PLANET Networking & Communication

Pioneer of IP Innovation

Industrial IEEE 802.3at Gigabit High Power over Ethernet Injector

IPOE-162

www.planet.com.tw

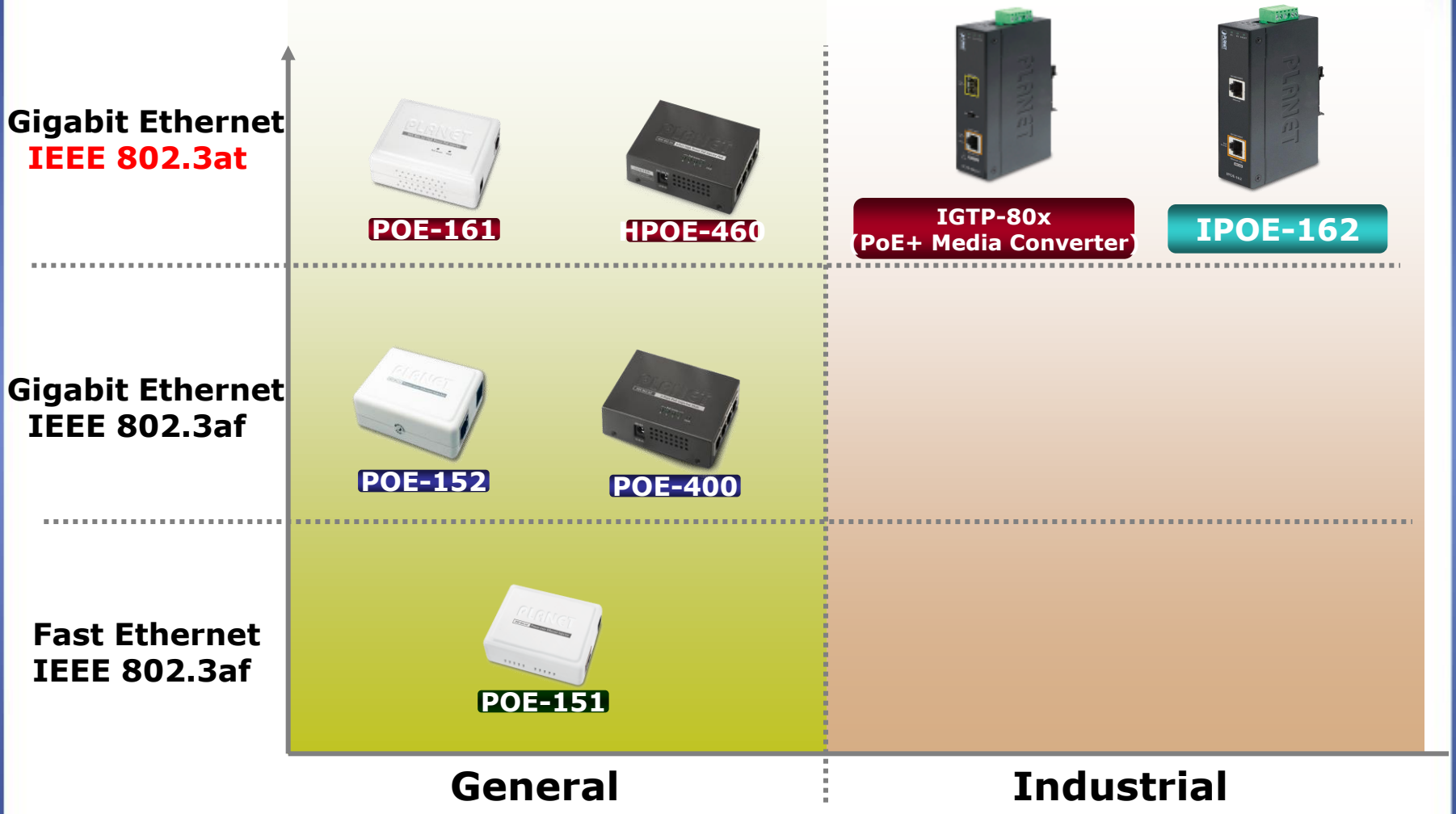
Presentation Outline

- Product Overview
- Key Features
- Product Features
- Application
- Comparison

IPOE-162

Product Overview

The PLANET PoE Injector Family



PLANET PoE Injector Comparison Table

Model	IPOE-162	POE-161	POE-152	POE-151
RJ-45 Data Input	1			
RJ-45 Data Output	1			
No. of Non-PoE device can be powered	1			
Data Rate	10/100/1000Mbps			10/100Mbps
PoE Standard	IEEE 802.3af PoE IEEE 802.3at PoE		IEEE 802.3af PoE	
Input Power	24 ~ 48V DC ,24V AC Dual Input	56V DC	48V DC	
PoE Budget	30 Watts		15.4 Watts	
PoE Output	PoE 56V DC		PoE 48V DC	
Temperature	-40 to 75 ℃	0 to 50 ℃		

Product Overview

What is PoE (Power over Ethernet) ?

- **It is based on two core networking technologies:**
  - **IEEE 802.3 / IEEE 802.3u / IEEE 802.3ab standard**
  - **IEEE 802.3at Power over Ethernet standard**
- This technology based on the global standard IEEE 802.3af and IEEE 802.3at PoE is a technology for wired Ethernet, the most widely installed local area network technology adopted today.
- PoE allows the electrical power necessary for the operation of each end-device to be carried by data cables rather than by separate power cords.
- New network applications, such as IP Cameras, VoIP Phones, and Wireless Networking, can help enterprises improve productivity.
- It minimizes wires that must be used to install the network for offering lower cost, and less power failures.

Product Overview – IPOE-162

Outlook of IPOE-162S

✓ One Terminal Block

- Redundant 24~48V DC / 24V AC power input

✓ 3 Led Indicators

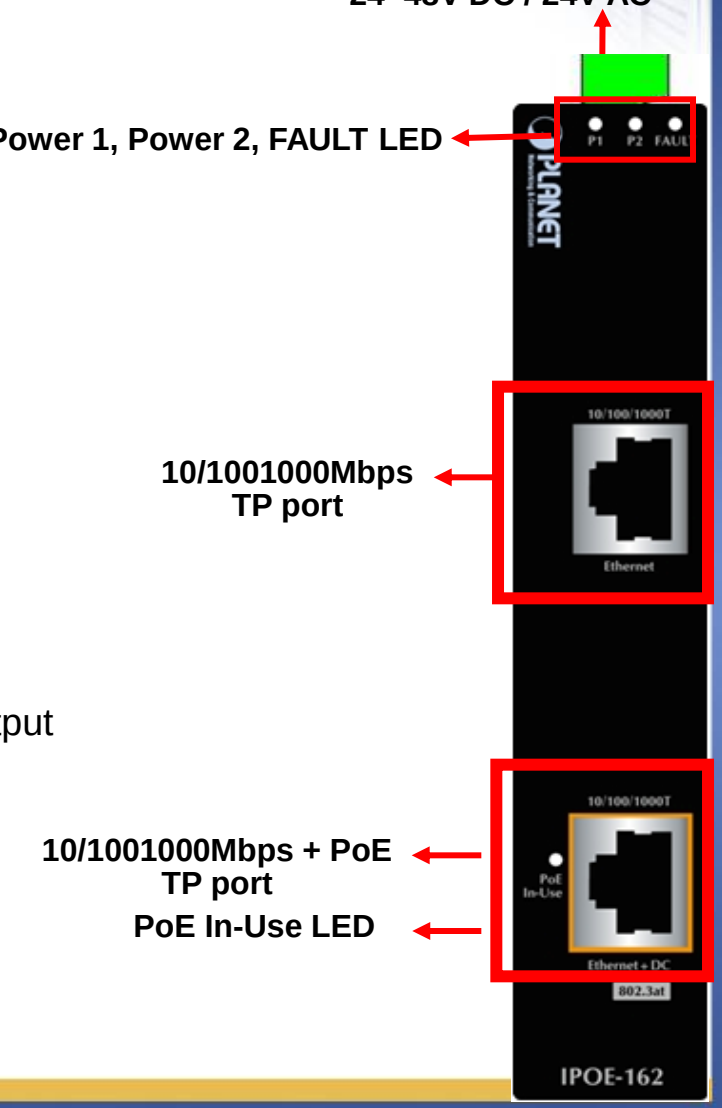
- Power 1, Power 2 and Fault

✓ Data In

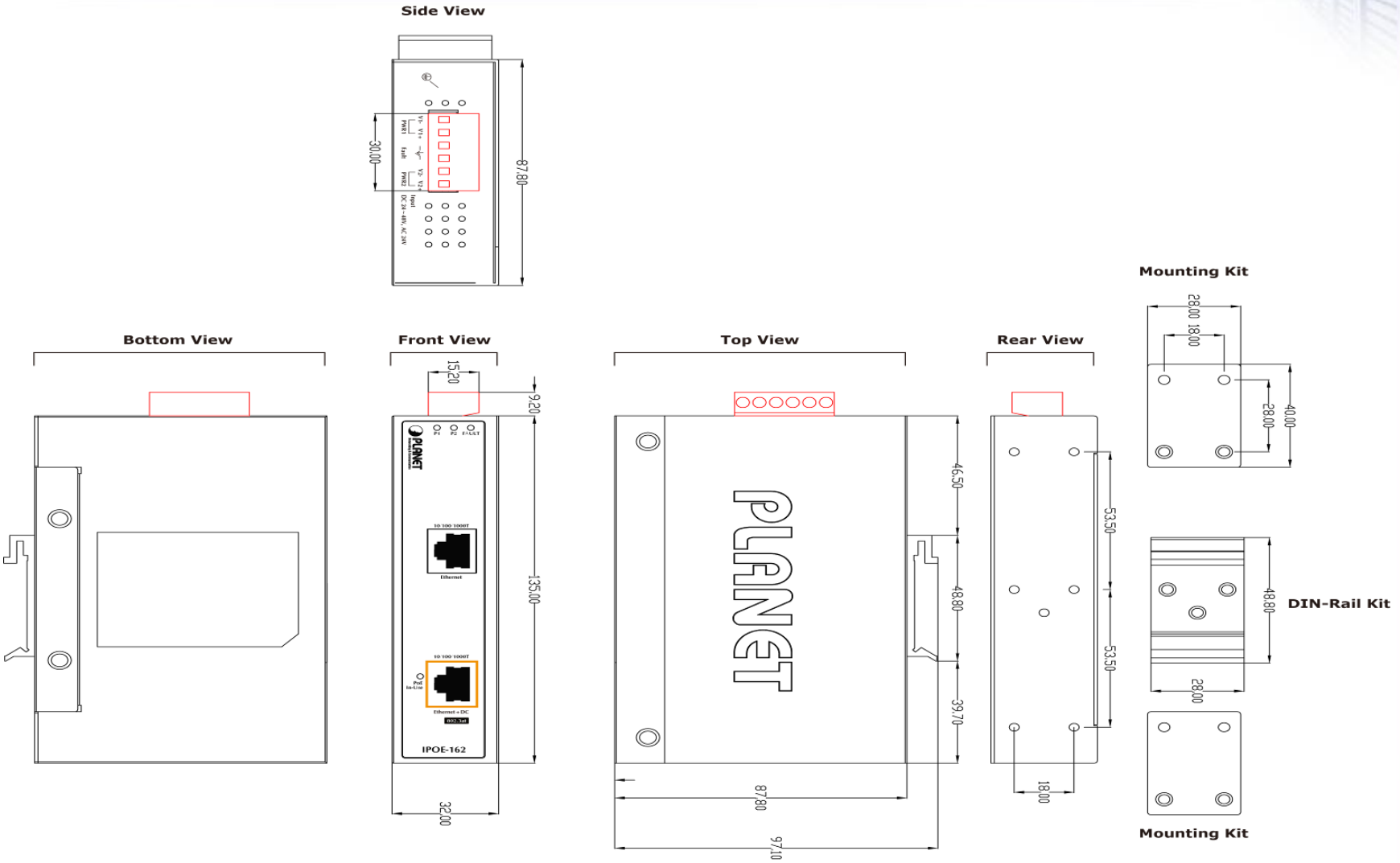
- 1 TP port 10/100/1000Mbps (Data In/Out)

✓ Power Output

- 1 TP Port 10/100/1000Mbps with 56V DC PoE Output

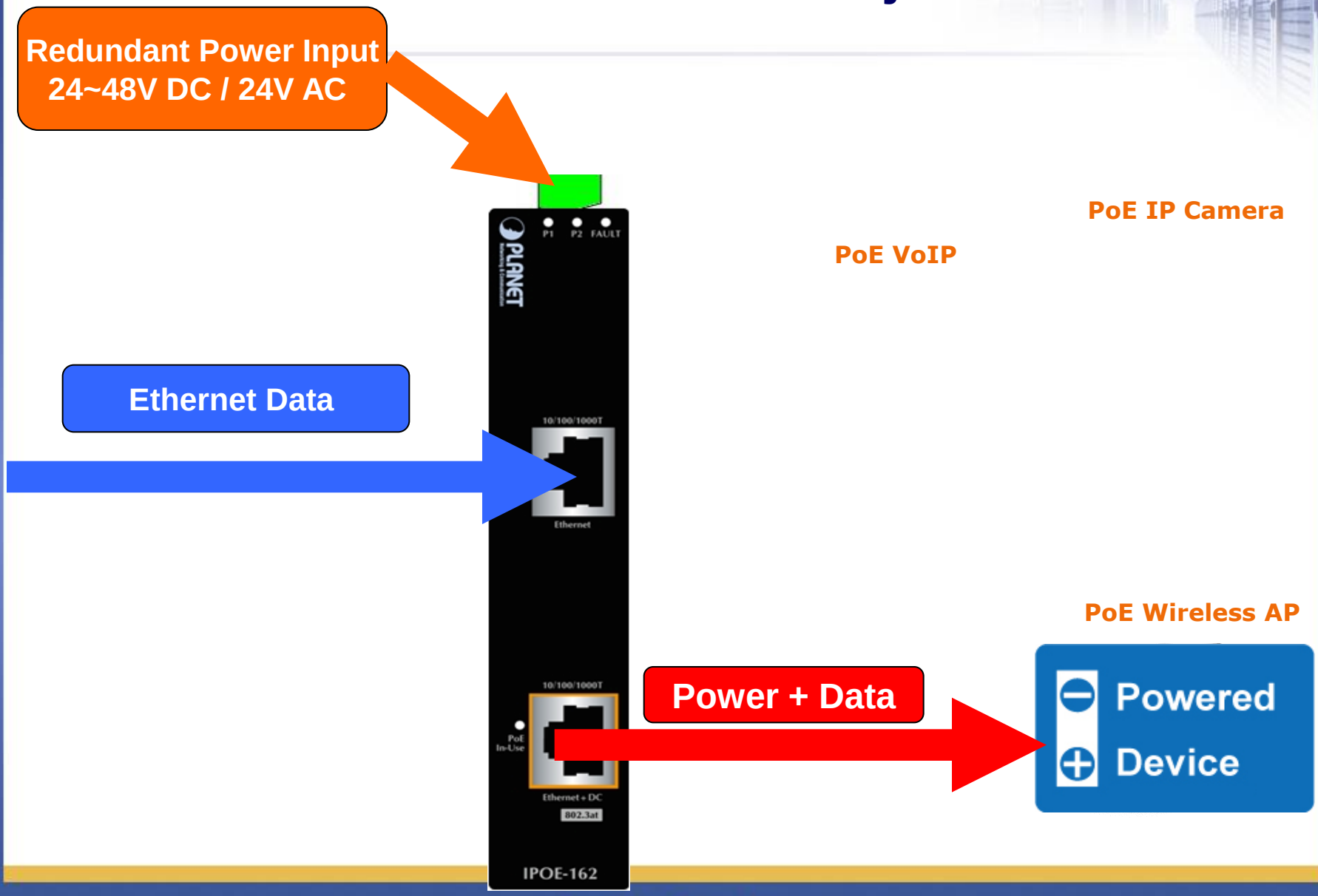


Product Overview –Three View Drawing

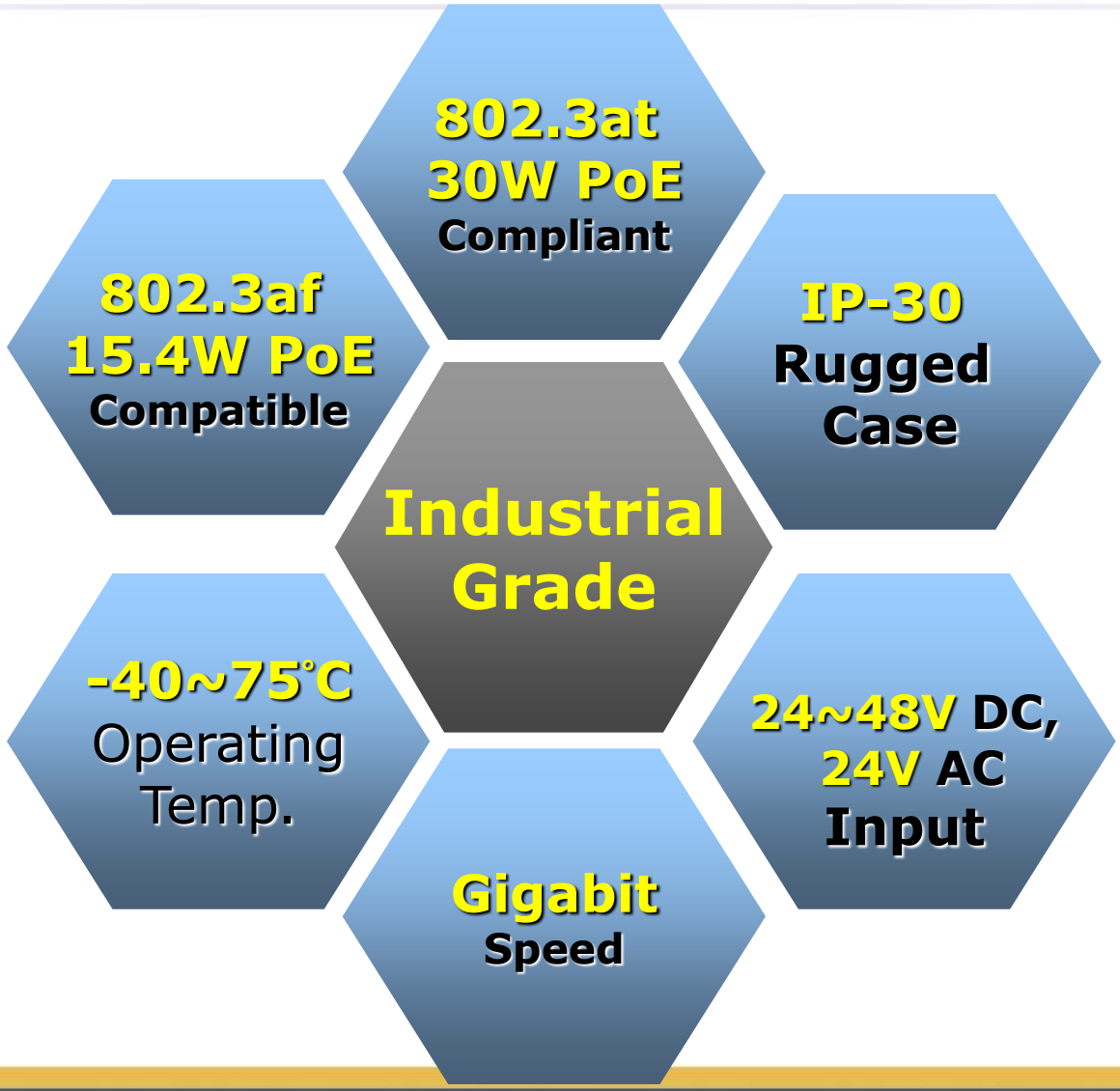


Product Overview

How does IPOE-162 PoE Injector work ?



Key Features



Product Features

Hardware

- ✓ **IEEE 802.3/ 802.3u / 802.3ab** 10/100/1000Base-T Ethernet standard
- ✓ **IEEE 802.3at** Power over Ethernet enhancement standard
- ✓ Provides **DC 56V** power over RJ-45 Ethernet cable to device with Ethernet port
- ✓ LED indicators for Power1, Power 2, Fault and PoE In-use
- ✓ Remote power feeding up to **100 meters**
- ✓ **IP30 Metal Case** / **Wall mountable / DIN Rail**
- ✓ Works with EIA568, category 5/5e/6, 2/4-pair cables for 10Base-T, 100Base-TX and 1000Base-T

Product Features

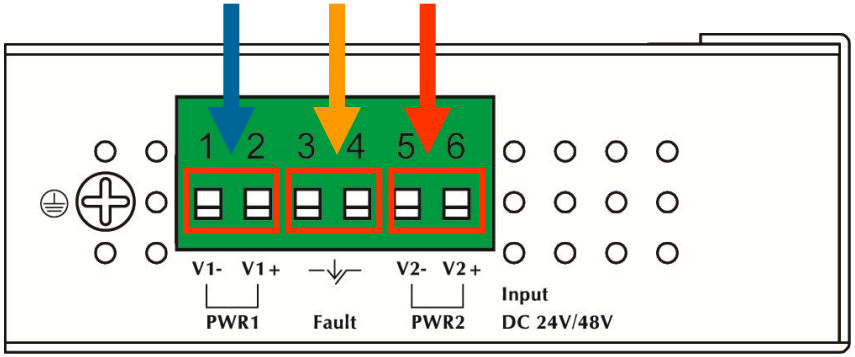
Industrial Conformance

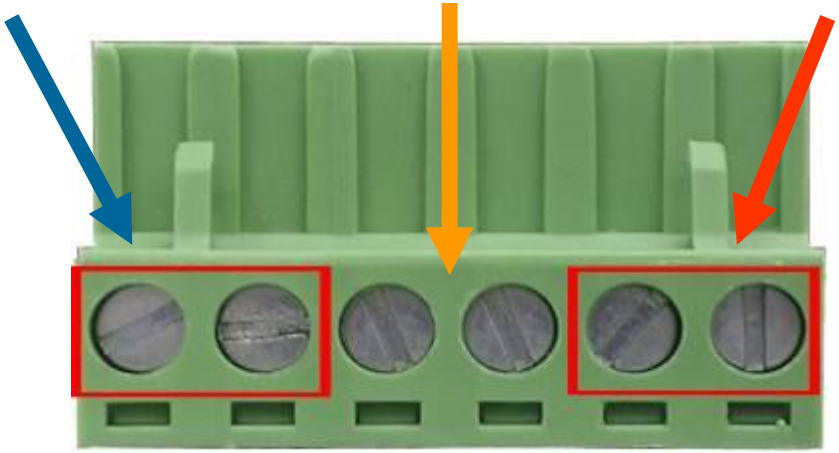
- ✓ Redundant Power Input: **24 to 48V DC / 24V AC**
- ✓ **-40 to 75** Degree C operation temperature
- ✓ **IP30 metal case**
- ✓ Stability testing with
  - **IEC60068-2-32 (Free fall)**
  - **IEC60068-2-27 (Shock)**
  - **IEC60068-2-6 (Vibration)**

Product Features

Upper Panel of IPOE-162

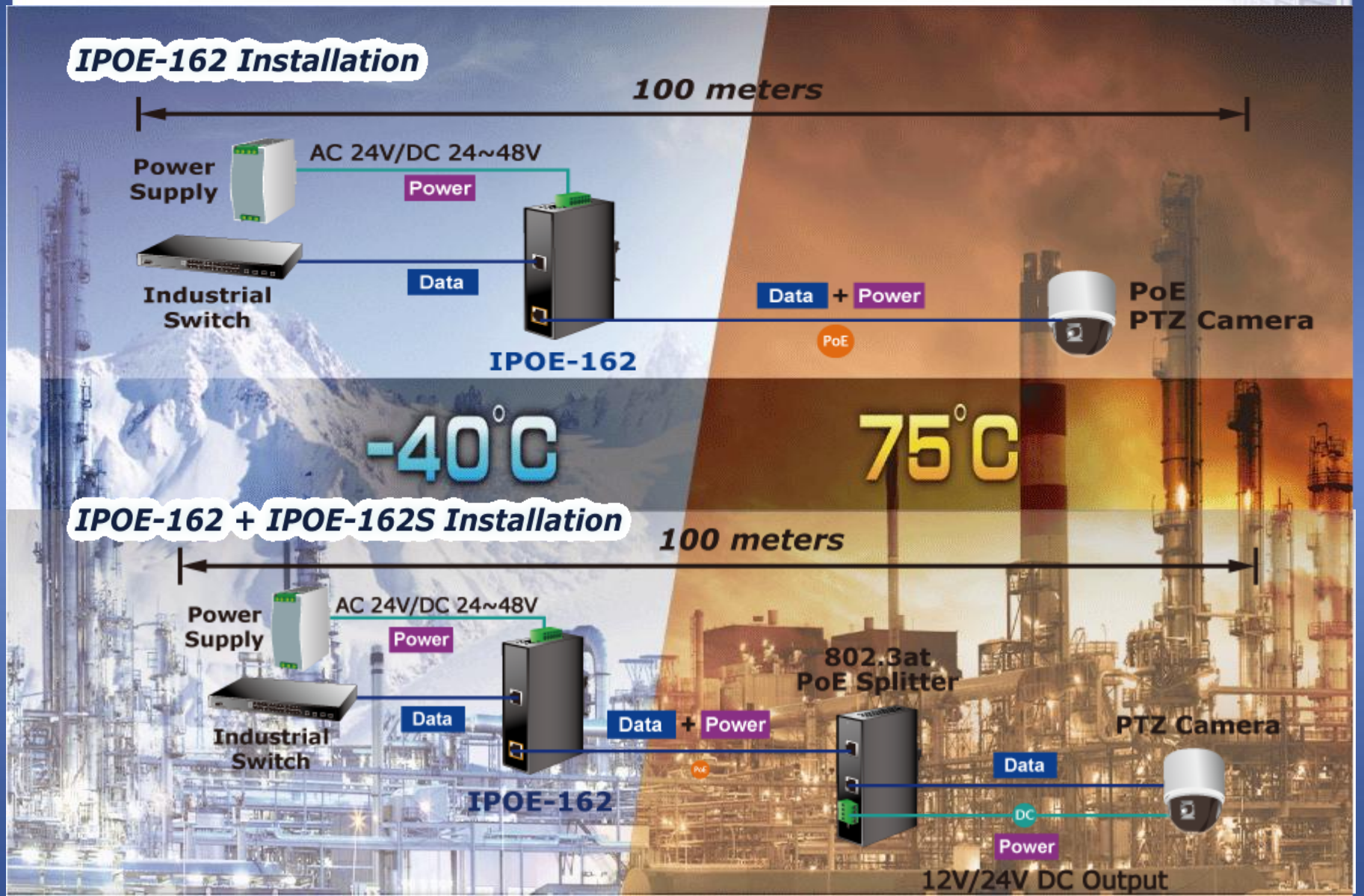
- ✓ 24 / 48V DC or 24V AC redundant power input
- ✓ Supports Real-Time Power Fault Relay Alarm



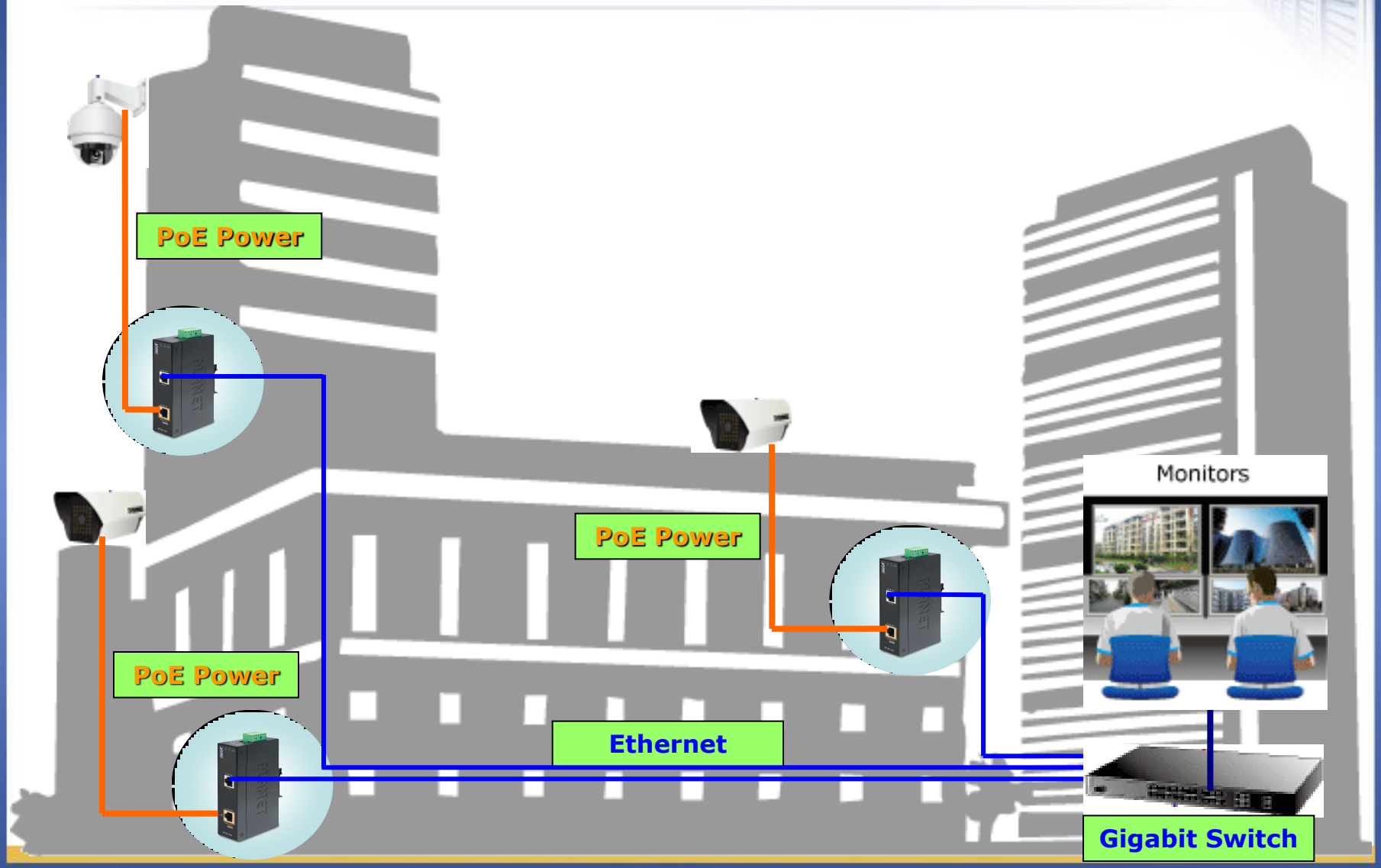


1	2	3	4	5	6
Power 1		Fault		Power 2	
-	+			-	+

Application

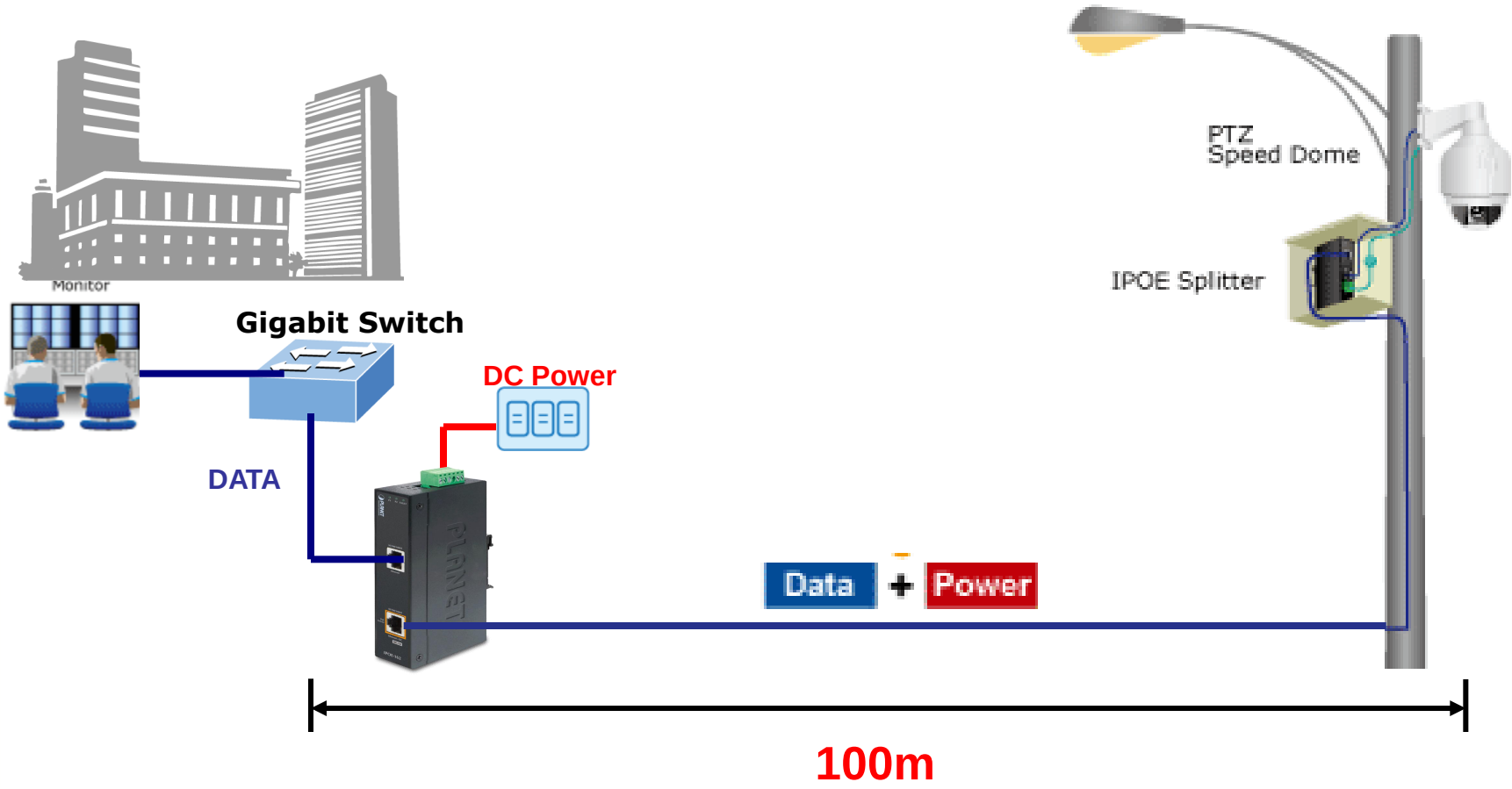


Application-Standalone



Application

The IPOE-162 can connect with IPOE-162S / POE-162S Splitter



Product Comparison

Brand	PLANET	Microsens	MOXA
Model Name	**IPOE-162**	**MS655033X**	**INJ-24-T**
Product outlook			
Hardware Specification			
Enclosure	IP30 Metal Case	IP30 Metal Case	IP30 Plastic Case
Mounting	DIN Rail / Wall mounting	DIN Rail	DIN Rail / Wall mounting
Dimension (W x D x H)	135 x 87.8 x 32 mm	140 × 95 × 30 mm	100 x 86.2 x 24.9 mm
Weight	421g	432g	115g
Ethernet connector	2 x RJ-45 (1 for Data + DC in, 1 for Data out)	2 x RJ-45 (1 for Data + DC in, 1 for Data out)	2 x RJ-45 (1 for Data + DC in, 1 for Data out)
Data Rate	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps
Power Input	Dual 24~48VDC or 24VAC	Dual 24~48VDC	24~48VDC
Power Connector	1 x 6-Pin Terminal Block	1 x 6-Pin Terminal Block	1 x 3-Pin Terminal Block
LED	Power 1, Power 2, Fault (Green) PoE In-Use (Green)	Power 1, Power 2, PoE	System Power, PoE
Ethernet Data Rate	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps

Product Comparison

Power over Ethernet Specification			
PoE Standard	IEEE 802.3af / 802.3at	IEEE 802.3af / 802.3at	IEEE 802.3af / 802.3at
PoE Power Output	56VDC / 30 Watts	? / 30 Watts	? / 30 Watts
PoE Power supply Type	Mid-Span PSE	End-Span PSE	Mid-Span PSE
Power Pin Assignment	4/5(+), 7/8(-)	1/2(+), 3/6(-)	4/5(+), 7/8(-)
Number of Device can be powered	1	1	1
Standard			
Ethernet Standard	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at PoE Enhancement Standard	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at PoE Enhancement Standard	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at PoE Enhancement Standard
Operating environment	-40~75 Degree C	-40~75 Degree C	-40~75 Degree C
Storage environment	-40~85 Degree C	-40~85 Degree C	-40~85 Degree C
Shock	IEC60068-2-27	NA	IEC60068-2-27
Freefall	IEC60068-2-32	NA	IEC60068-2-32
Vibration	IEC60068-2-6	NA	IEC60068-2-6
Protection	ESD: 6KV EFT: 6KV	ESD and EFT	ESD: 6KV EFT: 6KV
Emission	FCC Part 15 Class A, CE	CE LVD	FCC Part 15 Class B, CE, UL

Appendix - Sales Target

Target Markets

- ✓ Tender Market (Public construction)
- ✓ System Integrator
- ✓ IE Distributor
- ✓ Manufactory
- ✓ Transportation

Target Customers

- ✓ **Who needs wide operating temperature PoE solution?**
- ✓ **Who buys PLANET Industrial PoE produce**
  - ISW-5x4PT series / ISW-1022MPT / IVC-2004PT / ISW-5x4PS series
- ✓ **Who buys PLANET PoE+ Switch / Injector Hub / Injector**
  - SGSW-24040HP / HPOE-1200G / HPOE-2400G / POE-161
  - GSD-808HP / GSD-808HP2 / WGSD-10020HP / WGSW-2620HP
- ✓ **Who buys PLANET PoE+ Splitter**
  - POE-162S, IPOE-162S

Appendix

Available DIN-Rail Power Supply:

- ✓ **PWR-40-24** 40W 24V DC Industrial DIN Rail Power Supply (-20 ~ 70 Degree C)
- ✓ **PWR-60-24** 60W 24V DC Industrial DIN Rail Power Supply (-20 ~ 70 Degree C)
- ✓ **PWR-75-24** 75W 24V DC Industrial DIN Rail Power Supply (-10 ~ 60 Degree C)
- ✓ **PWR-120-48** 120W 48V DC Industrial DIN Rail Power Supply (-10 ~ 60 Degree C)
- ✓ **PWR-240-48** 240W 48V DC Industrial DIN Rail Power Supply (-10 ~ 60 Degree C)

Appendix

Related Products:

✓ PLANET IEEE 802.3at Power over Ethernet Adapter

- **POE-161** IEEE 802.3at Power over Ethernet Injector (10/100/1000Mbps)
- **POE-162S** IEEE 802.3at Power over Ethernet Splitter- 12V / 24V
- **IPOE-162S** Industrial IEEE 802.3at Power over Ethernet Splitter- 12V / 24V

✓ PLANET IEEE 802.3at Power over Ethernet Inject Hub

- **HPOE-460** 4-Port Gigabit 802.3at PoE Injector Hub
- **HPOE-1200G** 12-Port Gigabit 802.3at PoE Injector Hub
- **HPOE-2400G** 24-Port Gigabit 802.3at PoE Injector Hub

✓ PLANET IEEE 802.3at Power over Ethernet Media Converter

- **GTP-80x series** 1000Base-X to 10/100/1000Base-T 802.3at PoE Media Converter
- **IGTP-80xT series** 1000Base-X to 10/100/1000Base-T 802.3at Industrial Media Converter

Appendix

Relative PoE Product:

✓ POE Extender

- ✓ **POE-E201** IEEE 802.3at Power over Ethernet Extender

PoE IP Camera

PoE Extender

Activating IP Power