

# 16-Port Gigabit 60W Ultra PoE Managed Injector Hub (600 watts)

PLANET Ultra PoE Managed Injector Hub series, a cost-effective and quick Ultra PoE solution, is designed to perfectly upgrade an existing network infrastructure to Ultra Power over Ethernet network system without replacing the existing Ethernet Switch.



## Ready to Deploy Next Generation Power over Ethernet

The UPOE-1600G is a high-density, rack-mountable managed Ultra PoE injector hub featuring PLANET intelligent PoE functions through web user interface for remote management. It provides 16 10/100/1000BASE-T Ethernet ports featuring Ultra PoE injector with a total PoE budget of 600 watts. Each PoE port can deliver up to 60-watt power over Cat.5/5e/6 Ethernet UTP cables which allow data and power to transmit simultaneously to a remote 60W and 802.3at/af powered device (PD).

The UPOE-1600G enables centralization of the power supply and optimizes the installation and power management of remote network devices, and provides a quick, safe and cost-effective Power over Ethernet network solution for small businesses and enterprises.

## Quick and Easy PoE Network Deployment

The UPOE-1600G is installed between a regular Ethernet Switch and the PDs. There are totally 32 RJ45 STP ports on the front panel of the UPOE-1600G, of which the 16 ports are on the lower stack functioned as "Data input" while the other 16 ports are on the upper stack functioned as "PoE (Data and Power) output". Both power and data are transferred simultaneously over the UTP cables to PDs without affecting the existing network performance and functions.

## Interface

- Complies with the IEEE 802.3, IEEE 802.3u and IEEE 802.3ab Ethernet standards
- 32-port RJ45
  - 16-port 10/100/1000Mbps "Data input"
  - 16-port 10/100/1000Mbps "Data + Power output"
- One 10/100/1000BASE-T management port

## Power over Ethernet

- Ultra Power over Ethernet end-span/mid-span PSE
- Up to 60 watts of power on 4-pair UTP
- Backward compatible with IEEE 802.3at/af PD device
- 52V DC, 60-watt PoE power output at maximum on each port
- 600-watt PoE budget
- Auto-detection of IEEE 802.3at/af PoE equipment and device to avoid possible damage by incorrect installation
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m

## PoE Management

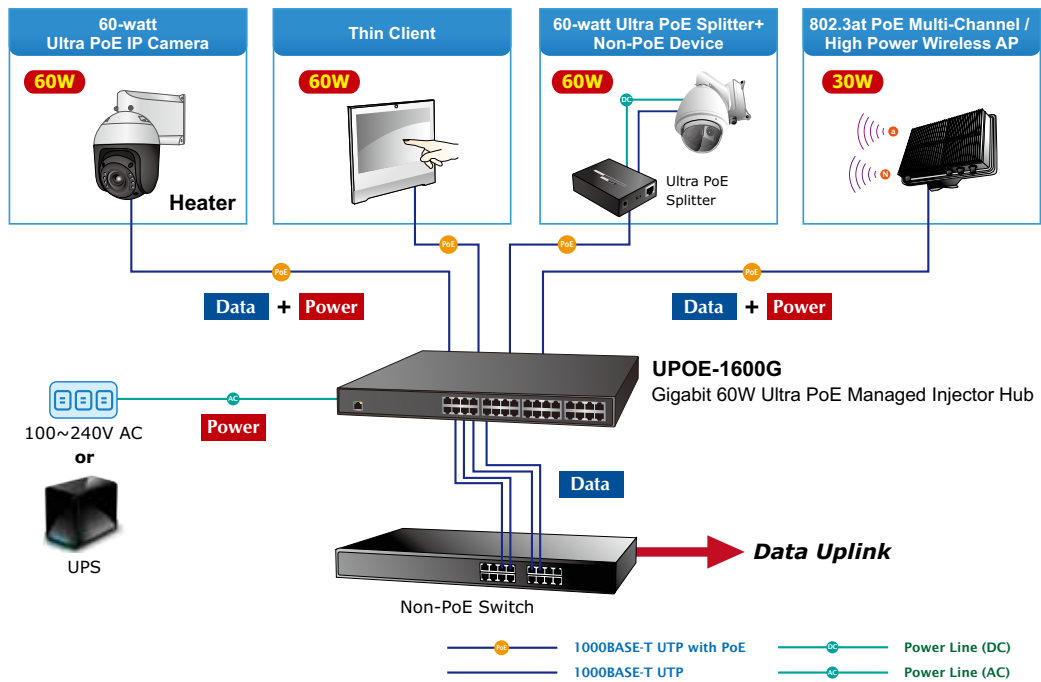
- Per port PoE power schedule
- PoE function enable/disable
- Per port PoE function enable/disable
- PoE port power feeding priority
- PD classification detection
- Over temperature protection
- PD alive check
- PoE schedule

## Management

- Web interface for remote management
- Supports Network Time Protocol (NTP)
- Firmware upgrade through Web interface
- PLANET Smart Discovery utility automatically finds PLANET devices on the network
- SNMP trap for alarm notification of events
- System log/remote syslog

## Hardware

- 19-inch rack mountable; 1U height
- Reset button for resetting to default setting and system reboot
- LED indicators for PoE ready and PoE activity
- LED indicators for power alert and fan alert
- LED indicators for PoE power usage status (watts)
- FCC Part 15 Class A, CE

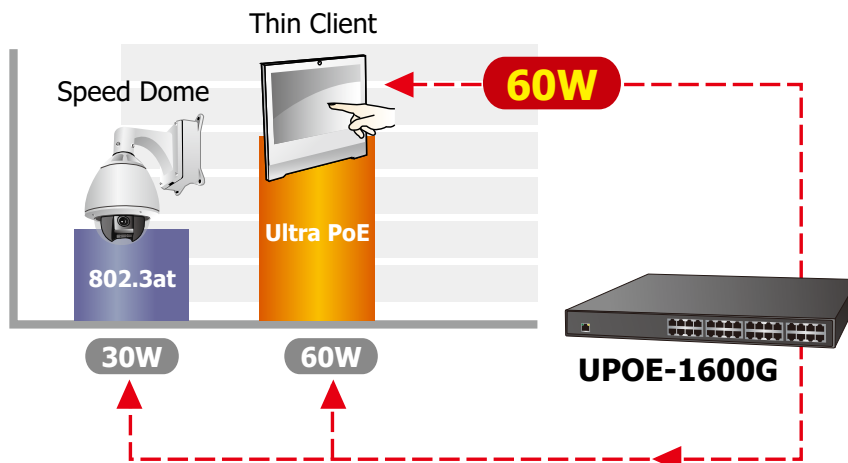


With data and Power over Ethernet from one unit, the UPOE-1600G can reduce power cable deployment and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place.

**802.3bt Ready -- 60 Watts of Power over 4-Pair UTP System**

The UPOE-1600G Ultra PoE solution adopts the IEEE 802.3at/af PoE standard. Instead of delivering power over 2-pair twisted UTP – be it end-span (Pin 1, 2, 3 and 6) or mid-span (Pin 4, 5, 7 and 8), it provides the capability to source up to 60 watts of power by using all the four pairs of standard Cat.5e/6 Ethernet cabling. In the new 4-pair system, the UPOE-1600G is able to deliver per port up to 60 watts of power to each remote PoE compliant powered device. It possesses double amount of power capability than the conventional 802.3at PoE and is an ideal solution to satisfy the growing demand for higher power consuming network PDs, such as:

- PoE PTZ speed dome
- Any network device that needs higher PoE power to work normally
- Thin-client
- AIO (all-in-one) touch PC, point of sale (POS) and information kiosks
- Remote digital signage display



*Friendly Web Management Interface*

To efficiently manage the powered devices, the UPOE-1600G provides simple Web management interface in which administrators can control the system and PoE functions for powered devices. It can automatically detect the power status of each port and show messages on its Web management interface. These features also provide users with a cost-effective way to manage the device via Internet whenever they are at work or at home.



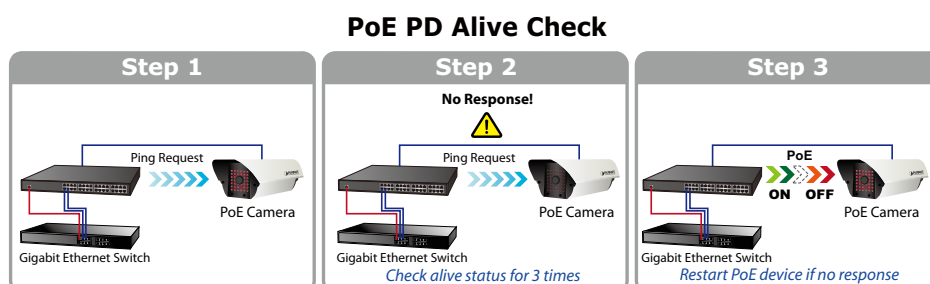
*Built-in Unique PoE Functions for Powered Device Management*

As it is the managed Ultra PoE Injector Hub for VoIP, wireless and surveillance networks, the UPOE-1600G features the following special PoE management functions:

- PoE schedule
- PD alive check
- Scheduled power recycling
- UPOE, end-span or mid-span selectable in PoE Power Output Mode
- PoE usage monitoring
- Over temperature protection

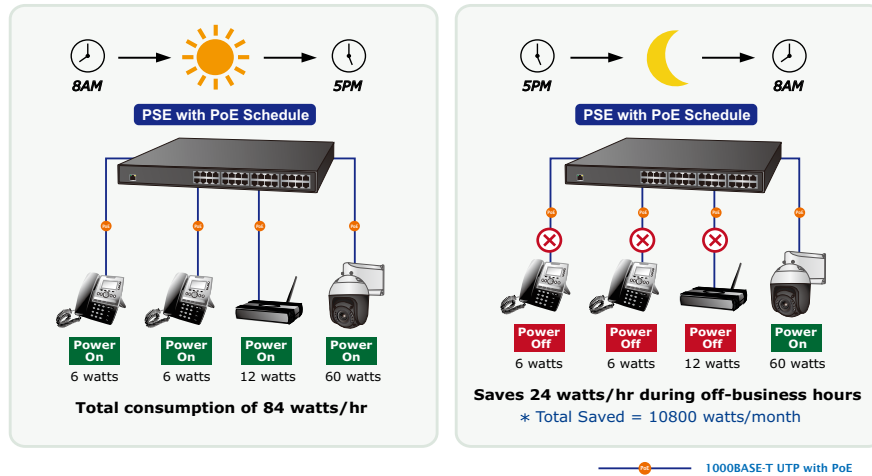
*Intelligent Powered Device Alive Check*

PLANET's Managed PoE products adopt not only Power over Ethernet technology, but also automated PD monitoring and real-time PoE status. The UPOE-1600G can be configured to monitor connected PD's status in real time via ping action through the uplinked Ethernet switch. Once the PD stops working and responding, the UPOE-1600G will recycle the PoE port power and bring the PD back to work. It also will greatly enhance the network reliability in that the PoE port will reset the PD power, thus reducing administrator's management burden.



PoE Schedule for Energy Saving

Under the trend of energy saving worldwide and contributing to environmental protection on the Earth, the UPOE-1600G can effectively control the power supply besides its capability of giving high watts power. The built-in "PoE schedule" function helps you to enable or disable PoE power feeding for each PoE port during specified time intervals and it is a powerful function to help SMBs or enterprises save power and money. It also increases security by powering off PDs that should not be in use during non-business hours.



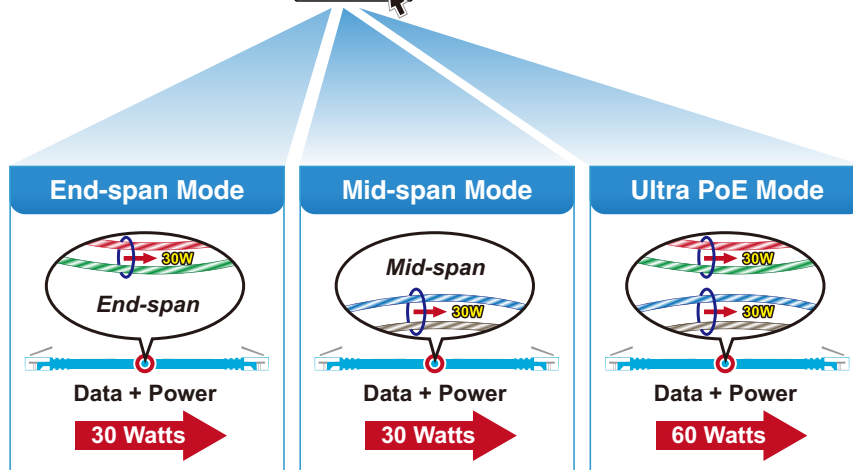
Advanced PoE Power Output Mode Management

To fill the demand of various powered devices consuming stable PoE power, the UPOE-1600G provides three different PoE power output modes for selection.

- 60W UPOE PoE Power Output Mode (Pin 1, 2, 3, 6 + Pin 4, 5, 7, 8)
- 30W End-span PoE Power Output Mode (Pin 1, 2, 3, 6)
- 30W Mid-span PoE Power Output Mode (Pin 4, 5, 7, 8)

Selectable End-span/Mid-span/UPoE Power Inline Mode

Port	PoE Mode	Schedule	Power Inline Mode	Priority	PD Class	Current Used [mA]	Power Used [W]	Power Allocation [W]
1	Enable	Profile 1	UPoE	Critical	--	0	0	60
2	Enable	Profile 1	End-span	Critical	--	0	0	30
3	Enable	Profile 1	UPoE End-span Mid-span	Critical	--	0	0	60

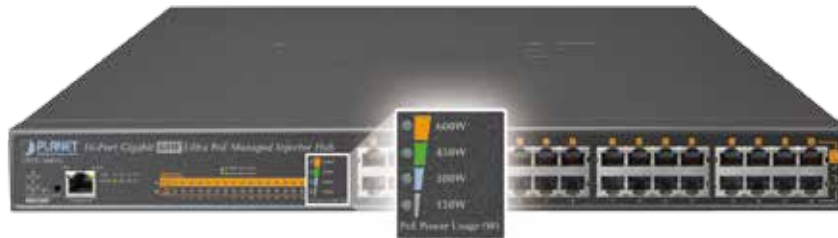


### *Advanced Power Management*

To facilitate power management, the UPOE-1600G comes with powerful PoE management features such as over temperature protection, usage threshold alert and auto power allocation to prevent power budget overloading. The PoE power budget can be allocated by priorities or classification and sent alert event logs when power usage reaches the defined threshold.

### *Intelligent LED Indicator for Real-time PoE Usage*

The UPOE-1600G helps users to monitor the current status of PoE power usage easily and efficiently by its advanced LED indication. Called "PoE Power Usage", the front panel of the UPOE-1600G has four green LEDs indicating 150W, 300W, 450W and 600W of PoE power usage.



### *PoE Usage Monitoring*

Via the power usage chart in the web management interface, the UPOE-1600G enables the administrator to monitor the status of the power usage of the connected PDs in real time.

### *High Power Budget for 802.3af/802.3at PoE Extension*

With IEEE 802.3af/802.3at PoE output capability, the UPOE-1600G can extend much longer distance by using PLANET PoE Extender for powering up the PoE PD which can be installed over more than 100 meters away. By daisy-chaining multiple PLANET PoE Extenders, it offers the great flexibility of doubling, tripling or quadrupling the distance of PoE network.

### *Smart Fan Design for Silent Operation*

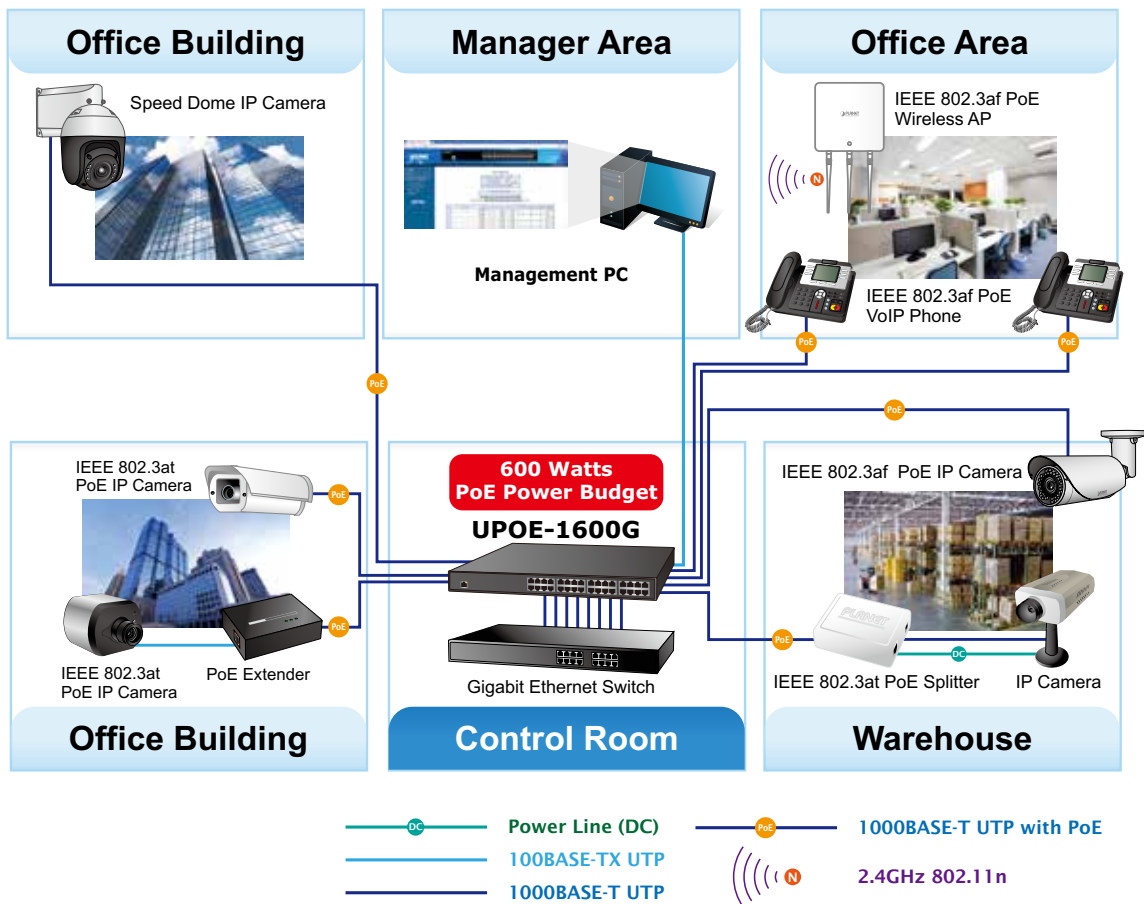
The UPOE-1600G features a low noise design and an effective ventilation system. It supports the smart fan technology that automatically controls the speed of the built-in fan to reduce noise and maintain the temperature of the Ultra PoE Managed Injector Hub for optimal power output capability. The UPOE-1600G is able to operate reliably, stably and quietly in any environment without affecting its performance.

## Applications

### Gigabit Ultra PoE and PoE+ Network Deployment

The UPOE-1600G provides the easiest way to power your Ethernet devices such as IP camera on the ceiling and the wireless access point installed on the top of the building. With 16 10/100/1000BASE-T Gigabit Ethernet ports, the UPOE-1600G supports full 52V DC power for any remote 60W and IEEE 802.3af/IEEE 802.3at powered device (PD).

To control the power system of your networking devices, the UPOE-1600G can directly co-work with network devices such as PoE IP phone to build VoIP telephony network in the office. The Ultra PoE hub can be directly connected to any third-party IEEE 802.3af/802.3at compliant devices installed within 100 meters. Furthermore, the UPOE-1600G can extend much longer distance by using PLANET PoE Extender for powering up the PoE PD which can be installed over more than 100 meters away.



## Specifications

Product		UPOE-1600G
Hardware		
Interface	"Data" Input Ports	16 x RJ45
	"Data + Power" Output Ports	16 x RJ45
	Management Port	1 x RJ45; 10/100/1000BASE-T, auto-negotiation, auto-MDI/MDIX
Data Rate	10/100/1000Mbps	
LED	System: SYS PWR x 1 (green) PoE Failure x 1 (red) Fan Failure x 2 (red) Management port x 2: 1000 (green), 10/100(orange) Per PoE Port: Ultra 60W PoE-in-use x 1 (green) 802.3at/af PoE-in-use x1 (orange) PoE Power Usage LED x4 (green)	
Power Requirements	100-240V AC, 50/60 Hz, 8A	
Power Consumption	800 watts (max.)/2729BTU	
Ventilation	Fan x 3	
Dimensions (W x D x H)	440 x 300 x 44.5 mm, 1U height	
Enclosure	Metal	
Weight	4.8kg	
Power over Ethernet		
PoE Standard	IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus 4-pair Ultra PoE	
PoE Power Supply Type	End-span/Mid-span/UPoE(Ultra PoE)	
Power Pin Assignment	Pair 1 end-span: 1/2(-), 3/6(+) Pair 2 mid-span: 4/5(+), 7/8(-) UPoE: 1/2(-), 3/6(+),4/5(+), 7/8(-)	
PoE Power Output	DC 52V / 60-watt PoE via 4-pair DC 52V / 30-watt PoE via 2-pair	
PoE Power Budget	600 watts/2047BTU	
Number of 60W PDs can be powered	10	
Number of 802.3af PDs (Class 0, 1, 2, 3) can be powered	16	
Number of 802.3at PDs (Class 1, 2, 3) can be powered	16	
Number of 802.3at PDs (Class 0, 4) can be powered	16	
Management		
Management Interface	Web, PLANET Smart Discovery Lite	
PoE Management	Power limit by consumption and allocation PoE admin mode Per port power schedule Per port power enable/disable Power feeding priority Over temperature protection Current per port usage and status Total power consumption PD alive check Scheduled power recycling	
Management Feature	Setup of system/management functions Web firmware upgrade SNMP trap for alarm notification of events	
Standards Conformance		
Regulatory Compliance	FCC Part 15 Class A, CE	
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 RFC 768: UDP RFC 791: IP RFC 2068 HTTP RFC 1157: SNMP v1 RFC 1902: SNMP v2c RFC 5424: Syslog	

Network Cable	10BASE-T: 4-pair UTP Cat5 up to 100m (328ft) 100BASE-TX: 4-pair UTP Cat5 up to 100m (328ft) 1000BASE-T: 4-pair UTP Cat5e/6 up to 100m (328ft) EIA/TIA- 568 100-ohm STP (100m)
<b>Environments</b>	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 90% (non-condensing)

## Ordering Information

UPOE-1600G	16-Port Gigabit 60W Ultra PoE Managed Injector Hub (600 watts)
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## Related Products

UPOE-800G	8-Port Gigabit 60W Ultra PoE Managed Injector Hub (400 watts)
GS-4210-24UP4C	24-Port 10/100/1000T Ultra PoE + 4-Port Gigabit TP/SFP Combo Managed Switch (600W)
GS-4210-16UP4C	16-Port 10/100/1000T Ultra PoE + 4-Port Gigabit TP/SFP Combo Managed Switch (400W)
POE-171	Single-Port 10/100/1000Mbps Ultra PoE Injector (60 watts, external power supply)
POE-173	Single-Port 10/100/1000Mbps Ultra PoE Injector (60 watts, internal power supply)
IPOE-E174	1-Port Ultra PoE to 4-Port 802.3af/at Gigabit PoE Extender
POE-171S	Single-Port 10/100/1000Mbps Ultra PoE Splitter (12V/19V/24V)
HPOE-1200G	12-Port Gigabit IEEE 802.3at High Power Injector Hub (360 watts)
HPOE-2400G	24-Port Gigabit IEEE 802.3at High Power Injector Hub (720 watts)
POE-1200G	12-Port Gigabit IEEE 802.3af Injector Hub (200 watts)
POE-2400G	24-Port Gigabit IEEE 802.3af Injector Hub (400 watts)
POE-162S	IEEE 802.3at Gigabit High Power over Ethernet Splitter
POE-E201	IEEE 802.3at Power over Ethernet Extender