

# 24-Port 10/100Mbps + 2- Gigabit TP/SFP Managed PoE Switch

## *Cost effective 24 Ports Power over Ethernet with Enhanced Features for SMB PoE Networking*

The PLANET FGSW-2620PVM PoE Switch features 802.3af Power over Ethernet (PoE) function, which optimizes the installation and safe power management of network devices such as wireless access points (AP), Voice over IP (VoIP) phones and IP Surveillance cameras. 802.3af PoE capabilities reduce installation costs of add-in network productivity devices. It frees the wireless AP deployment from restrictions of power outlet locations. With PoE features, power and data switching are integrated into one unit and delivered over a single cable, eliminating costs for additional AC wiring and reducing installation time. It provides a compact, affordable, safe and reliable power solution for small to medium enterprises.



## *Power over Ethernet, Easy Cabling installation*

The PoE in-line power following the standard IEEE 802.3af makes the FGSW-2620PVM able to power on 24 PoE compliant devices at the distance up to 100 meters through the 4-pair Cat 5/5e UTP wire. With data and power over Ethernet from one unit, the FGSW-2620PVM shall reduce cables deployment and eliminates the need for dedicated electrical outlets on the wall, ceiling or any unreachable place. A wire carries both data and power lowering the installation costs, simplifying the installation effort and eliminating the need for electricians or extension cords. It is also proud of the key feature – energy saving. With more efficient switching power supply, the efficiency of the FGSW-2620PVM would be much better than four linear power adapters in a long run.

## *Centralized Power Distribution with Remote Management*

The remote PoE management functions of FGSW-2620PVM make it easy to survey and control the PoE power provision to the devices and ensure interoperability with equipment from other vendors. Via Web interface, SNMP trap and SNMP monitoring, the manager can get the PoE devices status and alert immediately. The over-temperature detection of the PoE Switch offers a safe and stable PoE operating by limit the output power according to detected temperature to prevent destructive breakdown caused by un-expected overheating.

## *High Performance Wire-Speed Switching*

The PLANET FGSW-2620PVM offers 24 10/100Mbps Fast Ethernet ports and 2 Gigabit TP/SFP combo ports. The two Gigabit TP/SFP combo ports can be either 1000Base-T for 10/100/1000Mbps or 1000Base-SX/LX through SFP (Small Factor Pluggable) interface. PLANET FGSW-2620PVM boasts a high performance switch architecture that is capable of providing non-blocking switch fabric and wire-speed throughput as high as 8.8Gbps. Its two built-in GbE uplink ports also offer incredible extensibility, flexibility and connectivity to the Core switch or Servers.

## *Efficient Management*

Afford the current network to grow and expand, the PLANET FGSW-2620PVM provides console and telnet command line interface, advanced WEB and SNMP management interface to fill this kind of demand. With its built-in Web-based management, the FGSW-2620PVM offers an easy-to-use, platform-independent management and configuration facility. The FGSW-2620PVM supports standard Simple Network Management Protocol (SNMP) and can be monitored via any standard-based management software. For text-based management, the FGSW-2620PVM can also be accessed via Telnet and the console port. Moreover, the FGSW-2620PVM offers secure remote management by supporting Secure Socket Layer (SSL) connection which encrypts the packet content at each session.

## *Robust Layer 2 Features*

For efficient management, via WEB interface, the FGSW-2620PVM can be programmed for basic switch management functions such as port speed configuration, Port link aggregation, IEEE 802.1Q VLAN and Q-in-Q VLAN, Port Mirroring, Rapid Spanning Tree and ACL security. Additionally, the firmware includes advanced features such as IGMP snooping, QoS (Quality of Service), broadcast storm and bandwidth control, to enhance bandwidth utilization.

**Advanced Security and Quality of Service**

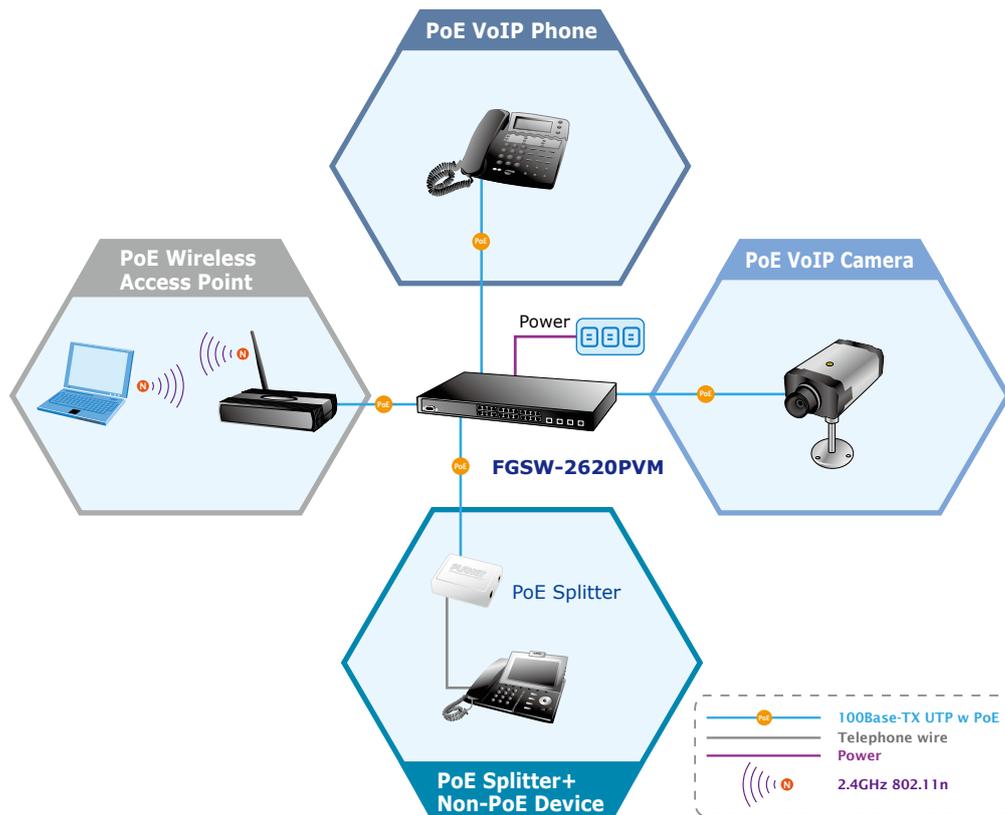
The PLANET FGSW-2620PVM offers comprehensive Layer 2, Layer 3 and Layer 4 Access Control List (ACL) to filter out unwanted traffic. Its protection mechanisms comprises of RADIUS and Port-based 802.1X user and device authentication. Moreover, the switch provides MAC filter, Static MAC, IP/MAC binding and Port Security for enforcing security policies to the edge. The administrators can now construct highly secured corporate networks with considerably less time and effort than before.

To ensure IP voice and video communication get the quality of service needed, the FGSW-2620PVM classifies traffic and prioritizes Layer 2 802.1p or Layer 3 IP DSCP traffic into four hardware queues that support strict or Weighted Round Robin (WRR) queuing algorithms. It also empowers the SMB IP office to take full advantages of the limited network resources and guarantees the best performance in VoIP and Video conferencing transmission.

**APPLICATIONS**

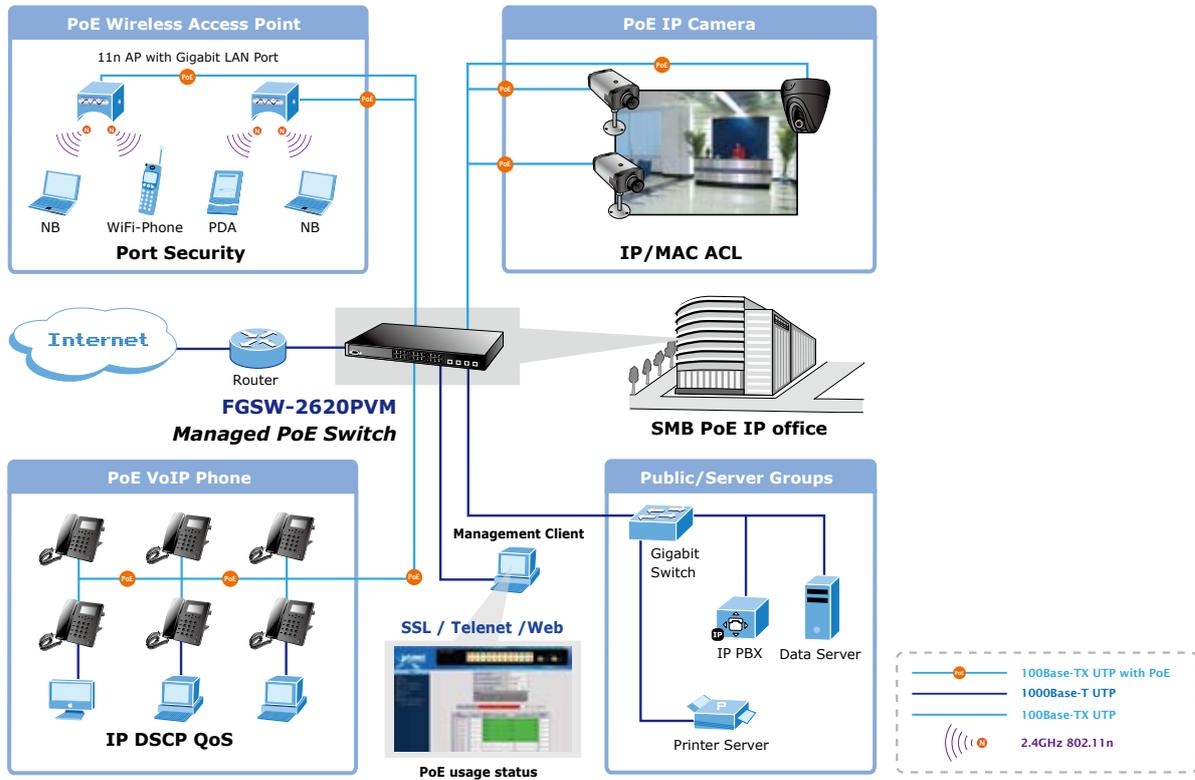
**PoE IP Telephony Office**

With the business office expansion, the additional telephones required could be installed in less cost via the implementation of PoE IP Telephony system than that of the traditional circuit wiring telephony system. PLANET FGSW-2620PVM PoE Managed Switch helps SMB to create an integrated data, voice, and powered network. PLANET 802.3af compliant IP Phones can be installed without the need of additional power cables because the power can be provided from the standard Ethernet cable connecting to the FGSW-2620PVM. PoE IP Phones and Analog Telephony Adapter work perfectly with the FGSW-2620PVM which injects power through the Ethernet cables and the IP DSCP priority of QoS feature improves the voice communicating. With FGSW-2620PVM, IP Telephony deployment becomes more reliable and cost effective, which helps SMB save tremendous cost when upgrading from the traditional telephony to IP Telephony communications infrastructure.



### Department / Workgroup PoE Switch

Providing up to 24 PoE, in-line power interface, the FGSW-2620PVM Managed PoE Switch can easily build a power central-controlled IP phone system, IP camera system, or Wireless AP group for the enterprises. For instance, 24 cameras or APs can be easily installed in the company for surveillance demands or building a wireless roaming environment in the office. Without the power-socket limitation, the PoE Switch makes the installation of cameras or WLAN AP more easily and efficiently.



### Factory / Warehouse Applications

While video surveillance system becomes more and more important for visible security in the factory or warehouse, the IP cameras with PoE function would be a lot helpful for the surveillance deployment when the power outlet not easily found in the ceiling or in the outdoor. For example, in the factory operation or in the warehouse storage security, the PoE IP cameras can be installed anywhere when needed regardless of the restrictions of power outlet location. With the PoE Switch as the central control manager and offering remote power monitoring via Web interface or SNMP trap and SNMP monitoring, the manager can get the PoE devices status and alert immediately. The PoE IP cameras could also be controlled remotely, which increases the administrator management efficiency and improve the productivity.

## KEY FEATURES

### PHYSICAL PORT

- 24-Port 10/100Mbps Fast Ethernet ports with PoE Injector
- 2 10/100/1000Mbps TP and SFP shared combo interfaces
- RS-232 male DB9 console interface for Switch basic management and setup
- Reset button for system management

### POWER OVER ETHERNET

- Complies with IEEE 802.3af Power over Ethernet End-Span PSE
- Up to 24 IEEE 802.3af devices powered
- PoE Power up to 15.4 Watts for each PoE port
- Auto detect powered device (PD)
- Circuit protection prevent power interference between ports
- Remote power feeding up to 100m
- PoE Management
  - Total PoE power budget control
  - Per port PoE function enable/disable
  - PoE Port Power feeding priority
  - Per PoE port power limit
  - PD classification detection

### LAYER 2 FEATURES

- Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z Gigabit Ethernet standard
- Supports Auto-negotiation and Full-Duplex / Half-Duplex modes for all 10Base-T/100Base-TX and 1000Base-T ports
- Auto-MDI/MDI-X detection for each RJ-45 port
- Prevents packet loss Flow Control:
  - IEEE 802.3x Pause Frame flow control for Full-Duplex mode
  - Back-Pressure Flow Control in Half-Duplex mode
- High performance of Store-and-Forward architecture, runt/CRC filtering eliminate erroneous packets to optimize the network bandwidth
- Broadcast / Multicast / Unicast storm control
- 8K MAC address table, automatic source address learning and ageing
- VLANs
  - IEEE 802.1Q Tag-based VLAN
  - Port-Based VLAN
  - Q-in-Q tunneling
  - Up to 255 VLANs groups, out of 4041 VLAN IDs
- Link Aggregation
  - up to 13 trunk groups
  - up to 8 ports per trunk group with 1.6Gbps bandwidth (Full Duplex Mode)

- IEEE 802.3ad LACP (Link Aggregation Control Protocol)
- Cisco ether-channel (Static Trunk)
- Spanning Tree Protocol
  - STP, IEEE 802.1D (Classic Spanning Tree Protocol)
  - RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
- Port Mirroring to monitor the incoming or outgoing traffic on a particular port

### QUALITY OF SERVICE

- 4 priority queues on all switch ports
- Traffic classification:
  - IEEE 802.1p CoS
  - IP TOS / DSCP to 802.1p priority mapping
  - Port-Based priority
- Strict priority and Weighted Round Robin (WRR) CoS policies
- QoS and In / Out bandwidth control on each port

### MULTICAST

- IGMP Snooping v1 and v2
- IGMP Snooping v2 fast leave
- Querier mode support

### SECURITY

- IEEE 802.1x Port-Based network access control protocol
- RADIUS users access authentication
- L2 / L3 / L4 Access Control List (ACL)
- MAC Filtering and Source IP-MAC / Port-Binding
- Port Security for Source MAC address entries filtering

### MANAGEMENT

- Switch Management Interface
  - Console / Telnet Command Line Interface
  - Web switch management
  - SNMP v1, v2c switch management
  - SSL switch management
- DHCP client for IP address assignment
- Built-in Trivial File Transfer Protocol (TFTP) client
- Firmware upgrade via TFTP or HTTP
- Configuration upload / download via TFTP or HTTP
- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events)
- SNMP trap for interface Link Up and Link Down notification
- Ping function

**SPECIFICATION**

Product	<b>24-Port 10/100Mbps + 2 Gigabit TP / SFP Managed PoE Switch</b>
Model	<b>FGSW-2620PVM</b>
<b>Hardware Specification</b>	
10/100Mbps Copper Ports	24 10/ 100Base-TX RJ-45 Auto-MDI/MDI-X ports
1000Mbps Copper Ports	2 10/100/1000Mbps RJ-45 Auto-MDI/MDI-X ports
SFP/mini-GBIC Slots	2 1000Base-SX/LX/BX, shared with Port-25~Port-26
Switch Architecture	Store-and-Forward
Switch Fabric	8.8Gbps / non-blocking
Switch Throughput	6.547Mpps @64Bytes
Address Table	8K entries
Share Data Buffer	512Kbytes
Maximum Frame Size	9K Bytes
Flow Control	Back pressure for Half-Duplex IEEE 802.3x Pause Frame for Full-Duplex
LED	Power, FAN Alarm Link/Activity (Green) PoE In-Use (Amber) 1000 LNK / ACT(Green) 10/100 LNK / ACT(Green)
Reset Button	< 5 sec: System reboot > 5 sec: Factory Default
Dimension (W x D x H)	440 x 265 x 44 mm, 1U height
Weight	3.6kg
Power Requirement	100~240V AC, 50-60 Hz
Power Consumption / Dissipation	210 Watts maximum / 717 BTU/hr maximum
<b>Power over Ethernet</b>	
PoE Standard	IEEE 802.3af Power over Ethernet / PSE
PoE Power Supply Type	End-Span
PoE Power Output	Per Port 48V DC, 350mA . Max. 15.4 Watts
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Budget	190 Watts
Max. number of Class 2 PD	24
Max. number of Class 3 PD	12
<b>Layer 2 function</b>	
Management Interface	Console, Telnet, Web Browser, SSL, SNMPv1, v2c Port disable/enable
Port Configuration	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 and Flow control status. Auto negotiation status, trunk status.
Bandwidth Control	Ingress / Egress Rate Control Allow to configure per 128Kbps
VLAN	IEEE 802.1Q Tag-based VLAN Port-based VLAN Q-in-Q tunneling Up to 255 VLANs groups, out of 4041 VLAN IDs
Link Aggregation	Static Port Trunk IEEE 802.3ad LACP (Link Aggregation Control Protocol) Supports 13 groups of 8-Port trunk support Traffic classification based on :
Quality of Service	- Port priority - 802.1p priority - DSCP/TOS field in IP Packe
IGMP Snooping	IGMP (v1/v2) Snooping, up to 256 multicast Groups IGMP Querier support
Port Mirror	RX / TX / Both 1-to-1 mirroring

<b>Security</b>	IEEE 802.1x Port-Based Network access control Port Security Static MAC MAC Filtering MAC / IP Binding																								
<b>Access Control List</b>	IP-Based Layer 3 / Layer 4 ACL Up to 220 ACL rule entries																								
<b>SNMP MIBs</b>	RFC-1157 SNMP MIB RFC-1213 MIB-II RFC-1215 Trap RFC-2863 Interface MIB RFC-1493 Bridge MIB RFC-2665 EtherLike MIB RFC-2674 Extended Bridge MIB (Q-Bridge) RFC-2737 Entity MIB RFC-2819 RMON MIB (Group 1, 2, 3,9)																								
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## ORDERING INFORMATION

<b>FGSW-2620PVM</b>	24-Port 10/100Mbps +2 Gigabit TP/SFP Combo Managed PoE Switch
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## AVAILABLE MODULES FOR FGSW-2620PVM

<b>MGB-GT</b>	SFP-Port 1000Base-T mini-GBIC module
<b>MGB-SX</b>	SFP-Port 1000Base-SX mini-GBIC module
<b>MGB-LX</b>	SFP-Port 1000Base-LX mini-GBIC module
<b>MGB-L30</b>	SFP-Port 1000Base-LX mini-GBIC module – 30km
<b>MGB-L50</b>	SFP-Port 1000Base-LX mini-GBIC module – 50km
<b>MGB-L70</b>	SFP-Port 1000Base-LX mini-GBIC module – 70km
<b>MGB-L120</b>	SFP-Port 1000Base-LX mini-GBIC module – 120km
<b>MGB-LA10</b>	SFP-Port 1000Base-LX mini-GBIC module - LC WDM (TX:1310nm), SM,10km
<b>MGB-LB10</b>	SFP-Port 1000Base-LX mini-GBIC module - LC WDM (TX:1550nm), SM,10km
<b>MGB-LA20</b>	SFP-Port 1000Base-LX mini-GBIC module - LC WDM (TX:1310nm), SM,20km
<b>MGB-LB20</b>	SFP-Port 1000Base-LX mini-GBIC module - LC WDM (TX:1550nm), SM,20km
<b>MGB-LA40</b>	SFP-Port 1000Base-LX mini-GBIC module - LC WDM (TX:1310nm), SM,40km
<b>MGB-LB40</b>	SFP-Port 1000Base-LX mini-GBIC module - LC WDM (TX:1550nm), SM,40km

Longer distance modules (up to 120km) are available upon request.

**RELATIVE PoE PRODUCT**

<i>POE-151S-5V</i>	IEEE 802.3af Power over Ethernet Splitter with 5V DC output
<i>POE-151S-12V</i>	IEEE 802.3af Power over Ethernet Splitter with 12V DC output
<i>ICA-107P</i>	PoE CMOS IP Camera
<i>ICA-310</i>	30-meter Infrared Internet Camera
<i>ICA-510</i>	Dual Mode CCD Dome Internet Camera
<i>ICA-700</i>	CCD Box Internet Camera with PoE
<i>ICA-750</i>	Dual Mode CCD Box Internet Camera
<i>IVS-110</i>	1-Channel Internet Video Server
<i>ICA-230</i>	CMOS Pan/Tilt IR Internet Camera with PoE
<i>ICA-M230</i>	Mega-Pixel CMOS Pan/Tilt IR Internet Camera with PoE
<i>WNAP-1120PE</i>	802.11n Wireless Access Point with PoE
<i>WAP-4033PE</i>	54Mbps Wireless PoE Access Point
<i>WAP-4060PE</i>	54/108Mbps Super G Wireless LAN Managed Access Point with PoE
<i>WDAP-2000PE</i>	54/108Mbps Super A+G WLAN Managed Access Point with PoE
<i>VIP-254PT</i>	SIP PoE IP Phone
<i>VIP-255PT</i>	Multi-Language PoE IP Phone (2 x RJ-45)
<i>VIP-155PT</i>	Power over Ethernet SIP IP Phone
<i>VIP-156PE</i>	802.3af PoE SIP Analog Telephone Adapter
<i>VIP-351PT</i>	Business PoE IP Phone