

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



High-Density, Resilient Deployment Switch Solution for Enterprises, Campuses and Data Centers

PLANET provides a new generation of Stackable Gigabit Switch solutions for the growing Gigabit network demand. SGSW-24040 series Switch fulfills the need of large scale network deployment in enterprises, Telecoms or campuses. PLANET's SGSW-24040 series Switch, which includes the SGSW-24040 and the SGSW-24040R, is a Layer 2 Managed Stackable Gigabit Switch that provides 24 10/100/1000Mbps Gigabit Ethernet ports, 4 shared Gigabit SFP slots, and 2 dedicated High-Speed HDMI-like interfaces for stacking the series of switches.

Up to 16 units can be stacked together to form, 384 Gigabit Ethernet ports that can be managed as a unit. Network administrators can add ports and functionality as needed. Its 2 built-in stacking ports provide 5Gbps of bandwidth and up to 20Gbps of Bi-directional speed, and it can handle extremely large amounts of data in a secure topology that links to a backbone or a high capacity network server with 68Gbps switching fabric per unit. The stacking technology enables the integration of the SGSW-24040 series Managed Switch but without the expensive up-front cost.

High Reliability Stacking Management

The SGSW-24040 series uses its stackable technology be able to manage the stack group with one single IP address, helping network managers easily manage a stack of switches instead of having to configure each unit separately. With its high bandwidth tunnel and stacking technology, the SGSW-24040 series gives enterprises, service providers, and Telecoms flexible control over port density, uplinks and switch stack performance. Stack redundancy of the SGSW-24040 series ensures retaining data integrity even if one switch in the stack fails. Network administrators can even hot-swap switches without disrupting the network, greatly simplifying the tasks of upgrading a LAN that supports the 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 up to a maximum of 255 VLAN groups are allowed. Via the aggregation of supporting ports, the SGSW-24040 series allows for the operation of a high-speed trunk combining multiple ports. It enables a maximum of up to 12 groups of 16 ports for port link aggregation, and supports the fail-over function as well.

Secure and Efficient Traffic Control

PLANET's SGSW-24040 series features easy traffic management and QoS features to enhance the services offered by telecoms. Functionality includes QoS features such as wire-speed Layer 4 traffic classifiers and bandwidth limiting that are particularly useful for multi-tenant units, multi business units, Telco, or Network Service Provider applications, such as VoIP, video streaming and multicast applications. The embedded QoS configuration wizard helps network administrators set up typical network application rules easily and quickly via a Web interface. The SGSW-24040 series also allows enterprises or campuses to take full advantage of their limited network resources and guarantees the best performance in Voice and Video conferencing transmission.

Efficient Management

The SGSW-24040 series Managed Stackable Gigabit Switch is equipped with console, WEB and SNMP management interfaces for efficient network management. With its built-in Web-based management interface, PLANET's 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 its console port. In addition, the SGSW-24040 series offers secure remote management by supporting a SNMPv3 connection which encrypts packet content at each session.

Powerful Security

PLANET's SGSW-24040 series offers a comprehensive Layer 2 to Layer 4 Access Control List (ACL) for enforcing maximum security. 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 its private VLAN function, communication between edge ports can be prevented to ensure user privacy. Network administrators can now construct highly secure corporate networks in considerably less time and effort than before.

Flexibility and Extension Solution

With its four built-in mini-GBIC slots, the SGSW-24040 series is compatible with 1000Base-SX/LX and WDM SFP (Small Factor Pluggable) fiber-optic modules. Distances 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 distribution centers.

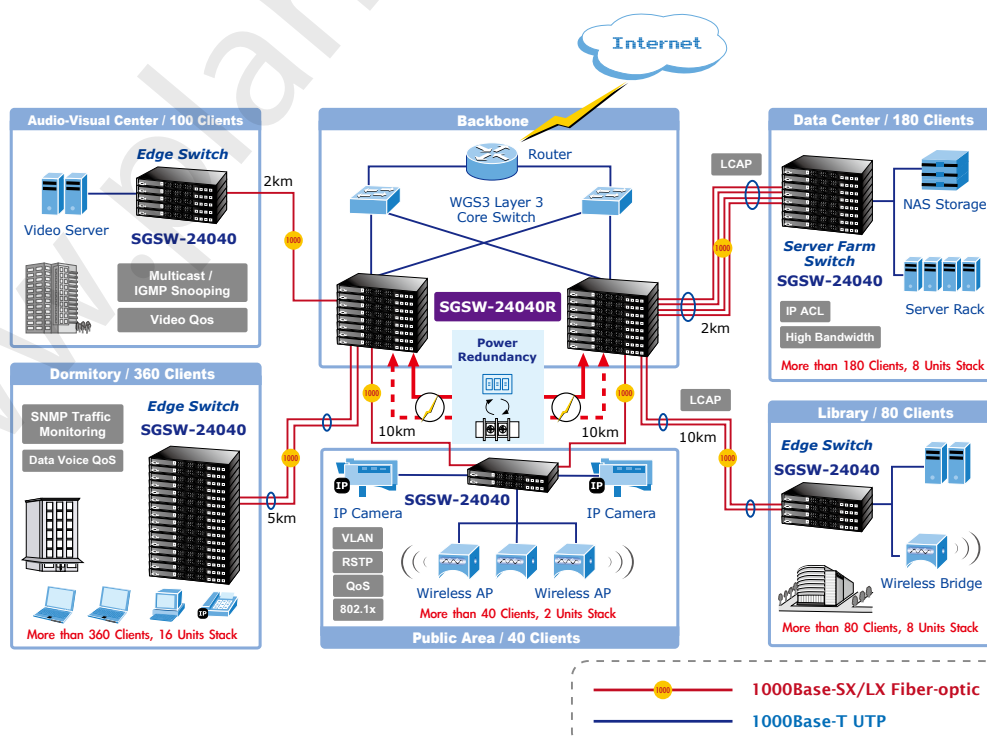
AC / DC Power Redundant to Ensure Continuous Operation (SGSW-24040R)

The SGSW-24040R in particular, is equipped with one 100~240V AC power supply unit and one DC -48V power supply unit to provide a reliable and scalable redundant power supply installation. The continuous power system is specifically designed to fulfill the demands of high tech facilities that require high power integrity. The implemented -48V DC power supply makes the SGSW-24040R a telecom device that can be located in an electrical room.

APPLICATIONS

Carrier Class backbone Switch for the Campus and Enterprises

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



Highly Reliable Enterprise Backbone and Server Farm Switch

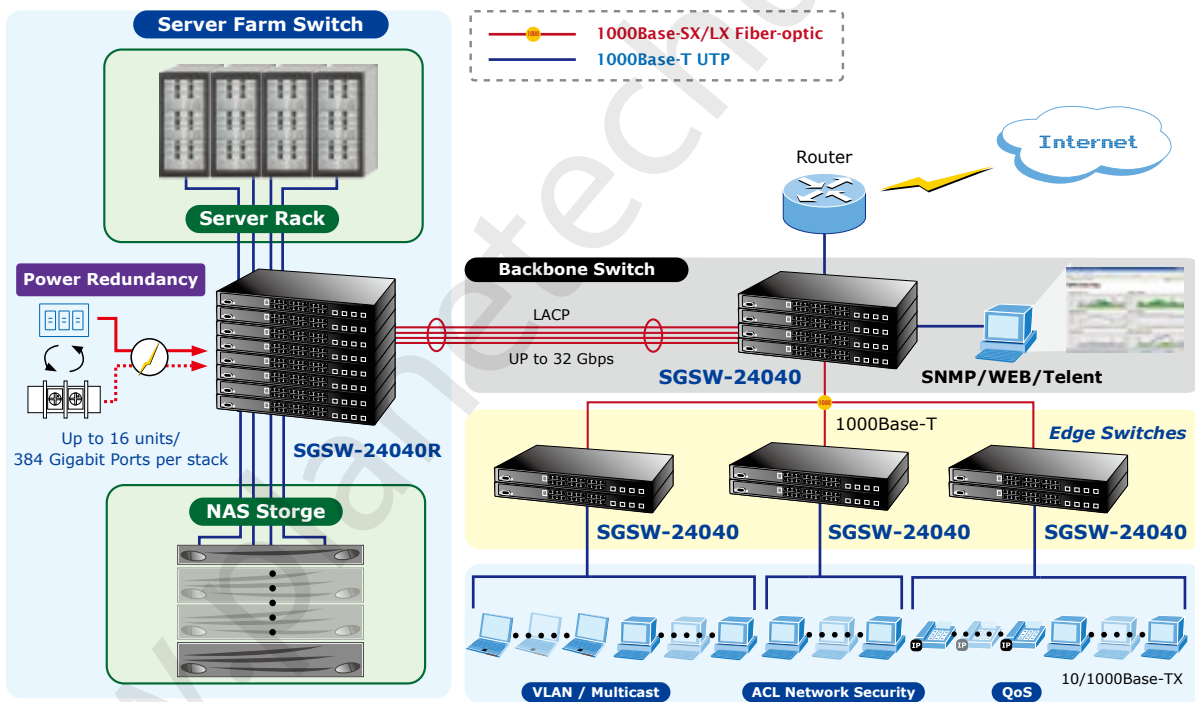
Gigabit Ethernet equipment has become a fundamental unit of Enterprises and Network servers. The SGSW-24040 series stackable Gigabit switch can easily provide a cost-effective, high-density and high-bandwidth solution. Its built in, dedicated stacking features of the SGSW-24040 series switch groups a stack so that they can operate together as a one larger switch that provides multiple high-performing Gigabit Ethernet networks for the backbone of an enterprise or Telecoms. The SGSW-24040 series switch is an ideal solution to intergrate into a server farm switch that connects servers. Because of its dynamic link aggregation function, a 16 GB fat pipe is provided for connecting to the backbone if required.

The dual power supplies provided with the SGSW-24040R offer 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 accept electrical power either from the AC outlet, the DC outlet or accept both sources to create a redundant power supply.

Department / Edge Security and QoS Switch

The SGSW-24040 series switch delivers high-performing and cost-effective Gigabit Ethernet network connectivity to support the increasing number of IP telephones, IP Surveillances, wireless access points and other devices at the edge of the network. The SGSW-24040 improves network efficiency and protects network clients with these 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 double tagging 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, 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 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
	4-level priority queue for switching
QoS	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