

Product Specification

24-Port 10/100Mbps with 4 Gigabit TP/ SFP Combo Managed Security Switch
With Redundant DC Power

SGSW-2840R

Version 1.0

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Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2008/6/26	Kent Kang	Initial Release

Author:	Kent Kang	Editor:	Kent Kang
Reviewed By:	Kent Kang	Approved By:	Tom Shih

1. PRODUCT DESCRIPTION

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

The PLANET SGSW-2840R is a 24-Port 10/100Mbps Fast Ethernet Switch with 4-Port Gigabit TP/ SFP Combo interfaces, which boasts high performance switch architecture. That is capable of providing non-blocking switch fabric and wire-speed throughput as high as 12.8 Gbps Its four built-in GbE uplink ports also offer incredible extensibility, flexibility and connectivity to the Core switch or Servers.

High Performance

The SGSW-2840R provides 24 10/100Mbps Fast Ethernet ports with 4-Port Gigabit TP/ SFP Combo interfaces. Its architecture is able to provide non-blocking switch fabric and wire-speed throughput as high as 12.8Gbps, which greatly simplifies the tasks of upgrading the LAN for catering to increase bandwidth demands.

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 using within the enterprises' data centers and distributions.

Robust Layer 2 Features

The SGSW-2840R 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-2840R will be maximally up to 256. Via aggregation of supporting port, the SGSW-2840R allows the operation of high-speed trunk combining multiple ports, maximum up to 8 ports can be assign for 12 trunk groups and it supports fail-over as well.

Efficient Management

For efficient management, the SGSW-2840R Managed Ethernet Switch is equipped with console, WEB and SNMP management interfaces. With its built-in Web-based management, the PLANET SGSW-2840R 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 as well. For text-based management, the SGSW-2840R can also be accessed via Telnet and the console port. For secure remote management, the SGSW-2840R supports SSL and SSH connection which encrypt the packet content at each session.



2. PRODUCT FEATURES

> **Physical Port**

- 24-Port 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
- Support 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
- Support 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
- Support DHCP relay function
- 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

3. PRODUCT SPECIFICATION

3.1 MAIN COMPONENT

Switch ASIC:	Acute AQ8828	X 1
10/100 PHY:	IC Plus IP108A	X 3
Gigabit PHY:	Vitesse VSC8211	X4
FLASH:	Intel JS28F640 (64MB)	X1
RAM:	MIRA P3V56S40ETP (128MB)	X2
CPU:	Embedded ARM7 processor	x 1

3.2 FUNCTION SPECIFICATION

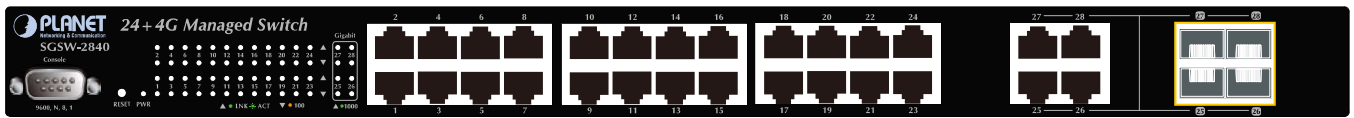
Product	SGSW-2840R 24-Port 10/100Mbps + 4 Gigabit TP / SFP Managed Security Switch
Hardware Specification	
10/100Mbps Copper Ports	24 10/ 100Base-TX RJ-45 Auto-MDI/MDI-X ports
1000Mbps Copper Ports	4 10/100/1000Mbps RJ-45 Auto-MDI/MDI-X ports
SFP/mini-GBIC Slots	4 1000Base-SX/LX/BX, shared with Port-25~Port-28, 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
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

	<p>Q-in-Q tunneling GARP/GVRP for VLAN Management Up to 255 VLANs groups, out of 4041 VLAN IDs Private VLAN Edge (PVE) supported</p>																												
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	<p>IP-Based ACL / MAC-Based ACL In / Out direction per port Up to 32 rules per ACL</p>																												
SNMP MIBs	<p>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</p>																												
Standards Conformance																													
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3.3 PHYSICAL SPECIFICATIONS:

- **Dimensions:**
440 x 200 x 44mm, 1U height
- **Weight:**
3.0KG

■ Front Panel:



■ Rear Panel:



■ LED definition

System

LED	Color	Function
PWR	Green	Lights to indicate that the Switch has power.

Per 10/100Mbps port

LED	Color	Function
LNK/ACT	Green	Lights: To indicate the link through that port is successfully established. Blink: To indicate that the switch is actively sending or receiving data over that port.
100	Orange	Lights: indicate that the port is operating at 100Mbps . Off: If LNK/ACT LED light-> indicate that the port is operating at 10Mbps If LNK/ACT LED Off -> indicate that the port is link down

Per 10/100/1000Base-T port /SFP interfaces

LED	Color	Function
1000 LNK/ACT	Green	Lights: To indicate the link through that port is successfully established with speed 1000Mbps Blink: To indicate that the switch is actively sending or receiving data over that port. Off: If L10/100 NK/ACT LED light-> indicate that the port is operating at 10Mbps or 100Mbps If LNK/ACT LED Off -> indicate that the port is link down
10/100 LNK/ACT	Orange	Lights: To indicate the link through that port is successfully established with speed 10Mbps or 100Mbps Blink: To indicate that the switch is actively sending or receiving data over that port.

		Off: If 1000 LNK/ACT LED light-> indicate that the port is operating at 1000Mbps If 1000 LNK/ACT LED Off -> indicate that the port is link down
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3.4 ENVIRONMENTAL SPECIFICATION

Operating:

Temperature: 0°C ~ 50degree C
Relative Humidity: 20% ~ 95% (non-condensing)

Storage:

Temperature: -40°C ~ 70 degree C
Relative Humidity: 20% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATION

AC / DC dual power supplies : Supports Power Redundant
AC Power Input Voltage: 100 ~ 240VAC, 50 / 60Hz, Auto-sensing.
DC Power Input Voltage: -48V DC @ 0.5A
 Range: 30V~60V
Power Consumption(System on): 110V: **10.8** Watts / 36.9 BTU
 220V: 11.1 Watts / 37.9 BTU
Power Consumption(Full Load): 110V: **17.9** Watts / 61.1 BTU
 220V: **19** Watts / 65 BTU

3.6 REGULATORY COMPLIANCE

FCC Class A, CE.

3.7 REALIABILITY

MTBF > 50,000 hrs @ 25 degree C

3.8 BASIC PACKAGING

- SGSW-2840R x1 X1
- User's manual CD X1
- Quick installation Guide X1
- Power cord X1
- RS-232 cable X1
- Rubber feet X4
- Rack ear with Screws X2

3.9 PACKING DIMENSION

Dimension: 565 (W) x 305 (D) x 95(H) mm

Weight: TBD KG (Gross Weight)

5 pcs in one carton