

SMC8126PL2-F

24-port Managed Gigabit Switch with Full-Power PoE, IP Clustering and 2 additional Gigabit SFP uplinks



Product Overview

SMC's TigerSwitch 10/100/1000 SMC8126PL2-F is an intelligent Layer 2 full-power PoE switch with 24 10/100/1000BASE-T ports, four of which are combo ports that are shared with four SFP transceiver slots and two additional SFP slots. The IEEE 802.3af Power over Ethernet (PoE) operates on all 10/100/1000 ports enabling IP phones or cameras to be installed without the need for extra power cables. It supports full-power PoE with 15.4W on all RJ-45 ports and comes installed with clustering software which will enable grouping together of up to 32 of other SMC6100 and SMC8100 switches. The SMC8126PL2-F is capable of reaching up to 52Gbps with a non-blocking single chip switching architecture. It provides cost-effective, Ethernet switching for bandwidth-intensive networks that require advanced switching features to ensure smooth transmission of mission critical data.

Key Features and Benefits

Performance and Scalability

With 52Gbps switching capacity, the SMC8126PL2-F delivers wire-speed switching performance on all gigabit ports, allowing users to take full advantage of existing high-performance, gigabit integrated servers, PCs and laptops by significantly improving the responsiveness of applications and file transfer times.

High Availability

IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence, to ensure faster recovery from failed links, enhancing overall network stability and reliability.

IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing on redundant links.

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

Comprehensive QoS

4 egress queues per port enable differentiated management of up to 4 traffic types. Traffic is prioritized according to 802.1p and DSCP, giving optimal performance to real-time applications such as voice and video.

Asymmetric bidirectional rate-limiting, per port or per traffic class, preserves network bandwidth and allowing maximum control of network resources.

IEEE 802.3af PoE Features

The SMC8126PL2-F supports max. 15.4 Watts per port over existing CAT 5 cables to distances of up to 100 meters. Port one to four can even support up to 31 Watts to power devices such as VoIP phones, wireless access points and surveillance cameras. By using Power over Ethernet the need for individual power sources is eliminated, saving on costs for power cable installation and avoiding power outlet availability issues later on.

Enhanced Security

Port Security allows access to switch ports based on MAC addresses, thus limiting the total number of devices using a switch port and protecting against MAC flooding attacks.

IEEE 802.1x port-based or MAC-based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server.

Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on source and destination MAC addresses, IP addresses, TCP/UDP ports. This is done by hardware, so switching performance is not compromised.

Security Shell (SSH) and Secure Sockets Layer (SSL/HTTPS) encrypt network management information via Telnet and web, providing secure network management.

TACACS+/RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

Private VLAN isolates edge ports to ensure user privacy.

Simplified Management

The user friendly web interface helps new users to configure the switch quickly and easily. For advanced users an industry standard Command Line Interface (CLI) via console port or Telnet provides a common user interface and command set to configure the switch.

Four groups of RMON are supported for traffic management, monitoring and analysis. When upgrading firmware or fine tuning configuration, dual software images and multiple configuration files can be used for backup. TFTP can be used to backup or restore firmware and configuration files.

Features

Physical Ports

- 20-ports 10/100/1000BASE-T (RJ-45)
- 4-ports Gigabit combo (RJ-45/ SFP)
- 2-ports Gigabit (SFP)
- 1-port console (RJ-45)
- 1 RPU connector (on the backside)

Performance

- Switching Capability: 52Gbps
- Throughput: 38.7Mpps
- Packet Buffer Size: 512KB
- MAC Address Table: 8K
- Memory: 16MB Flash, 64MB SDRAM

L2 Features

Auto-negotiation for port speed and duplex mode

Flow Control:

- IEEE 802.3x for full duplex mode
- Back-Pressure for half duplex mode

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)
- Loop back detection
- Auto edge port
- BPDU filter/guard
- Root guard

VLANs:

- Supports 4K IEEE 802.1Q VLANs
- Port-based VLANs
- IEEE 802.1v Protocol-based VLANs
- Private VLAN
- VLAN trunking
- GVRP protocol for VLAN management

Link Aggregation:

- Static Trunk
- IEEE 802.3ad Link Aggregation Control Protocol
- Trunk groups: 4, Trunk links: 2-8

IGMP Snooping:

- IGMP v1/v2/v3 snooping
- IGMP Queried
- IGMP Filtering

IEEE 802.3af Power over Ethernet (PoE)

- Maximum output power per port up to 15.4W, port 1-4 up to 31W
- Maximum PoE power budget 370W
- Provides power on all 24 ports
- LED indicators for power status per port
- Power on/off command for each port

MVR (Multicast VLAN Registration)

- DHCP Option 82
- 9K Jumbo frames

Security

- IEEE 802.1X port based/ MAC-based access control/ Guest VLAN
- RADIUS authentication
- IP Source Guard
- TACACS+ 3.0
- Access Control List (L2/L3/L4/IPv6)
- SSH (v1.5/v2.0)
- SSL

QoS Features

- Priority Queues: 4 hardware queues per port
- Traffic classification based on IEEE 802.1p CoS, IP and DSCP.
- Supports WRR and Strict scheduling
- Bandwidth Control:
 - Egress rate limiting: 1 Mbps, 1Gbps
 - Ingress rate limiting: 1Mbps, 1Gbps

Management

Switch Management:

- CLI via console port or Telnet
- WEB management
- SNMP v1, v2c, v3

Firmware & Configuration:

- Dual firmware images
- Firmware upgrade via TFTP/FTP/HTTP server
- Auto upgrade via TFTP server
- Multiple configuration files
- Configuration file upload/download via TFTP server
- Diagnostic support TFTP download

RMON (groups 1, 2, 3 and 9)

BOOTP, DHCP for IP address assignment

DHCP option 82 relay

DHCP dynamic provision (option 66/67)

SNTP

Event/Error Log/Syslog Flow

Dynamic ARP inspection (DAI)

VLAN mirror

MAC based mirror

Auto Traffic Control (ATC)

Delay reload

Mechanical

- LED Indicators: Port, Uplink, System, Diagnostic
- Dimensions (H x W x D): 409 x 440 x 44 mm (1RU)
- Weight: 5.6Kg
- Maximum Power consumption : 430Watt

Safety

- CSA/NRTL (UL1950, CSA 22.2.9.50)
- TUV/GS (EN60950)

Electromagnetic Compatibility

- CE Mark
- FCC Class A

Environmental Specifications

- Temperature:
 - IEC 68-2-14
 - 0°C to 40°C (Standard Operating)
 - -40°C to 70°C (Non-Operating)
- Humidity: 10% to 95% (Non-condensing)
- Vibration: IEC 68-2-36, IEC 68-2-6
- Shock: IEC 68-2-29
- Drop: IEC 68-2-32

Warranty

Please check www.smc.com for the warranty terms in your country/region.

Contact

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24/7 Technical Support

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Check www.smc.com for your local country contact information

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