SMC8926EM/50EM
Managed 24/48 port Gigabit Stackable L3 Ethernet Switch with 4 combo SFP slots

Product Overview
The SMC8900 series is a stackable Gigabit Ethernet routing switch with a choice of 24 or 48 Gigabit 10/100/1000BASE-T ports, 4 combo Gigabit Ethernet SFP slots and 2 optional 10 Gigabit Ethernet slots and 2 stacking ports on the rear panel. The SMC8900 series is ideal for service provider edge aggregation, Enterprise wiring closets, data center aggregation and network core deployment. It provides high performance, resilient stacking, wire speed L2 switching and L3 routing, comprehensive QoS and advanced security to deliver the scalability and resiliency to increase your company’s productivity while reducing operation cost.

Key Features and Benefits

Resilient Stacking up to 8 units
The SMC8900 series currently includes 2 different models SMC8926EM and SMC8950EM with dual optional Gigabit Ethernet uplinks. The two models provide fully non-blocking performance to fulfill the most network demands for voice and video streaming. Optional 10GBASE-XFP10 transceivers can support up to 40km for fiber uplinks.

High Availability
With IEEE 802.1w Rapid Spanning Tree Protocol, the SMC8900 series provides a loop free network and redundant links to the core network with rapid convergence less than 2 second. IEEE 802.1s Multiple Spanning Tree Protocol allows a spanning-tree instance per VLAN, for Layer 2 load sharing on redundant links.

The SMC8900 series supports IEEE 802.3ad Link Aggregation Control Protocol (LACP). It increases bandwidth by automatically aggregating several physical links together as a logical trunk and offers load balancing and fault tolerance for uplink connections.

Adding Optional Redundant Power Supply ensures that the SMC8900 series delivers the stable and redundant power support for today’s high-availability, mission-critical environments.

Comprehensive QoS
The SMC8900 series offers advanced QoS for marking, classification, and scheduling to deliver best-in-class performance for data, voice, and video traffic at wire speed. 8 egress queues per port enable differentiated management of up to 8 traffic types across the stack. Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number to provide optimal performance to real-time applications. Weight Round Robin (WRR) and strict priority ensure differential prioritization of packet flows and avoid congestion of ingress and egress queues.

With bidirectional rate-limiting, per port or traffic class, the SMC8900 series preserves network bandwidth and allows full control of network resources.

Enhanced Security
The SMC8900 series provides enhanced security features for connectivity and access control, including ACLs, authentication and port-level security with IEEE 802.1X. Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers. SSH and RADIUS authentication protect data communication and ensure data privacy. IEEE 802.1X port-based access control ensures dynamic, port-based security and user authentication for network access.

IP source guard prevents a malicious user from spoofing or taking over another user’s IP address by creating a binding table between client’s IP and MAC address, port, and VLAN.

Simplified Management
For IP multicast traffic, the SMC8900 series enables IGMP snooping to provide fast client joins and leaves of multicast streams. It prevents flooding of IP multicast traffic, and limits bandwidth intensive video traffic to only the subscribers.

The SMC8900 series supports IPv6 management functions in SNMP/HTTP/Telnet/FTP/TFTP, SSH, RADIUS/TACACS+ authentication and IPv6 QoS remapping when connecting to the switch or stack.

The SMC8900 series can be managed through By industry standard Command Line Interface (CLI) which provides a common industry look and feel to reduce training and operating costs. It also provides easy-of-use Web GUI interface through a standard web browser.

With four groups of RMON, the SMC8900 series can easily backup and restore Firmware and configuration files via TFTP.

Advanced IPv6 and IPv4 Routing
The SMC8900 series supports hardware based IPv6 and IPv4 routing hardware for maximum performance. It provides seamless migration path from IPv4 to IPv6 for future network upgrades and investment protection.

Advanced routing protocols such as RIP and OSPF provide dynamic routing by exchanging routing information with other Layer 3 switches or routers. Multicast routing is supported under independent multicast protocol, including PIM-DM*, and PIM-SM*. DVMRP* is also supported to interconnect two multicast-enabled networks across non-multicast networks. VRRP prevents your system from failing by dynamically backing up multiple L3 switches for routing.
**Features**

**Physical Ports**
- 20 or 44 RJ-45 10/100/1000Base-T ports
- 4 Combo G (RJ-45/SFP) ports
- 2 stacking ports on the rear panel
- 2 optional I/O Slots for 10G uplink
- 1 RJ-45 console port
- 1 Redundant Power Supply Connector

**Performance**
- Switching Capacity: 880Gbps/136Gbps
- Forwarding Rate: 65.5Mpps/101.2Mpps
- MAC Address Table Size: 16K
- Packet Buffer Size: 2MB/4MB

**L2 Features**
- Auto-negotiation for port speed and duplex mode
- Flow Control: IEEE 802.3x & Back-Pressure
- Spanning Tree Protocol:
  - IEEE 802.1D Spanning Tree Protocol (STP)
  - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
  - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- VLANs:
  - Support 4K IEEE 802.1Q VLANs, port-based VLANs, GVRP
  - Private VLAN
- Link Aggregation:
  - Static Trunk, IEEE 802.3ad Link Aggregation Control Protocol
  - Trunk groups: 8
  - Trunk links: 2-8 for Gigabit Ethernet port
  - Trunk links: 2-4 for 10 Gigabit Ethernet port
- IGMP Snooping: IGMP v1, v2 and v3 snooping and IGMP queries

**L3 Features**
- 2K IP Address entries
- 512 static routes
- ARP
- Multi-netting, Super-netting (CIDR)
- RIPv1, RIPv2
- OSPF
- DVMRP*, PIM-DM*, PIM-SM*
- VRRP
- IPv4 hardware IP routing, future firmware upgrade
- Policy based routing
- DHCP/BootP relay, DHCP server

**QoS Features**
- Priority Queues: 8 hardware queues per port
- Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP, TCP/UDP port number, Access Control List, Marking
- DiffServ
- Supports WRR and Strict Priority
- Port Rate Limiting

**Security**
- Port Security
- IP Source Guard* Supports IEEE 802.1X port-based and MAC based access control
- IP filtering configuration for management interface (SNMP, Telnet, Web)
- RADIUS authentication
- Access Control List
- SSHv2
- HTTPS/SSL

**Management**
- Switch Management:
  - CLI via console port or Telnet
  - WEB management
  - SNMP v1, v2c, v3
  - IGMP snooping (v1/v2)
- Firmware & Configuration:
  - Dual firmware images
  - Firmware upgrade via TFTP/FTP/Secure FTP
  - Multiple configuration files
  - Configuration file upload/download via TFTP/FTP server
- Supports RMON (groups 1, 2, 3 and 9)
- Supports BOOTP, DHCP for IP address assignment
- DHCP Snooping*:
  - DHCP option 82*
- Supports SNTP
- Supports Event/Error log/ System log
- IPv4:

**SNMP Standards**
- RFC 1907 SNMPv2-MIB (MIB-II)
- RFC 2011 IP-MIB (MIB-II)
- RFC 2012 TCP-MIB (MIB-II)
- RFC 2013 UDP-MIB (MIB-II)
- IEEE 802.1X IEEE8021-PAE-MIB
- RFC 1493 Bridge MIB
- RFC 2863 IF-MIB
- RFC 2819 RMON MIB
- RFC 2618 RADIUS MIB
- RFC 2665 Etherlike MIB
- RFC 2737 Entity MIB
- RFC 2674 P-bridge, Q-bridge
- RFC 3036 MAU MIB
- RFC 1612 DNS Resolver MIB
- RFC 3411 SNMP FrameWork
- RFC 3412 SNMP MD MIB
- RFC 3413 SNMP Target MIB, SNMP Notify MIB
- RFC 3415 SNMP View-Based ACM MIB
- SNMP Trap Supported:
  - RFC 1215, 1907, 2863, 1493, 1757, 2819
- Private MIB

**Standards & Compliance**
- IEEE 802.1D (STP)
- IEEE 802.1p (CoS)
- IEEE 802.1Q (VLANs)
- IEEE 802.1w Rapid Reconfiguration Spanning Tree
- IEEE 802.2 (LLC)
- IEEE 802.3 10Base-T
- IEEE 802.3u 100BASE-TX and 100BASE-FX
- IEEE 802.3x flow control support
- IEEE 802.3z (1000Base-SX/LX)
- IEEE 802.3ab (1000Base-TX)
- IEEE 802.3ac (VLAN tag)
- IEEE 802.3ad (Link Aggregation)
- IEEE 802.1Q (VLANs)
Features

Mechanical
Dimensions (H x W x D): 4.4 x 44 x 41.5 cm (1RU)
LED Indicators: Port, Uplink, System, Diagnostic
AC Power Input: 100 ~ 240VAC, 50 ~ 60Hz
Weights:
SMC8926EM: 3.72 kg (8.44 lbs)
SMC8950EM: 4.34 kg (9.59 lbs)

Safety
CSA/NRTL (UL60950, CSA 22.2.No 60950-00)
TUV/GS (EN60950)
CB

Electromagnetic Compatibility
CE Mark(EN50081-1: EN55022 Class A, EN55022-1:IEC 1000-4-2/3/4/6),
EN60555-2 Class A, EN60555-3
FCC Class A
VCCI Class A

Environmental Specifications
Temperature:
- IEC 68-2-14
- 0°C to 50°C (Standard Operating)
- -40°C to 70°C (Non-Operating)
Humidity:5% to 95% (Non-condensing)
Vibration: IEC 68-2-36, IEC 68-2-6
Shock: IEC 68-2-29
Drop: IEC 68-2-32

Electrical
Power Consumption (Max.):
SMC8926EM
- 49.6 Watts (without expansion XFP modules)
- 63.96 Watts (with two expansion XFP modules)
SMC8950EM
- 98.16 Watts (without expansion XFP modules)
- 104.16 Watts (with two expansion XFP modules)

Power characteristics:
- Voltage: 100-240V AC auto-ranging
- Frequency: 47-63Hz

Current:
SMC8926EM
- 0.58 A @ 110 VAC (without expansion XFP modules)
- 0.74 A @ 110 VAC (with two expansion XFP modules)
- 0.312 A @ 240 VAC (without expansion XFP modules)
- 0.375 A @ 240 VAC (with two expansion XFP modules)
SMC8950EM
- 0.995 A @ 110 VAC (without expansion XFP modules)
- 1.21 A @ 110 VAC (with two expansion XFP modules)
- 0.54 A @ 240 VAC (without expansion XFP modules)
- 0.605 A @ 240 VAC (with two expansion XFP modules)

Reliability
SMC8926EM
- MTBF 25°C: 122,388 hours
- MTBF 55°C: 35,535 hours
SMC8950EM
- MTBF 25°C: 132,087 hours
- MTBF 55°C: 45,739 hours

Warranty
Limited lifetime warranty

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