SG-IPS33064PFM
6-Port Managed Industrial PoE Switch

Overview

SG-IPS33064PFM is a full Gigabit managed industrial PoE switch independently developed by ONV. it has 4*10/100/1000M PoE ports and 2*100/1000M SFP fiber slot ports, port 1-4 can supports IEEE802.3af/at standard POE power supply, single port POE power up to 30W, and the maximum POE output power is 60W (at-120W). 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.

The SG-IPS33064PFM has the L2+ full network management function, supportIPV4/IPV6 management, static route full line rate forwarding, security protection mechanism, ACL/QoS policy and VLAN, and is easy to manage and maintain. Support multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS(<20ms) to improve link backup and network reliability. When one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as PoE power management, port traffic control, VLAN division, and SNMP through the Web network management mode.

Features

### Gigabit access, SFP fiber port uplink

- All series support "Gigabit Ethernet port and Gigabit SFP port" combination, which enables users to flexibly build networking to meet the needs of various scenarios.
- Support non-blocking wire-speed forwarding & loop protection.
- Support full-duplex based on IEEE802.3x and half-duplex based on backpressure.

Powerful port lightning protection, ultra-wide voltage input

- Contact discharge 8KV, air discharge 15KV; port lightning protection common-mode 4KV, differential mode 2KV;
- Industrial dual power input
- DC INPUT: 48V-57V, non-PoE DC INPUT: 12-48V

Intelligent PoE power supply

- 4*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring,teleconferencing system, wireless coverage, and other scenarios.
- IEEE 802.3af/at PoE standard, without damaging non-PoE devices.
- Priority system for PoE port, it will supply power to the high priority level port first when the power budget is insufficient and avoid overwork of the device.
- PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
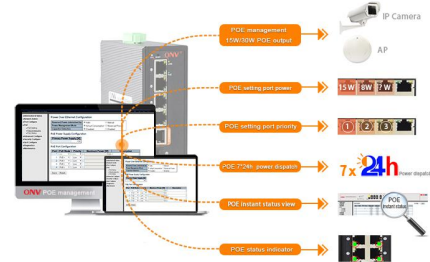
PoE network management and fast Ring function

- IEEE802.1Q VLAN, flexible VLAN division and QinQ configuration.
- QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.
- ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.
- IGMP V1/V2 and IGMP Snooping.
- ERPS/STP/RSTP/MSTP.
- Static and dynamic aggregation.

Security

- 802.1X authentication.
- Port isolation,Storm control.
- IP-MAC-VLAN-Port binding.

Stable and reliable

- Low power consumption, fan-less design, aluminum shell.
- CCC, CE, FCC, RoHS.
- The user-friendly panel, it can show the device status through the LED indicator of PWR,SYS, Link, L/A, PoE.

One-stop remote control and management

- Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3)
- HTTPS, SSLV3, and SSHV1/V2.
- RMON, system log, LLDP, and port traffic statistics.
- CPU monitoring, memory monitoring, Ping test, and cable diagnose.

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Specifications

Model	SG-IPS33064PFM	SG-IPS33064PFM-at
Interface Characteristics		
Fixed Port	4*10/100/1000Base-T PoE ports (Data/Power) 2*100/1000Base-X uplink SFP slot ports (Data) 1 * RS232 console port(115200,N,8,1) 2 set of V+, V- redundant DC power interface (5 Pin Phoenix terminal)	
Ethernet Port	Port 1-4 support 10/100/1000Base-T,auto-sensing,Full/half duplex MDI/MDI-X self-adaption ,Loop protection	
Twisted Pair	10BASE-T: Cat3,4,5 UTP(100 meter)	
Transmission	100BASE-TX: Cat5 or later UTP(100 meter) 1000BASE-T: Cat5e or later UTP(100 meter)	
SFP Slot Port	Gigabit SFP optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
Optical Cable	Multi mode: 850nm 0 ~ 550M, single mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.	
Chip Parameter		
Network Management Type	L2+	
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-TX IEEE802.3z 1000Base-X, IEEE802.3x	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	128Gbps	
Forwarding Rate@64byte	893Mpps	
MAC	8K	
Buffer Memory	4M	
Jumbo Frame	9.6K	
LED Indicator	Power/ System : SYS (green) , Network: Link (yellow), fiber port: L/A (green), PoE: PoE (green)	
Reset Switch	Yes, One-button factory reset	

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PoE & Power	
PoE Port	Port 1 to port 4
PoE Management	PoE working status Delay start of power supply PoE output priority configuration
	Scheduling of PoE operation and time Total power limit of PoE power supply PoE output power allocation, off& af &at
Power Supply Pin	Default: 1/2 (+), 3/6 (-)
Max Power Per Port	30W; IEEE802.3af/at
Total PWR / Input Voltage	60W (48VDC) / 120W (48VDC)
Power Consumption	Standby<6W, Full load<60W / Standby<8W, Full load<120W
Working Voltage	48-57VDC; 5 Pin industrial Phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 48V/60W or 48V/120W industrial power supply
Physical Parameter	
Operation TEMP / Humidity	-40~+80°C;5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+85°C;5%~95% RH Non condensing
Dimension (L*W*H)	145*134.5*47.5mm
Net /Gross Weight	<0.6kg / <0.8kg
Installation	Desktop, DIN rail
Certification & Warranty	
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.
Network Management Features	
Interface	IEEE802.3X (Full-duplex)
	Port temperature protection setting
	Port green Ethernet Energy-saving setting
	Broadcast storm control based on port speed
	The speed limit of the message flow in the access port.
	The minimum particle size is 64Kbps.
Layer 3 Features	L2+ network management ,IPV4/IPV6 management
	L3 soft routing forwarding,
	Static route, Default route @ 128 pcs, APR @ 1024 pcs
VLAN	4K VLAN based on port, IEEE802.1q
	VLAN based on the protocol
	VLAN based on MAC
	Voice VLAN, QinQ configuration
	Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP, Static aggregation
	Max 3 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Industrial Ring Network Protocol	G.8032 (ERPS),Recovery time less than 20ms
	250 Ring at most, Max 250 devices per ring.

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Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS,Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL,ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	IP-MAC-VLAN-Port binding ARP inspection,Anti-DoS attack AAA & RADIUS,MAC learning limit Mac black holes,IP source protection IEEE802.1X & MAC address authentication Broadcast storm control,Backup for host datum SSH 2.0,SSL,Port isolation,ARP message speed limit User hierarchical management and password protection
DHCP	DHCP Client,DHCP Snooping,DHCP Server,DHCP Relay
Management	One-key recovery Cable Diagnose,LLDP Web Management (HTTPS) NTP,System work log,Ping Test CPU instant utilization status view
	Console/AUX Modem/Telnet/SSH2.0 CLI Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3 ONV NMS - smart network management system platform(LLDP+SNMP)

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System	Category 5 Ethernet network cable
	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

Diamensions