Industrial Single-Port Multi-Gigabit 802.3bt PoE++ Injector (60 Watts, -40~75 degrees C, 48~56VDC)



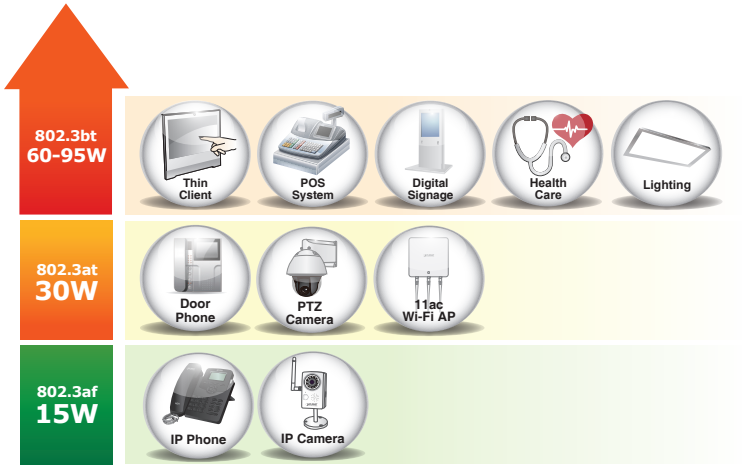
Advanced Industrial Multi-Gigabit and 802.3bt PoE++ Network Solution

PLANET IPOE-171-60W is a **Single-Port**, **Industrial 802.3bt Power over Ethernet Injector** with a maximum of up to **60 watts** of power output over Ethernet cables. It is also equipped with two **100M/1G/2.5G/5GBASE-T** RJ45 copper interfaces to handle extremely large amounts of data transmission.



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

- Lighting
- All-in-one touch PC
- Remote digital signage display
- Other network devices that need higher power to work normally



Interface

- 2 Multi-Gigabit RJ45 interfaces
  - 1-port **Data + Power output**
  - 1-port **Data input**
- 1 terminal block for master and slave power input. (Power Range: 48 ~ 56V DC redundant power)
- 1 PoE mode (standard/legacy and force) DIP switch

Power over Ethernet

- Complies with IEEE 802.3at/bt PoE end-span/mid-span PSE
- Supports PoE power up to 60 watts for PoE port
- Auto-detection of PoE IEEE 802.3at/bt equipment and devices from being damaged by incorrect installation
- Monitors the status of the total PoE usage in real time
- Remote power feeding up to 100m
- Auto-detection of DC input voltage

Hardware

- IP30 slim-type metal case
- LED indicators for Power LED , PoE-in-Use LED and PoE Usage LED

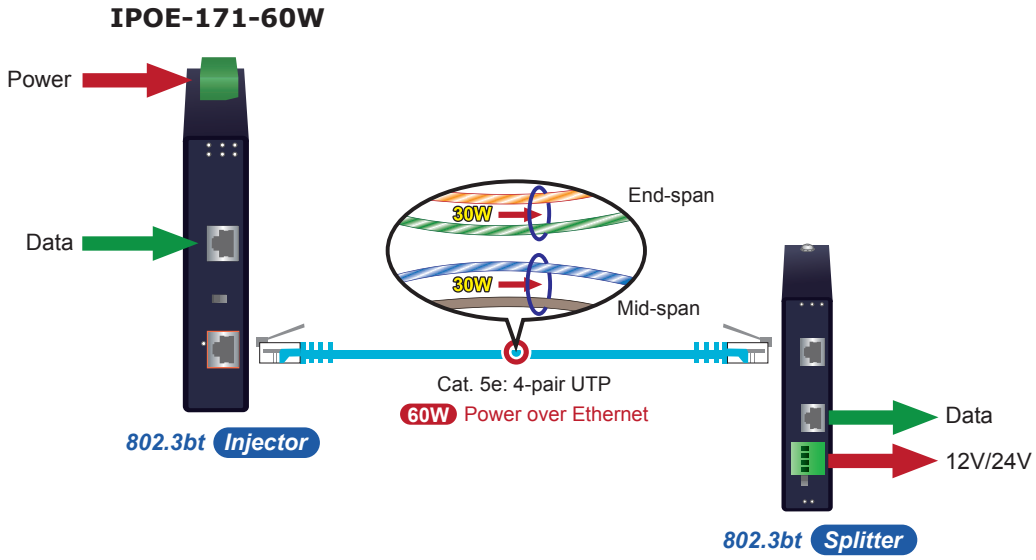
Industrial Case and Installation

- Solid wall mount or DIN-rail mount installation
- Supports 6KV DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

The IPOE-171-60W delivers the Ethernet digital data with DC power over the twisted-pair cables as a 60-watt Power over Ethernet Injector, and the connected ultra Power over Ethernet splitter, the IPOE-173S, will separate the digital data and the power into three optional outputs (12V/24V DC) with distance up to 100 meters.

60 watts of Power over 4-pair UTP

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 IPOE-171-60W provides the capability to source up to 60 watts of power by using all the four pairs of standard Cat. 5e/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)
Maximum Power delivered by PSE	15.4 watts	**30 watts**	**60 watts**
Power Available at PD	12.95 watts	**25.5 watts**	**51 watts**
Voltage Range	48V	**50~57V**	**50~57V**
Twisted-pair Used	2-pair		**4-pair**
Supported Modes	End-span or Mid-span		**End-span + Mid-span**
Supported Cabling	Cat. 3/5/5e/6/6A		**Cat. 5e/6/6A**

Intelligent LED Indicator for Power Input and Real-time PoE Usage

The IPOE-171-60W helps users to monitor the current status of power input and PoE power usage easily and efficiently via its advanced LED indication. “Power Input” allows user to know the status of power input. “PoE Power Usage” displayed on the panel of the IPOE-171-60W has three LED indicators of different power usages. Via the power usage LED, the IPOE-171-60W enables the administrator to monitor the status of the power usage of the connected PDs in real time.

Power Input and PoE Power Usage Display

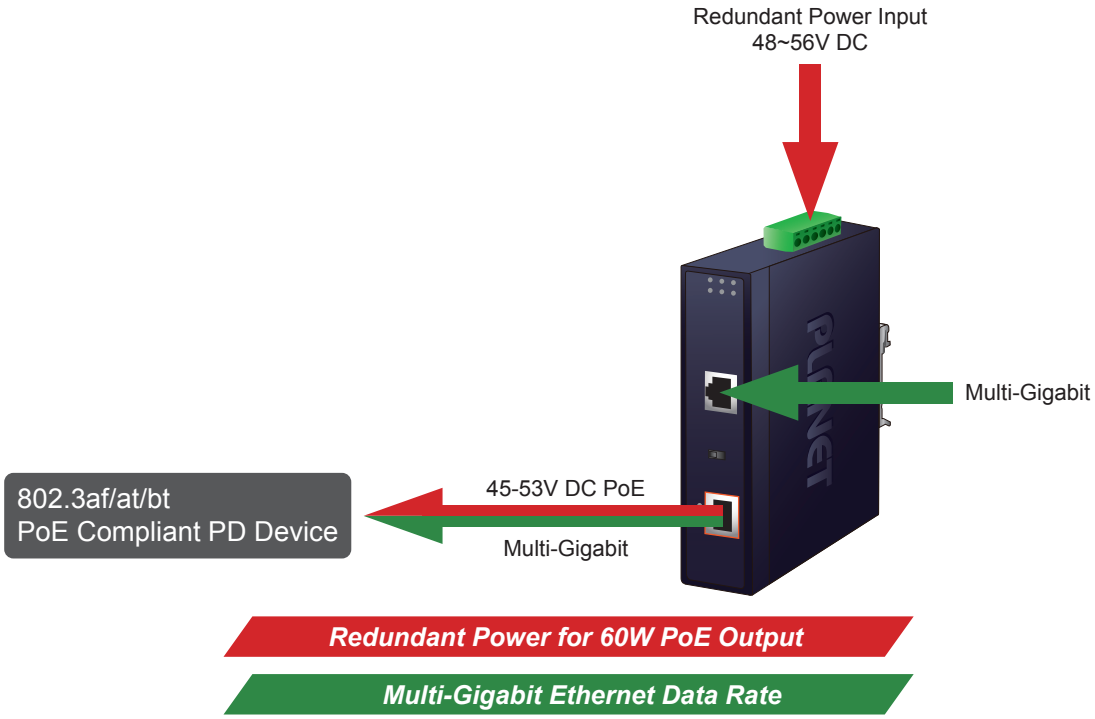


High compatibility and Compact Size Design

It is easy to install the PoE injector by way of **Plug and Play** and comes with simple troubleshooting, making it easy for industrial users to own it. Besides, the IPOE-171-60W comes in compact housing, and provides two DC redundant power inputs, two power LEDs, fault LED and PoE-in-Use LED. Two RJ45 ports -- Ethernet port and Ethernet + DC port – are on the front panel.

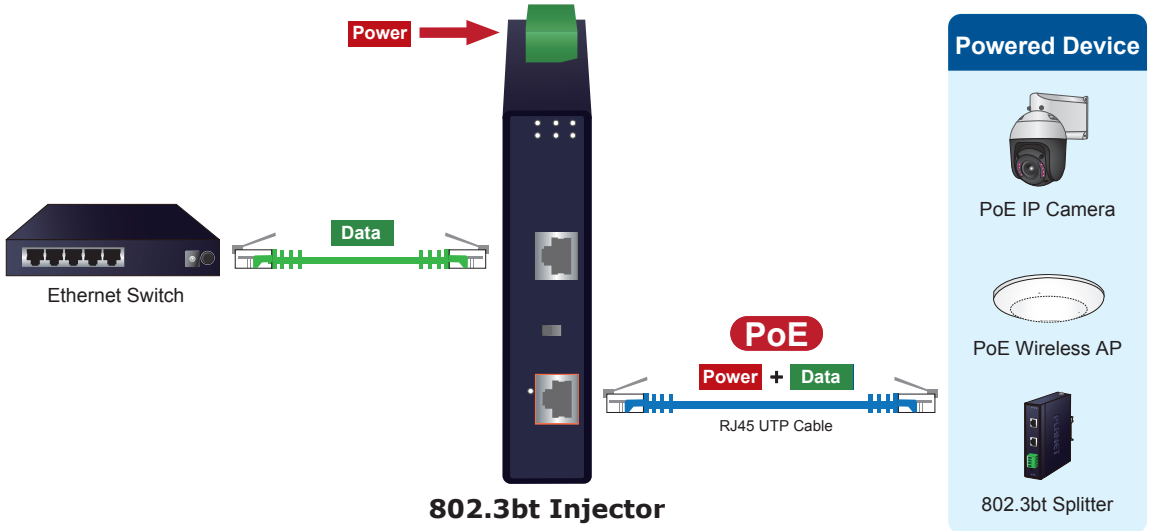
Moreover, the IPOE-171-60W, when switched to the Legacy mode and Force mode, provides power to those PD devices which do not fully follow the IEEE 802.3at/bt standard. It is helpful to enhance the compatibility of IPOE-171-60W with other PDs.

Simply plug in the Ethernet cables and DC power wire, and the IPOE-171-60W is ready to provide high-speed network communication and the 802.3bt PoE injector functions simultaneously with no need of software configuration.



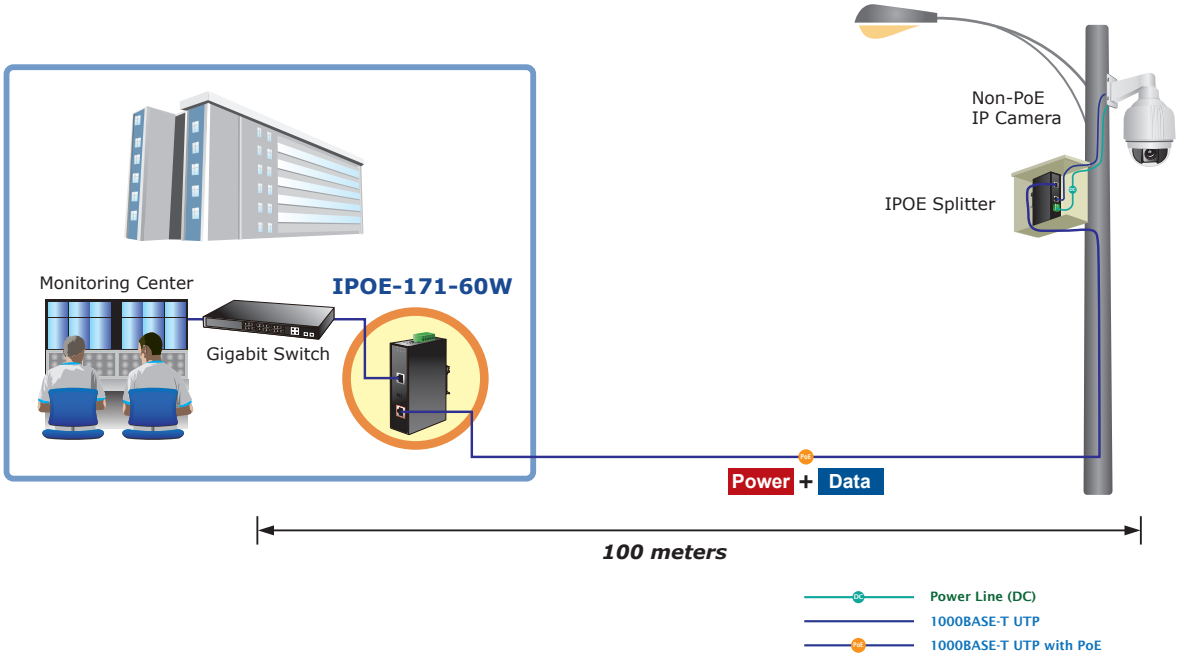
Quick and Easy Cabling Installation for PoE Network Deployment

Backward compatible with both 802.3af/at PoE standards, the IPOE-171-60W 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 IPOE-171-60W 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.



Stable Operating Performance under Difficult Environments

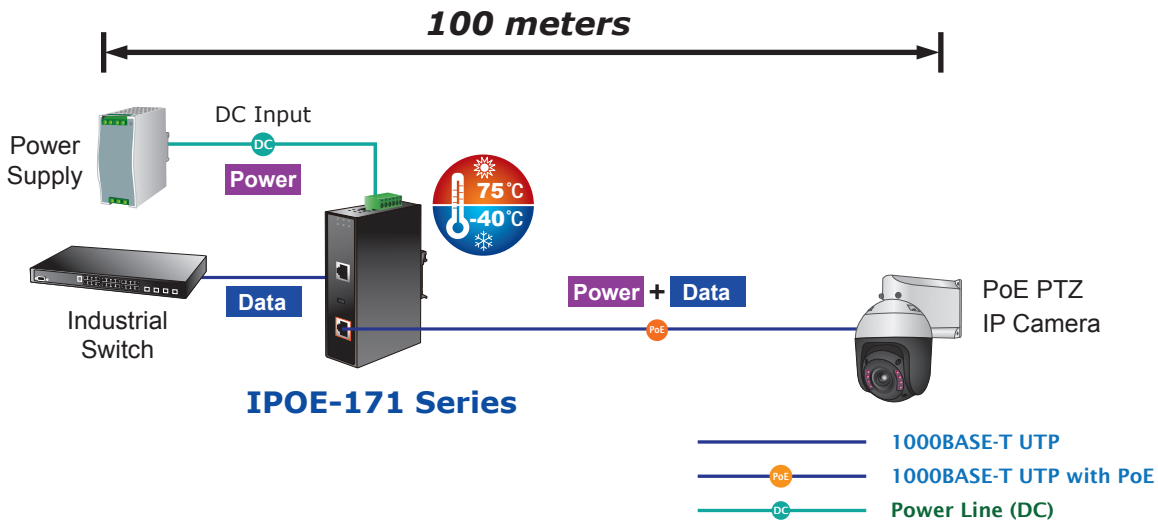
Today, the PoE demand expands from commercial applications to many critical networks in the harsh environment. The IPOE-171 series will be one of the ideal solutions that provide a high level of immunity against electromagnetic interference and heavy electrical surges typical of environments found on plant floors or in curb-side traffic control cabinets. The IPOE-171 series can operate stably under temperature range from -40 to 75 degrees C which enables the users to conveniently apply the device in almost any location of the network. The IPOE-171 series is also equipped with a compact IP30 standard metal case that allows either DIN-rail or wall mounting for efficient use of cabinet space.



Applications

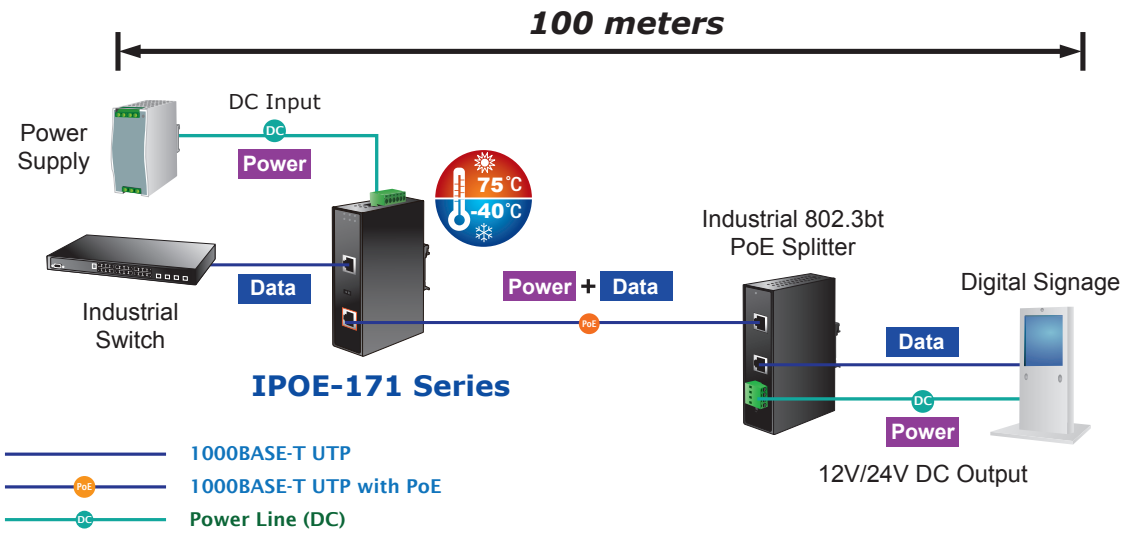
Installation of 802.3bt PoE Injector

Due to the backward capability of IEEE 802.3at PoE standard, the IPOE-171-60W can directly connect with any IEEE 802.3at end-nodes, such as PTZ (Pan, Tilt & Zoom) speed dome IP cameras, color touch-screen Voice over IP (VoIP) telephones, and multi-channel wireless LAN access points.



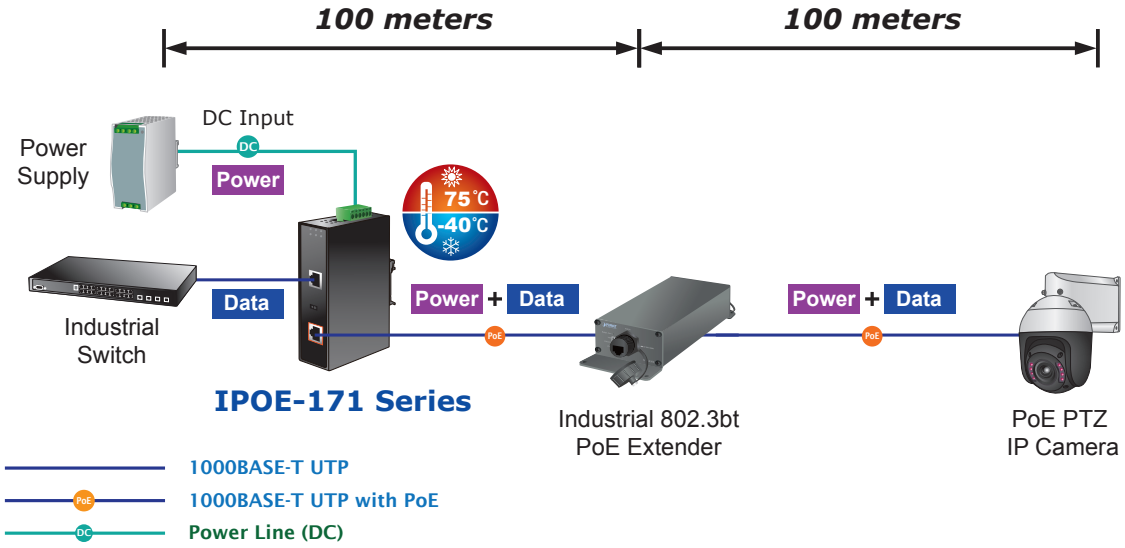
Installation of 802.3bt PoE Injector and Splitter

For a place which is hard to find the power inlet, the IPOE-171-60W and IPOE-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 IPOE-171-60W and PLANET PoE Extender, IPOE-E302, 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 IPOE-171-60W. The IPOE-171-60W 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		IPOE-171-60W
Hardware Specifications		
Interface	Input Port	1 x RJ45 STP Data In
	Output Port	1 x RJ45 STP PoE (Data + Power) Out
	Input Power Terminal Block	1
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, 6, 6A 5G: 4-pair UTP Cat. 6, 6A
LED Indicators		System: Power 1 (**Green**), Power 2 (**Green**), Fault (**Red**) PoE Port: PoE-in-Use x 1 (**Amber**) PoE Usage: PoE Usage x 3 (**Amber**)
Data Rate		10M/100M/1G/2.5G/5Gbps
ESD Protection		6KV DC
Enclosure		Metal case
Dimensions (W x D x H)		135 x 87.8 x 32 mm
Weight		430g
Power Requirements		DC 48~56V, 2A max.
Unit Output Voltage		DC 45~53V
Power Consumption		75 watts max.
No. of devices that can be powered		1
Installation		DIN-rail kit or wall-mount ear
Alarm		Provides one relay output for power failure Alarm Relay current carry ability: 1A @ DC 24V
Enclosure		IP30 slim type metal case
Power over Ethernet		
PoE Standard		IEEE 802.3at/bt PSE
PoE Power Output Budget		DC 50~53V / 60-watt PoE via 4-pair DC 45~53V / 30-watt PoE via 2-pair
PoE Power Output		Max. 60W@1 m cable Max. 51W@100m 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		Standard mode Legacy and Force mode
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/5GBASE-T IEEE 802.3bt 4-pair Power over Ethernet IEEE 802.3at Power over Ethernet Plus
Regulatory Compliance		FCC Part 15 Class A, CE
Environment		
Operating Temperature		-40 ~ 75 degrees C
Storage Temperature		-40 ~ 85 degrees C
Operating Humidity		5 ~ 90%, relative humidity, non-condensing
Storage Humidity		5 ~ 90%, relative humidity, non-condensing
Standard Accessories		
Package Contents		■ IPOE-171-60W ■ User's manual ■ Wall-mount kit ■ Dust cap

Ordering Information

IPOE-171-60W	Industrial Single-Port Multi-Gigabit 802.3bt PoE++ Injector (60 Watts, -40~75 degrees C, 48~56VDC)

Related Products

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)
IPOE-171-95W	Industrial Single-Port Multi-Gigabit 802.3bt PoE++ Injector (95 Watts, -40~75 degrees C, 12~48V DC)
IPOE-162	Industrial IEEE 802.3at Gigabit High Power over Ethernet Injector (Mid-span)
IPOE-171S	Industrial Single-Port 10/100/1000Mbps Ultra PoE Splitter
IPOE-173S	Industrial Single-Port 10/100/1000Mbps 802.3bt PoE++ Splitter
IPOE-E174	1-Port Ultra PoE to 4-Port 802.3af/at Gigabit PoE Extender
ICA-E6265	2 Mega-pixel IR PoE Plus Speed Dome IP Camera with Extended Support

PLANET Technology Corporation

11F., No.96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)

Tel: 886-2-2219-9518 Fax: 886-2-2219-9528

Email: sales@planet.com.tw www.planet.com.tw

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