24-Port 10/100Mbps + 4G TP / SFP Combo L2/L4 Managed Security Switch

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

The PLANET SGSW-2840 is a 24-Port 10/100Mbps Fast Ethernet Switch with 4-Port Gigabit TP/ SFP Combo interfaces, which boasts high performance switch architecture. The SGSW-2840 is capable of providing non-blocking switch fabric and wire-speed throughput as high as 12.8 Gbps, which greatly simplifies the tasks of upgrading the LAN for catering to increase bandwidth demands. Its four built-in GbE uplink ports also offer incredible extensibility, flexibility and connectivity to the core switch or servers.

Robust Layer 2 Features

The SGSW-2840 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 SGSW-2840 will be maximally up to 256. Via aggregation of supporting port, the SGSW-2840 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

PLANET SGSW-2840 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 SGSW-2840 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 SGSW-2840 is equipped with console, WEB and SNMP management interfaces. With its built-in Web-based management, the PLANET SGSW-2840 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 SGSW-2840 can be accessed via Telnet and the console port. Moreover, the SGSW-2840 offers secure remote management by supporting SSL and SSH connection which encrypt the packet content at each session.

Powerful Security

The PLANET SGSW-2840 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. 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

- 24 10/100Mbps Fast Ethernet ports

- 4 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 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 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 VLANs groups, out of 4041 VLAN IDs

  - Private VLAN Edge (PVE) supported

- Supports Link Aggregation

  – up to 12 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

- Supports 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

Department/ Workgroup Switch

With 24 10/100Mbps ports and 4 10/100/1000Base-T ports, the SGSW-2840 connects up to 28 workstations in Ethernet environment. The four SFP Mini-GBIC interfaces uplink to a department backbone. Moreover, this Switch provides an 12.8 Gigabit per second switch fabric and high bandwidth for backbone connection.
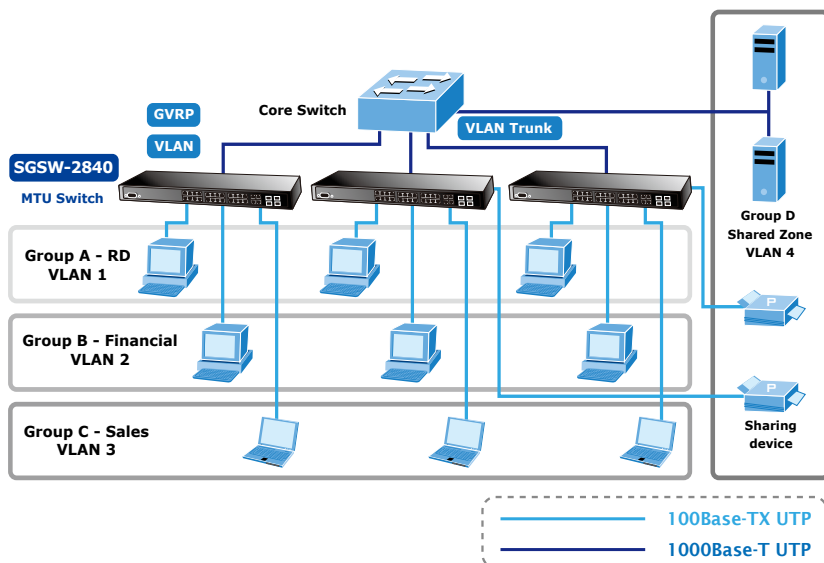
Enterprise Security and QoS Edge Switch

With the IEEE 802.1x Network access authentication, MAC/IP/Protocol Access Control list and Port Security limit the number of MAC address to be pass through one specific port. IGMP Snooping and QoS features improve the network efficiency and protects the network clients.
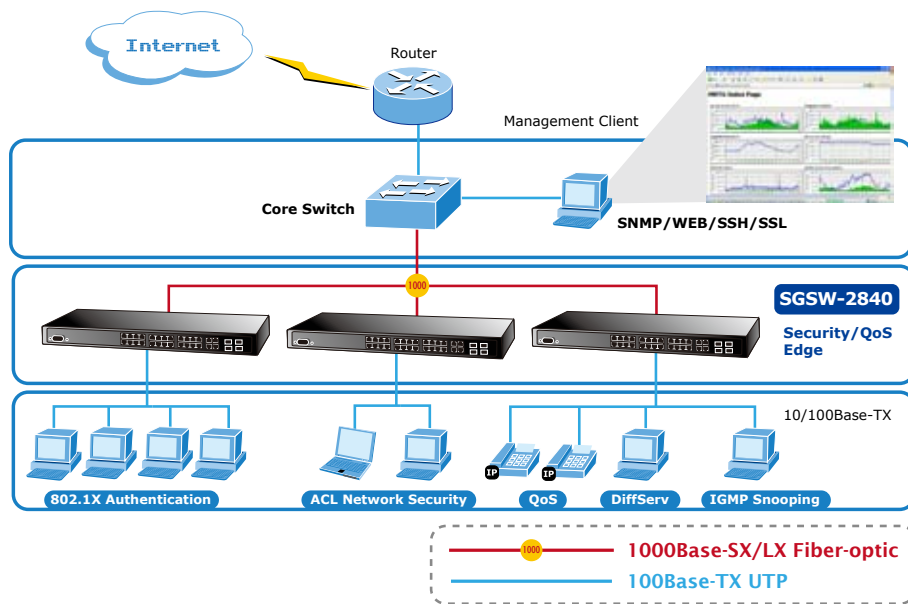
MTU Switch

In an MTU/MDU application, the advanced functionality of the SGSW-2840 eliminates traditional issues associated with the use of Ethernet. Users can be segregated with advanced VLAN functionality to enhance security.   The bandwidth is managed with tiered bandwidth provision and controled by configurable upstream/downstream restrictions. These coupled with the flexible Mini-GBIC 1000Base-SX/LX module options make the SGSW-2840 one of the best and most cost-effective Switch solutions for Multi-tenant service providers.

SPECIFICATION

Product	24-Port 10/100Mbps + 4 Gigabit TP / SFP Managed Security Switch
Model	SGSW-2840
Hardware Specification	
10/100Mbps Copper Ports	24 10/ 100Base-TX RJ-45 Auto-MDI/MDI-X ports
1000Mbps Copper Ports	4 10/100/1000Mbps RJ-45 Auto-MDI/MDI-X ports
SFP/mini-GBIC Slots	4 1000Base-SX/LX/BX, shared with Port-25~Port-28, Port -25, Port-26 compatible with 100Base-FX SFP
Switch Architecture	Store-and-Forward
Switch Fabric	12.8Gbps / non-blocking
Switch Throughput	9.52Mpps @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)	440 x 200 x 44.5 mm, 1U height
Weight	2.8 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 12 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

SGSW-2840	24-Port 10/100Mbps + 4 Gigabit TP / SFP combo Managed Security Switch

RELATIVE PRODUCT

SGSW-2840R	24-Port 10/100Mbps + 4 Gigabit TP / SFP combo Managed Switch with 48V DC Redundant Power
SGSW-2840P	24-Port 10/100Mbps + 4 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