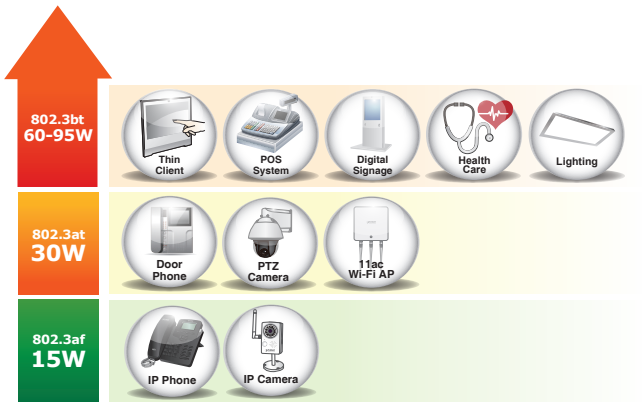
Single-Port 10Gbps 95-watt 802.3bt PoE++ Injector

Advanced Multi-Gigabit and 802.3bt PoE++ Network Solution

PLANET POE-176-95 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 also equipped with two **10M/100M/1G/2.5G/5G/10GBASE-T RJ45 copper interfaces** to handle extremely large amounts of data transmission.

The POE-176-95 adopting the IEEE 802.3bt standard, 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), provides the capability to source up to 95 watts of power by using all the four pairs of standard Cat. 5e/6 Ethernet cabling. In the new 4-pair system, it can offer more PoE applications, such as:

- PoE lighting
- PoE PTZ speed dome camera
- Any network device that needs higher PoE power to work normally
- Thin-client
- AIO (All-in-One) touch PC
- Remote digital signage display



Interface

- 2 RJ45 interfaces
  - 1-port **Data + Power** output
  - 1-port **Data** input
- 1 DC 52~56V input power socket
- 1 PoE mode (802.3bt/Force) DIP switch

Power over Ethernet

- Complies with IEEE 802.3af/at/bt PoE end-span/mid-span PSE
- Supports PoE power up to 60/95 watts for PoE port
- Auto-detection of PoE IEEE 802.3af/at/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
- Auto-detection of DC input voltage

Hardware

- All-in-one compact size design
- LED indicators for power, PoE-in-Use, Force mode and PoE usage
- Wall-mount design
- Metal case
- Supports 6KV DC Ethernet ESD protection

The POE-176-95 delivers the Ethernet digital data with 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-173S, will separate the digital data and the power into three optional outputs (12V/19V/24V DC) with distance up to 100 meters.

Intelligent LED Indicator for PoE Mode and Real-time PoE Usage

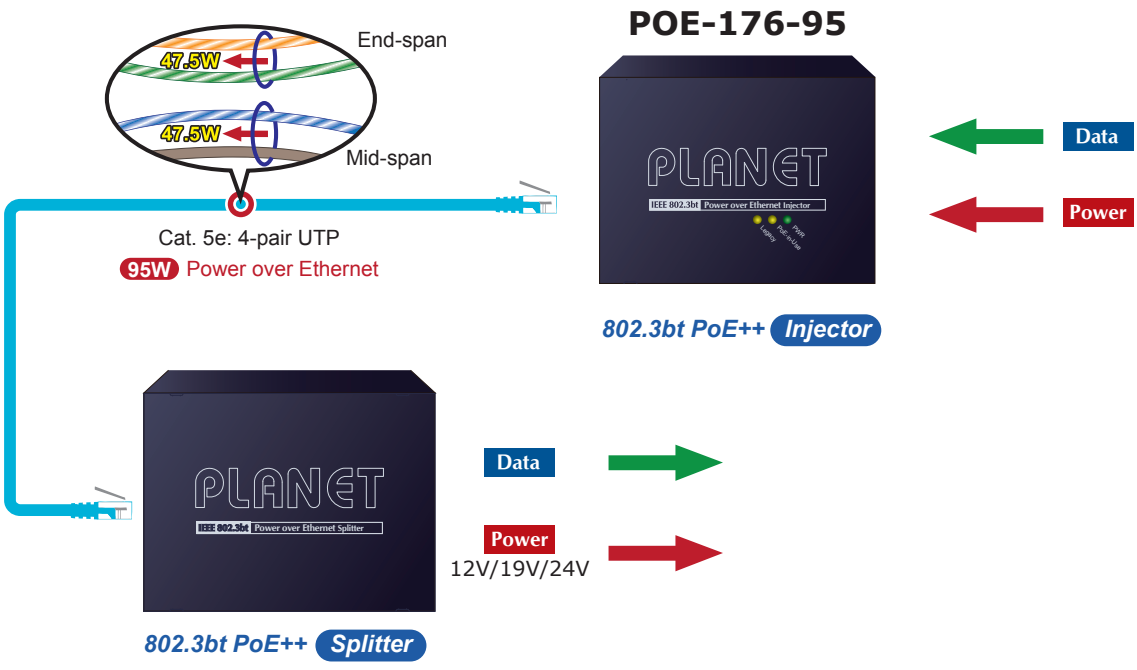
The POE-176-95, when switched to the Force mode, provides power to those PD devices which do not fully follow the IEEE 802.3af/at/bt standard. The Force LED will turn on when the Force mode is enabled; it can power on the PD with a maximum of 60 watts.

Moreover, the POE-176-95 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-176-95 has three LED indicators of different power usages. Via the power usage LED, the POE-176-95 enables the administrator to monitor the status of the power usage of the connected PDs in real time.

PoE Power Usage Display

95 Watts of Power over 4-pair UTP

In the new 4-pair system with IEEE 802.3bt standard, 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), the POE-176-95 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	**95 watts**	**95 watts**
Power Available at PD	12.95 watts	25.5 watts	51 watts	**71 watts**	**72 watts**
Voltage Range	48V	50~57V	52~57V	**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**

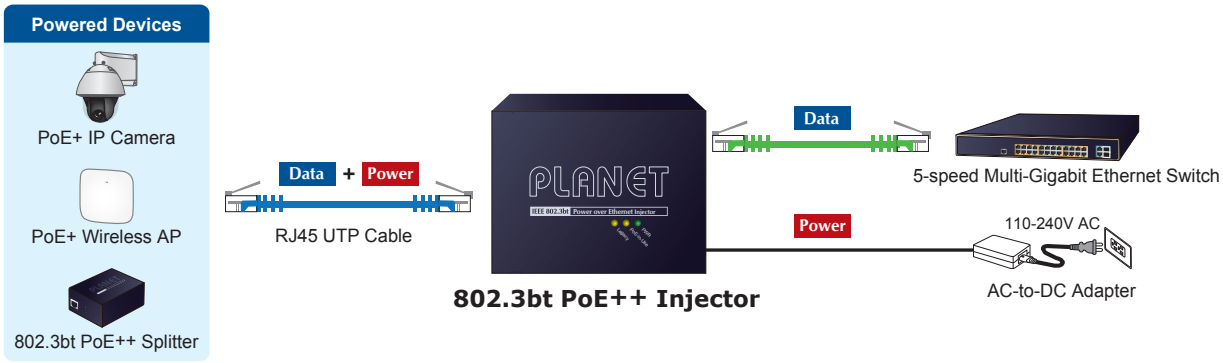
All-in-One and Compact Size Design

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-176-95 comes in compact housing, and provides one 52~56V DC input power jacket, one power LED, PoE-in-use LED and Force LED. Two RJ45 ports -- Ethernet port and Ethernet + DC port – are on the side panel. Simply plug in the Ethernet cables and DC power cord, and the POE-176-95 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-176-95 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-176-95 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.

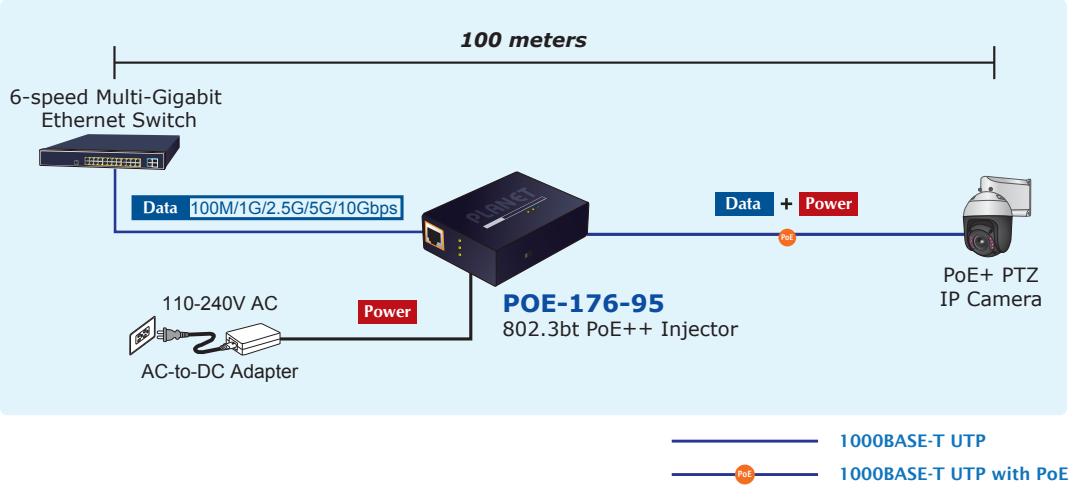
10G/5G/2.5G/1G/100Mbps Data Rate



Applications

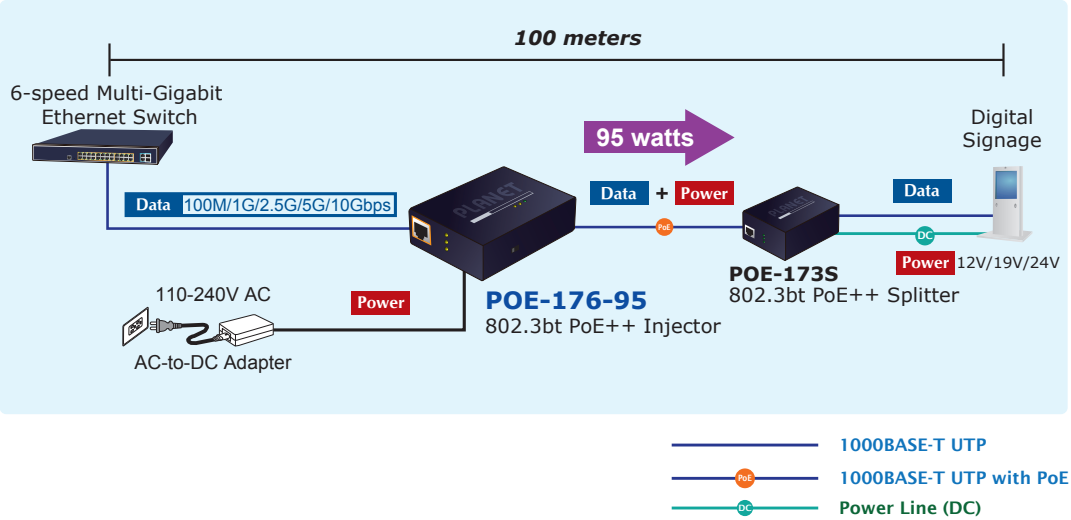
Installation of 802.3bt PoE Injector

Due to the backward capability of IEEE 802.3af/at PoE standard, the POE-176-95 can directly connect with any IEEE 802.3af/at end-nodes, such as PTZ speed dome IP cameras, color touch-screen Voice over IP (VoIP) telephones, and multi-channel wireless LAN access points.



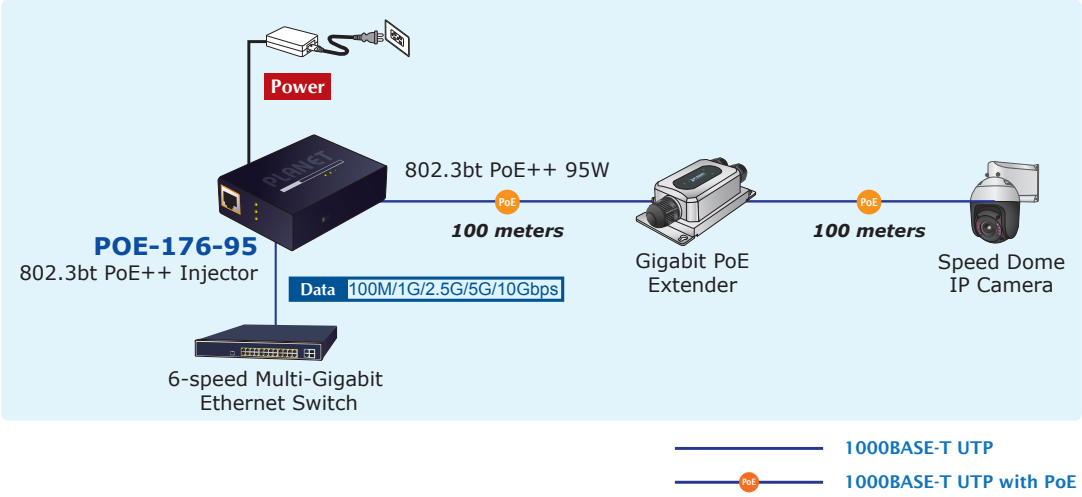
Installation of 802.3bt PoE Injector and Splitter

For a place which is hard to find the power inlet, the POE-176-95 and POE-173S operate as a pair to provide the easiest way to power your Ethernet devices which need high power input, such as PTZ network cameras, PTZ speed dome cameras, color touch-screen Voice over IP (VoIP) telephones, and multi-channel wireless LAN access points installed on the top of the building or used in enterprise office or home.



Extended Installation of IEEE 802.3bt Injector and PoE Network

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 and also the long-distance IP camera distribution, the POE-176-95 and PLANET PoE Extender, **POE-E304**, can be a quick and cost-effective option. In the simplest application, the PoE Extender enables a PoE IP camera to be installed up to 200 meters away from the POE-176-95. The POE-176-95 delivers PoE power over the first 100 meters to the PoE Extender over UTP cables, and then the PoE Extender forwards the Ethernet data and remaining PoE power to the remote PoE IP cameras.



Specifications

Product		POE-176-95
Hardware Specifications		
Interface	Input Port	1 x RJ45 STP Data In
	Output Port	1 x RJ45 STP PoE (Data + Power) Out
	DC Socket	1 x 52~56V DC input socket
Network Cable*		Twisted-pair cable up to 100 meters (328ft) 10BASE-T: 4-pair UTP Cat. 3, 4, 5, 5e, 6, 6A 100BASE-TX: 4-pair UTP Cat. 5, 5e, 6, 6A 1G/2.5G: 4-pair UTP Cat 5e/Cat 6/Cat 6A/ Cat 7 5G: 4-pair UTP Cat 6/Cat 6A/Cat 7 10G:4-pair UTP Cat 6A/Cat 7
LED Indicators		System: Power x 1 (**Green**) PoE Port: PoE-in-Use x 1 (**Amber**) Force Mode: Force x 1 (**Amber**) PoE Usage: PoE Usage x 3 (**Amber**)
Data Rate		10M/100M/1G/2.5G/5G/10Gbps
Dimensions (W x D x H)		94 x 70.3 x 26.2 mm
Weight		195g
Unit Output Voltage		DC 52~56V
Power Requirements		DC 52-56V, 2.5A max
Power Consumption		103 watts max.
No. of devices that can be powered		1
Power over Ethernet		
PoE Standard		IEEE 802.3af/at/bt PSE
PoE Power Output Budget		DC 54V/30-watt PoE via 2-pair DC 54V/60-watt PoE via 4-pair 54V/95-watt PoE via 4-pair
PoE Power Output		Max. 86.8W for 1 m cable Max. 72W for 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 (-)
PoE Mode		**802.3bt**: To provide power to the PD devices that follow the IEEE 802.3af/at/bt standard. **Force**: When the Force mode is enabled, it will provide PD with max. 60W.
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 802.3bz 2.5G/5G/10GBASE-T IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt 4-pair Power over Ethernet (Type 4)
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

Ordering Information

POE-176-95	Single-Port 10Gbps 95-watt 802.3bt PoE++ Injector

Related PoE Products

POE-171	Single-Port 10/100/1000Mbps Ultra PoE Injector (60 Watts)
POE-172	Single-Port 10/100/1000Mbps Ultra PoE Injector (60 Watts)
POE-173	Single-Port 10/100/1000Mbps Ultra PoE Injector (60 Watts)
POE-171A-60	Single-Port Multi-Gigabit 802.3bt PoE++ Injector (60 Watts)
POE-171A-95	Single-Port Multi-Gigabit 802.3bt PoE++ Injector (95 Watts)
POE-175-95	Single-Port 10/100/1000Mbps 802.3bt PoE++ Injector
POE-171S	Single-Port 10/100/1000Mbps Ultra PoE Splitter (12V/19V/24V)
POE-172S	Single-Port 10/100/1000Mbps Ultra PoE Splitter (12V/19V/24V)
POE-173S	Single-Port 10/100/1000Mbps 802.3bt PoE++ Splitter(12V/19V/24V)
POE-E304	1-Port 802.3bt PoE++ to 4-Port 802.3af/at Gigabit PoE Extender
IPOE-175	Industrial IP67 1-Port 60W 802.3bt PoE++ Injector (-40~75 degrees C)
IPOE-175S	Industrial IP67 802.3bt PoE++ Splitter (DC 12V, -40~75 degrees C)
IPOE-E302	Industrial IP67 1-Port 802.3bt PoE++ to 2-Port 802.3at/bt PoE++ Extender

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