

24-Port 10/100/1000Mbps with 4 Shared SFP Managed Stackable Switch



High-Density, Resilient Deployment Switch Solution for Growing Gigabit Networking of Enterprise, Campus and Data Center

For the growing Gigabit network demand, PLANET provides new generation Stackable Gigabit Switch solution, SGSW-24040 series Switch to fulfill the need of large scale of network deployment in the enterprises, Telecoms or campus. The PLANET SGSW-24040 series Switch, the SGSW-24040 and the SGSW-24040R, is the Layer 2 Managed Stackable Gigabit Switch which provides 24 10/100/1000Mbps Gigabit Ethernet ports, 4 shared Gigabit SFP slots, and 2 dedicated High-Speed HDMI-like interfaces for stacking with the series of switches. Up to 16 units,

384 Gigabit Ethernet ports can be managed by a stacking group and you can add ports and functionality as needed. The 2 built-in stacking ports providing 5Gbps bandwidth and up to 20Gbps Bi-directional speed, it can handle extremely large amounts of data in a secure topology linking for backbone or high capacity network server with 68Gbps switching fabric per unit. The stacking technology also enables the chassis-based switches to be integrated into SGSW-24040 series Managed Switch but without the expensive up-front cost.

High Reliability Stacking Management

The SGSW-24040 series applies the advantage of stackable technology to manage the stack group with one single IP address, which helps network managers to easily manage a stack of switches instead of connecting and setting each unit one by one. Through its high bandwidth tunnel and stacking technology, the SGSW-24040 series gives the enterprises, service providers and Telecoms flexible control over port density, uplinks and switch stack performance. Stack redundancy of the SGSW-24040 series ensures data integrity be retained even if one switch in the stack fails. You can even hot-swap switches without disrupting the network, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.



Robust Layer 2 Features

The SGSW-24040 series can be programmed for advanced switch management functions such as dynamic Port link aggregation, Q-in-Q VLAN, private VLAN, Rapid Spanning Tree protocol, Layer 2 to Layer 4 QoS, bandwidth control and IGMP Snooping. The SGSW-24040 series provides 802.1Q Tagged VLAN, and the VLAN groups allowed will be maximally up to 255. Via aggregation of supporting ports, the SGSW-24040 series allows the operation of a high-speed trunk combining multiple ports. It enables maximum up to 12 groups of 16 ports for port link aggregation, and supports fail-over as well.

Easy and Friendly Traffic Control

PLANET SGSW-24040 series is loaded with powerful but easy 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 that are particular useful for multi-tenant unit, multi business unit, Telco, or Network Service Provide applications, such as VoIP, video streaming and multicast applications. The embedded handy QoS configuration wizard helps you set up a typical network application rules easily and quickly via Web interface. The SGSW-24040 series also empowers the enterprises or campus to take full advantages of the limited network resources and guarantees the best performance in Voice and Video conferencing transmission.

Efficient Management

For efficient management, the SGSW-24040 series Managed Stackable Gigabit Switch is equipped with console, WEB and SNMP management interfaces. With the built-in Web-based management interface, the PLANET SGSW-24040 series offers an easy-to-use, platform-independent management and configuration facility. The SGSW-24040 series supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software. For text-based management, the SGSW-24040 series can be accessed via Telnet and the console port. Moreover, the SGSW-24040 series offers secure remote management by supporting SNMPv3 connection which encrypts the packet content at each session.

Powerful Security

PLANET SGSW-24040 series offers comprehensive Layer 2 to Layer 4 Access Control List (ACL) for enforcing security to the edge. It can be used to restrict network access by denying packets based on source and destination IP address, TCP/UDP ports or defined typical network applications. Its protection mechanism also comprises of 802.1x port-based and MAC-based user and device authentication. With the private VLAN function, communication between edge ports can be prevented to ensure user privacy. The 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 built in the SGSW-24040 series are compatible with 1000Base-SX/LX and WDM SFP (Small Factor Pluggable) fiber-optic modules. The distance can be extended from 550 meters (Multi-Mode fiber) up to above 10/50/70/120 kilometers (Single-Mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

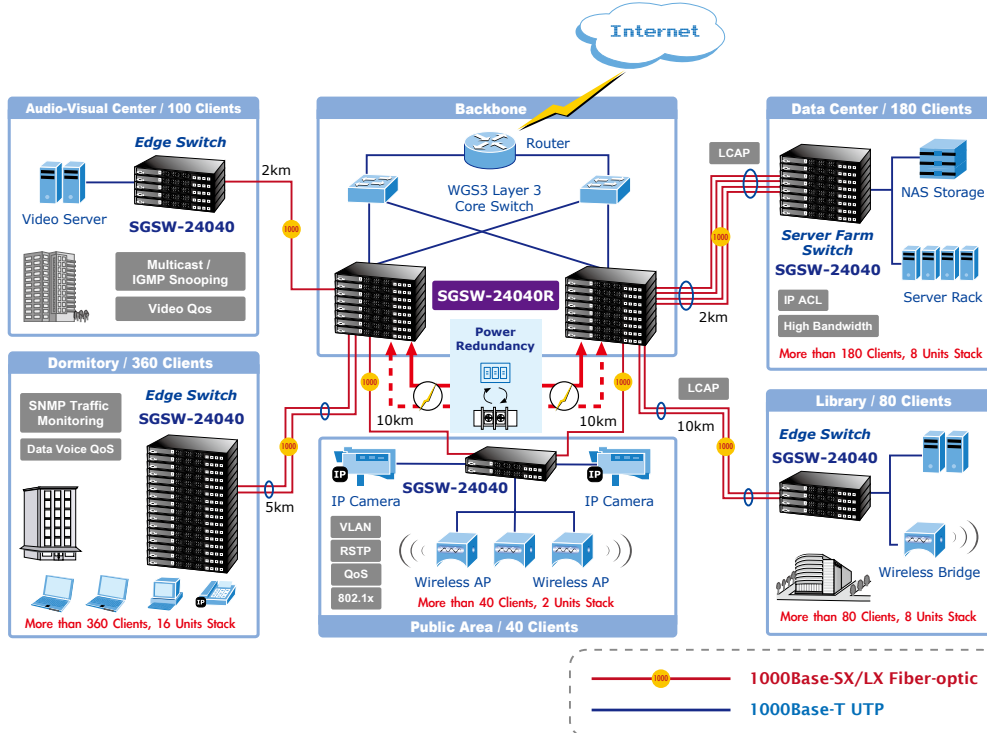
AC / DC Power Redundant to Ensure Continuous Operation (SGSW-24040R)

Particularly for the SGSW-24040R, it is equipped with one 100~240V AC power supply unit and one DC -48V power supply unit to provide an enhanced reliable and scalable redundant power supply installation. The continuous power system is specifically designed to fulfill the demands of high tech facilities requiring the highest power integrity. The -48V DC power supply implemented makes SGSW-24040R the telecom level device that can be located at the electronic room.

APPLICATIONS

Carrier Class backbone Switch for the Campus and Community

For small area network communication such as in campus and community, the PLANET SGSW-24040 series Managed Stackable switches enable an affordable and scalable network deployment. Multiple SGSW-24040 series switches may be connected together to constitute a chain or ring stack topology using the 5Gbps stacking ports as interconnect links. Up to 16 units, 384 high-density Gigabit Ethernet ports can be managed by a stacking group with a single IP address. Furthermore, up to 64 mini-GBIC/SFP ports are available for remote uplink connectivity in a stacking group and provide the uplink to the edge network through Gigabit Ethernet LX/SX SFP modules. The SGSW-24040 series stackable switching system gives you the flexibility to expand small area network when needed.



High Performance, High-Density, High Reliable Enterprise Backbone and Server Farm Switch

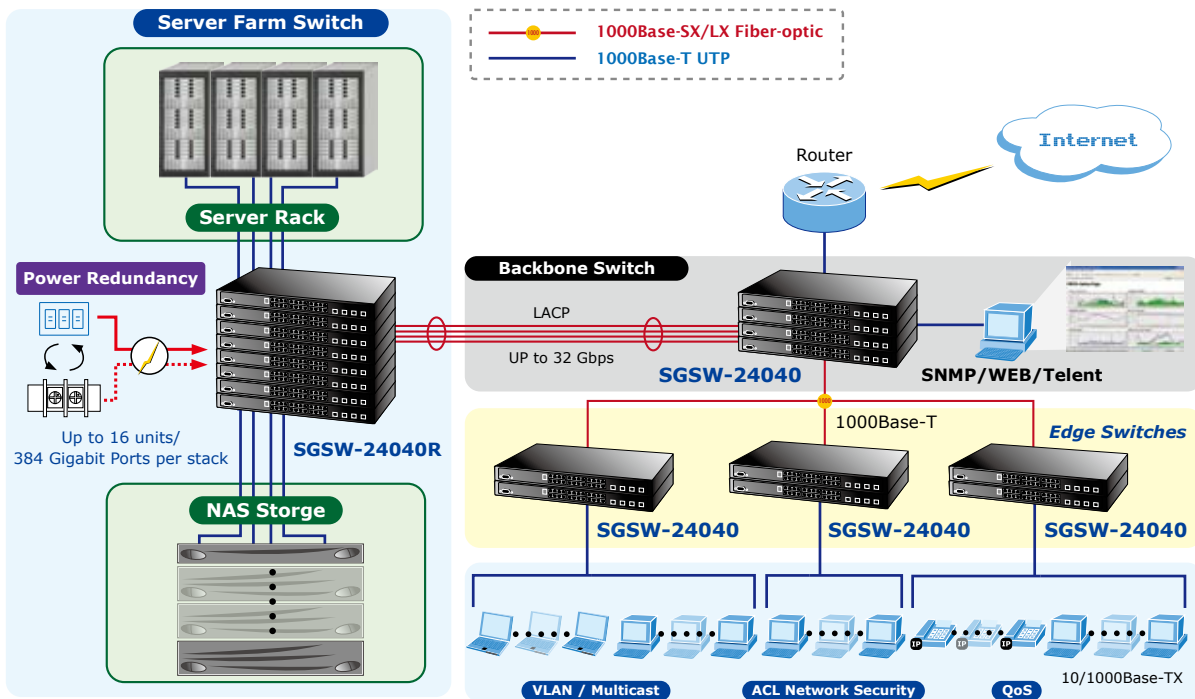
Gigabit Ethernet supported equipment had become the fundamental unit of Enterprises and Network servers. The SGSW-24040 series stackable Gigabit switch can easily provide the cost-effective, high-density and high-bandwidth required from now on. Dedicated stacking features built into SGSW-24040 series switch makes all devices in the stack operate together as a one much larger switch providing multiple high performance Gigabit Ethernet network for backbone of enterprise or Telecoms. The SGSW-24040 series switch is ideal to be used as a server farm switch connecting servers. With the dynamic link aggregation function, a 16 GB fat pipe is provided for connecting to the backbone if required.

The dual power supplies provide the SGSW-24040R the non-Stop network service ability. Besides the AC power input, the DC power supply can be chosen as -48V DC power input source or redundant power for SGSW-24040R. The SGSW-24040R can take electrical power either from the AC outlet, the DC outlet or both for redundant.

Department / Edge Security and QoS Switch

The SGSW-24040 series switch delivers high-performance and cost-effective Gigabit Ethernet network connectivity for the increasing number of IP telephones, IP Surveillances, wireless access points and other devices at the edge of the network. The SGSW-24040 improves the network efficiency and protects the network clients with the powerful features:

- Layer 2 to Layer 4 security
- QoS
- 802.1x Port-Based and MAC-Based network access authentication security
- Multicast IGMP Snooping



FTTX / MAN application Switch

The SGSW-24040 series applies the double tag VLAN (Q-in-Q) technology to provide low cost and easy operation for service providers carrying traffic for multiple customers across their networks. With SNMPv3 and RMON groups support, the SNMPv3 security structure in the SGSW-24040 consists of various security models, with each model having its own security levels for the ISP and Service Provider.

KEY FEATURES

PHYSICAL PORT

- 24-Port 10/100/1000Base-T Gigabit Ethernet RJ-45
- 4 mini-GBIC/SFP slots, shared with Port-21 to Port-24
- 2 HDMI-like 5Gbps Stacking interfaces
- Console interface for Switch basic management and setup

STACKING

- Hardware stack up to 16 units and 384 Gigabit ports
- Single IP address stack management
- Stacking architecture supports Chain and Ring mode
- Plug and Play connectivity
- Mirror across stack
- Link Aggregation groups spanning multiple switches in a stack
- Hardware learning with MAC table synchronization across stack

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 Half-Duplex / Full-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 with back pressure (Half-Duplex) and IEEE 802.3x PAUSE frame flow control (Full-Duplex)
- High performance of Store-and-Forward architecture, broadcast storm control and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- 8K MAC address table, automatic source address learning and ageing
- 1392Kbytes embedded memory for packet buffers
- Supports VLAN
 - IEEE 802.1Q Tagged VLAN
 - Up to 255 VLANs groups, out of 4041 VLAN IDs
 - Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
 - Private VLAN Edge (PVE)
- Supports Spanning Tree Protocol
 - STP, IEEE 802.1d (Spanning Tree Protocol)
 - RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
- Supports Link Aggregation
 - 802.3ad Link Aggregation Control Protocol (LACP)
 - Cisco ether-channel (Static Trunk)

- Maximum 12 trunk groups, up to 16 ports per trunk group
- Up to 32Gbps bandwidth(Duplex Mode)

- Provides Port Mirror (many-to-1)
- Port Mirroring to monitor the incoming or outgoing traffic on a particular port

QUALITY OF SERVICE

- 4 priority queues on all switch ports.
- Supports for strict priority and Weighted Round Robin (WRR) CoS policies
- Ingress Shaper and Egress Rate Limit per port bandwidth control
- Traffic-policing policies on the switch port

MULTICAST

- Supports IGMP Snooping v1, v2 and v3
- Querier mode support

SECURITY

- IEEE 802.1x Port-Based / MAC-Based network access authentication
- IP-Based Access Control List (ACL)
- MAC-Based Access Control List
- Static MAC

MANAGEMENT

- WEB-based, Telnet, Console Command Line management
- Accesses through SNMPv1, v2c and v3 security set and get requests.
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- Firmware upload/download via HTTP / TFTP
- SNTP (Simple Network Time Protocol)
- Link Layer Discovery Protocol (LLDP) Protocol
- PLANET Smart Discovery Utility for deploy management

REDUNDANT POWER SYSTEM (SGSW-24040R)

- 100~240V AC / 48V DC Dual power redundant
- Active-active redundant power failure protection
- Backup of catastrophic power failure on one supply

SPECIFICATION

Product	24-Port 10/100/1000Mbps with 4 Shared SFP Managed Stackable Switch
Model	SGSW-24040 / SGSW-24040R
Hardware Specification	
Copper Ports	24 10/ 100/1000Base-T RJ-45 Auto-MDI/MDI-X ports
SFP/mini-GBIC Slots	4 SFP interfaces, shared with Port-21 to Port-24
Switch Processing Scheme	Store-and-Forward
Switch Fabric	48Gbps / non-blocking
Address Table	8K entries
Share data Buffer	1392 kilobytes
Flow Control	IEEE 802.3x Pause Frame for Full-Duplex Back pressure for Half-Duplex
Jumbo Frame	10Kbytes
LED	Power, 1000 Link/Act, 100 Link/Act, SFP Link
Dimension (W x D x H)	440 x 200 x 44.5 mm, 1U height
Weight	3.0 KG
Power Consumption	Max. 30 watts / 102 BTU
Power Requirement	SGSW-24040
	- AC 100~240V, 50/60Hz
	SGSW-24040R
	- 100~240V AC, 50/60Hz
	- -48V DC @ 0.6A, Range: -30 ~ -60V
Stacking	
Stacking Numbers	16
Stacking Bandwidth	10Gbps Full Duplex
Stack ID Display	7-Segment LED display (1~9, A~F, 0)
Stack Topology	Ring / Chain / Back-to-Back stack
Layer 2 function	
System Configuration	Console, Telnet, Web Browser, SNMPv1, v2c and v3
Port configuration	Port disable/enable
	Auto-negotiation 10/100/1000Mbps full and half duplex mode selection
	Flow Control disable / enable
	Bandwidth control on each port
Port Status	Display each port's speed duplex mode, link status, Flow control status. Auto negotiation status, trunk status
VLAN	802.1Q Tagged Based VLAN ,up to 255 VLAN groups
	Q-in-Q
	Private VLAN
Port Trunking	IEEE 802.3ad LACP / Static Trunk
	Support 12 groups of 16-Port trunk support
QoS	4-level priority queue for switching
	Traffic classification based, Strict priority and WRR
	- TCP/UDP Port Number
	- 802.1p priority
	- IP DSCP/TOS field
	Policy-Based QoS
IGMP Snooping	IGMP (v1/v2) Snooping, up to 255 multicast Groups IGMP Querier mode support
Access Control List	IP-Based ACL / MAC-Based ACL
	Up to 256 entries
SNMP MIBs	RFC-1213 MIB-II
	IF-MIB
	RFC-1493 Bridge MIB
	RFC-1643 Ethernet MIB
	RFC-2863 Interface MIB
	RFC-2665 Ether-Like MIB
	RFC-2819 RMON MIB (Group 1)
	RFC-2737 Entity MIB
	RFC-2618 RADIUS Client MIB
	RFC-2933 IGMP-STD-MIB ()
	RFC3411 SNMP-Frameworks-MIB
IEEE 802.1X PAE	
LLDP	
MAU-MIB	

Standards Conformance

Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T 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 802.1p Class of service IEEE 802.1Q VLAN Tagging 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

SGSW-24040	24-Port 10/100/1000Mbps with 4 Shared SFP Managed Stackable Switch
SGSW-24040R	24-Port 10/100/1000Mbps with 4 Shared SFP Managed Stackable Switch / 48V DC Redundant Power

OPTIONAL ACCESSORIES

CB-STX50	0.5 Meter 5Gbps Stacking Cable with Crossed-HDMI connector (Standard package)
CB-STX200	2 Meter 5Gbps Stacking Cable with Crossed-HDMI connector

RELATIVE PRODUCT

WGSW-24040	24-Port 10/100/1000Mbps with 4 Shared SFP Managed Switch
WGSW-24040R	24-Port 10/100/1000Mbps with 4 Shared SFP Managed Switch / 48V DC Redundant Power

AVAILABLE MODULES FOR SGSW-24040/SGSW-24040R

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