

SMCGS18P-Smart

EZ Switch[™] 10/100/1000 16-Port Gigabit Web Managed PoE Smart Switch with 2 100/1000BASE-X SFP Uplink Slots



Product Overview

SMC Network's EZ Switch SMCGS18P-Smart is a new 18-port Gigabit Ethernet Smart Switch providing 16 Gigabit PoE ports and 2 100/1000BASE-X SFP slots. The switch supports a flexible web-based management interface as well as SNMP for both IPv4 and IPv6. The new SMCGS18P-Smart provides a range of feature-rich functions, including VLANs, Spanning Tree, link aggregation, multicasting, security, storm control, and QoS with 8 priority queues. Ideal for users looking to migrate from unmanaged to managed networks, this Smart Switch is easy to install and is perfect for SMB and SOHO businesses.

Key Features and Benefits

Performance and Scalability

This entry-level managed switch provides 36 Gbps wire-speed switching performance across all 18 ports. This enables the switch to fully support existing high-performance PCs and laptops, which significantly improves application response times and the speed of large file transfers.

The two Gigabit Ethernet 100/1000BASE-X SFP slots provide uplink flexibility, offering extended fiber connections to the network backbone.

Feature-Rich Functionality

VLAN features support flexible network partition and configuration, performance improvement, and cost savings.

IGMP snooping prevents flooding of IP multicast traffic and limits bandwidth-intensive video traffic to only the subscribers.

Storm control monitors the amount of storm traffic that is sent each second on an interface. It allows the administrator to specify how much storm traffic can be sent as a percentage of the total bandwidth of an interface.

Continuous Availability

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

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

Support for eight egress queues per port enables differentiated management of up to eight traffic types. Traffic is prioritized according to 802.1p, DSCP, and TCP/UDP port number, 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 allows maximum control of network resources.

Enhanced Security

Port Security limits the total number of devices that can access a switch port based on MAC address, and protects 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 a standards-based RADIUS server, with support for dynamic VLAN assignment.

Simple Management

An embedded user-friendly web interface helps users quickly and simply configure switches. SNMP v1/v2 is supported for management by a network management station. The switch supports management functions over both IPv4 and IPv6. Cable diagnostics identifies cable faults (such as short, open, etc.) and feeds back a distance to the fault. LLDP (Link Layer Discovery Protocol) enables administrators to monitor devices attached to switch ports.

PoE Features

The SMCGS18P-Smart can provide up to 30 Watts of power to attached devices, such as VoIP phones, wireless access points, surveillance cameras, etc, all over existing Cat. 5 cables. The switch can deliver up to 30 Watts on 4 ports, or 15.4 Watts on all ports. This eliminates the need for individual power sources for devices in the network, saving on costs for power cables and avoiding power outlet availability issues. If the power demand exceeds the switch's maximum power budget, ports can be prioritized to receive power.

Features

Physical Ports

- 16 10/100/1000BASE-T RJ-45 PoE ports
- 2 Gigabit Ethernet SFP Uplink slots
- (SFP ports support dual speed 100/1000BASE-X)

Performance

- Switching Capability: 36 Gbps
- Packet Buffer Size: 512KB
- MAC Address Table: 8K
- Flash: 16MB

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)
 - STP Auto Edge
- VLANs:
 - Supports 4K IEEE 802.1Q VLANs
 - Port-based VLANs
 - Voice VLAN
 - Private VLAN
- Link Aggregation:
 - Static Trunk
 - IEEE 802.3ad Link Aggregation Control Protocol
 - Trunk groups: 9 trunk links: Up to 12 ports
- IGMP Snooping:
 - IGMP snooping v1/v2/v3
 - IGMP immediate leave
 - Supports jumbo frames up to 10 KB
- IEEE 802.3at Power over Ethernet (PoE)
 - Maximum output power per port up to 30 W
 - Maximum PoE power budget 225 W
 - Data-pairs mode
 - Voltage: Maximum current: 4.0A
 - Provides power on all 16 copper ports
 - Power on/off command for each port
 - LED indicators for power status per port

QoS Feature

- Priority Queues: 8 hardware queues per port
- Traffic classification based on IEEE 802.1p CoS, DSCP, Supports WRR, Strict scheduling, or hybrid mode
- Rate Limiting
 - Ingress: Resolution 16 Kbps
 - Egress: Resolution 16 Kbps

Security

- Port Security: Static and dynamic
- Supports IEEE 802.1X port based and MAC-based
- EAPOL transparent
- MAC authentication
- Web authentication
- HTTPS/SSL
- SSH v1.5/v2.0
- MAC Filter/IP Filter
- DHCP Snooping

Management

- Switch Management:
 - Web management
 - SNMP v1/v2/v3
- Firmware and Configuration: Upgrade via TFTP/HTTP
- Supports DHCP Client
- Supports LLDP (802.1ab) and LLDP-MED
- RMON (groups 1, 2, 3, and 9)
- Port mirroring: one to one and many to one
- Event log: Local flash, syslog, remote server (RFC3164) and SMTP (RFC821)
- SNTP (IPv4/IPv6)
- Loop detection and prevention
- UPnP
- Cable diagnostics
- IPv6 management:
 - IPv4/IPv6 dual protocol stack
 - IPv6 address types: Unicast/multicast
 - IPv6 Ping/tracert
 - ICMPv6 and ICMPv6 redirect
 - IPv6 neighbor discovery
 - IPv6 stateless auto config/manual config
 - IPv6 Telnet/SNMP/HTTP/DHCP

Mechanical

- Dimensions (W x D x H): 44 x 35 x 4.45 cm
(17.32 x 13.77 x 1.75 in.)
- Weight: 4.05 kg (8.92 lbs)
- LED Indicators: Port, Uplink, System, Diagnostic

Power Supply

- AC Power
 - 100 to 240 V, 50-60 Hz, 4.0A
- Power Supply
 - Internal, auto-ranging transformer: 100 to 240 VAC, 47 to 63 Hz
- Power Consumption
 - 225 Watts for PoE Power and 20 Watts for System Power

Electromagnetic Compatibility

- CE Mark
- FCC Class A
- EN 55022 (CISRP 22) Class A
- EN 61000-3-2/3

Environmental Specification

- Temperature:
 - 0°C to 50°C (standard operating)
 - -40°C to 70°C (non-operating)
- Humidity: 10% to 90% (non-condensing)
- Vibration: IEC 68-2-36, IEC 68-2-6
- Shock: IEC 68-2-29
- Drop: IEC 68-2-32

Safety

- CSA (CSA 22.2 NO 60950-1 & UL 60950-1)
- CB (IEC/EN60950-1)

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