

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

This **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 **Ultra PoE Managed Injector Hub series** is a high-density, rack-mountable managed Ultra PoE injector hub featuring **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 **Ultra 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 cost-effective Power over Ethernet network solution for small businesses and enterprises.

#### **Quick and Easy PoE Network Deployment**

The **Ultra PoE Managed Injector Hub series** is installed between a regular Ethernet Switch and the PDs. There are totally 32 RJ45 STP ports on the front panel of the **Ultra PoE Managed Injector Hub series**, of which the16 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
- 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 **Ultra 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.

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

The 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 **Ultra PoE Managed Injector Hub series** 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





## PoE Schedule for Energy Saving

Under the trend of energy saving worldwide and contributing to environmental protection on the Earth, the Ultra 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. It also increases security by powering off PDs that should not be in use during non-business hours.



## **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 Ultra PoE Managed Injector Hub series 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

Risk'Expert'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 Ultra PoE Managed Injector Hub series 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 PD Alive Check**



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## Advanced PoE Power Output Mode Management

To fill the demand of various powered devices consuming stable PoE power, the **Ultra PoE Managed Injector Hub series** 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



#### **Advanced Power Management**

To facilitate power management, the **Ultra PoE Managed Injector Hub series** 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 **Ultra PoE Managed Injector Hub series** 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 **Ultra PoE Managed Injector Hub series** enables the administrator to monitor the status of the power usage of the connected PDs in real time.

## High Power Budget for 802.3at PoE Extension

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

### **Smart Fan Design for Silent Operation**

The **Ultra 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 Ultra PoE Managed Injector Hub for optimal power output capability. The **Ultra PoE Managed Injector Hub series** is able to operate reliably, stably and quietly in any environment without affecting its performance.



#### Applications

## Gigabit Ultra PoE and PoE+ Network Deployment

The **Ultra 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 16 10/100/1000BASE-T Gigabit Ethernet ports, the **Ultra PoE Managed Injector Hub series** supports full 52V DC power for any remote 60W and IEEE 802.3at/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 **Ultra 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

Hardware	
Interface	<ul> <li>"Data" Input Ports: 16 x RJ45</li> <li>"Data + Power" Output Ports: 16 x RJ45</li> <li>Management Port: 1 x RJ45; 10/100/1000BASE-T, auto-negotiation, auto-MDI/MDIX</li> </ul>
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 x 1 (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 2068 HTTP RFC 2068 HTTP



	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)
Environments	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 90% (non-condensing)

