8-Port 10/100Mbps + 2G TP / SFP Combo PoE Managed Stackable Switch

Advanced Features and Centralized Power Management for SMB and Public Service PoE Networking

The PLANET SGSD-1022P PoE Switch features 802.3af Power over Ethernet (PoE) function, which optimizes the installation and power management of network devices such as wireless access points (AP), Voice over IP (VoIP) phones and security video 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.

Full-Functioned / Robust Layer2 Features

The SGSD-1022P 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 SGSD-1022P will be maximally up to 256. Via aggregation of supporting port, the SGSD-1022P 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

The PLANET SGSD-1022P is loaded with powerful traffic management and QoS features to enhance services offered by Service Providers. 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 SGSD-1022P PoE Managed 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 each unit one by one. For efficient management, the SGSD-1022P is equipped with console, WEB and SNMP management interfaces. With its built-in Web-based management, the PLANET SGSD-1022P 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 SGSD-1022P can be accessed via Telnet and the console port. Moreover, the SGSD-1022P offers secure remote management by supporting SSL and SSH connection which encrypt the packet content at each session.

Powerful Security

The PLANET SGSD-1022P 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 four 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, distributions or remote PoE equipments data link.

Key Features

PHYSICAL PORT

- 8-Port 10/100Mbps Fast Ethernet ports
- 2 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

- IEEE 802.3af Power over Ethernet compliant End-Span PSE
- Up to 8 IEEE 802.3af devices powered
- PoE Power up to 15.4 Watts for each PoE ports
- Auto detect of powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m
- PoE Management
  - Total PoE power budget control
  - Pert 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
- Support VLANs
  - IEEE 802.1Q Tag-based VLAN
  - IEEE 802.1v Protocol based VLAN
  - Q-in-Q tunneling
  - GVRP protocol for VLAN Management
  - Private VLAN Edge (PVE) supported
  - Up to 255 VLANs groups, out of 4041 VLAN IDs
- Supports Link Aggregation
  - Up to 5 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)
- Supports 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
- Private Enterprise MIB
- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events)
- Ping function
- IP Stacking management up to 36 units

APPLICATIONS

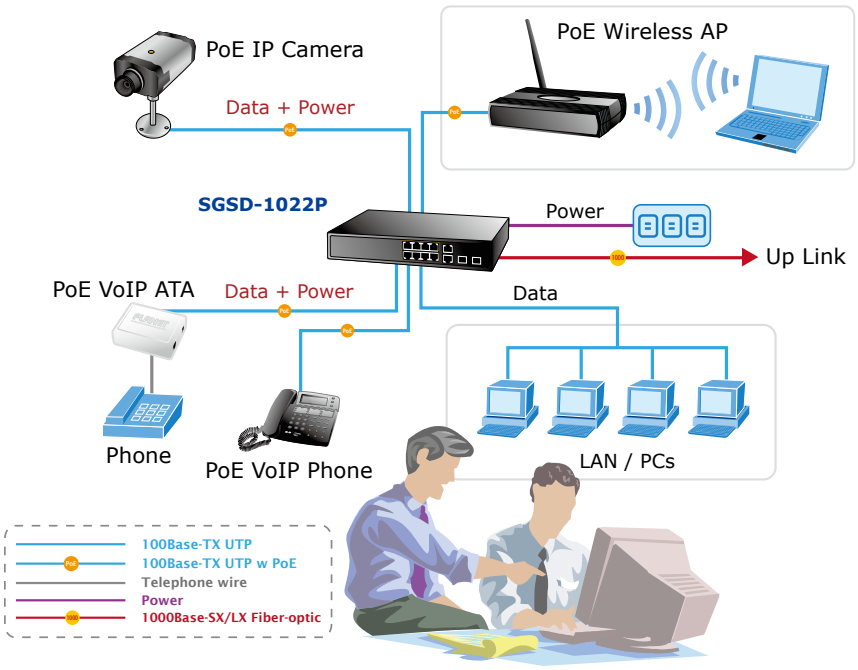
Department / Workgroup PoE Switch

Providing up to 8 PoE, in-line power interface, the SGSD-1022P PoE Managed Switch can easily build a power central-controlled IP phone system, IP Camera system, or wireless AP group for the enterprises. For instance, 8 IP cameras or APs can be easily installed in the company for surveillance demands or build 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.

IP 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 SGSD-1022P PoE Managed Switch helps enterprises to create an integrated data, voice, and powered network. PLANET 802.3af compliant IP Phones can be installed without the need of an additional power cable because the power can be provided from the standard Ethernet cable connecting to the SGSD-1022P. PoE IP Phones and Analog Telephony Adapter work perfectly with the SGSD-1022P equipments which inject power through the Ethernet cables.

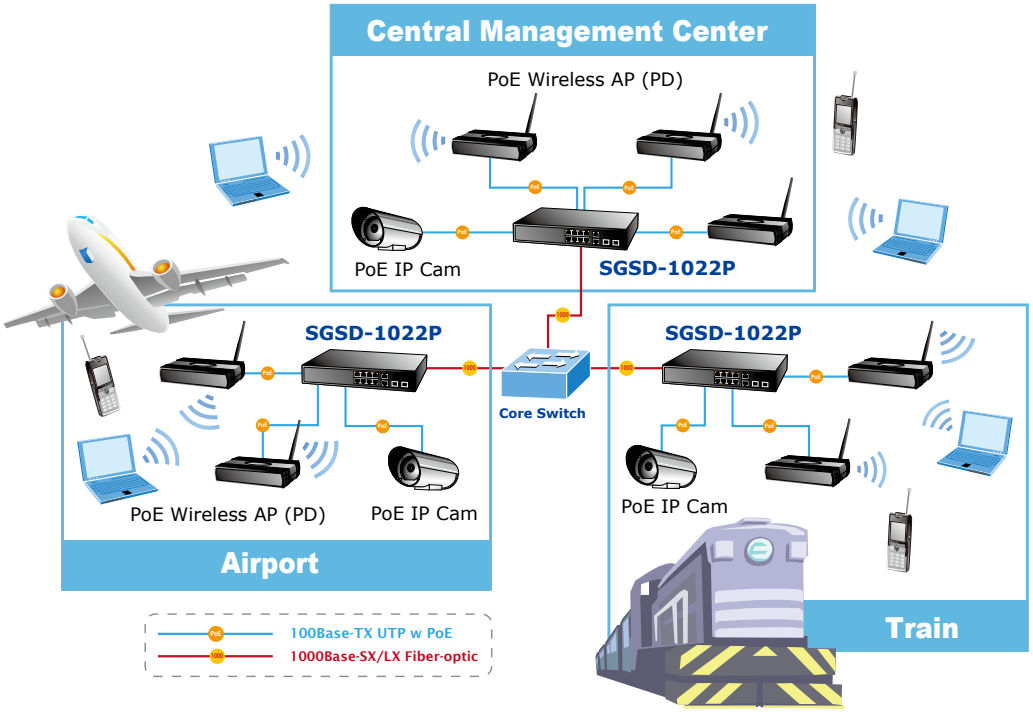
With SGSD-1022P, IP Telephony deployment becomes more reliable and cost effective, which helps enterprises save tremendous cost when upgrading from the traditional telephony to IP Telephony communications infrastructure.



Transportation – Wireless and IP Surveillance

In modern time, Internet service is mostly required during travel times, either for business or for leisure. Besides the wired Internet network, the wireless LAN would be more efficient for the transportation station to provide high-speed and wide area Internet services for travelers. With the PoE wireless LAN APs connected to SGSD-1022P that provides long distance fiber capability, people can experience the wireless LAN roaming service within the Wi-Fi coverage even when the transportation itself like train, bus or ship moving on the way. By adopting PoE Wireless LAN structure, the transportation authority gains benefit from costing less while providing better Internet services in wider areas for the travelers.

On the other hand, the PoE IP Surveillance system deployed helps watch the transportation security and PoE IP Telephony system improves the voice communicating in the station with lower cost.



Specification

Product	8-Port 10/100Mbps + 2G TP / SFP Combo PoE Managed Stackable Switch
Model	SGSD-1022P
Hardware Specification	
Copper Ports	8 10/ 100Base-TX RJ-45 Auto-MDI/MDI-X ports All ports with PoE Injector function
SFP/ mini-GBIC Slots	2 1000Base-SX / LX / BX, shared with Port-9~Port-10, compatible with 100Base-FX SFP
Switch Architecture	Store-and-Forward
Switch Fabric	5.6Gbps / non-blocking
Switch Throughput	4.16Mpps
Address Table	8K entries
Share Data Buffer	2 Mbits
Flow Control	Back pressure for Half-Duplex IEEE 802.3x Pause Frame for Full-Duplex
LED	Power Link / Act and PoE In-Use per port
Dimension (W x D x H)	330 x 155 x 43.5mm, 1U height
Weight	1.59 kg
Power	AC 100~240V, 50/60Hz
Power Supply	Max. 130 Watts / 443 BTU
Power over Ethernet	
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	110 Watts /375BTU
Layer 2 Function	
Management Interface	Console, Telnet, SSH, Web Browser, SSL, SNMPv1, v2c and v3
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 and Flow control status. Auto negotiation status, trunk status.
VLAN	IEEE 802.1Q Tag-based VLAN IEEE 802.1v Protocol based VLAN Q-in-Q tunneling GARP / GVRP for VLAN Management Up to 255 VLANs groups, out of 4041 VLAN IDs Private VLAN Edge (PVE) supported
Link Aggregation	Supports 5 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 In / Out direction per port Up to 32 rules per ACL
SNMP MIBs	RFC-1213 MIB-II RFC-2863 Interface MIB RFC-2665 EtherLike MIB RFC-1493 Bridge MIB RFC-2674 Extended Bridge MIB RFC-2819 RMON MIB (Group 1, 2, 3,9) RFC-2737 Entity MIB RFC-2618 RADIUS Client MIB

Standards Conformance		
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
Environment		
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

SGSD-1022P	8-Port 10/100Mbps + 2 Gigabit TP / SFP combo PoE Managed Stackable Switch

Relative PoE Products

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

Relative Stackable Series Products

SGSW-2840	24-Port 10/100Mbps + 4 Gigabit TP / SFP combo Managed Security Switch
SGSW-2840R	24-Port 10/100Mbps + 4 Gigabit TP / SFP combo Managed Security Switch with -48V DC Redundant Power
SGSW-2840P	24-Port 10/100Mbps + 4 Gigabit TP / SFP combo PoE Managed Stackable Switch
SGSW-2840P4	24-Port 10/100Mbps + 4 Gigabit TP / SFP combo PoE Managed Stackable Switch – 380W
SGSD-1022	8-Port 10/100Mbps + 2 Gigabit TP / SFP combo Managed Switch

Available Modules

MFB-FX	SFP-Port 100Base-FX Transceiver (1310nm) -2KM
MFB-F20	SFP-Port 100Base-FX Transceiver (1310nm) - 20KM
MFB-F40	SFP-Port 100Base-FX Transceiver (1310nm) - 40KM
MFB-F60	SFP-Port 100Base-FX Transceiver (1310nm) - 60KM
MFB-FA20	SFP-Port 100Base-BX Transceiver (WDM,TX:1310nm) -20KM
MFB-FB20	SFP-Port 100Base-BX Transceiver (WDM,TX:1550nm) -20KM
MGB-GT	SFP-Port 1000Base-T Module-100m
MGB-SX	SFP-Port 1000Base-SX mini-GBIC module-550m
MGB-LX	SFP-Port 1000Base-LX mini-GBIC module-10km
MGB-L30	SFP-Port 1000Base-LX mini-GBIC module-30km
MGB-L50	SFP-Port 1000Base-LX mini-GBIC module-50km
MGB-L70	SFP-Port 1000Base-LX mini-GBIC module-70km
MGB-L120	SFP-Port 1000Base-LX mini-GBIC module-120km
MGB-LA10	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module-10km
MGB-LB10	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module-10km
MGB-LA20	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module-20km
MGB-LB20	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module-20km
MGB-LA40	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module-40km
MGB-LB40	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module-40km

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