8-Port 10/100Mbps + 2G TP / SFP Combo L2/L4 Managed Security Switch

Full-Functioned Layer 2 / Layer 4 Managed Switch for Enterprise and Campus Networking

The PLANET SGSD-1022 is an 8-Port 10/100Mbps Fast Ethernet Switch with 2-Port Gigabit TP/ SFP Combo interfaces, which boasts high performance switch architecture. The SGSD-1022 is capable of providing non-blocking switch fabric and wire-speed throughput as high as 5.6 Gbps. Its two built-in Gigabit Ethernet uplink ports also offer incredible extensibility, flexibility and connectivity to the core switch or servers.

Robust Layer 2 Features

The SGSD-1022 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-1022 will be maximally up to 256. Via aggregation of supporting port, the SGSD-1022 allows the operation of high-speed trunk combining multiple ports. Maximum up to 8 ports can be assigned for 8 trunk groups and it supports fail-over as well.

Excellent Traffic Control

The SGSD-1022 is loaded with powerful traffic management and QoS features to enhance services offered by telecoms. 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-1022 can be applied as a desktop switch with the desktop size design. It also supports IP Stacking function that helps network managers to easily configure up to 36 switches in the same series via one single IP address instead of connecting and setting each unit one by one. For efficient management, the SGSD-1022 is equipped with console, WEB and SNMP management interfaces. With its built-in Web-based management, the PLANET SGSD-1022 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-1022 can be accessed via Telnet and the console port. Moreover, the SGSD-1022 offers secure remote management by supporting SSL and SSH connection which encrypt the packet content at each session.

Powerful Security

The PLANET SGSD-1022 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 two mini-GBIC slots are compatible with 1000Base-SX/LX and WDM SFP (Small Form Factor Pluggable) fiber-optic modules. 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.

Key Features

PHYSICAL PORT

- 8 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

LAYER 2 FEATURES

- Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z Gigabit Ethernet standards
- 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 FAUSE 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 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 VLAN groups, out of 4041 VLAN IDs
  - Private VLAN Edge (PVE) supported
- 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)
- 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

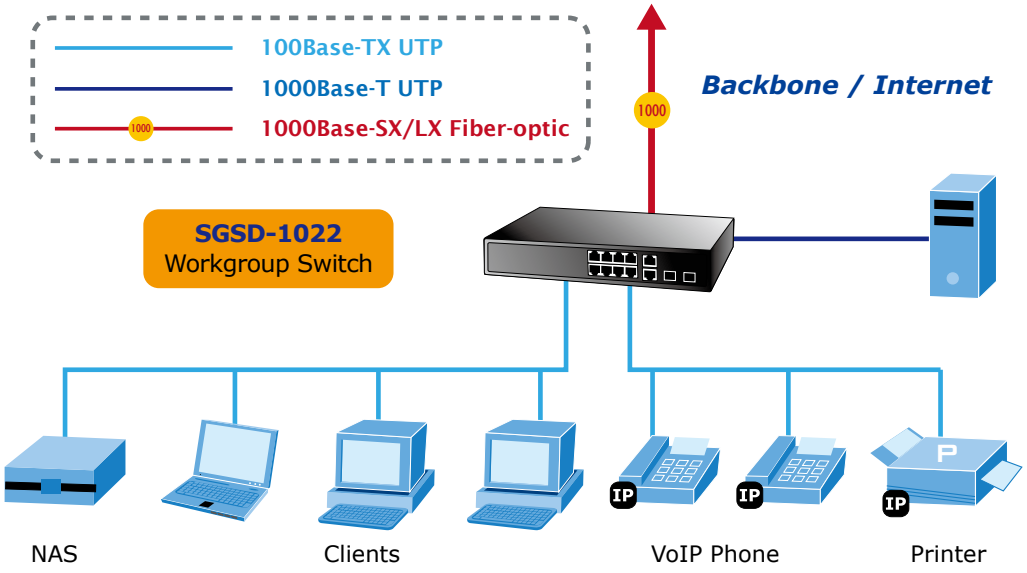
MANAGEMENT

- 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
- Support 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

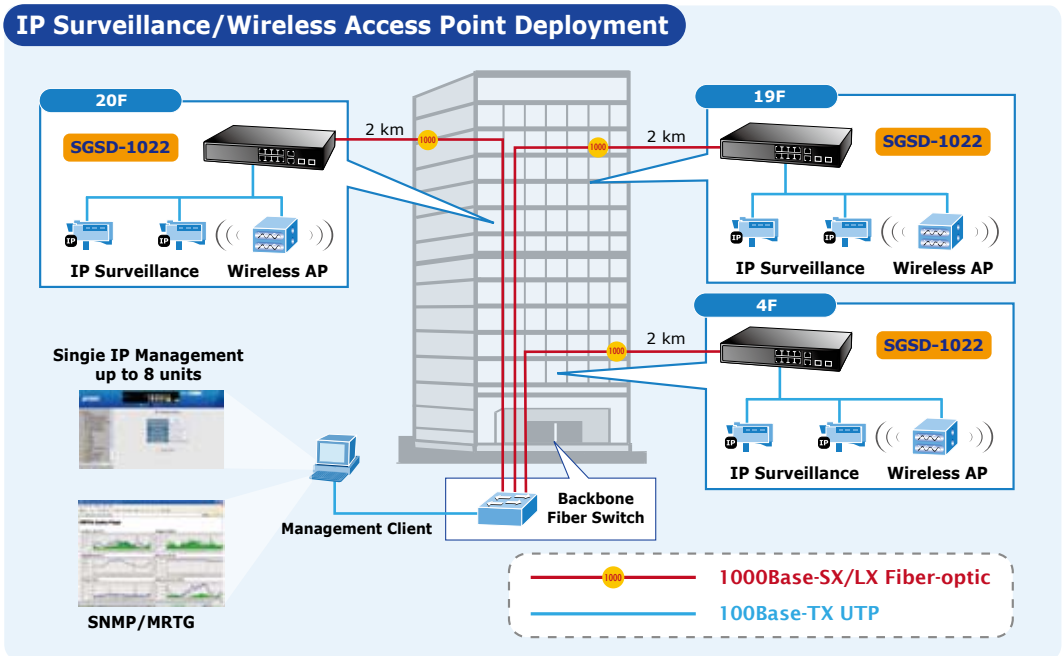
Workgroup Switch

With 8 10/100Mbps copper ports and 2 Gigabit-Ethernet fiber ports, the SGSD-1022 provides a cost-effective and high-performance solution for power users.



Department Switch

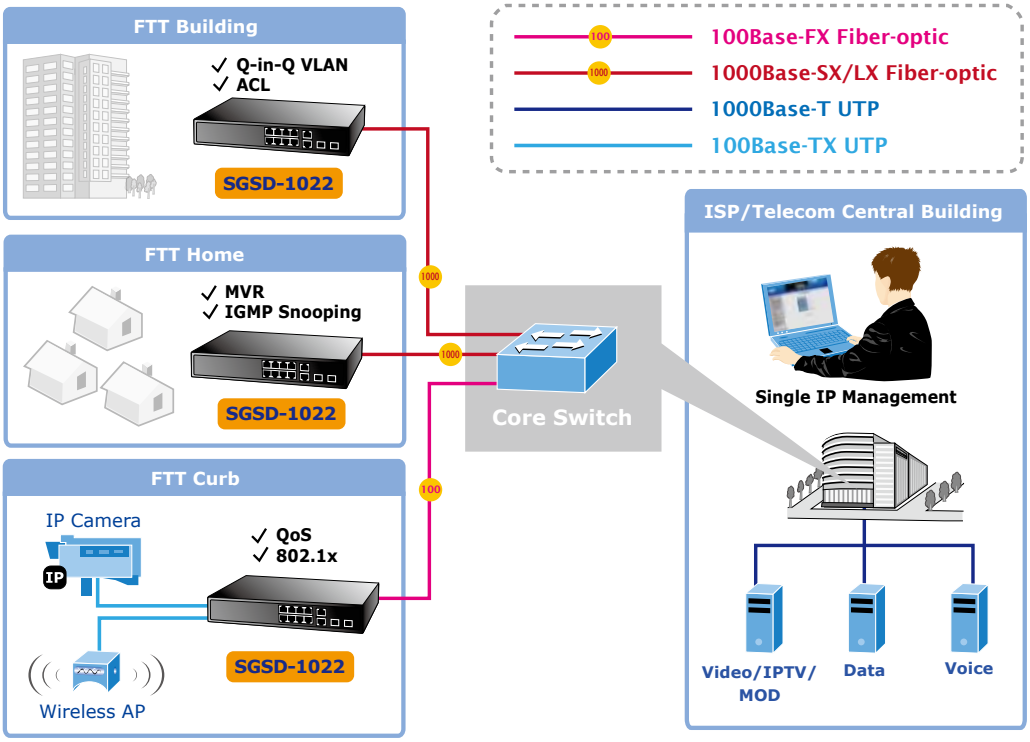
With non-blocking switch fabric 5.6 Gigabits per second , the SGSD-1022 can easily provide a local and high bandwidth Fast Ethernet network for backbone of departments. With the SFP port, the SGSD-1022 provides the uplink to the backbone network through Gigabit Ethernet LX/SX SFP mini-GBIC modules. The high backplane simplifies the tasks of upgrading the LAN for catering the increasing bandwidth demands.



FTTx Edge Switch

With the mini-GBIC 1000Base-SX/LX SFP (Small-Form Factor Pluggable) interface, the deploy distance of SGSD-1022 can be extended from 550 meters (Multi-mode fiber) up to above 10/50/70/120 kilometers (Single-mode fiber).

To build a network solution of FTTH (Fiber to the Home), FTTC (Fiber to the Curb) for ISPs or FTTB (Fiber to the Building) for enterprises, the various distances of SFP (Small-form Factor Pluggable) and Bidi (WDM) transceivers are optional for customers. For security and applications, the 8 copper ports can be configured with VLAN settings and connected to different units, offices, houses and departments.



Specification

Product	8-Port 10/100Mbps + 2 Gigabit TP / SFP Managed Security Switch
Model	SGSD-1022
Hardware Specification	
10/100Mbps Copper Ports	8 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-9~Port-10, compatible with 100Base-FX SFP
Switch Architecture	Store-and-Forward
Switch Fabric	5.6Gbps / non-blocking
Switch Throughput	4.16Mpps @64Bytes
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 speed per port
Reset Button	< 5 sec: System reboot > 5 sec: Factory Default
Dimension (W x D x H)	330 x 155 x 43.5 mm, 1U height
Weight	1.2 KG
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
Bandwidth Control	Input Rate Limit Output Traffic Shaper Allow to configure per 10K or 1M
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 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-2 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 802.1v	Protocol VLAN
	IEEE 802.1x	Port Authentication Network Control
	IEEE 802.1ab	LLDP
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-1022	8-Port 10/100Mbps + 2 Gigabit TP / SFP combo Managed Switch

Relative PoE Product

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

Available Modules

MGB-GT	SFP-Port 1000Base-T Module
MGB-SX	SFP-Port 1000Base-SX mini-GBIC module
MGB-LX	SFP-Port 1000Base-LX mini-GBIC module
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
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

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