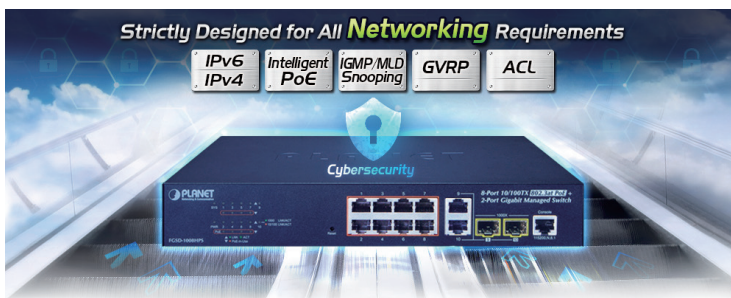# 8-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP Combo Managed Ethernet Switch

PLANET's newly-revised FGSD-1008HPS Layer 2 PoE+ Managed Switch is designed for enterprises and industries where a network of PDs can be centrally managed. The Switch's management functions have been enhanced to include intelligent PoE management, IPv6 management, ACL, GVRP, and more.

Cost-optimized Managed PoE+ Switch with L2/L4 Switching and Security

PLANET FGSD-1008HPS is an ideal Managed PoE+ Switch which provides cost-effective advantage to local area network and is widely accepted in the SMB office network. It offers **intelligent Layer 2 data packet switching and management functions, friendly web user interface** and **stable operation**. The model complies with **IEEE 802.3at Power over Ethernet Plus (PoE+)** at an affordable price; the FGSD-1008HPS is equipped with **8 10/100BASE-TX** Fast Ethernet ports and **2 Gigabit TP/SFP combo** interfaces with inner power system. With its **8** Fast Ethernet ports integrated with 802.3at PoE+ injector function and total power budget of up to **120 watts**, it offers a rack-mountable, affordable, safe and reliable power solution for SMBs deploying Power over Ethernet networks, or requiring enhanced data security and network traffic management.

FGSD-1008HPS

120-watt PoE Power Budget

8 x 10/100BASE-TX 802.3at PoE+ Port
RJ45 Type Console
Reset Button
2 x Gigabit TP/SFP Combo Port
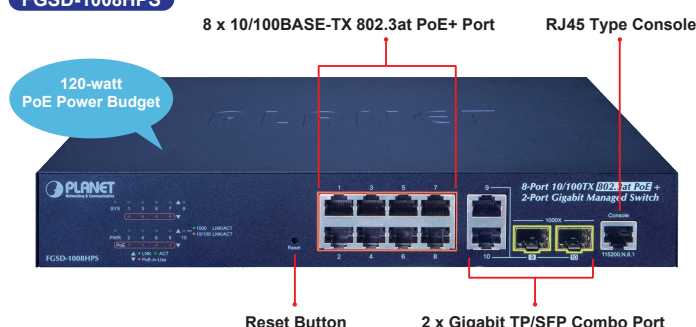
Physical Port

- **8 10/100BASE-TX** RJ45 copper ports with **IEEE 802.3at/af PoE+** injector function
- **2 10/100/1000BASE-T** Gigabit RJ45 copper ports
- **2 100/1000BASE-X mini-GBIC/SFP slots**, shared with port-9 to port-10
- Reset button for system factory default

Switching

- Hardware-based 10/100Mbps, half/full duplex and 1000Mbps full duplex mode, flow control and auto-negotiation, and auto MDI/MDI-X
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- Automatic address learning and address aging
- Supports CSMA/CD protocol

Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet Plus
- Backward compatible with IEEE 802.3af Power over Ethernet
- Up to 8 ports of IEEE 802.3af/802.3at devices powered
- Supports PoE Power up to 30 watts for each PoE port
- 120-watt PoE budget
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 250m via extend mode
- PoE Management
  – Per port PoE function enable/disable
  – Per Port PoE operation mode selection
  – Per PoE port power budget control
  – PD classification detection and PoE consumption usage status
- Intelligent PoE features
  – PD alive check
  – PoE port sequence
  – PoE schedule

Layer 2 Features

- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)

Solution for IPv6 Networking

With the support for IPv6/IPv4 protocol, and easy and friendly management interfaces, the FGSD-1008HPS is the ideal choice for IP surveillance, VoIP and wireless service providers to connect with the IPv6 network. It also helps SMBs to step in the IPv6 era with the lowest investment and without having to replace the network facilities even though ISPs establish the IPv6 FTTx edge network.
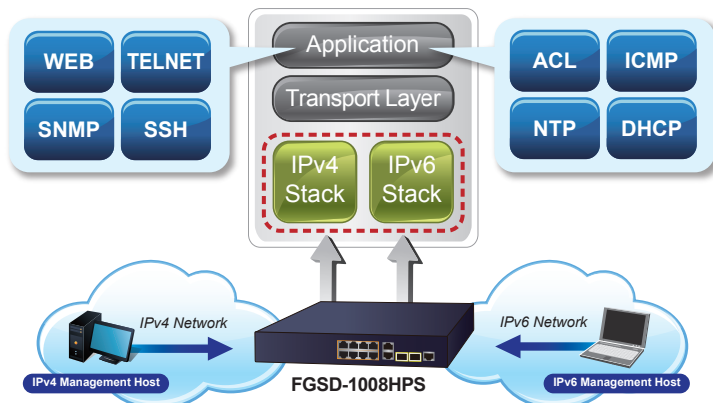

Built-in Unique PoE Functions for Surveillance Management

As a managed PoE Switch for surveillance network, the FGSD-1008HPS features the following intelligent PoE management functions:

- PD Alive Check
- PoE Port Sequence
- PoE Schedule

Intelligent Powered Device Alive Check

The FGSD-1008HPS can be configured to monitor a connected PD status in real time via ping action. Once the PD stops working and it is without response, the FGSD-1008HPS 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, thus reducing administrator management burden.
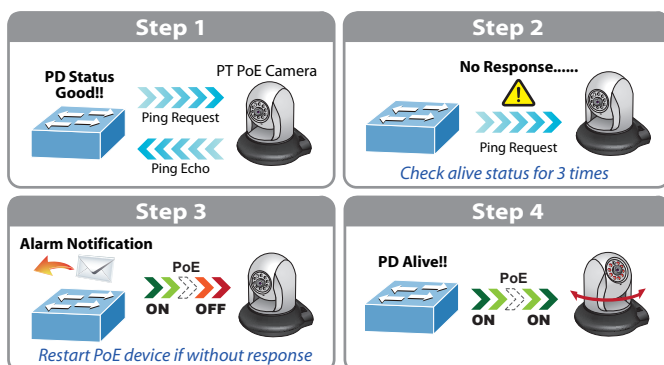
PoE Port Sequence

To prevent all the PoE ports of the FGSD-1008HPS from being active at the same time when the Switch has booted up, the PoE ports of the FGSD-1008HPS can be configured to allow each port to be activated at an interval time. In addition, the **"Delay"** setting is to delay power feeding on each port when the FGSD-1008HPS has completely booted up.

- High performance Store and Forward architecture, runt/ CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Supports **VLAN**
  – Port-based VLAN, up to 10 VLAN groups
  – IEEE 802.1Q tagged VLAN
  – Protocol VLAN
  – Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
  – GVRP
  – Voice VLAN
- Supports **Spanning Tree Protocol**
  – STP (IEEE 802.1D Spanning Tree Protocol)
  – RSTP (IEEE 802.1w Rapid Spanning Tree Protocol)
  – MSTP (IEEE 802.1s Multiple Spanning Tree Protocol)
  – STP BPDU filtering, BPDU Guard
- Supports **Link Aggregation**
  – IEEE 802.3ad Link Aggregation Control Protocol (LACP)
  – 1 LACP group, up to 2 ports per LACP group
  – Cisco ether-channel (static trunk)
  – 1 trunk group, up to 2 ports per trunk group
- Provides port mirror (many-to-1)
- Loop detection

Quality of Service

- Ingress/Egress Rate Limit per port bandwidth control
- Storm Control support
  – Broadcast/ Multicast /DLF (Destination Lookup Fail)/ARP/ ICMP
- Traffic classification
  – IEEE 802.1p Qos/CoS
  – TCP/UDP/DSCP/IP precedence of IPv4/IPv6 packets
- Strict priority and Weighted Round Robin (WRR) CoS policies
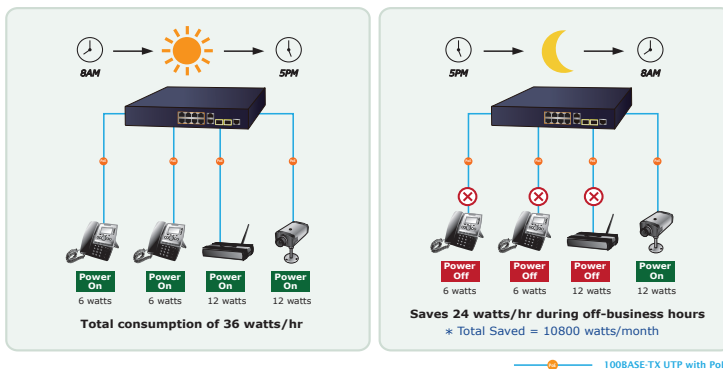
Multicast

- Supports IPv4 IGMP snooping v1/ v2 and v3
- Supports IPv6 MLD snooping v1, v2

Security

- Access Control List
  – IPv4/IPv6 IP-based ACL
  – MAC-based ACL
- Port-MAC-IP Address Binding
  – Port-MAC-IP Port Setting
  – Port-MAC-IP Entry Setting
- MAC Address Binding
  – Static MAC
  – MAC Filtering
- DHCP snooping to filter distrusted DHCP messages

PoE Schedule for Energy Saving

Besides being used for IP surveillance, the FGSD-1008HPS is certainly applicable to build any PoE network including VoIP and wireless LAN. Under the trend of energy saving worldwide and contributing to the environmental protection on the Earth, the FGSD-1008HPS can effectively control the power supply besides its capability of giving high watts power. The **"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 and enterprises save energy and budget.


8AM / 5PM

Power On 6 watts | Power On 6 watts | Power On 12 watts | Power On 12 watts

Total consumption of 36 watts/hr

5PM / 8AM

Power Off 6 watts | Power Off 6 watts | Power Off 12 watts | Power On 12 watts

Saves 24 watts/hr during off-business hours
✱ Total Saved = 10800 watts/month

100BASE-TX UTP with PoE

- ARP Inspection discards ARP packets with invalid MAC address to IP address binding

Management

- IPv4 and IPv6 dual stack management
- Switch management interface
  – Web switch management
  – Telnet command line interface
  – SNMP v1, v2c and v3
- BOOTP and DHCP for IP address assignment
- System maintenance
  – Firmware upgrade via HTTP
  – Configuration upload/download through web interface
  – Hardware-based reset button for system reset to factory default
- SNTP Network Time Protocol
- Link Layer Discovery Protocol (LLDP)
- Event message logging to remote Syslog server
- PLANET Smart Discovery utility

Ethernet Data Transmission Distance Extension

In the "Extended" operation mode, the FGSD-1008HPS operates on a per-port basis at 10Mbps duplex operation but can support PoE power output over a distance of up to 250 meters overcoming the 100 meters limit on Ethernet UTP cable.

Extend Mode

PoE IP Camera

FGSD-1008HPS

Power

250 meters (820 feet)

10BASE-T UTP with PoE
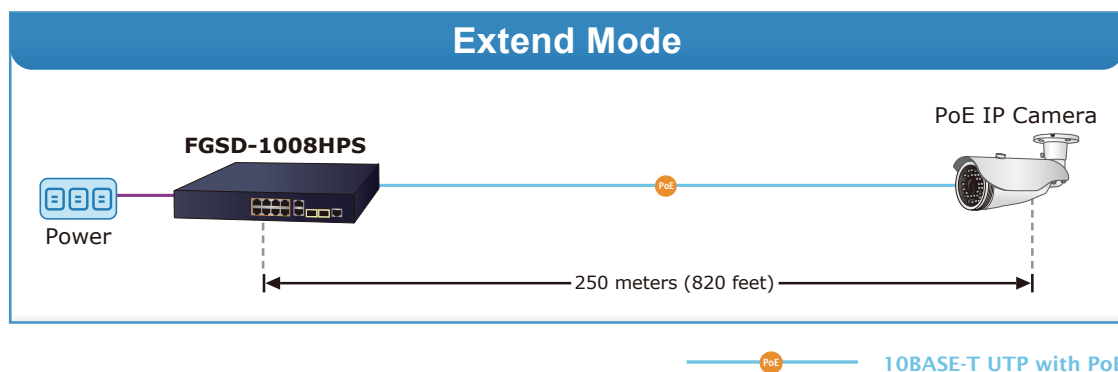
Robust Layer 2 Features

The FGSD-1008HPS can be programmed for advanced switch management functions, such as **Multiple Spanning Tree Protocol (MSTP)**, BPDU filtering, BPDU Guard, dynamic port link aggregation, **IGMP/MLD snooping**, DHCP relay agent, loop detection and GVRP, voice VLAN and the **Link Layer Discovery Protocol (LLDP)**. The Layer 2 protocol included is to help discover basic information about neighboring devices in the local broadcastdomain. Other features included are the port-based/802.1Q VLAN and Q-in-Q VLAN, Layer 2/4 QoS, port mirroring, broadcast storm control and bandwidth control.

MSTP | LACP
Q-in-Q | QoS | LLDP
MLD | IGMP

L2/L4 Managed Switch

L2/L4 Managed Switch