8/16/24-Port 10Gbps 802.3bt PoE++ Managed Injector Hub

PLANET's newly launched **10Gbps 802.3bt PoE++ Managed Injector Hub series** offers a high-density, rack-mountable solution for rapid 10Gbps PoE++ deployment. It is designed to seamlessly upgrade existing network infrastructures to the IEEE 802.3bt standard without the need to replace current Ethernet Switch devices.

To ensure robust cybersecurity, the 1**0Gbps 802.3bt PoE++ Managed Injector Hub series** features enhanced management functions, including TLSv1.2 and TLSv1.3 protocols.

Furthermore, through integration with PLANET's NMSViewerPro/**CloudNMS** apps, all kinds of businesses can efficiently manage their entire network from a single, centralized platform. This **10Gbps 802.3bt PoE++ Managed Injector Hub series** also supports PLANET DDNS/Easy DDNS services for flexible remote access.

A Perfect Managed 10G PoE++ Injector Hub with Full Power Budget

The **10Gbps 802.3bt PoE++ Managed Injector Hub series**, a high-density, rack-mountable managed IEEE 802.3bt PoE++ injector hub, features PLANET **intelligent PoE** functions through **web user interface** for remote management. It provides 8/16/24 **10/100/1000/2.5G/5G/10GBASE-T Ethernet ports** featuring **802.3bt type-4 PoE++** injector with a total PoE budget of 400/600/800 watts. Each PoE port can deliver up to **95-watt** power over Cat.5/5e/6/7 Ethernet UTP cables which allow data and power to transmit simultaneously to a remote 802.3bt/at powered device (PD).

The **10Gbps 802.3bt PoE++ Managed Injector Hub series** enables centralization of the power supply and optimizes the installation and power management of remote network devices, and provides a quick, safe and effective Power over Ethernet network solution for small businesses and enterprises.

Model	PoE Ports	Per PoE Power Output	PoE Standard	Total PoE Budget
UPOE-800XG	8	95 watts	IEEE 802.3bt PoE++ IEEE 802.3at PoE+	400 watts
UPOE-1600XG	16			600 watts
UPOE-2400XG	24			800 watts

Interface

- **16/32/48-port RJ45**
  - 8/16/24-port 10/100/1000/2.5G/5G/10GBASE-T "Data input"
  - 8/16/24-port 10/100/1000/2.5G/5G/10GBASE-T "Data + Power output"
- One 10/100/1000BASE-T management port

802.3bt Power over Ethernet

- Complies with IEEE 802.3bt Power over Ethernet Plus Plus
- Backward compatible with IEEE 802.3at Power over Ethernet Plus
- Up to 8/16/24 ports of IEEE 802.3at/IEEE 802.3bt PoE devices powered
- 8/16/24 PoE ports with built-in 802.3bt type-4 PoE 95W injector function
- All PoE ports support 802.3at end-span/mid-span PoE 36W injector function
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100 meters

PoE Management

- PoE admin-mode control
- PoE Consumption and allocation mode option
- Per port PoE function enable/disable
- Per port PoE Inline mode option (802.3BT(Factory default)/End-span/Mid-span)
- Per port PD type option (Standard(Factory default)/Legacy/Force)
- PoE port power feeding priority
- PD classification detection
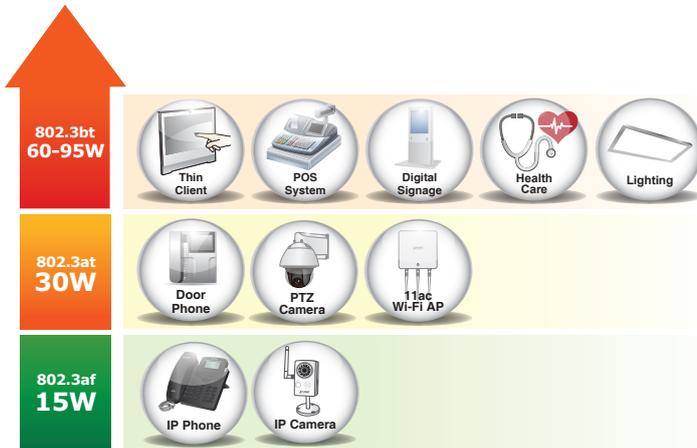- PoE schedule
- PD alive check

Security

- SPI Firewall Protection
- Authentication Method Configuration
- MAC Filtering
- Access Management for HTTP/HTTPS/SNMP
- System CA Certificate for HTTPS

802.3bt PoE++ 95-watt Power over 4-pair UTP Solution

As the **10Gbps 802.3bt PoE++ Managed Injector Hub series** adopts the IEEE 802.bt PoE++ standard technology, it is capable to source up to **95 watts** of power by using all the four pairs of standard Cat.5/5e/6/7 Ethernet cabling to deliver power and full-speed data to each remote PoE compliant powered device (PD). Its power capability is three times more than that of the conventional 802.3at PoE+ and it is an ideal solution for those high power consuming network PDs, such as:

- PoE PTZ speed dome cameras
- Network devices
- Thin clients
- AIO (all-in-one) touch PCs, point of sale (POS) and information kiosks
- Remote digital signage displays
- PoE lightings

802.3bt PoE++ and Advanced PoE Power Output Mode Management

To meet the demand of various powered devices consuming stable PoE power, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** supports multi-PoE operation modes that include 95-watt 802.3bt type-4 PoE++ mode, and 4-pair legacy and force modes to solve the incompatibility of non-standard 4-pair PoE PDs in the field.

- **95W 802.3bt PoE++ Power Output Mode**
- **36W End-span 802.3at PoE+ Power Output Mode**
- **36W Mid-span 802.3at PoE+ Power Output Mode**

PoE Watts	PoE Operation Mode	Power Output Mode
95W	802.3bt PoE++	(Pins 1, 2, 3, 6 + Pins 4, 5, 7, 8)
36W	End-span 802.3at PoE	(Pins 1, 2, 3, 6)
36W	Mid-span 802.3at PoE	(Pins 4, 5, 7, 8)

Management

- IPv4 and IPv6 dual stack management
- Web interface for remote management
- LLDP Link Layer Discovery Protocol (LLDP)
- PLANET DDNS and Easy DDNS
- Supports Network Time Protocol (NTP)
- System Maintenance
  - Firmware upload via HTTP
  - Configuration upload/download via HTTP
  - Reboot button for system reboot
  - Reset button for system reset to factory default
- PLANET Smart Discovery utility automatically finds PLANET devices on the network
- PLANET NMS system and CloudNMS for deployment management
- Remote RADIUS Server authentication
- SNMP v1, v2c and v3 for system status monitoring
- SNMP trap for alarm notification of events
- System event log/remote syslog
- Scheduled System Power Rebooting
- Network Diagnostic
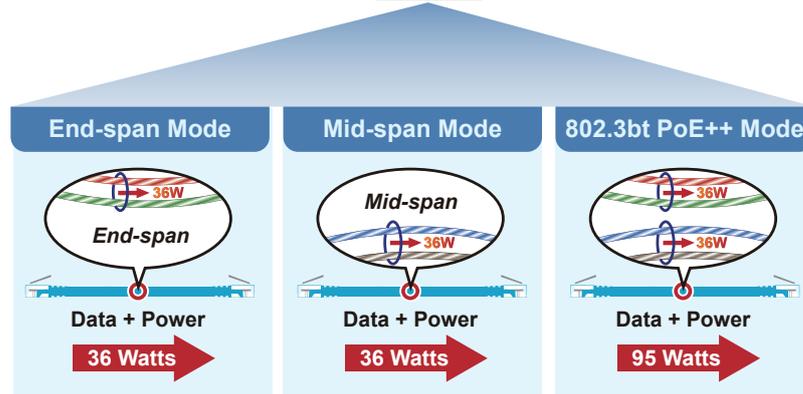 - ICMPv6/ICMPv4 Remote Ping
  - Trace Route

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
- FCC Part 15 Class A, CE

Selectable End-span/Mid-span/802.3bt PoE++ Power Inline Mode

Port	Description	PoE Function	Schedule	Power Mode	Power Type	Priority	Device Class	Current Used[mA]	Powered Used [W]	Power Limit [W]
All		<All> ▼	<All> ▼	<All> ▼	<All> ▼	<All> ▼				
1		Enable ▼	None ▼	BT ▼	Standard ▼	High ▼	--	0	0	95
2		Enable ▼	None ▼	BT ▼	Standard ▼	High ▼	--	0	0	95
3		Enable ▼	None ▼	BT ▼	Standard ▼	High ▼	--	0	0	95

Standard
Legacy
Force

End-span Mode — Data + Power 36 Watts
Mid-span Mode — Data + Power 36 Watts
802.3bt PoE++ Mode — Data + Power 95 Watts
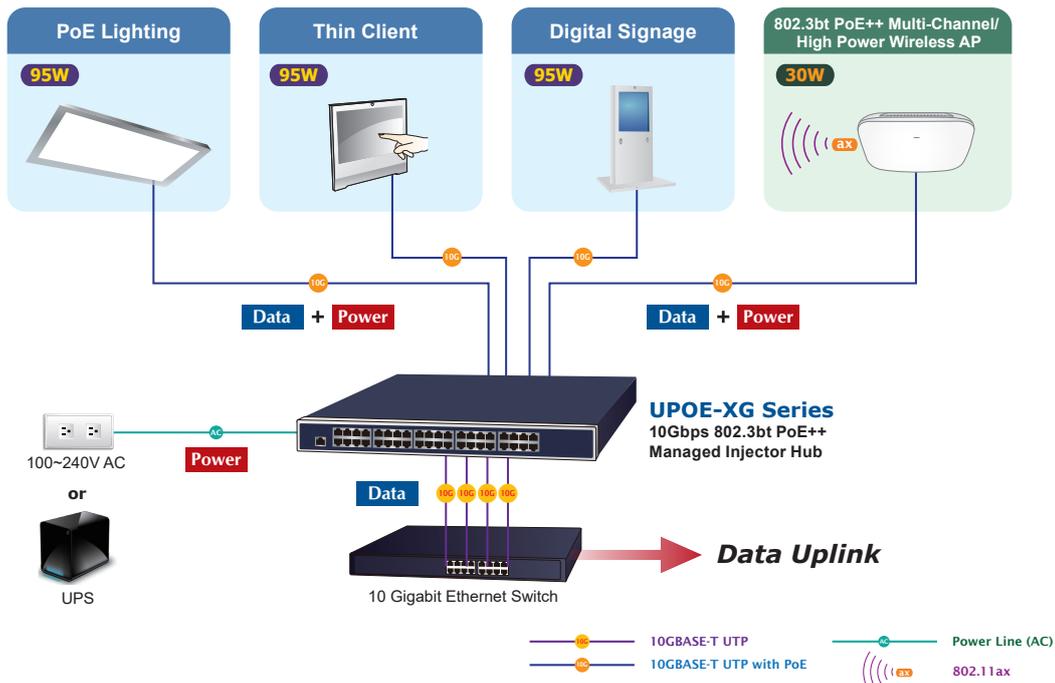
Quick and Easy 802.3bt/at PoE Network Deployment

The **10Gbps 802.3bt PoE++ Managed Injector Hub series** is installed between a regular Ethernet Switch and the PDs. There are totally 16/32/48 RJ45 STP ports on the front panel of the **10Gbps 802.3bt PoE++ Managed Injector Hub series**, of which the 8/16/24 ports are on the lower stack functioned as "**Data input**" while the other 8/16/24 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.

With data and Power over Ethernet from one unit, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** can reduce power cable deployment and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place.

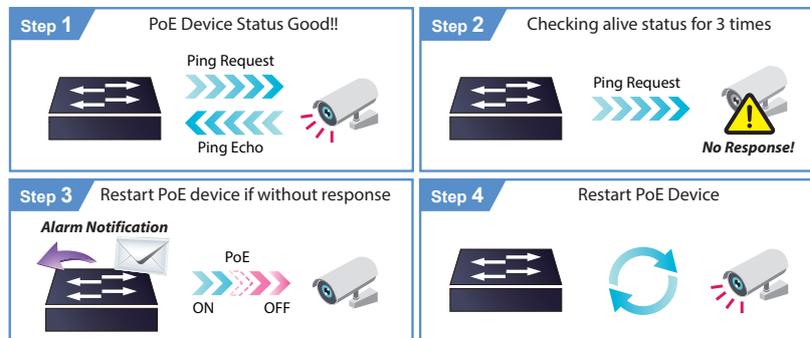## Built-in Unique PoE Functions for Powered Device Management

As it is the **10Gbps Managed PoE++ Injector Hub** for surveillance, wireless and VoIP networks, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** features the following special PoE management functions:

- PoE schedule
- PD alive check
- Scheduled power recycling
- PoE usage monitoring
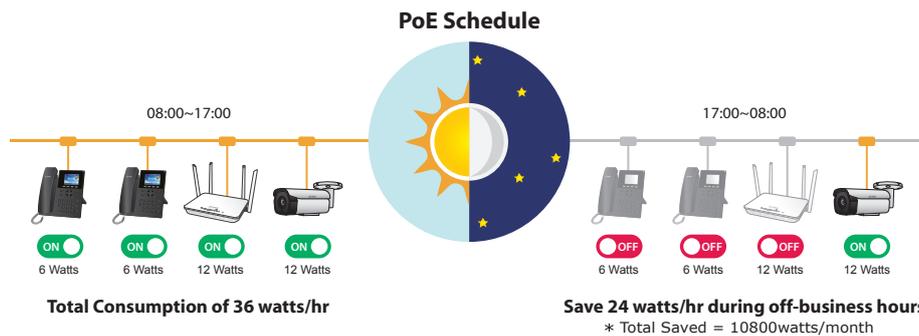
Intelligent Powered Device Alive Check

The **10Gbps 802.3bt PoE++ Managed Injector Hub series** can be configured to monitor connected PD status in real time via ping action. Once the PD stops working and responding, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** will resume the PoE port power and bring the PD back to work. It will greatly enhance the network reliability through the PoE port resetting the PD's power source and reducing administrator management burden.

PD Alive Check

Step 1 PoE Device Status Good!!
Ping Request
Ping Echo

Step 2 Checking alive status for 3 times
Ping Request
No Response!

Step 3 Restart PoE device if without response
Alarm Notification
PoE
ON   OFF

Step 4 Restart PoE Device

PoE Schedule for Energy Savings

Under the trend of energy savings worldwide and contributing to environmental protection on the Earth, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** 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.

PoE Schedule

08:00~17:00

17:00~08:00

ON 6 Watts   ON 6 Watts   ON 12 Watts   ON 12 Watts

OFF 6 Watts   OFF 6 Watts   OFF 12 Watts   ON 12 Watts

Total Consumption of 36 watts/hr

Save 24 watts/hr during off-business hours
∗ Total Saved = 10800watts/month

Scheduled Power Rebooting

The **10Gbps 802.3bt PoE++ Managed Injector Hub series** can be scheduled to reboot at a specified time like every minute, every hour, every day to reduce the chance of PD device crash resulting from buffer overflow.

PoE Usage Monitoring

Via the power usage chart in the web management interface, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** enables the administrator to monitor the status of the power usage of the connected PDs in real time. Thus, it greatly enhances the management efficiency of the facilities.
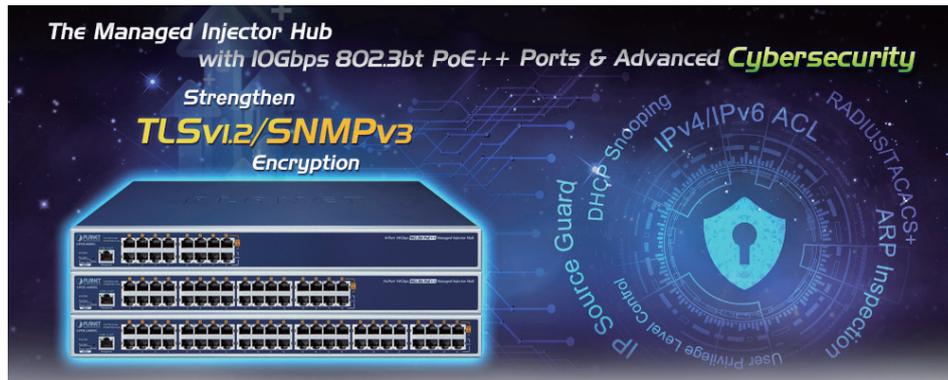
High Power Budget for PoE Extension

With up to 95-watt PoE output capability, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** 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 802.3bt PoE++ Extenders, it offers the great flexibility of doubling, tripling or quadrupling the distance of PoE network.

Smart Fan Design for Silent Operation

The **10Gbps 802.3bt PoE++ Managed Injector Hub series** 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 PoE injector hub for optimal power output capability, **with low speed and high speed smart fan status display on web interface**. The **10Gbps 802.3bt PoE++ Managed Injector Hub series** is able to operate reliably, stably and quietly in any environment without affecting its performance.

Cybersecurity Network Solution to Minimize Security Risks

The cybersecurity feature included to protect the **10Gbps 802.3bt PoE++ Managed Injector Hub serie**s management in a mission-critical network virtually needs no effort and cost to install. Both TLSv1.2 and TLSv1.3 protocols are utilized to provide strong protection against advanced threats. The network administrator can now construct highly-secure corporate networks with considerably less time and effort than before.

User-friendly Web Management Interface

To efficiently manage the PDs, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** provides simple **Web management** interface in which administrators can control the system and PoE functions for PDs. 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.

PLANET CloudNMS – Cloud-Based Universal Network Management

PLANET's **CloudNMS** platform and mobile app empower IT staff to remotely manage all network devices and Powered Devices (PDs) in real time. Designed for enterprises and industries, CloudNMS minimizes the need for on-site troubleshooting by providing centralized monitoring, fault detection, and instant alerts. With **CloudNMS**, businesses can manage diverse network deployments more **efficiently**, **securely**, **and intelligently**—all from a single cloud-based platform.
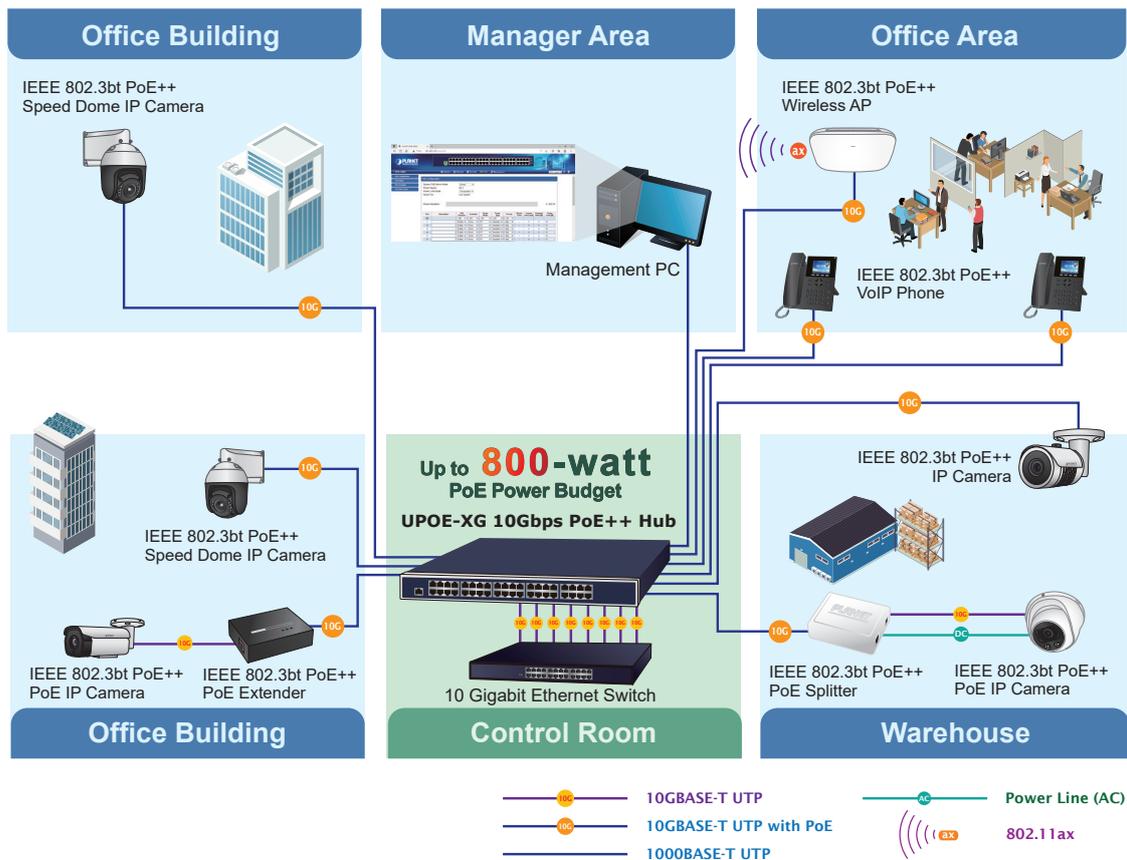
Applications

Gigabit PoE++ Network Deployment

The **10Gbps 802.3bt PoE++ Managed Injector Hub series** 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 8/16/24 10/100/1000/2.5G/5G/10GBASE-T Gigabit Ethernet ports, the 1**0Gbps 802.3bt PoE++ Managed Injector Hub series** supports full 54V DC power for any remote IEEE 802.3at/IEEE 802.3bt powered device (PD).

To control the power system of your networking devices, the **10Gbps 802.3bt PoE++ Managed Injector Hub** series can directly co-work with network devices such as PoE IP phone to build VoIP telephony network in the office. The **10Gbps 802.3bt PoE++ Managed Injector Hub series** can be directly connected to any third-party IEEE 802.3bt and 802.3at PoE compliant devices installed within 100 meters. Furthermore, the **10Gbps 802.3bt PoE++ Managed Injector Hub series** 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

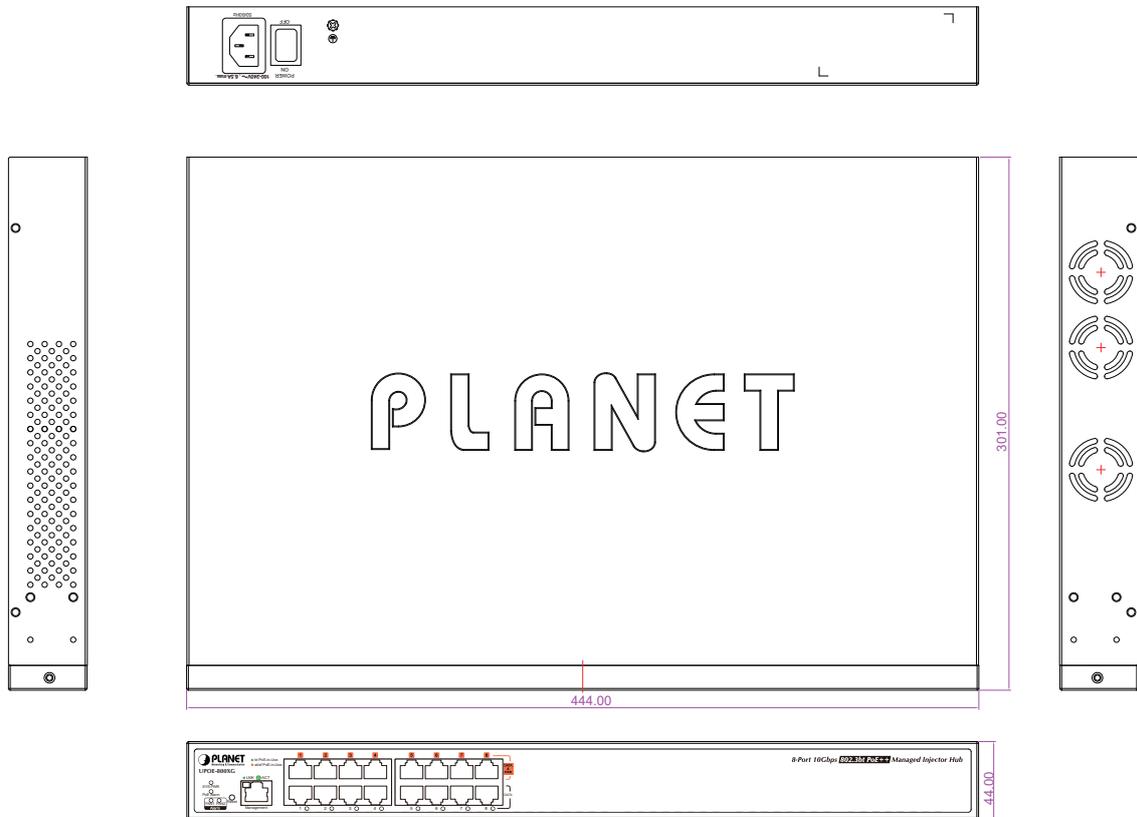| Product		UPOE-800XG	UPOE-1600XG	UPOE-2400XG
Hardware				
Interface	Management Port	1 x RJ45; 10/100/1000BASE-T, auto-negotiation, auto-MDI/MDIX		
	"Data" Input Ports	8 x RJ45	16 x RJ45	24 x RJ45
	"Data + Power" Output Ports	8 x RJ45	16 x RJ45	24 x RJ45
Data Rate		10/100/1000/2.5G/5G/10GBASE-T		
Power Requirements		100-240V AC, 50/60 Hz, 6.5A	100-240V AC, 50/60 Hz, 12A	100-240V AC, 50/60 Hz, 15A
Power Consumption		Max. 11.5 watts / 39.2 BTU (Power on without any connection) Max. 455 watts / 1552 BTU (Full Loading)	Max. 13.8 watts / 47 BTU (Power on without any connection) Max. 677 watts / 2309BTU (Full Loading)	Max. 39.7 watts / 135.4 BTU (Power on without any connection) Max. 944 watts / 3220 BTU (Full Loading)
Ventilation		Smart Fan x 3		
Dimensions (W x D x H)		440 x 301 x 44mm		
Weight		3.8kg	4.4kg	5.3kg
Reset Button		< 5 sec: System reboot > 5 sec: Factory default		
LED		System: SYS PWR x 1 (Green) PoE Alarm x 1 (Red) Fan Alarm x 2 (Red) Management port x 1: LNK/ACT (Green), Per PoE Port: 802.3bt PoE-in-use x 1 (Green) 802.3at/af PoE-in-use x1 (Amber)		
Network Cable		10BASE-T: 4-pair UTP Cat5 up to 100m (328ft) 100BASE-TX: 4-pair UTP Cat5 up to 100m (328ft) 1G/2.5GBASE-T: 4-pair UTP Cat 5e/Cat 6/Cat 6A/Cat 7 up to 100m (328ft) 5GBASE-T: 4-pair UTP Cat 6/Cat 6A/Cat 7 up to 100m (328ft) 10GBASE-T: 4-pair UTP Cat 6A/Cat 7 up to 100m (328ft) EIA/TIA- 568 100-ohm STP (100m)		
Power over Ethernet				
PoE Standard		802.3bt PoE++ PSE Backward compatible with IEEE 802.3at PoE PSE		
PoE Power Supply Mode		■ 802.3bt ■ End-span ■ Mid-span		
PoE Power Output		Per port 54V DC ■ 802.3bt mode: maximum 95 watts ■ End-span mode: maximum 36 watts ■ Mid-span mode: maximum 36 watts		
Power Pin Assignment		■ 802.3bt: 1/2(-), 3/6(+), 4/5(+), 7/8(-) ■ End-span: 1/2(-), 3/6(+) ■ Mid-span: 4/5(+), 7/8(-)		
PoE PD Type		■ Standard ■ Legacy ■ Force		
PoE Power Budget		400 watts	600 watts	800 watts
Number of 95W 802.3bt Type-4 PDs		4	6	8
Number of 60W 802.3bt Type-3 PDs		6	10	13
Number of 802.3at PDs		8	16	22
PoE Management		Power limit by consumption and classification PoE function enable/disable Per port PoE function enable/disable Per port PoE power schedule Power feeding priority PD alive check PD classification detection Current per port usage and status Total power consumption		
Security				
Firewall		SPI Firewall Protection		
Authentication		Authentication Method Configuration		
Filtering		MAC Filtering		

Access Management	HTTP/HTTPS/SNMP
Certificates	System CA Certificate for HTTPS
Management Functions	
Management Interface	HTTP/HTTPs Web user interface
Secure Management Interface	TLSv1.2, TLSv1.3

Management Feature	IPv4 and IPv6 dual stack management
	Web interface for remote management
	LLDP Link Layer Discovery Protocol (LLDP)
	PLANET DDNS and Easy DDNS
	Supports Network Time Protocol (NTP)
	System Maintenance
	  - Firmware upload via HTTP
	  - Configuration upload/download via HTTP
	  - Reboot button for system reboot
	  - Reset button for system reset to factory default
	PLANET Smart Discovery utility automatically finds PLANET devices on the network
	PLANET NMS system and CloudNMS for deployment management
	Remote RADIUS Server authentication
	Scheduled System Power Rebooting
	Network Diagnostic
	  - ICMPv6/ICMPv4 Remote Ping
	  - Trace Route

SNMP Management	SNMP v1, v2c and v3 for system status monitoring SNMP trap for alarm notification of events
Event Management	Local system event log Remote syslog
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 802.3bz Gigabit 2.5G, 5GBASE-T Ethernet IEEE 802.3an Gigabit 10GBASE-T Ethernet IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus RFC 768: UDP RFC 791: IP RFC 2068 HTTP RFC 1157: SNMP v1 RFC 1902: SNMP v2c RFC 2273: SNMPv3 RFC 5424: Syslog
Standards Conformance	
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

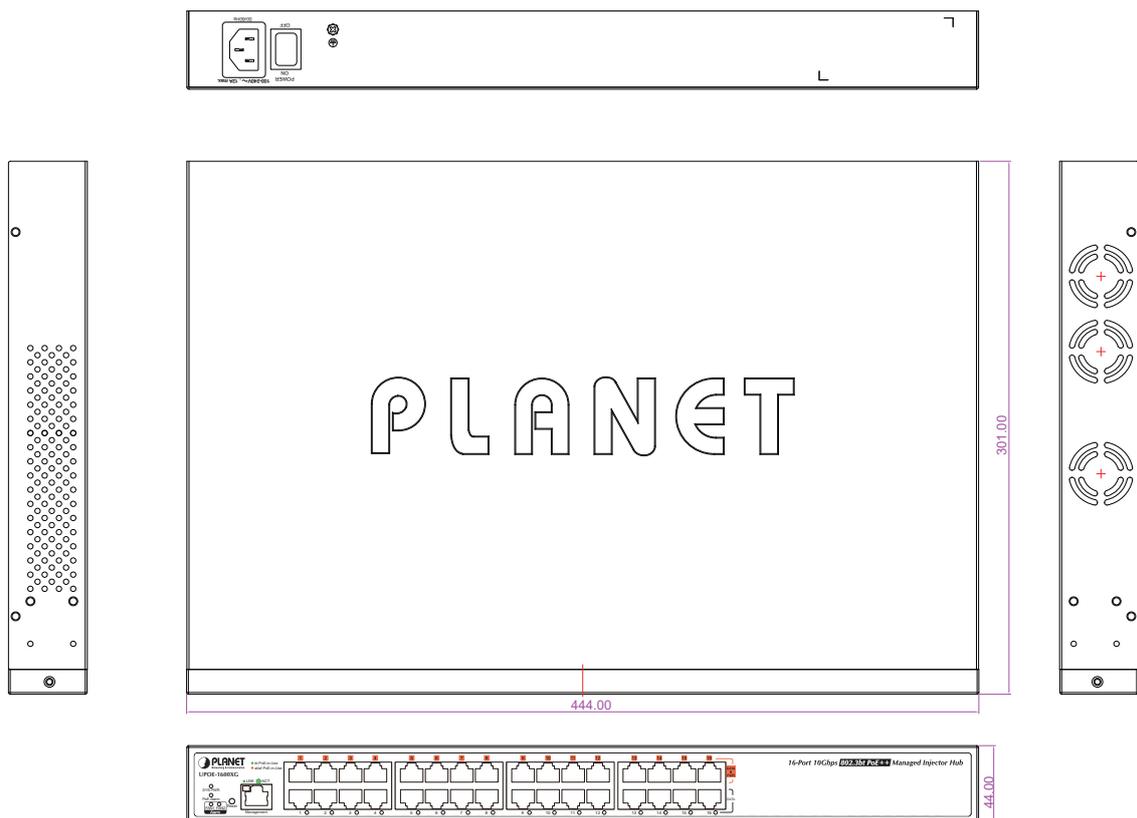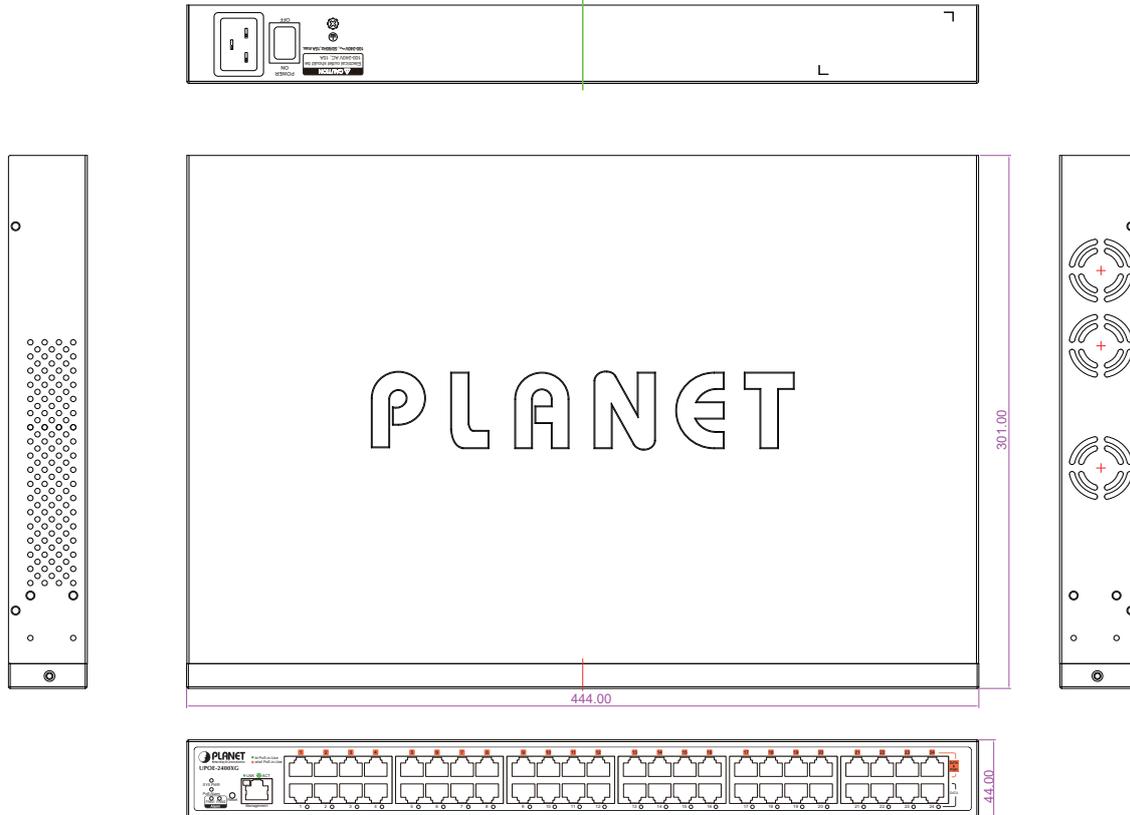|	
UPOE-800XG	8-Port 10Gbps 802.3bt PoE++ Managed Injector Hub (400W)
UPOE-1600XG	16-Port 10Gbps 802.3bt PoE++ Managed Injector Hub (600W)
UPOE-2400XG	24-Port 10Gbps 802.3bt PoE++ Managed Injector Hub (800W)

Dimensions

● **UPOE-800XG**

Dimensions (W x D x H): 444 x 301 x 44 mm

● **UPOE-1600XG**

Dimensions (W x D x H): 444 x 301 x 44 mm

● **UPOE-2400XG**

301.00

444.00

44.00

Dimensions (W x D x H): 444 x 301 x 44 mm

Related Products

UPOE-800G	8-Port Gigabit 802.3bt PoE++ Managed Injector Hub (400W)
UPOE-1600G	16-Port Gigabit 802.3bt PoE++ Managed Injector Hub (600W)
UPOE-2400G	24-Port Gigabit 802.3bt PoE++ Managed Injector Hub (800W)
POE-E301	1-Port 802.3bt to 1-Port 802.3bt Gigabit PoE++ Extender
POE-E304	1-Port 802.3bt PoE++ to 4-Port 802.3af/at Gigabit PoE Extender
POE-171S	Single-Port 10/100/1000Mbps Ultra PoE Splitter (12V/19V/24V)
POE-172S	Single-Port 10/100/1000Mbps Ultra PoE Splitter (12V/19V/24V)
POE-173S	Single-Port 10/100/1000Mbps 802.3bt PoE++ Splitter
POE-173S-12V	Single-Port 10/100/1000Mbps 802.3bt PoE++ Splitter
IPOE-176S	Industrial Single-Port 10Gbps 802.3bt PoE++ Splitter

UPOE-800XG/UPOE-1600XG/UPOE-2400XG