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Product Specifications

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

Web Smart Ethernet Switch

FGSW-2624HPS

Version 2.0

Change History:

Revision:	Date:	Author:	Change List
Version 2.0	2018/1/8	Marc Liao	Initial Release Hardware Designed Changed
Version 1.0	2015/5/26	Jos Li	Official released

Author:	Marc Liao	Editor:	Marc Liao
Reviewed By:		Approved By:	Kent Kang

1. PRODUCT DESCRIPTION

Cost-effective PoE+ Managed Switch for Small and Medium Networking

Particularly designed for the popular IP surveillance applications, PLANET FGSW-2624HPS 802.3at PoE web smart switch is a surveillance switch with the central management of remote power control and IP camera monitoring. The FGSW-2624HPS provides PoE functions along with **24 10/100BASE-TX** ports featuring **30-watt 802.3at PoE+** with RJ45 copper interfaces and **2 Gigabit TP/SFP combo** interfaces supporting high-speed transmission of surveillance images and videos. With a total power budget of up to **220 watts** for different kinds of PoE applications, respectively, the FGSW-2624HPS provides a quick, safe and cost-effective Power over Ethernet network solution for small businesses and enterprises.
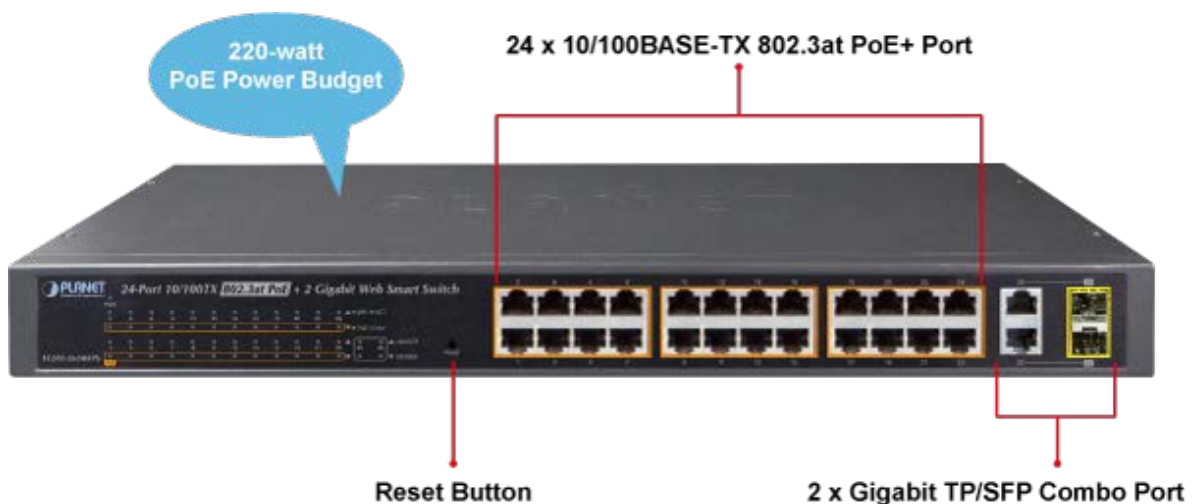
Centralized Power Management for Security and Public Service PoE Applications

To fulfill the needs of the high power consumption of PoE network applications, the FGSW-2624HPS features the standard IEEE 802.3at Power over Ethernet Plus (PoE+) that combines up to 30 watts of power output and data per port over one cat5E/6 Ethernet cable. It is designed specifically to meet the demand of the high power consumption of network PDs (powered devices) such as IR, PTZ, speed dome cameras; and even box-type IP cameras with built-in fan and heater. Compliant with both 802.3at and 802.3af standards, the series allows more flexibility in power requirement for a variety of PDs, making installation costs affordable.

Number of Powered Devices		Model & PoE Budget	FGSW-2624HPS
Applications			220 watts
PoE Ability (100 meters)	Class 2 PD @ 7 watts PoE Mini Dome PoE VoIP Phone		24
	Class 3 PD @ 15 watts PoE Box IP Camera PoE Wireless AP		14
	Class 4 PD @ 30 watts PoE+ Speed Dome		7

Robust Layer 2 Features

The FGSW-2624HPS can be programmed for advanced switch management functions such as dynamic port link aggregation (LACP), Spanning Tree Protocol (STP), IGMP snooping v1 and v2, bandwidth control, and L2/L4 security control. The FGSW-2624HPS provides IEEE 802.1Q tagged VLAN, port-based VLAN and MTU VLAN. The VLAN groups allowed will be maximally up to 32. Via aggregation of supporting ports, the FGSW-2624HPS allows the operation of a high-speed trunk combining multiple ports and supports fail-over as well.

Remote and Centralized Management

For catering to the need of easy management and centralized SNMP application to monitor the status of the switch and traffic per port, the FGSW-2624HPS provides friendly Web management interface for efficient network operation. With its built-in Web-based management, the FGSW-2624HPS offers an easy-to-use, platform-independent management and configuration facility. It also supports standard Simple Network Management Protocol (SNMP) and can be monitored via any standard-based management software.

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. Or through these fiber SFP slots, it can also connect with the **1000BASE-SX/LX** SFP (Small Form-factor Pluggable) fiber transceiver to uplink to 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.

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2. PRODUCT FEATURES

➢ **Physical Port**

- ◼ **24-port 10/100BASE-TX** RJ45 copper with **24-port IEEE 802.3at/af PoE** injector
- ◼ **2-port 10/100/1000BASE-T** Gigabit RJ45 copper
- ◼ **2 1000BASE-X mini-GBIC/SFP slots**, shared with port-25 to port-26
- ◼ Reset button for system management

➢ **Power over Ethernet**

- ◼ Complies with IEEE 802.3at Power over Ethernet Plus Mid-span PSE
  - ◼ Up to 24 IEEE 802.3at / 802.3af devices powered
  - ◼ Supports PoE Power up to 30.8 watts for each PoE port
  - ◼ Detects powered device (PD) automatically
  - ◼ Circuit protection prevents power interference between ports
  - ◼ Remote power feeding up to 100m
  - ◼ PoE Power Usage
  - ◼ PoE Management
  - – Per port PoE function enable/disable
  - – PoE Port Power feeding priority
  - – Per PoE port power limit
  - – PD classification detection
  - – PoE power sequential

➢ **Layer 2 Features**

- ◼ Supports broadcast storm control
- ◼ Supports **VLAN**
  - - IEEE 802.1Q tag-based VLAN, up to 32 VLANs groups, out of 4095 VLAN IDs
  - - Port-based VLAN, up to 26 VLAN groups
  - - MTU VLAN (Multi-tenant Unit VLAN)
- ◼ Supports **Link Aggregation**
  - - 802.3ad Link Aggregation Control Protocol (LACP)
  - - Cisco ether-channel (static trunk)
- ◼ Supports **Spanning Tree Protocol**
  - - IEEE 802.1d Spanning Tree Protocol
  - - IEEE 802.1w Rapid Spanning Tree Protocol
- ◼ Port mirroring to monitor the incoming or outgoing traffic on a particular port
- ◼ Provides port mirror (Many-to-1)

➢ **Quality of Service**

- ◼ 2 priority queues on all switch ports
- ◼ Traffic classification
  - - Port-based priority
  - - IEEE 802.1p-based priority
  - - IP TOS / DSCP-based priority
  - - TCP / UDP port-based QoS
- ◼ Strict priority and Weighted Round Robin (WRR) CoS policies

> **Multicast**

 ■ Supports IGMP Snooping v1 and v2 (excluding IGMP Query feature)

> **Security**

 ■ Physical port to MAC address binding

 ■ TCP/UDP port number filter: Forwarding or discarding typical network applications

 ■ Port mirroring to monitor the incoming or outgoing traffic on a particular port

> **Management**

 ■ Switch Management Interfaces

  - Web switch management

  - SNMP v1 switch management

 ■ Firmware upload/download via HTTP

 ■ Hardware reset button for system reboot or resetting to factory default

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

Switch ASIC	IC+ IP1826D	x 1
Fast Ethernet PHY	IC+ IP108A	x 3
Gigabit PHY	IC+ IP1001	x 2
CPU	IC+ IP210W	x 1
Flash	2MB	x 1
PoE Controller	Microsemi PD69108	x 3
PoE MCU	Microsemi PD69100	x 1
Power Supply	Gospower Power Supply	x 1
	Output: 5V/4A	
	Output: 54V / 4.5A	

3.2 FUNCTION SPECIFICATIONS

Product	FGSW-2624HPS
Hardware Specifications	
10/100Mbps Copper Ports	24 10/100BASE-TX RJ45 auto-MDI/MDI-X 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
Switch Architecture	Store-and-Forward
Switch Fabric	8.8Gbps / non-blocking
Throughput	6.54Mpps@64Bytes
Address Table	4K entries, automatic source address learning and ageing
Shared Data Buffer	2.75Mb embedded memory for packet buffers
Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex
Maximum Transmit Unit	1518 Bytes
Reset Button	< 5 sec: System reboot

		> 5 sec: Factory default
Dimensions (W x D x H)		440 x 210 x 44mm, 1U height
Weight		2.8kg
Power Consumption		Max. 248watts / 846BTU
ESD Protection		Contact Discharge 4KV DC Air Discharge 8KV DC
LED		System: 　Power　(Green) 10/100BASE-TX RJ45 Interfaces (Port 1 to Port 24): 　10/100Mbps LNK/ACT (Green) 　PoE-in-Use (Orange) 10/100/1000BASE-T RJ45 / SFP Interfaces (Port 25 to Port 26): 　LNK/ACT (Green) 　100/1000 (Green)
Cable	**Twisted-pair**	10BASE-T: 2-pair UTP Cat 3, 4, 5 for up to 100 meters 100BASE-TX: 2-pair UTP Cat 5, 5e for up to 100 meters 1000BASE-T: 4-pair UTP Cat 5e, 6 for up to 100 meters
	Fiber-optic Cable	**1000BASE-SX** : 　50/125µm or 62.5/125µm multi-mode fiber-optic cable, up to 550m (varying on SFP module) **1000BASE-LX** : 　9/125µm single-mode fiber optic cable, up to 10/20/30/40/50/70/120 kilometers (varying on SFP module)

Power over Ethernet		
PoE Standard		IEEE 802.3af / 802.3at PoE+ / PSE
PoE Power Supply Type		Mid-span
Power Pin Assignment		4/5(+), 7/8 (-)
PoE Power Output		Per Port 53V DC, Max. 30.8 watts
PoE Power Budget		220 watts (max.) @ 25 degrees C 190 watts (max.) @ 50 degrees C
PoE Ability	**PD @ 7 watts**	24 units
	PD @ 15.4 watts	14 units
	PD @ 30 watts	7 units

Layer 2 Functions	
Port Configuration	Port disable / enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow Control disable / enable
Port Status	Display each port's speed duplex mode, link status, flow control status, auto negotiation status and trunk status
Port Mirroring	TX / RX / Both Many-to-1 monitor
VLAN	802.1Q tagged-based VLAN, up to 32 VLAN groups, out of 4094 VLAN IDs Port-based VLAN, up to 26 VLAN groups MTU VLAN
Link Aggregation	1 group of 2-Port 10/100/1000BASE-T trunk supported
QoS	Allows to assign low / high priority on each port First-In-First-Out, All-High-before-Low, Weight-Round-Robin QoS policy
IGMP Snooping	IGMP (v1 / v2) Snooping, up to 32 multicast groups Without Query supported

Security Control	MAC address binding TCP & UDP filter
Management Functions	
Basic Management Interfaces	Web browser, SNMP v1
Standards Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet over Fiber-Optic IEEE 802.3x Full-duplex flow control IEEE 802.1Q VLAN IEEE 802.1p QoS IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus

3.3 PHYSICAL SPECIFICATIONS:

■ **Dimensions:**

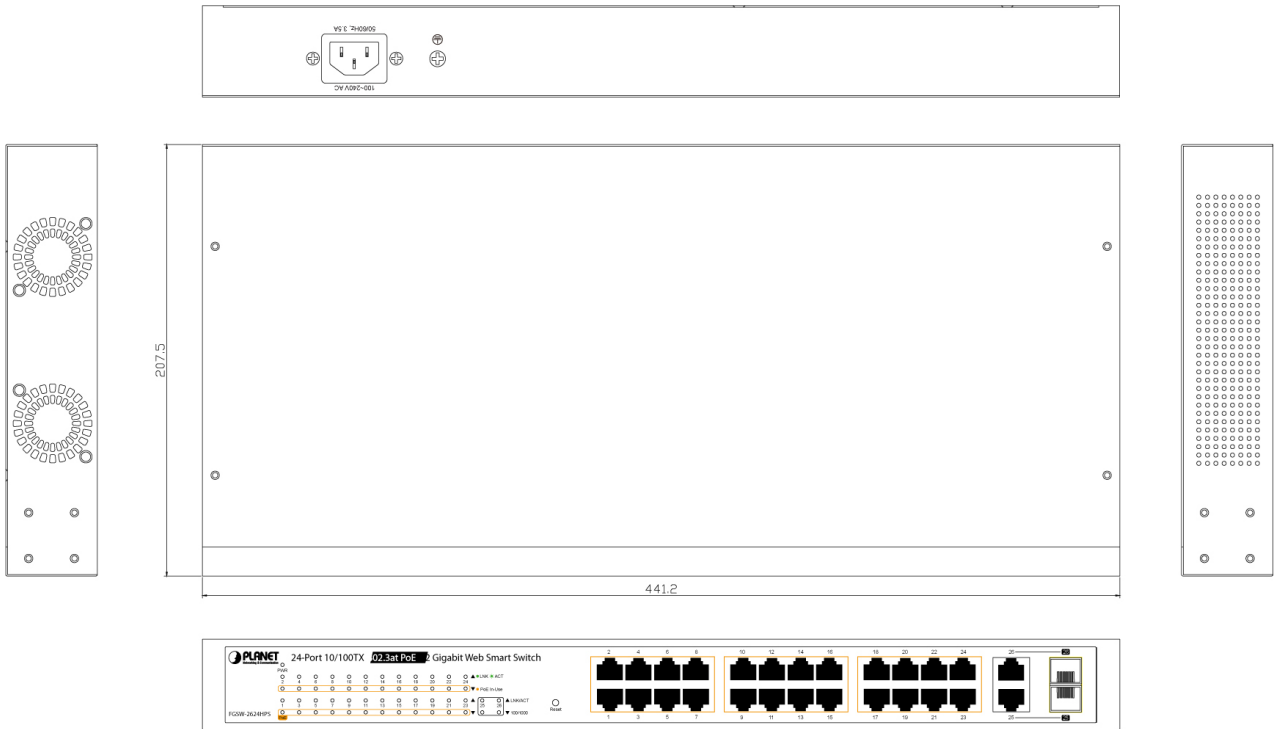440 x 207 x 45 mm (W x D x H), 1U height

■ **Weight:**

2.8kg

■ **Front Panel:**

■ **Rear Panel:**

■ **Diagram:**

Dimensions (unit = mm)

■ **LED Definition**

➢ **System**

LED	Color	Function
PWR	**Green**	**Lights** to indicate that the Switch has power.

➢ **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.
		Blinks	Indicates that the Switch is actively sending or receiving data over that port.
PoE In-Use	**Orange**	**Lights**	Indicates the port is providing DC in-line power.
		Off	Indicates the connected device is not a PoE Powered Device (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.
		Blinks	Indicates that the Switch is actively sending or receiving data over that port.
100/1000	**Green**	**Lights**	Indicates the port is successfully established at 1000Mbps.
		Slow Blinks	Indicates the port is successfully established at 100Mbps.
		Off	Indicates the port is successfully established at 10Mbps.

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

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

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, Auto-sensing	
Power Consumption (System on):	110V: 20 watts	68BTU
	220V: 20 watts	68BTU
Power Consumption (Ethernet Full Load):	110V: 29 watts	98BTU
	220V: 29 watts	98BTU
Power Consumption (PoE+ Ethernet Full Load):	110V:248 watts *	846BTU
	220V:240 watts *	818BTU

* 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

☑ The FGSW-2624HPS   x 1
☑ Quick Installation Guide   x 1
☑ Power Cord   x 1
☑ SFP Dust Cap   x 2
☑ Rubber Feet   x 4
☑ Rack Mount Accessory Kit   x 1

3.9 PACKING INFORMATION

Box Dimensions:	555 (W) × 295 (D) × 88 mm (H)
Carton Dimensions:	580 (W) × 395 (D) × 325 mm (H)
Total Weight:	TBD kg (gross weight)
	4pcs in one carton