Product Specifications

Industrial Ultra Power over Ethernet Splitter

IPOE-171S

Version 1.0

Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2017/1/5	Calvin Chao	Initial Release

Author:	Calvin Chao	**Editor:**	Calvin Chao
Reviewed By:		**Approved By:**	Kent Kang

1. PRODUCT DESCRIPTION

Highly Convenient and Robust Industrial Splitter

Planet IPOE-171S is an **Industrial Ultra PoE Splitter** that can separate Ethernet data and 48~56V DC over the existing UTP cable into the selectable **12V** or **24V** DC power output with distance up to 100 meters. It supports a passive **10/100/1000Mbps** Ethernet connection and is compatible with **IEEE 802.3bt Power over Ethernet** that supports up to **95-watt output power** to powered device.

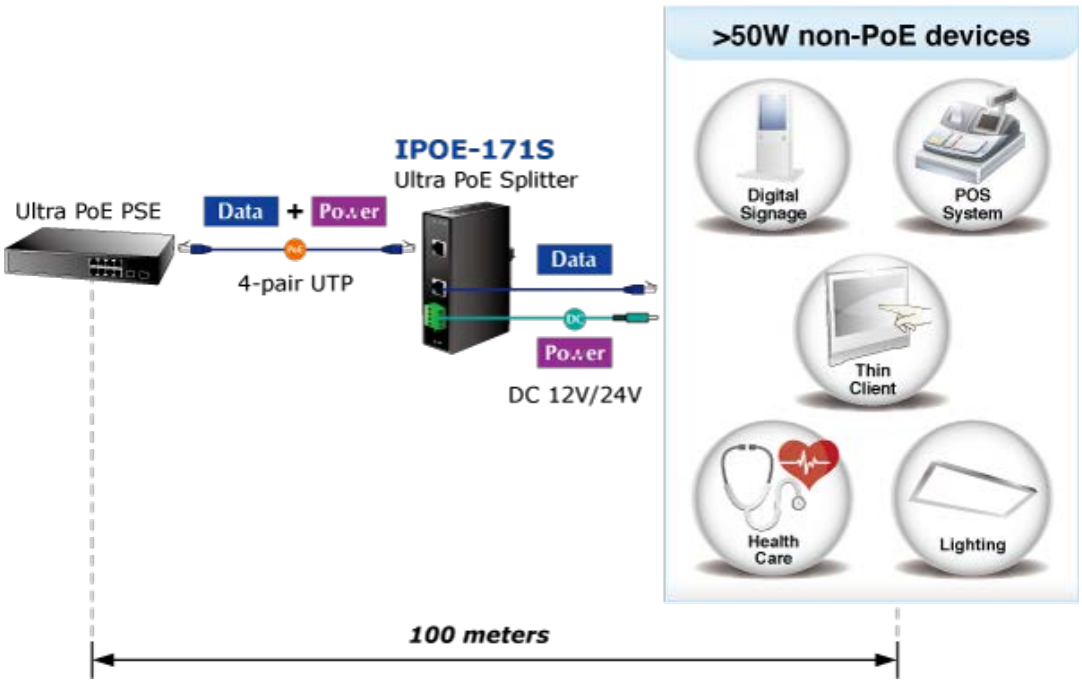
To fulfill the growing industrial applications, the IPOE-171S is designed to work under the operating temperature range from **-40 to 75 degrees C**.

The IPOE-171S is an ideal solution to transferring power to traditional network device with high power demand directly without the need to install additional power outlets and electrical cabling in the industrial environment.

Quick and Easy Ultra Power PoE Network Deployment

Many high-power required traditional Ethernet devices are not designed with PoE PD (Powered Device) capability to accept power over UTP cable. They can only get power through their DC jack while their RJ45 interfaces accept only Ethernet data. The IPOE-171S, functioned as a Ultra PoE PD(Powered Device), splits the combined data and power stream into two separate cords to offer more non-PoE applications, such as:

- POS
- AIO (All-in-One) touch PC and thin-client
- Digital signage and display tablet
- PTZ speed dome
- Other network devices that need higher power to work normally



When functioned with the IPOE-171S, these non-PoE Ethernet devices can immediately become PoE-ready without any modification required on their side. The IPOE-171S frees the device deployment from restrictions due to power outlet locations, which eliminate the costs for additional AC wiring and reduce the installation time.

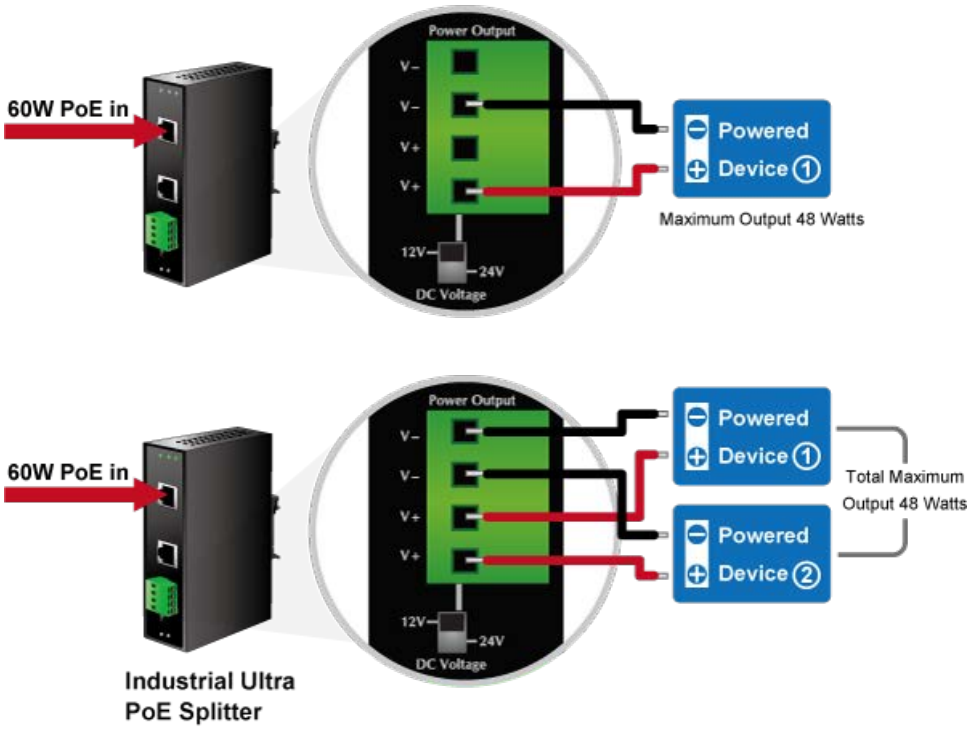
Innovative, Selectable DC Power Output Voltage

Via the innovative 12/24 volt DIP switch on the front panel, the IPOE-171S can supply either 24V DC power to industrial equipment or 12V DC output to the common network devices. It highly increases the flexibility of the product applications.

Dual Power Output Capability

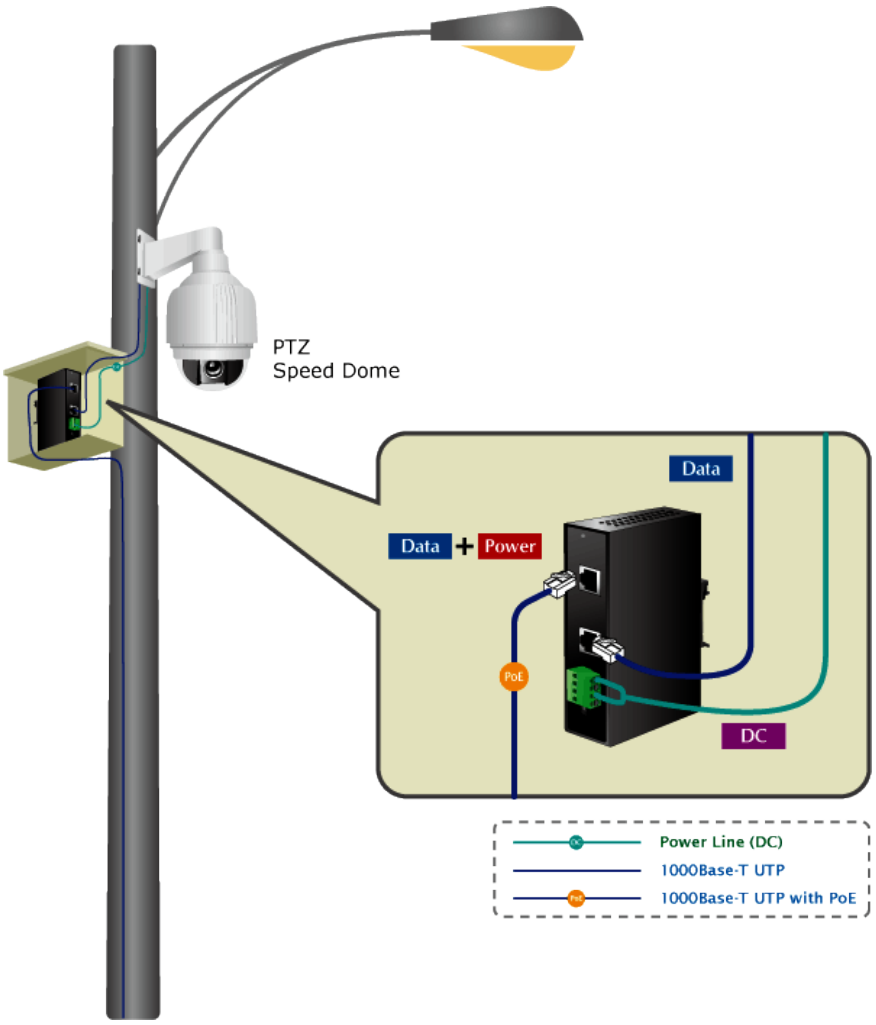
The IPOE-171S shares its 55-watt output power with not only a single power-hungry equipment but also two non-PoE Ethernet devices simultaneously through a 4-pin terminal block. For example, the two power output can be applied as shown below to completely solve the need of electric source:

- IP camera (Power 1) + Outdoor housing with fan and heater (Power 2)
- IP camera (Power 1) + Pan & Tilt motor (Power 2)
- Analog camera (Power 1) + IP video server (Power 2)



Environmentally Hardened Design

With compact, slim type IP30 industrial case protection, the space-saving Industrial Ultra PoE Splitter IPOE-171S can be placed in almost any difficult environment. It allows either DIN rail or wall mounting for efficient use of cabinet space. Being able to operate under the temperature range from **-40 to 75 degrees C**, the IPOE-171S is the ideal product for co-working with Industrial High Power Injector which can feed the power to non-PoE devices up to 100 meters (328 feet) away in those harsh environments.



2. PRODUCT FEATURES

Product Features

Interface

- 2 RJ45 interfaces
  - 1-port **Data + Power input**
  - 1-port **Data output**
- 2 DC output (4-pin terminal block)
- 1 DC 12V/24V DIP switch

Power over Ethernet

- Complies with ultra Power over Ethernet end-span and mid-span PDs
- Complies with IEEE 802.3at Power over Ethernet Plus end-span/mid-span PD
- Supports PoE input power up to 110 watts
- Splits the 50~56V DC power over RJ45 Ethernet cable into DC 12V/24V output
- Remote power feeding up to 100 meters

Hardware

- IP30 metal case protection
- DIN rail and wall mount design
- -40 to 75 degrees C operating temperature

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

PD interface controller	Microsemi PD70210	x 1
Dual MOSFET-based Bridge Rectifier	Microsemi PD70224	x 1

3.2 FUNCTION SPECIFICATIONS

Product		IPOE-171S	
Hardware Specifications			
Interface	**PoE Input Port**	1 10/100/1000 BASE-T RJ45 “PoE (Data + Power) In”	
	Data Output Port	1 10/100/1000 BASE-T RJ45 “Data Out”	
	DC Out Plug Connector	1 removable 4-pin terminal block	
	DIP Switch	12V DC/24V DC output voltage	
LED Indicator	**Power Ready**	Green	
	802.3at PoE+ In	Green	
	Ultra PoE or 802.3bt PoE in	Green	
	DC 12V	Orange	
	DC 24V	Green	
Network Cable	**Ultra PoE (60W/75W/95W)**	4-pair UTP Cat5e, 6, up to 100m (328ft)	
	802.3at PoE+	2-pair UTP Cat. 3, 4, 5, up to 100m (328ft)	
Data Rate		10/100/1000Mbps	
Dimensions (W x D x H)		32 x 87 x 135 mm	
Weight		425g	
Installation		DIN rail/wall mountable	
Enclosure		IP30 metal case	
Power Requirements		50 ~ 56V DC PoE	
Power Output (at 56V DC Input)		110-watt PoE input:	12V DC, 8A (max.) 24V DC, 4A (max.)
		75-watt PoE input:	12V DC, 4.5A (max.) 24V DC, 2.3A (max.)

Power Consumption	System on with PoE input:	3.7 watts
	Ethernet full loading without DC output:	3.7 watts
	Full loading with maximum 12V DC, 4A output:	60.2 watts
	Full loading with maximum 12V DC, 8A output:	110 watts (110-watt PoE in)
Power over Ethernet		
PoE Standard	802.3bt Type 3/Type 4 Power over Ethernet, 4-pair 802.3at PoE+ and Cisco UPOE compliant with voltage within 50V-56V DC	
Power Output	DC 12V/24V by DIP switch control	
PoE Power Supply Type	end-span + mid-span end-span mid-span	
Power Pin Assignment	1/2 (+), 3/6 (-); 4/5 (+), 7/8 (-) or 1/2(-), 3/6(+); 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 802.3at Power over Ethernet Plus IEEE 802.3af Power over Ethernet	
Regulatory Compliance	FCC Part 15 Class A, CE	
Environment		
Operating Temperature	-40~ 75 degrees C	
Storage Temperature	-40~ 85 degrees C	
Humidity	5 ~ 95% (non-condensing)	

3.3 PHYSICAL SPECIFICATIONS:

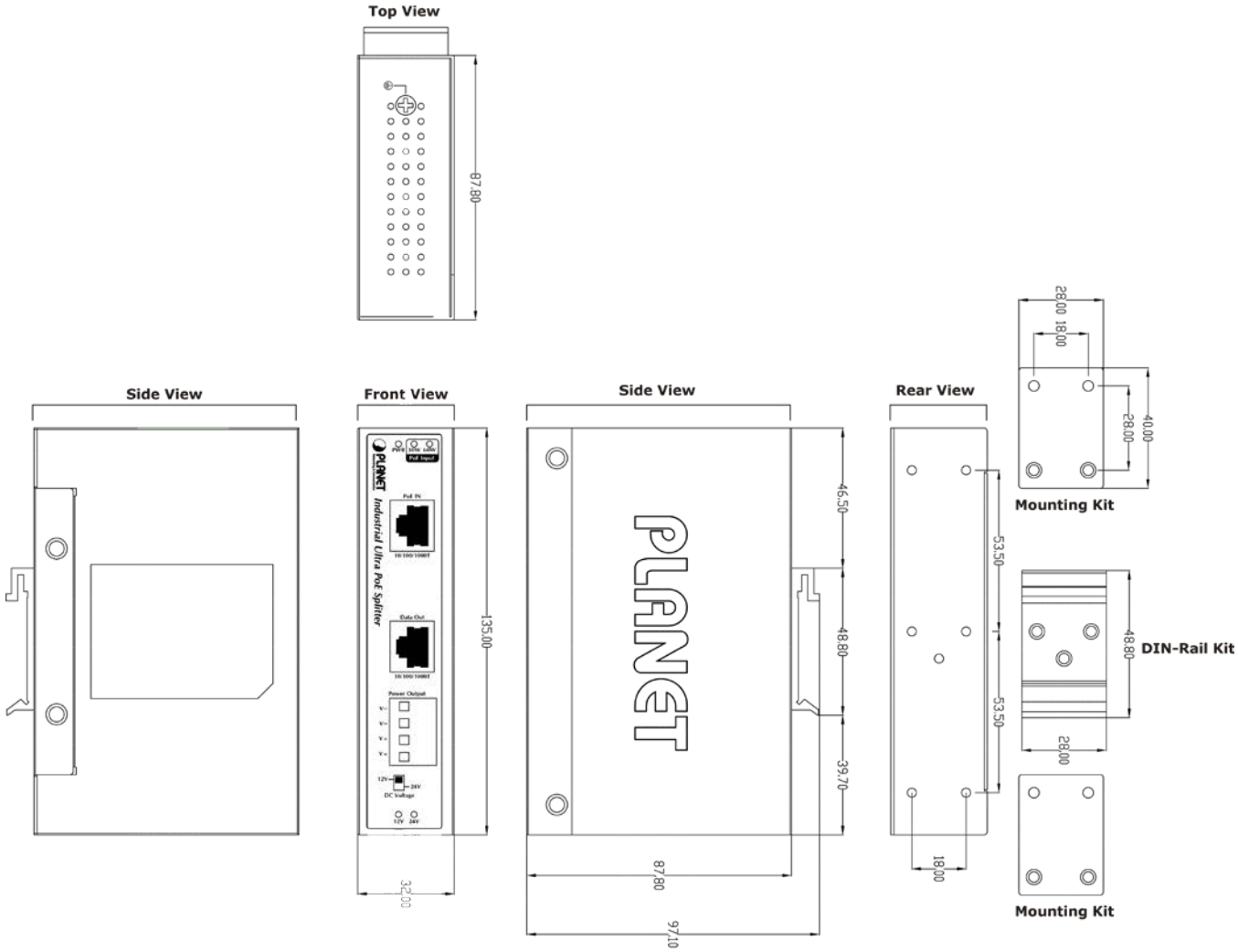
Dimensions:

32 mm x 87mm x 135 mm (W x D x H)

Weight:

425g

Physical Dimensions:



Dimensions (unit = mm)

Front Panel:

LED Definition:

■ **PWR**

LED	Color	Function
Power Ready	**Green**	**Lights** to indicate the port is receiving 50~57V DC in-line power and ready for output
30W	**Green**	**Lights** to indicate the ultra PoE splitter is working on 802.3at PoE mode
60W	**Green**	**Lights** to indicate the ultra PoE splitter is working on **Ultra PoE or 802.3bt PoE in**

■ **DC Output voltage indicator**

LED	Color	Function
12V	**Orange**	**Lights** to indicate the ultra PoE splitter's output is in 12V DC mode
24V	**Green**	**Lights** to indicate the ultra PoE splitter's output is in 24V DC mode

3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: -40 ~ 75 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

Storage:

Temperature: -40 ~ 85 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATIONS

- **Output Voltage:** 12V/ 24V DC
- **Power Consumption:**

Operation Mode	Ultra PoE input	Power Consumption
System on	60W	3.7 watts/12.69 BTU
Ethernet Full Loading without DC output	60W	3.7 watts/12.69 BTU
Ethernet Full Loading with maximum 12VDC, 4A output	60W	60.2 watts/206.55 BTU
Ethernet Full Loading with maximum 12VDC, 8A output	110W	110 watts/377.4 BTU

3.6 REGULATORY COMPLIANCE

EMI:

- FCC Part 15 Class A
- CE

Stability Testing:

- IEC60068-2-32 (free fall)
- IEC60068-2-27 (anti-shock)
- IEC60068-2-6 (anti-vibration)

3.7 BASIC PACKAGING

- The Industrial Ultra PoE Splitter x 1
- User's Manual x 1
- DIN Rail Kit x 1
- Wall Mount Kit x 1

3.9 PACKING DIMENSIONS

Dimensions:	430 (W) x 315 (D) x 264mm (H)
Weight:	TBD kg (gross weight)
Carton Unit :	20pcs in one carton