

# 24-Port 10/100Mbps + 4G TP / SFP Combo PoE Managed Stackable Switch



## *Advanced Features and Centralized Power Management for Enterprise and Campus PoE Networking*

The PLANET SGSW-2840P series PoE Switch provides 24 10/100Mbps Power-over-Ethernet (PoE, IEEE 802.3af compliant) ports which optimize the installation and power management of network devices such as wireless access points (AP), Voice over IP (VoIP) phones, and security video cameras. The PoE capabilities also help to reduce deployment costs for network devices like the wireless AP as a result of freeing from restrictions of power outlet locations. Power and data switching are integrated into one unit and delivered over a single cable. It thus eliminates cost for additional AC wiring and reduces installation time.

## *Full-Functioned / Robust Layer2 Features*

The SGSW-2840P series can be programmed for basic switch management functions such as port speed configuration, Port aggregation, VLAN, Spanning Tree protocol, QoS, bandwidth control and IGMP Snooping. It provides IEEE 802.1Q Tagged VLAN and the VLAN groups allowed on the SGSW-2840P series will be maximally up to 256. Via aggregation of supporting port, the SGSW-2840P series allows the operation of high-speed trunk combining multiple ports. Maximum up to 8 ports can be assigned for 12 trunk groups and it supports fail-over as well.

- 802.3af Power over Ethernet
- 802.1Q VLAN
- IGMP Snooping
- 802.1s Multiple Spanning Tree
- Advanced QoS
- SNMP and SNMP Trap
- Access Control List
- 802.1X Authentication / RADIUS
- SSH / SSL

## *Excellent Traffic Control*

PLANET SGSW-2840P series is loaded with powerful traffic management and QoS features to enhance services offered by Service Providers or Telco. The functionality includes QoS features such as wire-speed Layer 4 traffic classifiers and bandwidth limiting applications that are particular useful for multi-tenant unit, multi business unit, Telco, or Network Service Provider. It also empowers the enterprises to take full advantages of the limited network resources and guarantees the best performance in VoIP and Video conferencing transmission.

## *Efficient IP Stacking Management*

The SGSW-2840P series PoE Switch supports IP stacking function that helps network managers to easily configure up to 36 switches in the same series via single IP address instead of connecting and setting unit one by one. For efficient management, the SGSW-2840P series is equipped with console, WEB and SNMP management interfaces. With its built-in Web-based management, the PLANET SGSW-2840P series offers an easy-to-use, platform-independent management and configuration facility. It supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software. For text-based management, the SGSW-2840P series can be accessed via Telnet and the console port. Moreover, the SGSW-2840P series offers secure remote management by supporting SSL and SSH connection which encrypt the packet content at each session.

## *Powerful Security*

The PLANET SGSW-2840P series offers comprehensive Access Control List (ACL) for enforcing security to the edge. Its protection mechanism also comprises Port-based IEEE 802.1x user, Web Authentication user and device authentication. The Port-security is effective in limiting the numbers of clients pass through so that network administrators can now construct highly secured corporate networks with considerably less time and effort than before.

## *Flexibility and Extension solution*

The four mini-GBIC slots are compatible with 1000Base-SX/LX and WDM SFP (Small Form Factor Pluggable) fiber-optic modules. Two of the mini-GBIC slots are also compatible with 100Base-FX. The distance can be extended from 550 meters (Multi-Mode fiber cable) or up to 10/30/50/70/120 kilometers (Single-Mode fiber or WDM fiber cable). They are well suited for applications within the enterprises data centers and distributions or remote PoE equipments data link.

## KEY FEATURES

### PHYSICAL PORT

- 24-Port 10/100Mbps Fast Ethernet ports
- 4 10/100/1000Mbps TP and SFP shared combo interfaces, SFP(Mini-GBIC) supports 100/1000 Dual mode
- RS-232 DB9 console interface for basic management and setup

### POWER OVER ETHERNET

- Complies with IEEE 802.3af Power over Ethernet End-Span PSE
- Up to 24 IEEE 802.3af devices powered
- Supports PoE Power up to 15.4 watts for each PoE ports
- 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, broadcast storm control and runt / CRC filtering eliminate erroneous packets to optimize the network bandwidth
- 8K MAC address table, automatic source address learning and ageing
- 2Mbit embedded memory for packet buffers
- Supports VLANs
  - IEEE 802.1Q Tag-based VLAN
  - IEEE 802.1v Protocol based VLAN
  - Q-in-Q tunneling
  - GARP/GVRP for VLAN Management
  - Private VLAN Edge (PVE) supported
  - Up to 255 VLANs groups, out of 4041 VLAN IDs
- Supports Link Aggregation
  - up to 12 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)
- MSTP, IEEE 802.1s (Multiple Spanning Tree Protocol, spanning tree by VLAN)
- 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 / IP Precedence
  - IP TCP / UDP port number
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Supports QoS and In/Out bandwidth control on each port
- Traffic-policing policies on the switch port
- Voice VLAN Traffic QoS

### MULTICAST

- Supports IGMP Snooping v1 and v2
- Querier mode support
- Multicast VLAN Registration (MVR)

### SECURITY

- IEEE 802.1x Port-Based / MAC-Based Authentication
- Web Authentication
- RADIUS / TACACS+ users access authentication
- IP-Based Access Control List (ACL)
- MAC-Based Access Control List (ACL)
- Port Security

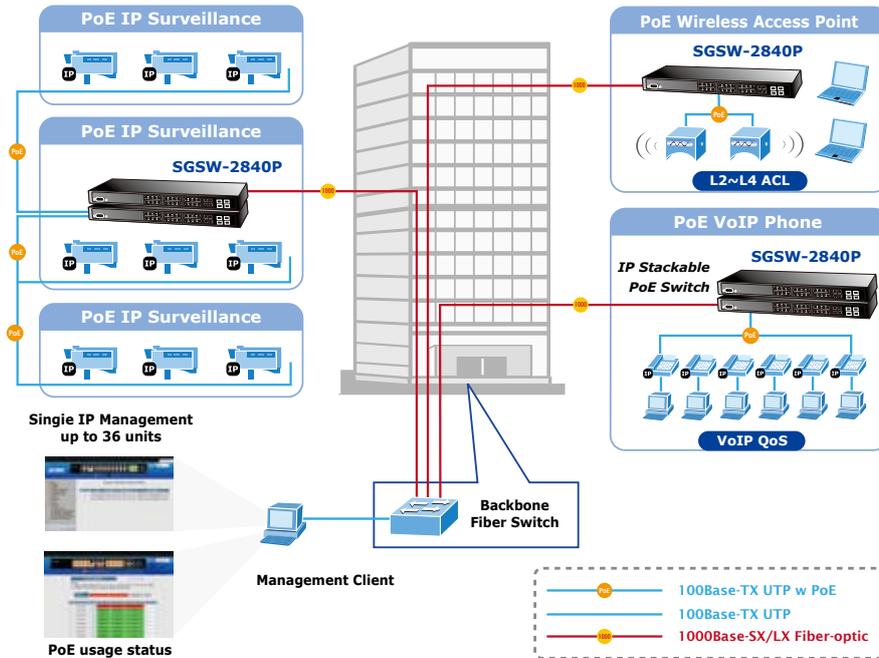
### MANAGEMENT

- Switch Management Interface
  - Console / Telnet Command Line Interface
  - Web switch management
  - SNMP v1, v2c, and v3 switch management
  - SSH v1/v2 switch management
  - SSL v3 switch management
- BOOTP and DHCP client for IP address assignment
- Built-in Trivial File Transfer Protocol (TFTP) client
- Firmware upload/download via TFTP
- Configuration upload/download via TFTP
- SNTP (Simple Network Time Protocol)
- Message/event/error/trap logs
- Logging to local file and syslog server
- Supports Private Enterprise MIB
- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events)
- Supports Ping function
- IP Stacking management up to 36 units

**APPLICATIONS**

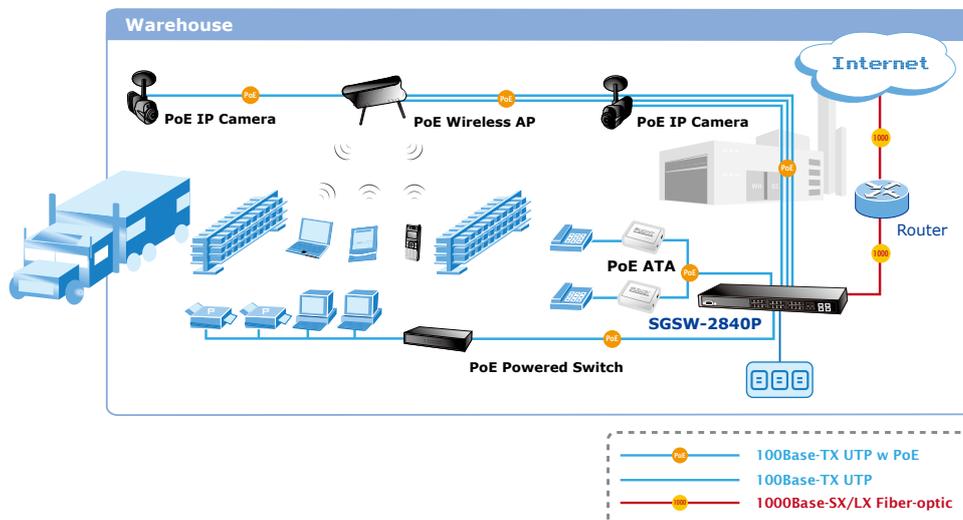
*Department / Workgroup PoE Switch*

Providing up to 24 PoE, in-line power interface, the SGSW-2840P series PoE Switch can easily build a power central-controlled IP phone system, IP Camera system, AP group for the enterprise. For instance, 24 IP cameras / APs can be easily installed in the company for surveillance demands or build a wireless roaming environment in the office. No need to worry about the power outlet, the SGSW-2840P series makes the installation of IP cameras or WLAN AP more easily and efficiently.



*Factory / Warehouse*

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 camera 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.



**SPECIFICATION**

|                               |  |                           |
|-------------------------------|--|---------------------------|
| Product                       | <b>24-Port 10/100Mbps + 4G TP / SFP Combo PoE Managed Stackable Switch</b>   |                           |
| Model                         | SGSW-2840P   | SGSW-2840P4               |
| <b>Hardware Specification</b> |  |                           |
| Copper Ports                  | 24 10/ 100Base-TX RJ-45 Auto-MDI/MDI-X ports<br>All ports with PoE Injector function   |                           |
| SFP/ mini-GBIC Slots          | 4 1000Base-SX / LX / BX, shared with Port-25 ~ Port-28, Port -25, Port-26 compatible with 100Base-FX SFP   |                           |
| Switch Architecture           | Store-and-Forward  |                           |
| Switch Fabric                 | 12.8Gbps / non-blocking  |                           |
| Switch Throughput             | 9.52Mpps @64Bytes  |                           |
| Address Table                 | 8K entries   |                           |
| Share Data Buffer             | 2 Mbits  |                           |
| Flow Control                  | Back pressure for Half-Duplex<br>IEEE 802.3x Pause Frame for Full-Duplex   |                           |
| LED                           | Power, Power alarm, FAN alarm<br>Link / Act and PoE In-Use per port  |                           |
| Reset Button                  | < 5 sec: System reboot<br>> 5 sec: Factory Default   |                           |
| Dimension ( W x D x H)        | 440 x 300 x 44 mm, 1U height   |                           |
| Weight                        | 4.3 kg   | 4.8 kg                    |
| Power                         | AC 100~240V, 50/60Hz   |                           |
| Power Supply                  | Max. 240 watts / 818 BTU   | Max. 400 watts / 1364 BTU |
| <b>Power over Ethernet</b>    |  |                           |
| PoE Standard                  | IEEE 802.3af   |                           |
| 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              | 220 Watts  | 380 Watts                 |
| <b>Layer 2 Function</b>       |  |                           |
| Management Interface          | Console, Telnet, SSH, Web Browser, SSL, SNMPv1, v2c and v3   |                           |
| Port Configuration            | Port disable / enable<br>Auto-negotiation<br>10/100/1000Mbps full and half duplex mode selection<br>Flow Control disable / enable  |                           |
| Port Status                   | Display each port's speed duplex mode, link status and Flow control status. Auto negotiation status, trunk status.   |                           |
| VLAN                          | IEEE 802.1Q Tag-based VLAN<br>IEEE 802.1v Protocol based VLAN<br>Q-in-Q tunneling<br>GARP / GVRP for VLAN Management<br>Up to 255 VLANs groups, out of 4041 VLAN IDs<br>Private VLAN Edge (PVE) supported              |                           |
| Link Aggregation              | Supports 12 groups of 8-Port trunk, IEEE 802.3ad LACP  |                           |
| QoS                           | Traffic classification based on TCP/UDP Port Number, 802.1p priority, DSCP/TOS/Precedence field in IP Packet   |                           |
| IGMP Snooping                 | IGMP (v1/v2) Snooping, up to 256 multicast Groups  |                           |
| Access Control List           | IP-Based ACL / MAC-Based ACL<br>In / Out direction per port<br>Up to 32 rules per ACL  |                           |
| SNMP MIBs                     | RFC-1213 MIB-II<br>RFC-2863 Interface MIB<br>RFC-2665 EtherLike MIB<br>RFC-1493 Bridge MIB<br>RFC-2674 Extended Bridge MIB<br>RFC-2819 RMON MIB (Group 1, 2, 3,9)<br>RFC-2737 Entity MIB<br>RFC-2618 RADIUS Client MIB |                           |
| <b>Standards Conformance</b>  |  |                           |
| Regulation Compliance         | FCC Part 15 Class A, CE  |                           |

|                                   |   |                                 |
|-----------------------------------|---|---------------------------------|
| Standards Compliance              | IEEE 802.3                                    | 10Base-T                        |
|                                   | IEEE 802.3u                                   | 100Base-TX                      |
|                                   | IEEE 802.3z                                   | 1000Base-SX/LX                  |
|                                   | IEEE 802.3ab                                  | 1000Base-T                      |
|                                   | IEEE 802.3x                                   | Flow Control and Back pressure  |
|                                   | IEEE 802.3ad                                  | Port trunk with LACP            |
|                                   | IEEE 802.1d                                   | Spanning tree protocol          |
|                                   | IEEE 802.1w                                   | Rapid spanning tree protocol    |
|                                   | IEEE 802.1s                                   | Multiple Spanning tree protocol |
|                                   | IEEE 802.1p                                   | Class of service                |
|                                   | IEEE 802.1Q                                   | VLAN Tagging                    |
| IEEE 802.1x                       | Port Authentication Network Control           |                                 |
| IEEE 802.3af                      | Power over Ethernet, Powered Source Equipment |                                 |
| <b>Environment Specifications</b> |   |                                 |
| Operating                         | Temperature:                                  | 0~50 Degree C                   |
|                                   | Relative Humidity:                            | 20~95% (non-condensing)         |
| Storage                           | Temperature:                                  | -40 ~70 Degree C                |
|                                   | Relative Humidity:                            | 20~95% (non-condensing)         |

## ORDERING INFORMATION

|                    |  |
|--------------------|--|
| <i>SGSW-2840P</i>  | 24-Port 10/100Mbps + 4 Gigabit TP / SFP combo PoE Managed Stackable Switch |
| <i>SGSW-2840P4</i> | 24-Port 10/100Mbps + 4 Gigabit TP / SFP Managed PoE Switch - 380W          |

## 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                                       |
| <i>ICA-750</i>      | Dual Mode CCD Box Internet Camera                             |
| <i>IVS-110</i>      | 1-Channel Internet Video Server                               |
| <i>ICA-M230</i>     | Mega-Pixel CMOS Pan/Tilt IR Internet Camera                   |
| <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-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   |

## RELATIVE STACKABLE SERIES PRODUCT

|                   |  |
|-------------------|--|
| <i>SGSW-2840</i>  | 24-Port 10/100Mbps + 4 Gigabit TP / SFP combo Managed Security Switch                              |
| <i>SGSW-2840R</i> | 24-Port 10/100Mbps + 4 Gigabit TP / SFP combo Managed Security Switch with -48V DC Redundant Power |
| <i>SGSD-1022</i>  | 8-Port 10/100Mbps + 2 Gigabit TP / SFP combo Managed Switch  |

**AVAILABLE MODULES**

|                 |  |
|-----------------|--|
| <b>MFB-FX</b>   | SFP-Port 100Base-FX Transceiver (1310nm) -2KM              |
| <b>MFB-F20</b>  | SFP-Port 100Base-FX Transceiver (1310nm) - 20KM            |
| <b>MFB-F40</b>  | SFP-Port 100Base-FX Transceiver (1310nm) - 40KM            |
| <b>MFB-F60</b>  | SFP-Port 100Base-FX Transceiver (1310nm) - 60KM            |
| <b>MFB-FA20</b> | SFP-Port 100Base-BX Transceiver (WDM,TX:1310nm) -20KM      |
| <b>MFB-FB20</b> | SFP-Port 100Base-BX Transceiver (WDM,TX:1550nm) -20KM      |
| <b>MGB-GT</b>   | SFP-Port 1000Base-T 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 (WDM,TX:1310nm) mini-GBIC module-10km |
| <b>MGB-LB10</b> | SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module-10km |
| <b>MGB-LA20</b> | SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module-20km |
| <b>MGB-LB20</b> | SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module-20km |
| <b>MGB-LA40</b> | SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module-40km |
| <b>MGB-LB40</b> | SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module-40km |