

# IEEE 802.3at Power over Gigabit Ethernet Extender



## Long Distance High Power PoE and Gigabit Data Extension Solution

PLANET POE-E201 is a newly designed simple device which extends both the reach of **Gigabit Ethernet Data** and **IEEE 802.3at / 802.3af Power over Ethernet** over the standard 100m (328 ft.) CAT. 5/5e/6 UTP cable to 200m, 300m, 400m and maximum 500m.

Currently, PoE supported networking devices such as PoE IP cameras, PoE wireless access points and PoE IP Phones have become the mainstream of network deployment because of the convenience of easy installation regardless of additional power supply. However, limited by the UTP cable specifications, only up to 100 meters (328 ft.) of cable could be applied for IP-based and PoE powered devices (PD) installation. Therefore, the POE-E201 is designed as the repeater to forward both Gigabit Ethernet data and high power PoE power, and thus extend the range of PoE installation. By just plug and play without additional power supply and setup, one single POE-E201 can increase the PoE range to 200m. By daisy-chaining multiple POE-E201s, it offers you great flexibility to extend the distance of PoE network to triple, quadruple further in length or more.



Providing high power PoE and Gigabit Ethernet data extension ability, the POE-E201 is an ideal solution for service providers, campuses and public areas networking applications which require PoE deployment of wireless access points, IP-based surveillance or IP phones in any places. It enables you to centrally manage the power easily, efficiently and cost effectively.

## Easy Cabling Installation

The POE-E201 Gigabit high power PoE Extender is quite easy to be installed by simple plug and play. It is used between a Power Source Equipment (PSE) and the Powered Device (PD). The POE-E201 injects power to the PD without affecting the data transmission performance. The POE-E201 offers a cost effective and quick solution to doubling the standard range of PoE from 100 to 200 meters. This Gigabit high power PoE Extender is designed in a compact mini box containing 2 RJ-45 ports, of which the "PoE IN" port functions as PoE (Data and Power) input and the "PoE OUT" port on the other side functions as PoE (Data and Power) output. The "PoE OUT" port is also the power injector to transmit DC voltage in the Cat. 5/5e/6 cable and transfer data and power simultaneously between the PSE and PD.

- **IEEE 802.3at / 802.3af** Power over Ethernet compliant
- Complies with **IEEE 802.3 / 802.3u / 802.3ab** 10/100/1000Base-T
- Extends the range of PoE to more than 100 meters (328ft.).
- Automatically detects and protects PoE equipment from being damaged by incorrect installation
- Multiple units, daisy-chain installation support
- Forwards both Ethernet data and PoE power to the remote device
- No external power cable installation required
- Compact size, wall-mountable design
- Plug and Play

## Left Side - PoE Out



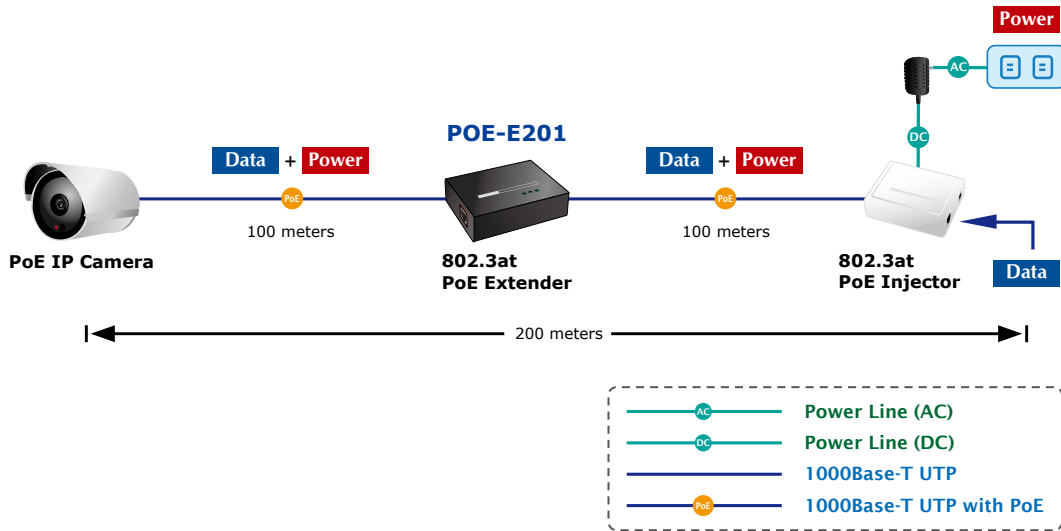
## Right Side - PoE In



## Applications

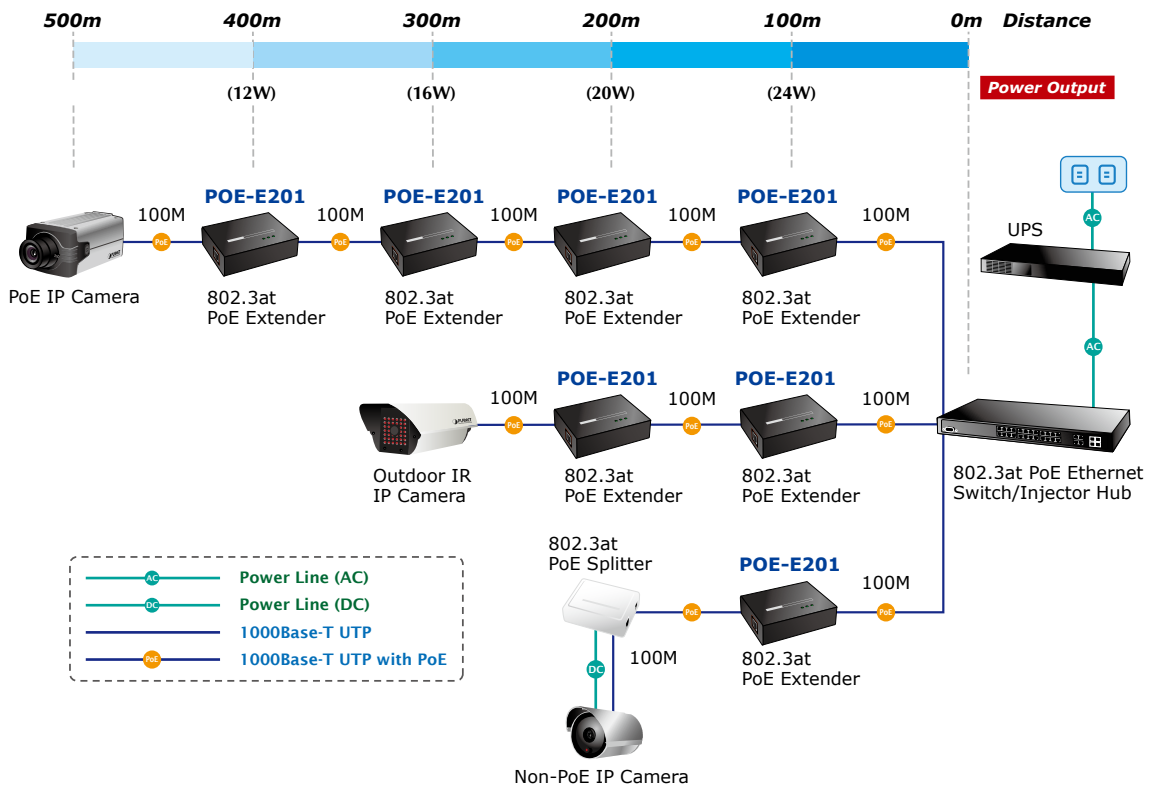
### Long Distance PoE IP Surveillance

Is 100 meter cable long enough for a wide range of IP Surveillance deployment? The answer is certainly not. To achieve the benefits of IP surveillance and also the long-distance IP camera distribution, PLANET POE-E201 Gigabit high power PoE Extender is a quick and cost-effective option besides adopting a PoE injector or PoE Ethernet switch equipped with fiber optical interface. In the simplest application, the POE-E201 enables a PoE IP camera to be installed up to 200 meters away from a PoE injector. The PoE injector delivers PoE power over the first 100 meters to the POE-E201 over UTP cable, and then the POE-E201 forwards the Ethernet data and remaining POE power to the PoE IP camera. The POE-E201 does not require an external power supply and can be installed easily by just plug and play; meaning the operator does not need to configure the POE-E201 for an immediate installation.



### Long Distance PoE Wireless Access Point

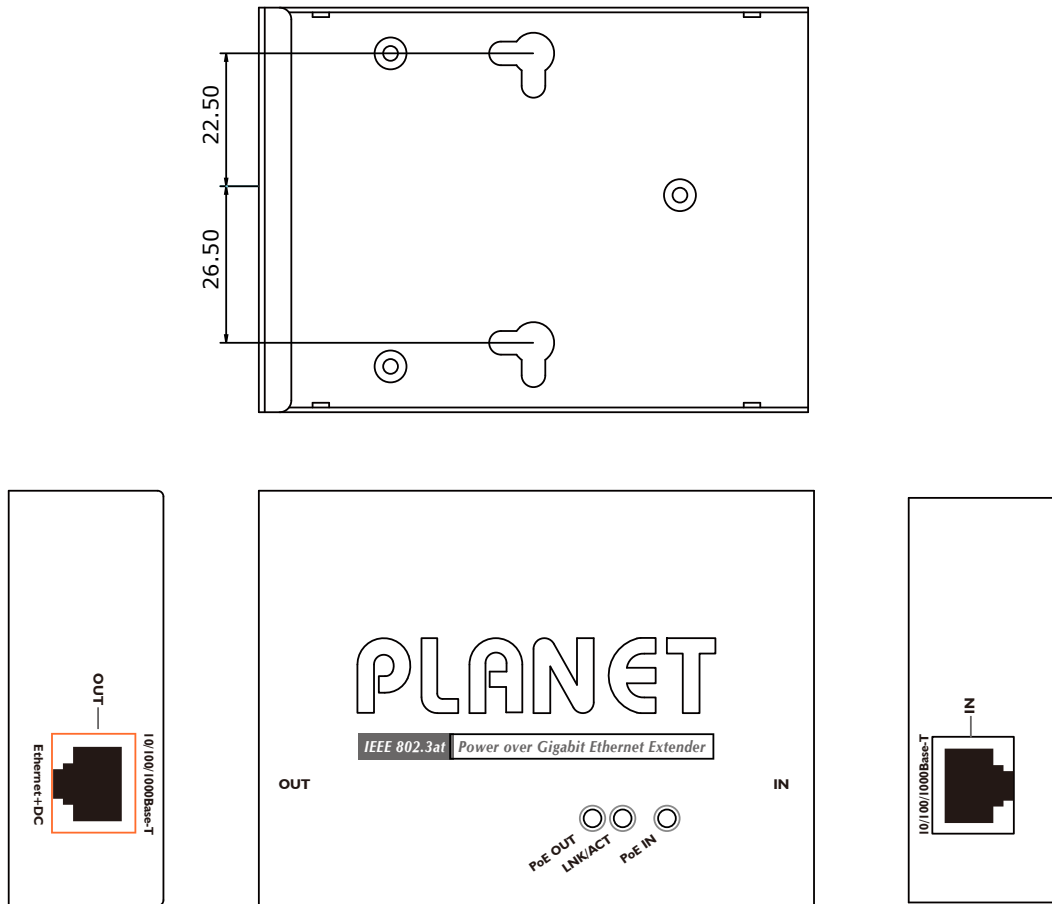
When being used in the Wireless LAN, the POE-E201 enables wireless access points to be connected using standard Cat.5/5e/6 cable over 100 meters from the Power Source Equipment (PSE), such as PoE switch, PoE injector hub and single port PoE injector. The POE-E201 is also powered by the incoming PoE on the Ethernet cable and does not require any external power feed. Therefore, the POE-E201 can reduce the usage of cables and eliminate the need of dedicated electrical outlets on the wall, ceiling or any unreachable place. It frees the wireless AP deployment from restrictions of power outlet locations.



## Specifications

Model	POE-E201
<b>Interfaces</b>	
LAN IN	1 x 10/100/1000Base-T Ethernet with IEEE 802.3at / 802.3af PoE "Data + DC" in auto MDI/MDI-X, auto-negotiation RJ-45 connector
LAN OUT	1 x 10/100/1000Base-T Ethernet with IEEE 802.3at / 802.3af PoE "Data + DC" out auto MDI/MDI-X, auto-negotiation RJ-45 connector
<b>Power over Ethernet</b>	
PoE Standard	IEEE 802.3af (Power over Ethernet) IEEE 802.3at (High Power over Ethernet)
PoE Power Supply Type	Mid-Span / Type B
PoE Power Output	52V DC, 510mA, Max. 26 watts
Power Pin Assignment	4/5(+), 7/8(-)
Maximum Distance	4 units, daisy-chain installation with 500m support
<b>Hardware Specifications</b>	
Data Rate	10/100/1000Mbps
Switch Architecture	Store-and-Forward
Switch Throughput	10Mbps:14880pps@64Bytes 100Mbps:148810pps@64Bytes 1000Mbps:1488000pps@64Bytes
Maximum Frame Size	1552Bytes
Flow Control	Back pressure for half-duplex IEEE 802.3x pause frame for full-duplex
LED Indicators	<ul style="list-style-type: none"> <li>• 1 x PoE IN (Green)</li> <li>• 1 x LAN Data (Green)</li> <li>• 1 x PoE OUT (Green)</li> </ul>
Protection	ESD (Ethernet): 2KV (TBD) Surge (EFT for power) : 2KV (TBD)
Dimensions (W x D x H)	94 x 70 x 26 mm
Weight	197g
Power Requirements	IEEE 802.3at compliant with voltage within 52V-56V DC
Power Consumption	3.2 watts (system maximum)
Mechanical	Metal / Wall-mountable
Network Cable	10Base-T: 4-Pair UTP Cat. 5 up to 100m (328ft) 100Base-TX: 4-Pair UTP Cat. 5 up to 100m (328ft) 1000Base-T: 4-Pair UTP Cat. 5e, 6, up to 100m (328ft) EIA/TIA- 568 100-ohm STP (100m, 328ft)
<b>Standards Conformance</b>	
Regulation Compliance	FCC Part 15 Class A, CE
Standard Compliance	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet IEEE 802.3x Flow Control
<b>Standard Conformance</b>	
Operating	Temperature: -10 ~ 60 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

## Product Outlook



## Ordering Information

POE-E201	IEEE 802.3at Power over Gigabit Ethernet Extender
----------	---

## Accessories

RKE-DIN	DIN-Rail Mounting Kit
---------	-----------------------

## Related Products

POE-161	IEEE 802.3at Gigabit High Power over Ethernet Injector (Mid-Span)
POE-163	IEEE 802.3at Gigabit High Power over Ethernet Injector (Mid-Span)
GTP-805A	1000Base-X to 10/100/1000Base-T 802.3at PoE Media Converter
HPOE-1200G	12-Port Gigabit IEEE 802.3at High Power over Ethernet Injector Hub
GSD-808HP2	8-Port 10/100/1000Mbps 802.3at PoE Desktop Switch - 240W
GSW-1600HP	16-Port 10/100/1000Mbps 802.3at PoE+ Ethernet Switch
WGSD-10020HP	8-Port 10/100/1000Mbps + 2-Port 100/1000X SFP Managed 802.3at PoE Switch
WGSW-20160HP	16-Port 10/100/1000Mbps 802.3at PoE + 4-Port Gigabit TP / SFP Combo Managed Switch
WGSW-24040HP4	24-Port 10/100/1000Mbps 802.3at PoE+ with 4-Port Shared SFP Managed Switch

### 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



PLANET reserves the right to change specifications without prior notice. All brand names and trademarks are property of their respective owners. Copyright © 2014 PLANET Technology Corp. All rights reserved.

C-POE-E201