IEEE 802.3at High Power over Ethernet Injector

POE-163 / POE-164

802.3at
Mid-span
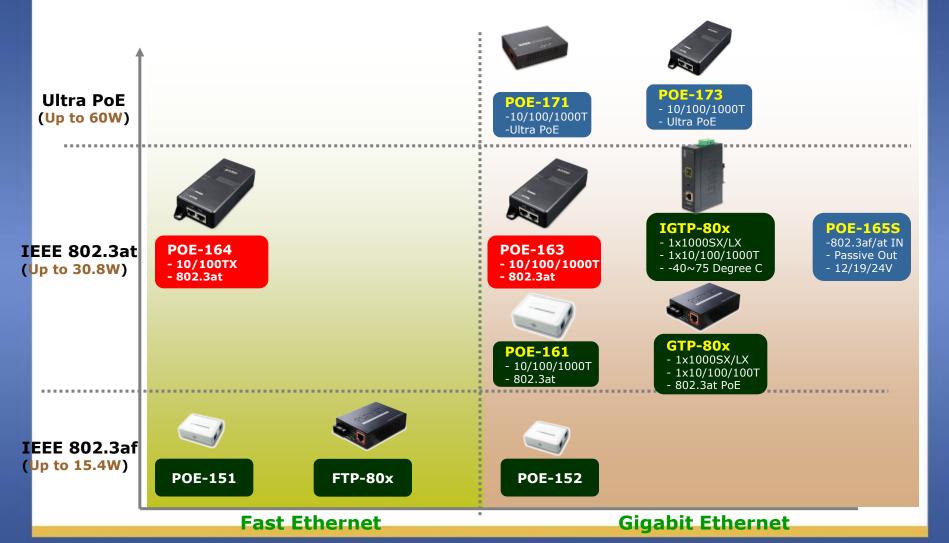802.3af

30W
PoE

10M/100M
1000M

PoE

Plug & Play

Wall
mountable

Presentation Outlines

- **Product Overview**

- **Product Benefits**

- **Product Features**

- **Applications**

- **Appendix**

Compact Size, Plug & Play

Product Overview

◆ **The PLANET** **Single-Port PoE Injector** **Family**

Ultra PoE
(Up to 60W)

POE-171
-10/100/1000T
-Ultra PoE

POE-173
- 10/100/1000T
- Ultra PoE

IEEE 802.3at
(Up to 30.8W)

POE-164
- 10/100TX
- 802.3at

POE-163
- 10/100/1000T
- 802.3at

IGTP-80x
- 1x1000SX/LX
- 1x10/100/1000T
- -40~75 Degree C

POE-165S
-802.3af/at IN
- Passive Out
- 12/19/24V

POE-161
- 10/100/1000T
- 802.3at

GTP-80x
- 1x1000SX/LX
- 1x10/100/100T
- 802.3at PoE

IEEE 802.3af
(Up to 15.4W)

POE-151

FTP-80x

POE-152

Fast Ethernet

Gigabit Ethernet

Product Overview

PLANET PoE Injector Comparison Table

Model	POE-161	POE-163	POE-164
RJ-45 Data Input	1	1	1
RJ-45 "Data + Power" Output	1	1	1
Data Rate	10/100/1000Mbps	10/100/1000Mbps	10/100Mbps
PoE Standard	IEEE 802.3at IEEE 802.3af	IEEE 802.3at IEEE 802.3af	IEEE 802.3at IEEE 802.3af
Input Power	56V DC	100-240V AC 50/60Hz	100-240V AC 50/60Hz
PoE Budget	30.8 watts	30.8 watts	30.8 watts
PoE Output	PoE 56V DC	PoE 53V DC	PoE 53V DC
Temperature	0 to 50 ℃	0 to 50 ℃	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 High 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

◆ **Outlook of POE-163 / POE-164**

   ✓ **One AC Power Input Socket**

- 100-240V AC, 50/60Hz, 0.75A power requirement

   ✓ **2 LED Indicators**

- System: Power x1, Green
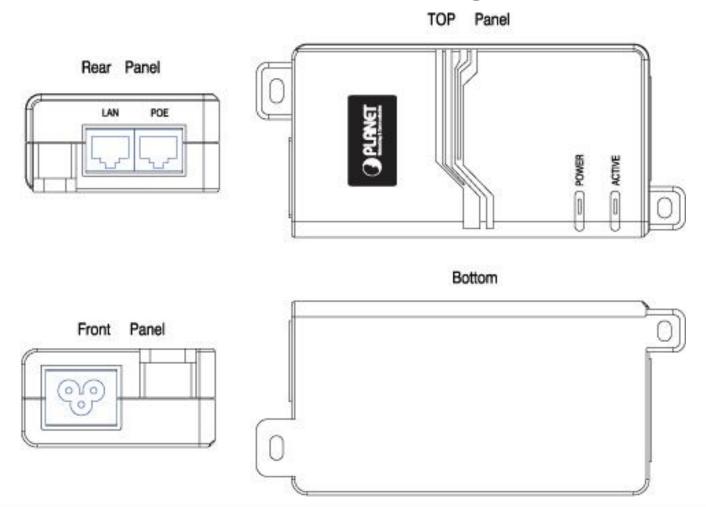- PoE Port: Active (PoE ready / In-Use) x1, Green

   ✓ **One LAN Port**

- POE-163: 1 TP port 10/100/1000Mbps (Data In/Out)
- POE-164: 1 TP port 10/100Mbps (Data In/Out)

   ✓ **One PoE Output Port**

- 1 PoE TP Port with 53V DC PoE Power Output

Product Overview

Three View Drawing

Product Benefits

◆ **PoE with High Power, Security, Stability and Easy Installation Features**

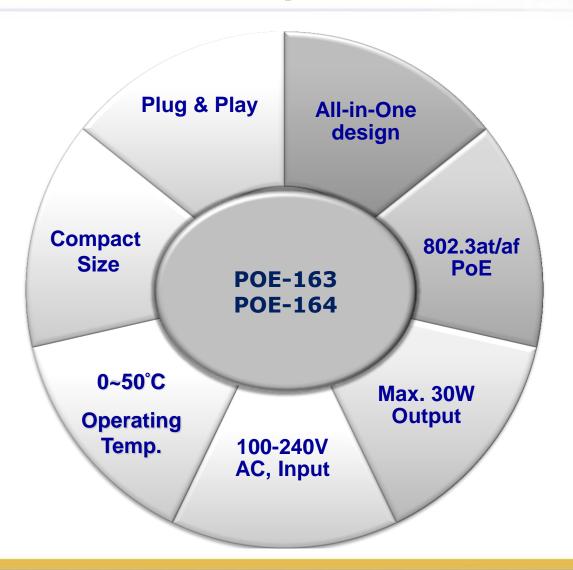| System Integrator /SMB	Home and SOHO Users
▶ IEEE 802.3at / 802.3af Power over Ethernet Plus Compliant	
▶ Reduced installation costs	
▶ 30-watt Power Output	▶ Compact size, internal power supply
▶ 10/100/1000Mbps Data Rate	▶ Plug and Play, easy installation
▶ Extends distance with PoE Extender	

Product Benefits

◆ **Compact size, all-in-one design**

◆ **Simple installation**

◆ **Plug and Play**

STEP 2

Connect the UTP cable to PD

POE-163

100~240V AC

Power

Data **+** Power

RJ-45 UTP Cable

Powered Device

PoE IP Camera

PoE Wireless AP

Data

Power

PoE Splitter

STEP 3

Plug in the power cable

Data

10/100/1000Mbps Ethernet Switch

STEP 1

Connect the UTP cable to switch or router

POWER ACTIVE

Product Key Features

Central hub: **POE-163 POE-164**

- Plug & Play
- All-in-One design
- Compact Size
- 802.3at/af PoE
- 0~50°C Operating Temp.
- 100-240V AC, Input
- Max. 30W Output

Product Features

◆ Hardware

- ✓ 2-Port RJ-45 interfaces

  - • 1-Port Data + Power output

  - • 1-Port Data input

- ✓ 1 AC 100-240V input power socket

- ✓ Plastic Case / Wall Mountable

- ✓ Internal Power Supply Designed

- ✓ LED indicators for Power LED and Active LED (PoE ready / In-use)

Product Features

◆ Power over Ethernet

- ✓ **IEEE** 802.3af / 802.3at **Power over Ethernet Mid-Span PSE**
- ✓ 1 **Ethernet copper port with built-in** PoE **injector**
- ✓ 53V DC, 30-watt **PoE power output**
- ✓ 30-watt **PoE Power Budget**
- ✓ Auto detects **powered device and consumption levels**
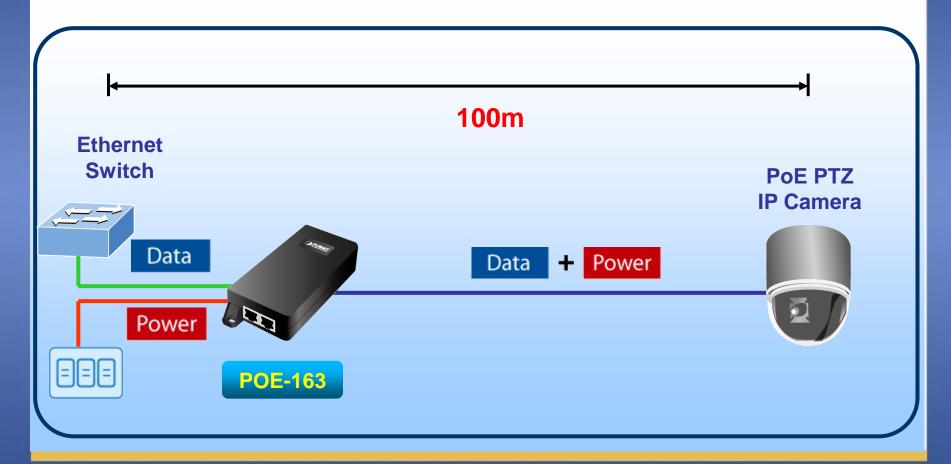- ✓ **Remote power feeding up to** 100m

Model		POE-163 / POE-164
PoE Budget		30 watts
PoE Ability	Class 1 PD, <3.8W	1
	Class 2 PD, <6.5W	1
	Class 3 PD, <12.9W	1
	Class 4 PD, 25W	1
Input Power		100-240V AC, 50/60Hz, 0.75A

Applications

◆ **Connecting to IEEE 802.3at/af Compliant Devices**

✓ Because of having the capability of **IEEE 802.3at / 802.3af Power over Ethernet**, the POE-163 and POE-164 series can directly connect with any IEEE 802.3at / 802.3af end-nodes which support IEEE 802.3at / 802.3af In-line Power over Ethernet port, such as:

■ **PTZ (Pan, Tilt & Zoom) network cameras**

■ **PTZ Speed Dome**

■ **Color touch- screen Voice over IP (VoIP) telephones**

■ **Multi-channel wireless LAN access points**

Applications

- **Single-Port PoE Injector**
  - ✓ **Standalone to Edge/CPE PoE device**

100m

Ethernet Switch

Data

Power
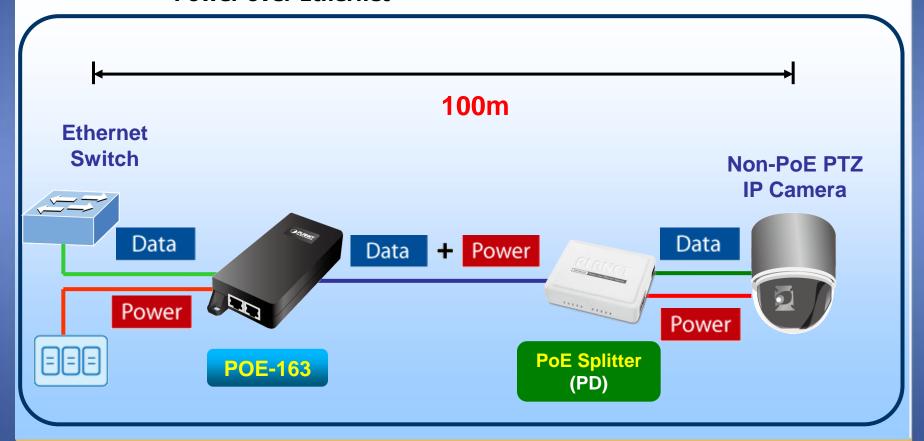
POE-163

Data + Power

PoE PTZ IP Camera

Applications

◆ **The IEEE 802.3at Injector and Splitter Installation**

✓ For remote non-PoE compliant Ethernet devices to enjoy convenience of Power over Ethernet, the POE-163 / POE-164 series and PoE Splitter operate as a pair to provide the easiest way to power your Ethernet devices which need high power input.

✓ For example, the POE-163 / POE-164 series delivers the Ethernet digital data with power over the twisted pair cable. When connected to PLANET POE-162S (IEEE 802.3at PoE+ splitter), the POE-162S will divide the digital data and the power into two selectable DC outputs (**12V D**C / **24V DC**) to non-PoE Ethernet device.

Applications

◆ **PoE Injector + PoE Splitter**

✓ **Help non-PoE network equipment to enjoy the convenience of Power over Ethernet**

100m

Ethernet Switch

Data

Power

POE-163

Data **+** Power

Non-PoE PTZ IP Camera

Data

Power

PoE Splitter (PD)

Applications

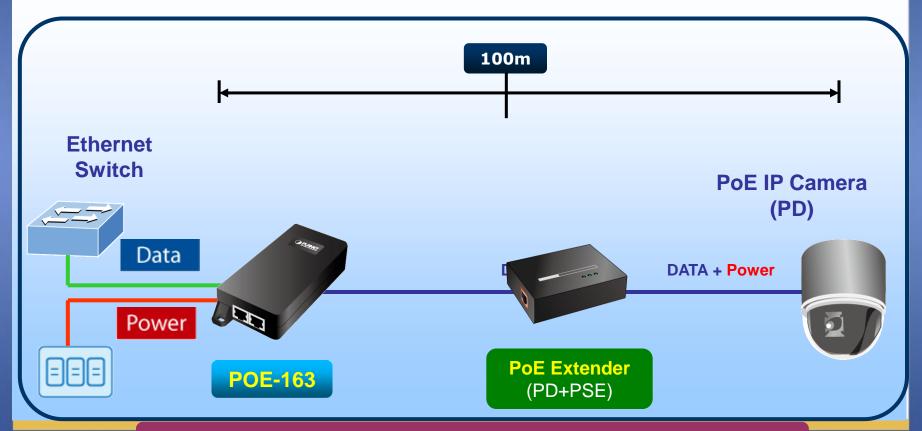◆ **The IEEE 802.3at Injector and PoE Extender Installation**

✓ 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-163 / POE-164 series and PLANET PoE Extender - POE-E201 - 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-163 / POE-164 series . The POE-163 / POE-164 series delivers PoE power over the first 100 meters to the PoE Extender over UTP cable, and then the PoE Extender forwards the Ethernet data and remaining POE power to the remote PoE IP camera.

PoE PSE (Power Source Equipment)

◆ **PoE Extender** (or PoE Repeater)
- ✓ **Extends both Ethernet data and PoE from the standard 100m UTP cable to 200m, 300m, 400m and maximum 500m.**
- ✓ **No additional power supply required**

100m

Ethernet Switch

Data

Power

POE-163

PoE Extender (PD+PSE)

DATA + **Power**

PoE IP Camera (PD)

The best combination for long distance power solution

Appendix Sales Target

◆ **Target Markets**

- ✓ **SMB IP Communication Office**

- ✓ **System Integrator / Service Provider**

- ✓ **IP Surveillance Integrator**

- ✓ **Wireless / VoIP Service Provider**

- ✓ **Hotel / Internet Cafe / Home & SOHO Users**

◆ **Profitable Products**

- ✓ **The following PLANET PoE PDs are potential to all customers:**
    - PoE IP surveillance: ICA-107P, ICA-HM835, ICA-HM136, ICA-HM351
    - PoE VoIP Phone / ATA: VIP-254PT, VIP-255PT, VIP-361PE, VIP-256PT
    - PoE Wireless AP : WNAP-C3220, WNAP-3000PE, WAP-7500
    - PoE Splitter: POE-151S, POE-152S, POE-162S
- ✓ **802.3at High Power PoE Switch / Injector Hub**
    - GSD-808HP2, WGSD-10020HP, WGSW-20160HP
    - SGSW-24040HP
    - HPOE-1200G, HPOE-2400G, HPOE-460
    - POE-161, GTP-80xT

Appendix

◆ **Related PoE Products:**

PoE Splitter	**POE-162S**	**IEEE 802.3at PoE+ Splitter with 24V/12V DC output**
	POE-152S	**IEEE 802.3af PoE Splitter with 12V/5V DC output**
	IPOE-162S	**Industrial IEEE 802.3at PoE+ Splitter with 24V/12V DC output**
PoE Extender	**POE-E201**	**IEEE 802.3at PoE+ Gigabit Extender**
	POE-E101	**IEEE 802.3af PoE Extender**

Appendix

◆ **Related PoE Products:**

– **IP Surveillance**

✓ **ICA-HM101:** 2 Mega-Pixel PoE Cube IP Camera

✓ **ICA-2500:** 5 Mega-Pixel PoE Box IP Camera

✓ **ICA-HM316:** 2 Mega-Pixel Outdoor IR PoE IP Camera

✓ **ICA-HM131:** H.264 Fixed Dome IP Camera

✓ **ICA-HM835:** 2 Mega-Pixel Vandalproof Fish-eye IP Camera

Appendix

◆ **Related PoE Products:**

    ✓ **WNAP-1120PE** 802.11n Wireless Access Point with PoE

    ✓ **WNAP-C3220** 802.11n 300Mbps Wireless Ceiling Mount Access Point

    ✓ **IAP-2000PE** 802.11n 300Mbps Industrial Wireless Access Point

Activating IP Power