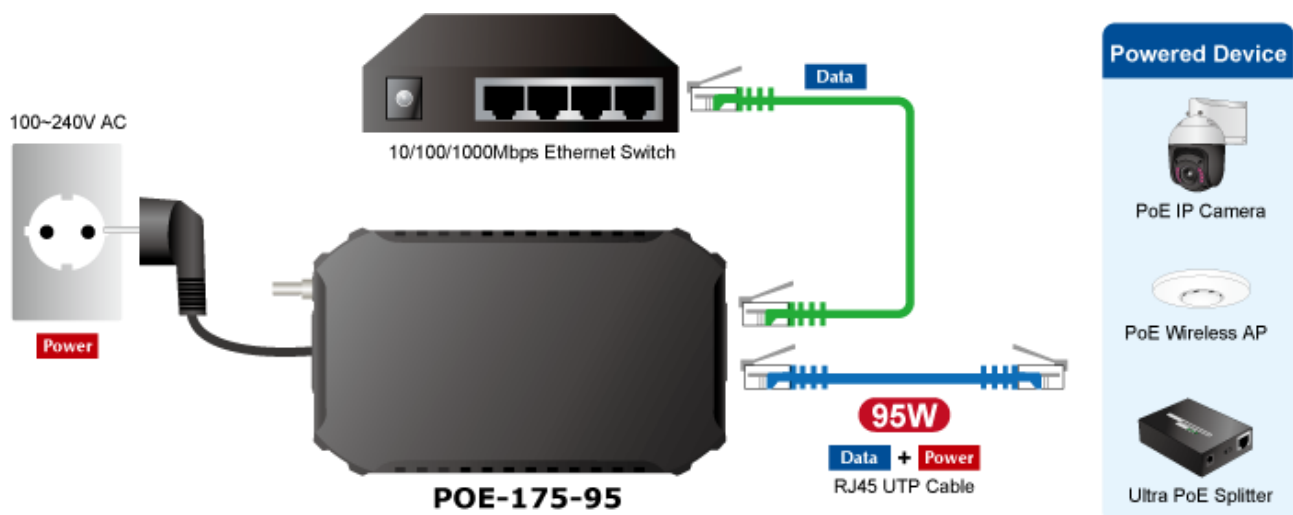


All-in-One and Compact Size Design

It is easy to install the PoE injector by way of **Plug and Play** and comes with simple troubleshooting, making it easy for business and home users to own it. Besides, the POE-175-95 comes in compact housing, and has a built-in internal power supply. On the side panel of the POE-175-95 features one 100-240V AC input socket, real-time LEDs (Power LED, PoE Usage LED and 2-/4-pair LED) and two RJ45 ports -- Ethernet port and Ethernet + DC port. Simply plug in the Ethernet cables and AC power cord, and the POE-175-95 is ready to provide high-speed network communication and the 802.3bt PoE++ injector functions simultaneously with no need of software configuration.

Quick and Easy Cabling Installation for PoE Network Deployment

Backward compatible with both 802.3af/at PoE standards, the POE-175-95 allows users to flexibly deploy standard and high powered devices to transfer data and power simultaneously through one Ethernet cable for up to 100 meters. The POE-175-95 frees the security IP camera and wireless AP deployment from restrictions of power outlet locations and the additional AC wiring. It thus reduces cables and eliminates the need for electrical outlets on the wall, ceiling or any unreachable place, and most of all, it reduces installation time.



2. PRODUCT FEATURES

➤ **Interface**

- 2 RJ45 interfaces
 - 1-port **Data + Power** output
 - 1-port **Data** input
- 1 AC 100~240V input power socket

➤ **Power over Ethernet**

- Complies with IEEE 802.3at/bt PoE end-span/mid-span PSE
- Supports PoE power up to 95 watts for PoE port
- Auto-detection of PoE IEEE 802.3at/bt equipment and devices from being damaged by incorrect installation
- Monitor the status of the total PoE usage in real time
- Remote power feeding up to 100m

➤ **Hardware**

- All-in-one compact size design
- Internal power supply
- LED indicators for Power LED, PoE Usage LED and 2-/4-pair LED
- Wall-mount design

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

PSE Chipset	Microsemi PD69208M/PD69208T4/PD69204T4	x 1
MCU	IAP15W413AS S0P16 STC	x 1
PoE Controller	PD69200C-0211 QFN32	x 1
PoE PSE	Microsemi PD69208M QFN56/PD69208T4 QFN56/PD69204T4 QFN56	x 1

3.2 FUNCTION SPECIFICATIONS

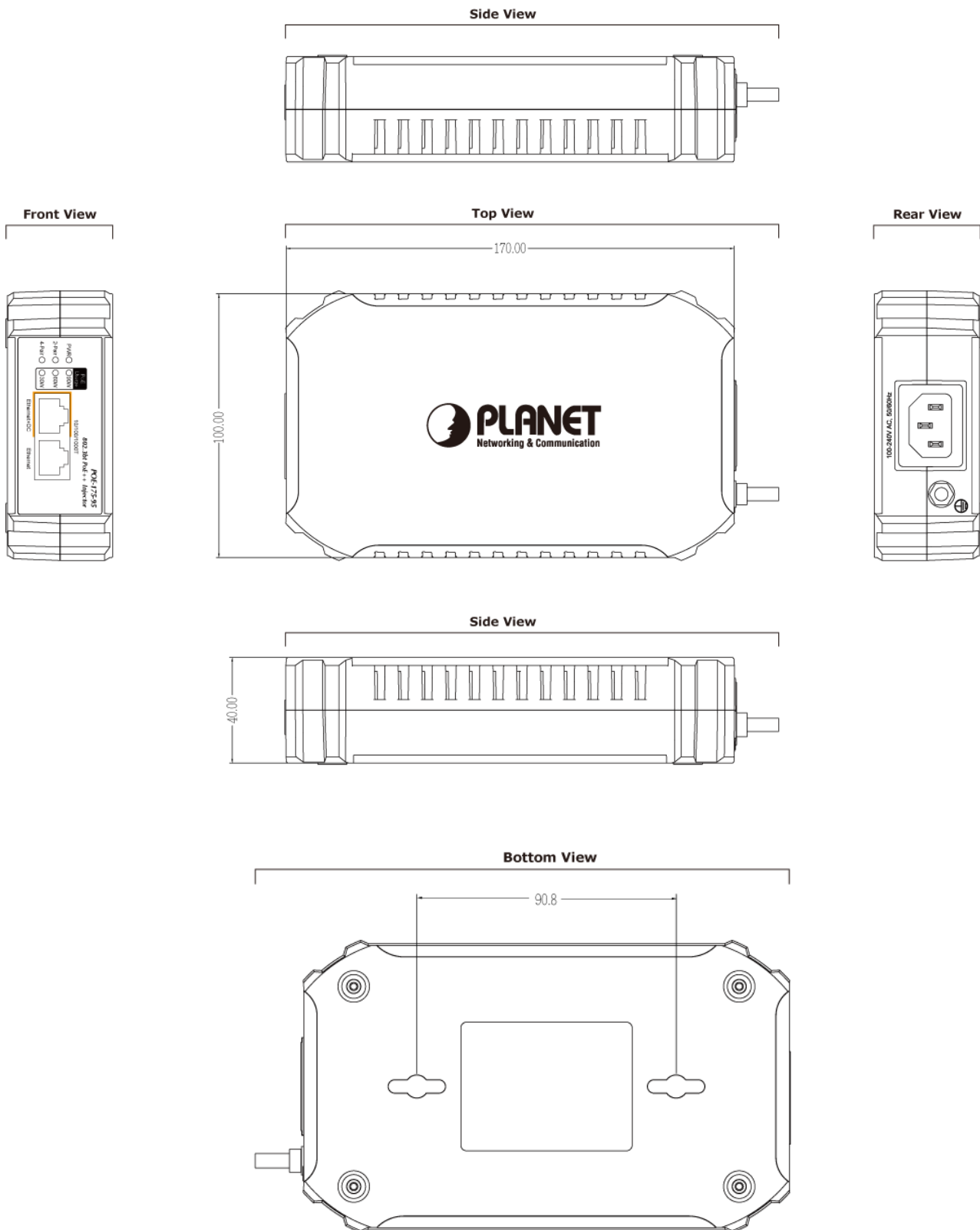
Product		POE-175-95
Hardware Specifications		
Interface	Input Port	1 x RJ45 STP Data In
	Output Port	1 x RJ45 STP PoE (Data + Power) Out
	AC Socket	1 x AC input socket
Network Cable		Twisted-pair cable up to 100 meters (328ft) 10BASE-T: 4-pair UTP Cat. 3, 4, 5, 5e, 6 100BASE-TX: 4-pair UTP Cat. 5, 5e, 6 1000BASE-T: 4-pair UTP Cat. 5e, 6
LED Indicator		PWR x 1 (Green) 2-pair x 1 (Green) 4-pair x 1 (Green) PoE Usage x 3 (Green)
Data Rate		10/100/1000Mbps
Dimensions (W x D x H)		170 x 100 x 40 mm
Weight		480g
Unit Output Voltage		DC 54V
Power Requirements		AC 100-240V, 1.5A max.
Power Consumption		120 watts max.
No. of devices that can be powered		1
Power over Ethernet		
PoE Standard		IEEE 802.3at/bt Ultra PoE PSE
PoE Power Output Budget		DC 54V / 95-watt PoE via 4-pair DC 54V / 30-watt PoE via 2-pair
PoE Power Output		Max. 90W @1 m cable

	Max. 73W @100 m cable
PoE Power Supply Type	End-span + Mid-span
Power Pin Assignment	Pair 1 End-span: 1/2 (-), 3/6 (+) Pair 2 Mid-span: 4/5 (+), 7/8 (-)
Standards Conformance	
Standards Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3bt 4-pair Power over Ethernet Type 4 IEEE 802.3at Power over Ethernet Plus IEEE 802.3af Power over Ethernet
Regulatory Compliance	FCC Part 15 Class A, CE
Environment	
Operating Temperature	0 ~ 50 degrees C
Storage Temperature	-10 ~ 70 degrees C
Operating Humidity	5 ~ 90%, relative humidity, non-condensing
Storage Humidity	5 ~ 90%, relative humidity, non-condensing
Standard Accessories	
Package Contents	<ul style="list-style-type: none"> ● POE-175-95 ● User's manual ● Power cord

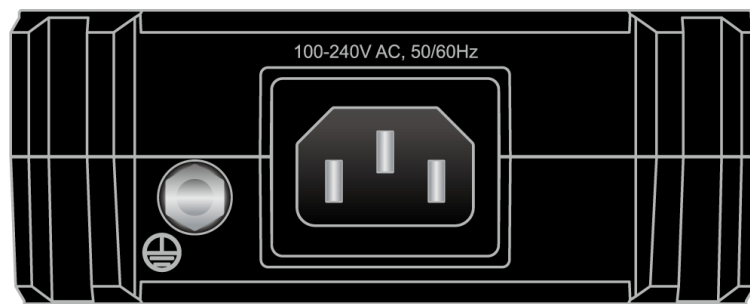
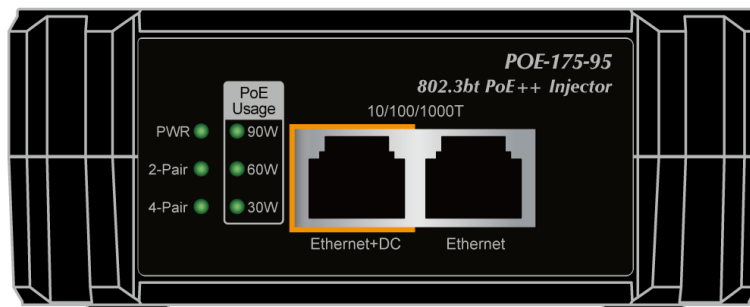
3.3 PHYSICAL SPECIFICATIONS:

- **Dimensions (W x D x H)**
170 x 100 x 40 mm
- **Weight**
480g

■ **Diagram**



■ Product Outlook



■ LED Indicators

LED	Color	Function
PWR	Green	Lights to indicate the 802.3bt PoE injector has power.
2-Pair	Green	When connecting the PoE injector to the PD device, it will take 10 seconds to check the type of PD device. Lights to indicate the PD device supports power supply of 2-pair wires.
4-Pair	Green	When connecting the PoE injector to the PD device, it will take 10 seconds to check the type of PD device. Lights to indicate the PD device supports power supply of 4-pair wires.
PoE Usage	Green	<p>PoE Usage LED can monitor the status of the power usage.</p> <p>30W:</p> <ol style="list-style-type: none"> Off to indicate the PoE usage is less than 14W. Blinks to indicate that the PoE usage is around 15W to 29W. Lights to indicate the PoE usage is around 30W to 44W.w <p>60W:</p> <ol style="list-style-type: none"> Blinks to indicate that the PoE usage is around 45W to 59W. Lights to indicate the PoE usage is around 60W to 74W. <p>90W:</p> <ol style="list-style-type: none"> Blinks to indicate that the PoE usage is around 75W to 89W. Lights to indicate the PoE usage is at the maximum.

3.4 ENVIRONMENTAL SPECIFICATIONS

- **Operating:**
Temperature: 0°C ~50 degrees C
Relative Humidity: 5% ~ 90% (non-condensing)
- **Storage:**
Temperature: -10°C ~70 degrees C
Relative Humidity: 5% ~ 90% (non-condensing)

3.5 ELECTRICAL SPECIFICATIONS

Power over Ethernet Capability

- **Power Requirement:**
AC 100-240V, 1.5A max.
- **Input Voltage:**
AC 100-240V

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

3.7 RELIABILITY

MTBF > 50,000Hrs @ 25 degrees C

3.8 BASIC PACKAGING

- POE-175-95 x 1
- User's Manual x 1
- Power Cord x 1

3.9 PACKING DIMENSIONS

Box Dimensions (W x D x H):	240 x 186 x 22 mm
Weight:	870g
Carton Dimensions (W x D x H):	450 x 264 x 406 mm
Carton Weight:	9.2kg
Quantity:	10pcs in one carton