# SG-IPS33108PFM
Gigabit Managed Industrial PoE Switch

DESCRIPTIONS

The SG-IPS33108PFM is a full Gigabit managed industrial PoE switch independently developed by Shogun. it has *10/100/1000M PoE ports and 2*100/1000 SFP fiber slot ports , port 1-8 can support IEEE 802.3af/at standard POE power supply, single port POE power up to 30W, and the maximum POE output power is 60W (at-110W). As a POE power supply device, it can automatically detect and identify the electrical equipment that meets the standard and supply power through the cable. It can supply the POE terminal equipment, such as wireless AP, network camera, network telephone, industrial sensor and so on, to meet the demand for high density PoE power supply network environment. It is suitable for intelligent transportation, rail transportation, electric power industry, mining mining, metallurgy and green energy construction and so on. A reliable communication network. Managed model supports a variety of network redundancy protocol STP/RSTP/MSTP (<50ms). When one way network fails, communication can be recovered quickly to ensure uninterrupted communication of important applications. SG-IPS33108PFM industrial series products fully follow industrial product design and material. The shell adopts aluminum alloy to enhance heat dissipation efficiency, IP40 protection grade, and ensures the stable operation of the equipment in bad environment. According to the actual application needs, through Web, CLI, SNMP network management, POE power supply management, port flow control, VLAN division, STP, RSTP and other functions of the application service configuration.

APPLICATIONS
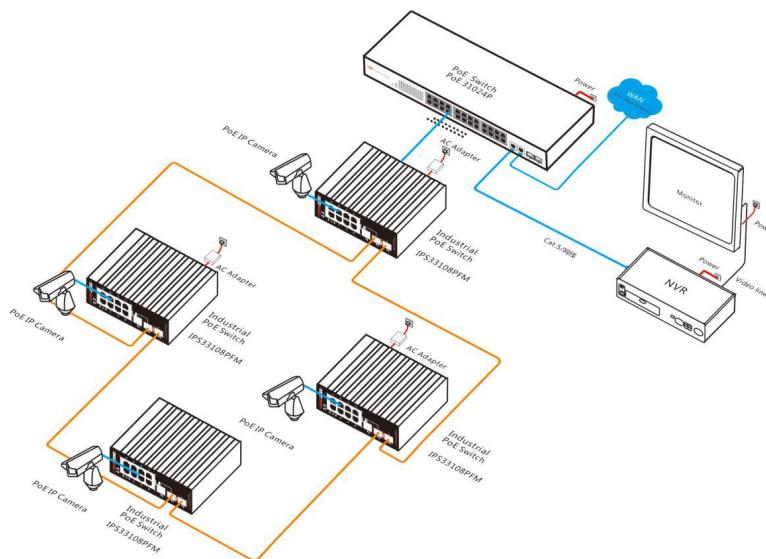
FEATURES

■ Full gigabit port

◇ All series supports "Ethernet port + SFP port" combination, which enables users to flexibly build networking to meet the needs of various scenarios.

◇ Support non-blocking wire speed forwarding .

◇ Support full duplex based on IEEE802.3x and half duplex based on backpressure .

■ Intelligent PoE power supply function

◇ 8*10/100/1000Base-T RJ45 ports support POE power supply to meet the needs of POE in various industrial fields.

◇ Conforms to the IEEE 802.3af POE power supply standard, automatically recognizes POE devices for power supply, without damaging non-POE devices. The maximum POE output power of the entire device reaches 120W(at-240W), and the maximum POE output power of a single port is 30 W.

◇ Support POE network management function, through the network management configuration, POE port power allocation, priority setting, port power status view, time scheduling, etc.

■ Strong business processing capability

◇ Support IEEE 802.1Q VLAN, users can flexibly divide VLAN according to needs, and support QinQ configuration.

◇ Support QoS, support port based, 802.1P based and DSCP based three priority modes and Equ, SP, WRR, SP+WRR four queue scheduling algorithms.

◇ ACL supports the filtering of data packets by configuring matching rules, processing operations and time permissions, and provides a flexible access control strategy.

◇ Support IGMP V1/V2 multicast protocol and support IGMP Snooping to meet the multi terminal HD video surveillance and video conference access requirements.

◇ Support industrial fast Ring network ERPS and STP/RSTP/MSTP production tree protocol, eliminates two layers of loops, and realizes link backup.

◇ Support static convergence and dynamic convergence, effectively increases link bandwidth, achieves load balancing, link backup, and improves link reliability.

■ Complete safety protection mechanism

◇ Support 802.1X authentication, provide authentication function for LAN computer, and control the authorized status of controlled port according to the result of authentication.

◇ Support port isolation , port mirroring

◇ Support port broadcast storm suppression

◇ Support port +MAC binding, IP+MAC+ port binding function

■ **The equipment is stable and reliable**

◇ The host has low power consumption, no fan mute design, aluminum alloy metal shell, excellent heat dissipation, and ensure stable operation of products.

◇ The equipment fully meets the requirements of UL, CE, FCC and RoHS safety regulations, and is safe and reliable.

◇ The user can easily understand the working status of the device through the power indicator/ system indicator (SYS), port status indicator (Link,L/A), and POE operation indicator.

■ **Easy operation and maintenance management**

◇ Supports various management and maintenance methods such as Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

◇ Supports encryption methods such as HTTPS, SSLV3, and SSHV1/V2 for more secure management.

◇ Support RMON, system log, port traffic statistics, easy network optimization and transformation.

◇ Support LLDP, which is convenient for the network management system to query and judge the communication status of the link.

◇ Support CPU monitoring, memory monitoring, ping detection, cable length detection.

Model	SG-IPS33108PFM	SG-IPS33108PFM-at
Interface	8*10/100/1000Base-T PoE ports (Data/Power) 2*100/1000Base-X uplink SFP fiber slot ports (Data) 1 * RS232 console port(115200,N,8,1) 2 sets of V+, V- redundant DC power interface (5 Pin Phoenix terminal)	
PoE Port	Port 1-8 can support IEEE802.3af/at POE standard	
Network Protocol	IEEE802.3 10BASE-T; IEEE802.3i 10Base-T; IEEE802.3u 100Base-TX/FX; IEEE802.3ab 1000Base-TX IEEE802.3z 1000Base-X IEEE802.3x	
PoE Standard	IEEE802.3af/at	
Ethernet Port Feature	10/100/1000BaseT (X) automatic detection, full / half duplex MDI/MDI-X adaptive	
SFP Port Characteristic	Gigabit SFP optical fiber interface, default matching optical modules, need to buy separately, (optional order mode / multi-mode, single fiber / double fiber optical module.	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	192Gbps	
Forwarding Rate@64byte	14.88Mpps	
MAC	8K	
Buffer Memory	4M	
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5 or later UTP(≤100 meter)	
Optical Cable	Multi mode: 850nm 0 ~ 550M,single mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.	
Power Supply Pin	Only support 1/2 (+), 3/6 (-) 4-core power supply	
Max / Average Power Per Port	30W/15.4W	30W/30W
Total PWR / Input Voltage	120W (48-57VDC)	240W (50-57VDC)
Power Consumption	Standby:<8W;Full load:<120W	Standby:<10W;Full load:<240W
LED	System indicator:SYS(green); Network Indicator: Link (yellow); SFP Indicator: L/A (green) ; PoE Indicator: PoE (green)	
Power Supply	No, see accessories information table to buy	

Operation TEMP / Humidity	-40~+80°C;5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+85°C;5%~95% RH Non condensing
Dimension	165*148*54mm
Weight	<0.8kg / <1.2kg
Lightning protection / protection level	Lightning protection: 6KV 8/20us;Protection level: IP40 IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge IEC61000-4-3(RS):10V/m(80~1000MHz) IEC61000-4-4(EFT): power cable:±4kV; data cable:±2kV IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz) IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s IEC61000-4-9(pulsed magnet field):1000A/m IEC61000-4-10(damped oscillation):30A/m 1MHz IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV IEC61000-4-16(common-mode transmission):30V; 300V,1s FCC Part 15/CISPR22(EN55022):Class A IEC61000-6-2(Common Industrial Standard)
Mechanical Properties	IEC60068-2-6 (anti vibration) IEC60068-2-27 (anti shock) IEC60068-2-32 (free fall)
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS;
Warranty	5 years , lifelong maintenance.
Business features (only restricted management function models)	
Port	Support IEEE802.3x flow control (full duplex) Support for broadcast storm suppression based on port rate support speed limit for incoming and offline message traffic, with a minimum particle size of 64Kbps. Support port temperature protection settings Support port EEE green Ethernet energy saving configuration
PoE Management	Support total power limit configuration for POE power supply Support PoE output power allocation per port, close / start af/at Support PoE output priority configuration per port Support PoE work status per port display Support power delay start Support PoE work and time scheduling
Layer 3 Function	L2+ network management function Support IPV4/IPV6 management Support layer3 soft routing (weak three tier) forwarding, Support different network segments, communication between different VLAN Support static routing / default routing 128, 1024 ARP software forwarding

VLAN	Support port based VLAN (4K), IEEE802.1q Support protocol based VLAN Support Voice VLAN Support for MAC address-based VLANs Support Access, Trunk, Hybrid three types of port configuration Support QinQ configuration
Port Aggregation	Support Dynamic/LACP, Link Aggregation (IEEE802.3ad) Support static polymerization Support the largest 8 aggregation groups, each aggregation group supports 8 ports.
Spanning Tree	Support STP (IEEE802.1d) Support STPRSTP (IEEE802.1w) Support STP MSTP (IEEE802.1s)
Industrial Ring Network Protocol	Support G.8032 (ERPS), support 255 loops at most, and supports 1024 devices per ring. The self healing time of the ring network is less than 20ms
Multicast	Support IGMP Snooping V1/V2 and support 1024 multicast groups at most. Support the user's quick departure mechanism Support MLD Snooping V1/V2 Support multicast VLAN
Mirror	Bi-directional traffic mirroring supporting the basic port
QoS	Support Diff-Serv QoS Each port supports 8 output queues Support 802.1p/DSCP priority mapping Support queue scheduling mechanism (SP, WRR, SP+WRR) Support priority tag Mark/Remark Support stream based packet filtering Support for stream based redirection Support flow based speed limit
ACLs	Support L2 to L4 packet filtering function, can match the first 80 bytes of the message, provide based on the source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN and other definition ACL. Support ACL based on port and VLAN
Safety Characteristics	Support user grading management and password protection Support IEEE802.1X authentication / centralized MAC address authentication Support AAA&RADIUS authentication Support the number of MAC address learning restrictions Support MAC address black hole Support SSH 2.0 to provide secure passwords for user login. Support SSL to ensure data transmission security Support port isolation Support the speed limit function of ARP message

	Support IP source address protection
	Support ARP intrusion detection function
	Support against DoS attacks
	Support port broadcast message suppression
	Support host data backup mechanism
	Binding capabilities of IP+MAC+VLAN+ ports
DHCP	Support DHCP Client
	Support DHCP Snooping
	Suport DHCP Serve
	Suport DHCP Relay
Management And Maintenance	Support Console/AUX Modem/Telnet/SSH2.0 CLI command line configuration
	Support WEB network management (HTTPS)
	Support FTP, TFTP, Xmodem, SFTP file download management
	Support SNMP V1/V2C/V3
	Support one bond reduction
	Support NTP clock
	Support system work log
	Support Ping detection
	Support cable state detection
	Support CPU instant utilization status view
	Support link layer discovery protocol LLDP
	Support ONV NMS intelligent management center
System Requirements	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later;
	Cat5e or later Ethernet cable;
	TCP/ IP, network adapter and network operating system (Microsoft Windows, Linux or Mac OS X) installed on on every computer in the network.