

Product Specifications

24-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP Combo

Managed Ethernet Switch

FGSW-2624HPS

Version 3.0

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Change History:

Revision:	Date:	Author:	Change List
Version 3.0	2018/12/14	Marc Liao	Initial Release - Hardware designed Changed - Software function enhance
Version 2.0	2018/1/8	Marc Liao	Initial Release - Hardware designed Changed
Version 1.0	2015/5/26	Jos Li	Official released

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1. PRODUCT DESCRIPTION



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

PLANET's newly-revised FGSW-2624HPS 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.

PLANET FGSW-2624HPS 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 FGSW-2624HPS is equipped with **24 10/100BASE-TX Fast Ethernet ports and 2 Gigabit TP/SFP combo** interfaces with inner power system. Its **24 Fast Ethernet ports** integrated with 802.3at PoE+ injector function and total power budget of up to **220 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.



Solution for IPv6 Networking

With the support for IPv6/IPv4 protocol, and easy and friendly management interfaces, the FGSW-2624HPS 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 the managed PoE Switch for surveillance network, the FGSW-2624HPS features the following intelligent PoE management functions:

- **PD Alive Check**
- **PoE Port Sequence**
- **PoE Schedule**

Intelligent Powered Device Alive Check

The FGSW-2624HPS 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 FGSW-2624HPS 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 FGSW-2624HPS from being active at the same time when the Switch has booted up, the PoE ports of the FGSW-2624HPS 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 FGSW-2624HPS has completely booted up.

PoE Schedule for Energy Saving

Besides being used for IP surveillance, the FGSW-2624HPS 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 FGSW-2624HPS 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.

Robust Layer 2 Features

The FGSW-2624HPS can be programmed for advanced switch management functions, such as **Multiple Spanning Tree Protocol (MSTP)** and BRDU 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)**. With Layer 2 protocol, it helps to discover basic information about neighboring devices in the local broadcast domain. 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.

Enhanced Security and Traffic Control

The FGSW-2624HPS offers the comprehensive **Layer 2 to Layer 4 access control list (ACL)** for enforcing security to the edge. It can be used to restrict network access by denying packets based on source and destination IP/MAC address or defined typical network applications. The FGSW-2624HPS also provides **DHCP Snooping**, **ARP Inspection** and **MAC Verification** functions to prevent IP snooping from attack and discard ARP packets with invalid MAC address. Also included are per port MAC/IP address binding and MAC address binding. The network administrator can now build highly-secure corporate networks with considerably less time and effort than before.

Efficient Management

For efficient management, the FGSW-2624HPS is equipped with **console**, **Web**, **Telnet** and **SNMP** management interfaces. With the built-in Web-based management interface, the FGSW-2624HPS offers an easy-to-use, platform-independent management and configuration facility. By supporting the standard Simple Network Management Protocol (SNMP), the FGSW-2624HPS can be managed via any standard management software. For text-based management, the switch can be accessed via Telnet and the console port. Moreover, the FGSW-2624HPS offers secure remote management by supporting **SNMPv3** connections which encrypt the packet content at each session.

Flexible and Extendable Uplink Solution

The FGSW-2624HPS provides **2 extra Gigabit TP/SFP combo** interfaces supporting **10/100/1000BASE-T** RJ45 copper to connect with surveillance network devices such as **NVR**, **Video Streaming Server** or **NAS** to facilitate surveillance management. Its fiber SFP slots designed for the **1000BASE-SX/LX** SFP (Small Form-factor Pluggable) fiber transceivers can be uplinked to a backbone switch and monitoring center in long distance. The distance can be extended from 550 meters (multi-mode fiber) to 10/20/30/40/50/60/70/120 kilometers (single-mode fiber or WDM fiber). They are well-suited for applications within the industrial data centers and distributions.

2. PRODUCT FEATURES

▶ Physical Port

- 24-port 10/100BASE-TX RJ45 copper with IEEE 802.3at/af PoE+ injector function
- 2-port 10/100/1000BASE-T Gigabit RJ45 copper
- 2 1000BASE-X mini-GBIC/SFP slots, shared with port-25 to port-26
- RJ45 console interface for switch basic management and setup
- 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
- 9K jumbo frame
- Automatic address learning and address aging
- Supports CSMA/CD protocol

▶ Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet Plus
- Complies with IEEE 802.3af Power over Ethernet
- Up to 24 ports of IEEE 802.3af/802.3at devices powered
- Supports PoE power up to 30.8 watts for each PoE port
- 220-watt PoE budget
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m
- PoE Management
 - Total PoE power budget control

- 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)
- High performance Store and Forward architecture, runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Supports **VLAN**
 - Port-based VLAN, up to 26 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 Protection
- Supports **Link Aggregation**
 - IEEE 802.3ad Link Aggregation Control Protocol (LACP)
 - 1 LACP group with 2 ports
 - Cisco ether-channel (static trunk)
 - **1 trunk group with 2 ports**
- 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
- ARP Inspection discards ARP packets with invalid MAC address to IP address binding

▶ **Management**

- IPv4 and IPv6 dual stack management
- Switch management interface
 - RJ45 console local management
 - 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
- Simple Network Time Protocol
- Link Layer Discovery Protocol (LLDP)
- SNMP trap for interface link up and link down notification
- Event message logging to remote Syslog server
- PLANET smart discovery utility

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

Switch ASIC	IC+ IP1829A	x 1
Gigabit PHY	Qualcomm AR8033	x 2
CPU	IC+ IP211	x 1
Flash	MXIC MX25L12835FM2I-10G	x 1
PoE Controller	IC+ IP808	x 3
Power Supply	Power Supply: Gospower Output: 12V, 1.8A Output: 54V, 4.5A	x 1

3.2 FUNCTION SPECIFICATIONS

Product	FGSW-2624HPS
Hardware Specifications	
Copper Ports	24 x 10/100BASE-TX RJ45 Auto-MDI/MDI-X ports
PoE Injector Port	24 802.3af/802.3at PoE+ injector ports
Gigabit Copper Ports	2 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
SFP/mini-GBIC Slots	2 1000BASE-X SFP interfaces, shared with Port-25 to Port-26
Console	1 x RS-232-to-RJ45 serial port (115200, 8, N, 1)
Switch Architecture	Store-and-Forward
Switch Fabric	8.8Gbps/non-blocking
Switch Throughput@64bytes	6.54Mpps @64bytes
MAC Address Table	16K entries
Shared Data Buffer	4Mbits
Flow Control	IEEE 802.3x pause frame for full duplex Back pressure for half duplex
Jumbo Frame	9216 bytes
Reset Button	> 5 sec: Factory default
LED	System: Power (Green) SYS (Green) 10/100TX RJ45 Interfaces (Port 1 to Port 24): 100 LNK/ACT (Green), PoE-in-Use (Amber) 10/100/1000BASE-T RJ45 / SFP Interfaces (Port 25 to Port 26): 1000 LNK/ACT (Green)
Thermal Fan	2
Power Requirements	100~240V AC, 50/60Hz, 5A (max.)
Power	Max. 254 watts/866 BTU

Consumption/Dissipation	
Enclosure	Metal
Power over Ethernet	
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE
PoE Power Supply Type	Mid-span
Power Pin Assignment	4/5(+), 7/8 (-)
PoE Power Output	Per Port 52V DC, 300mA. Max. 15.4 watts (IEEE 802.3af) Per Port 52V DC, 600mA. Max. 30 watts (IEEE 802.3at)
PoE Power Budget	220 watts
Number of PDs, 7 watts	24
Number of PDs, 15.4 watts	14
Number of PDs, 30 watts	7
Layer 2 Functions	
Port Mirroring	TX/RX/both Many-to-1 monitor
VLAN	Port-based VLAN, up to 26 VLAN groups IEEE 802.1Q tagged VLAN - Up to 256 VLAN groups, out of 4094 VLAN IDs Protocol VLAN Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad) GVRP Voice VLAN
Link Aggregation	IEEE 802.3ad LACP supports one 2-port trunk group and static trunk supports one 2-port trunk group
Spanning Tree Protocol	IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) STP BPDU Filtering, BPDU Protection
IGMP Snooping	IPv4 IGMP snooping v1/ v2 and v3
MLD Snooping	IPv6 MLD snooping v1, v2
Access Control List	IPv4/IPv6 IP-based ACL MAC-based ACL
QoS	Ingress/Egress Rate Limit per port bandwidth control Storm Control support - Broadcast/ Multicast /DLF (Destination Lookup Failure)/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
Security	Access Control List - IPv4/IPv6 IP-based ACL - MAC-based ACL Port-MAC-IP Address Binding Port-MAC-IP Port Setting

	<p>Port-MAC-IP Entry Setting</p> <p>MAC Address Binding</p> <ul style="list-style-type: none"> Static MAC MAC Filtering <p>DHCP snooping to filter distrusted DHCP messages</p> <p>ARP Inspection discards ARP packets with invalid MAC address to IP address binding</p>
Management Functions	
Basic Management Interfaces	<p>IPv4 and IPv6 dual stack management</p> <p>Switch management interface</p> <ul style="list-style-type: none"> - RJ45 console local management - Web switch management - Telnet command line interface - SNMP v1, v2c and v3 <p>BOOTP and DHCP for IP address assignment</p> <p>System maintenance</p> <ul style="list-style-type: none"> - Firmware upgrade via HTTP - Configuration upload/download through web interface - Hardware-based reset button for system reset to factory default <p>Simple Network Time Protocol</p> <p>Link Layer Discovery Protocol (LLDP)</p> <p>SNMP trap for interface link up and link down notification</p> <p>Event message logging to remote Syslog server</p> <p>PLANET smart discovery utility</p>
Secure Management Interfaces	SNMP v3
Standards Conformance	
Standards Compliance	<p>IEEE 802.3 10BASE-T</p> <p>IEEE 802.3u 100BASE-TX</p> <p>IEEE 802.3z Gigabit SX/LX</p> <p>IEEE 802.3ab Gigabit 1000T</p> <p>IEEE 802.3x flow control and back pressure</p> <p>IEEE 802.3ad port trunk with LACP</p> <p>IEEE 802.1D Spanning Tree Protocol</p> <p>IEEE 802.1w Rapid Spanning Tree Protocol</p> <p>IEEE 802.1s Multiple Spanning Tree Protocol</p> <p>IEEE 802.1p Class of Service</p> <p>IEEE 802.1Q VLAN tagging</p> <p>IEEE 802.1ab LLDP</p> <p>IEEE 802.3af Power over Ethernet</p> <p>IEEE 802.3at Power over Ethernet Plus</p> <p>RFC 2068 HTTP</p> <p>RFC 1112 IGMP version 1</p> <p>RFC 2236 IGMP version 2</p> <p>RFC 3376 IGMP version 3</p> <p>RFC 2710 MLD version 1</p> <p>RFC 3810 MLD version 2</p>

3.3 PHYSICAL SPECIFICATIONS:

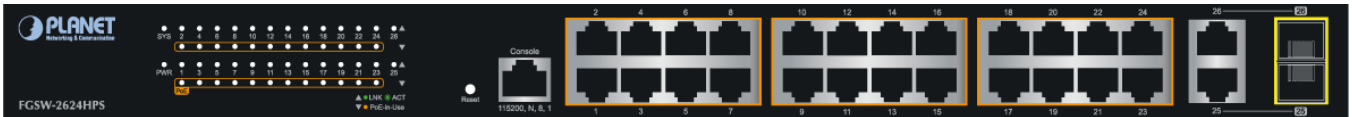
■ **Dimensions:**

445 x 207 x 45 mm (W x D x H), 1U height

■ **Weight:**

2.7kg

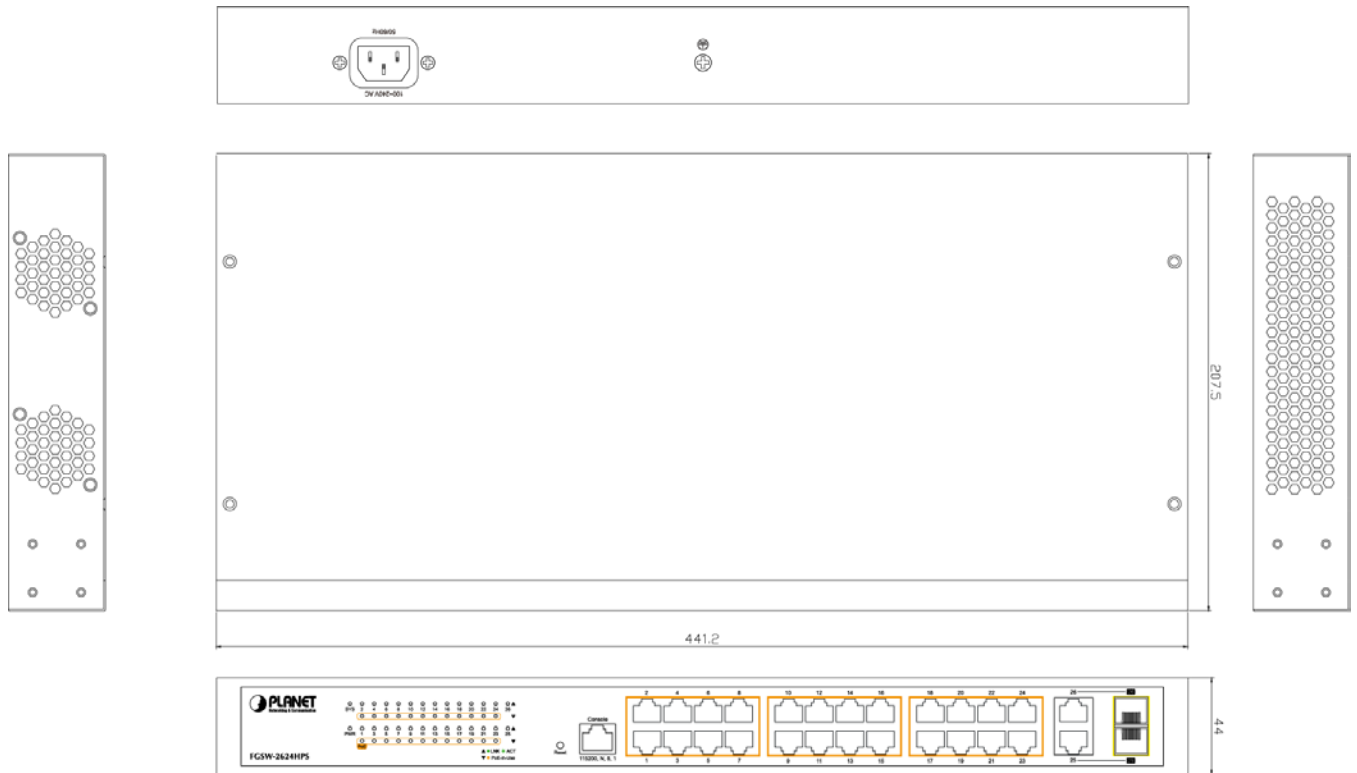
■ **Front Panel:**



■ **Rear Panel:**



■ **Diagram:**



Dimensions (unit = mm)

■ LED Definition

➤ System

LED	Color	Function
PWR	Green	Lights to indicate that the Switch has power.
SYS	Green	Lights to indicate the system is working. Off to indicate the system is booting.

➤ Per 10/100Mbps port with PoE interfaces (Port-1 to Port-24)

LED	Color	Function
LNK/ACT	Green	Lights: Indicates the link through that port is successfully established at 10/100Mbps.
		Blink: Indicates that the Switch is actively sending or receiving data over that port.
PoE In-Use	Amber	Lights: Indicates the port is providing DC 52V in-line power.
		Off: Indicates the connected device is not a PoE PD.

➤ Per 10/100/1000Mbps RJ45 Combo Interface (Port-25 to Port-26)

LED	Color	Function
LNK/ACT	Green	Lights: Indicates the port is successfully established at 10/100/1000Mbps.
		Blink: Indicates that the Switch is actively sending or receiving data over that port.

➤ Per 1000Mbps SFP Combo Interface (Port-25 to Port-26)

LED	Color	Function
LNK/ACT	Green	Lights: Indicates the port is successfully established at 1000Mbps.
		Blink: Indicates that the Switch is actively sending or receiving data over that port.

3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: 0 ~ 50 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

Storage:

Temperature: -10 ~ 70 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATIONS

Input Voltage:	100~240V AC, 50/60Hz,5A (max.) Auto-sensing	
Power Consumption (System on):	110V: 15.6 watts	53BTU
	220V: 15.6 watts	53BTU
Power Consumption (Ethernet Full Loading):	110V: 18.7 watts	63BTU
	220V: 18.8 watts	64BTU
Power Consumption (PoE+ Ethernet Full Loading):	110V: 254 watts *	866BTU
	220V: 247 watts *	842BTU

* With a total PoE power output limited at 220 watts

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

3.7 RELIABILITY

MTBF > 50,000 hrs @ 25 degrees C

3.8 BASIC PACKAGING

<input checked="" type="checkbox"/> The FGSW-2624HPS	x 1
<input checked="" type="checkbox"/> Quick Installation Guide	x 1
<input checked="" type="checkbox"/> RS232-to-RJ45 Console Cable	x 1
<input checked="" type="checkbox"/> Power Cord	x 1
<input checked="" type="checkbox"/> SFP Dust Cap	x 2
<input checked="" type="checkbox"/> Rubber Feet	x 4
<input checked="" type="checkbox"/> Rack Mount Accessory Kit	x 1

3.9 PACKING INFORMATION

Box Dimensions (W x D x H):	555 x 295x 88mm
Gross Weight:	3.7kg
Carton Dimensions (W x D x H):	572 x 370 x 315mm
Total Weight:	14.8kg
Quantity:	4pcs per carton