

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



High-Performance, Cost-effective Gigabit solution for backbone of Enterprise and Networking of Data Center

The PLANET WGSW-24040 series Switch, the WGSW-24040 and the WGSW-24040R, is the Layer 2 Managed Gigabit Switch which can handle extremely large amounts of data in a secure topology linking to an Enterprise backbone or high capacity network server with 48Gbps switching fabric. The powerful features of QoS and network security make WGSW-24040 series Switch to offer effective data traffic control for ISPs and Enterprises, such as VoIP, video streaming and multicast applications. It is ideal for the core layer of campus, enterprise networks and the aggregation layer of IP metropolitan networks.

High Performance

The WGSW-24040 series provides 24 10/100/1000Mbps Gigabit Ethernet ports with 4 shared Gigabit SFP slots. It boasts high performance architecture of switch that is capable for providing the non-blocking switch fabric and wire-speed throughput as high as 48Gbps, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.

Robust Layer 2 Features

The WGSW-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 WGSW-24040 series provides 802.1Q Tagged VLAN, and the VLAN groups allowed will be maximally up to 255. Via aggregation of supporting ports, the WGSW-24040 series allows the operation of a high-speed trunk combining multiple ports. It enables maximum up to 12 groups of 16 ports for trunking, and supports fail-over as well.

Excellent Traffic Control

The WGSW-24040 series 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 that are particular useful for multi-tenant unit, multi business unit, Telco, or Network Service Provide applications. 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 Management

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

Powerful Security

PLANET WGSW-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 WGSW-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.

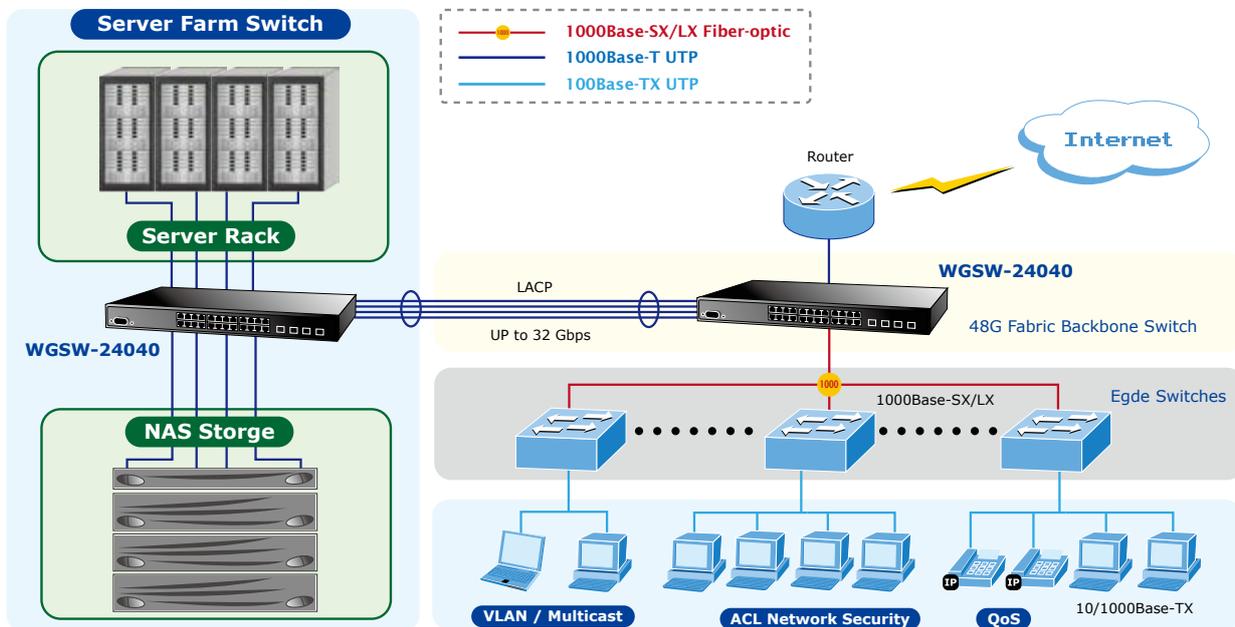
AC / DC Power Redundant to Ensure Continuous Operation (WGSW-24040R)

Particularly for the WGSW-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 WGSW-24040R the telecom level device that can be located at the electronic room.

APPLICATIONS

High Performance Backbone / Server Farm Switch

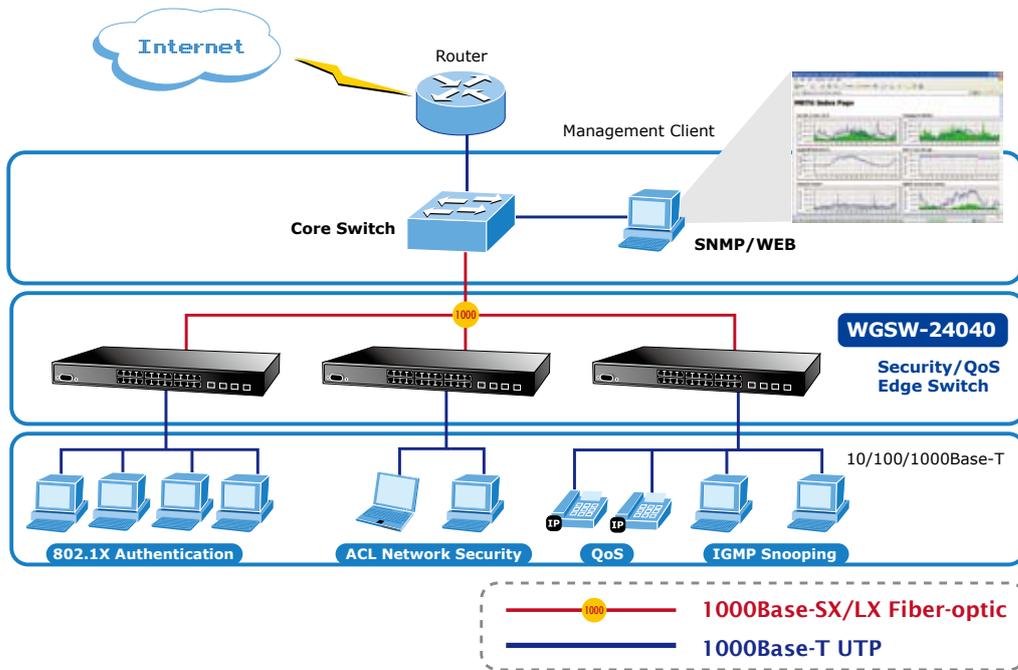
Gigabit Ethernet supported equipment had become the fundamental unit of Enterprises and Network servers. With up to 48Gigabits per second of non-blocking switch fabric, the WGSW-24040 can easily provide the high bandwidth required from now on. It can easily provide a local, high bandwidth and Gigabit Ethernet network for backbone of enterprises or Telecoms. With its port trunking function, a 16 GB fat pipe is provided for connecting to the backbone if required. It is ideal to be used as a server farm switch connecting servers. With the four SFP ports, the WGSW-24040 provides the uplink to the edge network through Gigabit Ethernet LX/SX SFP modules.



Department / Edge Security and QoS Switch

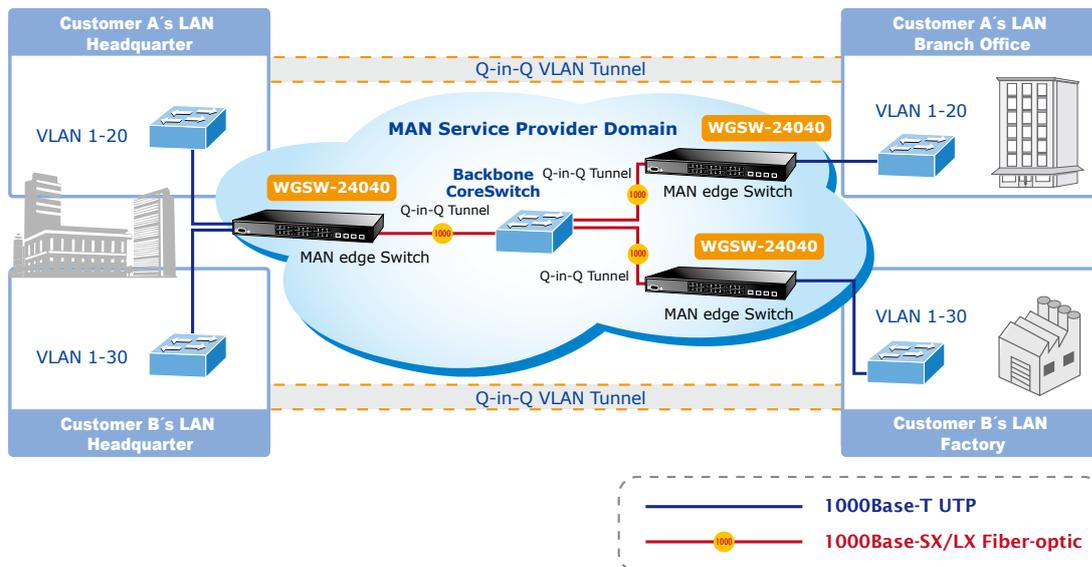
The WGSW-24040 improves the network efficiency and protects the network clients with the powerful features:

- 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 WGSW-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 WGSW-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
- Console interface for Switch basic management and setup
- Layer 2 Features

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
- Support 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)
- Support Spanning Tree Protocol
 - STP, IEEE 802.1d (Spanning Tree Protocol)
 - RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
- Support 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)
- Provide 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 (WGSW-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 Switch
Model	WGSW-24040 / WGSW-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	3.3 KG
Power Consumption	Max. 30 watts / 102 BTU
Power Requirement	WGSW-24040
	- 100~240V AC, 50/60Hz
	WGSW-24040R
	- 100~240V AC, 50/60Hz
	- -48V DC @ 0.6A, Range: -30 ~ -60V DC
Layer 2 function	
System Configuration	Console, Telnet, Web Browser, SNMPv1, v2c and v3 Port disable/enable
Port configuration	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 Traffic classification based, Strict priority and WRR
QoS	- 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

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

RELATIVE PRODUCT

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

AVAILABLE MODULES FOR WGSW-24040/WGSW-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