

Datasheet

4-Port Full Gigabit Managed Industrial PoE Switch

IPS33042PFM



OVERVIEW

The IPS33042PFM is a full Gigabit managed industrial PoE switch. It has 2*10/100/1000M PoE ports+2*100/1000M SFP fiber slot ports, port 1-2 supports IEEE 802.3af/at standard POE power supply, single port POE power up to 30W, the maximum PoE output power is 36W (at-60W). 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, metallurgy and green energy construction and more.

The managed model supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms). When a one-way network fails, communication can be quickly resumed to ensure uninterrupted communication of important applications. IPS33042PFM industrial series products fully comply with industrial product design and materials. The shell is made of aluminum alloy to enhance heat dissipation performance and IP40 protection level to ensure stable operation of equipment under harsh environment. You can configure PoE power management, port traffic control, VLAN division, STP, and RSTP for multiple application services based on the Web, CLI, and SNMP network management.

FEATURE

➤ 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

- ✓ 2*10/100/1000 Base-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 36W(at-60W), 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 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 and 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 3C, 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 (PWR), port status indicator (Link/Act), and POE operation indicator.

TECHNICAL SPECIFICATION

Model	IPS33042PFM	IPS33042PFM-at
Interface	2*10/100/1000M POE ports(Data); 2*100/1000M SFP fiber slot ports(Data) 1 * RS232 console port(115200,N,8,1) 2 groups V+, V- redundant DC power interface (5P phoenix terminal)	
PoE Port	Port 1-2 supports POE @ IEEE802.3af/at	
Network Protocol	IEEE802.3 10BASE-T; IEEE802.3i 10Base-T; IEEE802.3u 100Base-TX/FX; IEEE802.3ab 1000Base-TX IEEE802.3z 1000Base-FX IEEE802.3x	
PoE Standard	IEEE802.3af/at	
Ethernet Port Feature	Port 1-2 supports 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	128Gbps	
Forwarding Rate@64byte	8.93Mpps	
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	Default 1/2 (+), 3/6 (-), 4-core power supply	
Max / Average Power Per Port	30W/15.4W	30W/30W
Total PWR / Input Voltage	36W (48-57VDC)	60W (50-57VDC)
Power Consumption	Standby:<4W;Full load:<30W	Standby:<5W;Full load:<60W
LED	Power Indicator : PWR (Green);system indicator: SYS(Green);Network Indicator: Link/Act (Yellow);SFP Indicator: L/F (Green); PoE Indicator: PoE (Green)	
Power Supply	No, you can purchase industrial power supply 48V/36W@af or 48V/60W@at	
Operation TEMP / Humidity	-40~+80°C;5%~90% RH Non condensing	
Storage TEMP / Humidity	-40~+85°C;5%~95% RH Non condensing	

Dimension	145*134.5*47.5mm
Net /Gross Weight	<0.7kg / <1.0kg
Lightning protection / protection level	<p>Lightning protection: 4KV 8/20us;Protection level: IP40</p> <p>IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge</p> <p>IEC61000-4-3(RS):10V/m(80~1000MHz)</p> <p>IEC61000-4-4(EFT): power cable:±4kV; data cable:±2kV</p> <p>IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV</p> <p>IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz)</p> <p>IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m,1s to 3s</p> <p>IEC61000-4-9(pulsed magnet field):1000A/m</p> <p>IEC61000-4-10(damped oscillation):30A/m 1MHz</p> <p>IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV</p> <p>IEC61000-4-16(common-mode transmission):30V; 300V,1s</p> <p>FCC Part 15/CISPR22(EN55022):Class A</p> <p>IEC61000-6-2(Common Industrial Standard)</p>
Mechanical Properties	<p>IEC60068-2-6 (anti vibration)</p> <p>IEC60068-2-27 (anti shock)</p> <p>IEC60068-2-32 (free fall)</p>
Certification	3C;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; ROHS;

Business features (only restricted management function models)	
Port	<p>Support IEEE802.3x flow control (full duplex)</p> <p>Support for broadcast storm suppression based on port rate</p> <p>support speed limit for incoming and offline message traffic, with a minimum particle size of 64Kbps.</p> <p>Support port temperature protection settings</p> <p>Support port EEE green Ethernet energy saving configuration</p>
PoE Management	<p>Support total power limit configuration for POE power supply</p> <p>Support PoE output power allocation per port, close / start af/at</p> <p>Support PoE output priority configuration per port</p> <p>Support PoE work status per port display</p> <p>Support power delay start</p> <p>Support PoE work and time scheduling</p>
Layer3 Function	<p>Support L2+ three-layer soft routing (weak three-layer) forwarding, non-linear speed</p> <p>Support static routing / default routing 128, 1024 ARP software forwarding</p>
VLAN	<p>Support port based VLAN (4K), IEEE802.1q</p> <p>Support protocol based VLAN</p> <p>Support Access, Trunk, Hybrid three types of port configuration</p> <p>Support QinQ configuration</p>
Port Aggregation	<p>Support LACP</p> <p>Support static polymerization</p> <p>Support the largest 8 aggregation groups, each aggregation group supports 8 ports.</p>

Spanning Tree	<p>Support STP(IEEE802.1d)</p> <p>Support STPRSTP (IEEE802.1w)</p> <p>Support STP MSTP (IEEE802.1s)</p>
Industrial Ring Network Protocol	<p>Support G.8032 (ERPS), support 255 loops at most, and supports 1024 devices per ring.</p> <p>The self healing time of the ring network is less than 20ms</p>
Multicast	<p>Support IGMP Snooping V1/V2 and support 1024 multicast groups at most.</p> <p>Support the user's quick departure mechanism</p> <p>Support MLD Snooping V1/V2</p> <p>Support multicast VLAN</p>
Mirror	<p>Bi-directional traffic mirroring supporting the basic port</p>
QoS	<p>Support Diff-Serv QoS</p> <p>Each port supports 8 output queues</p> <p>Support 802.1p/DSCP priority mapping</p> <p>Support queue scheduling mechanism (SP, WRR, SP+WRR)</p> <p>Support priority tag Mark/Remark</p> <p>Support stream based packet filtering</p> <p>Support for stream based redirection</p> <p>Support flow based speed limit</p>
ACL	<p>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.</p> <p>Support ACL based on port and VLAN</p>
Safety Characteristics	<p>Support user grading management and password protection</p> <p>Support IEEE802.1X authentication / centralized MAC address authentication</p> <p>Support AAA&RADIUS authentication</p> <p>Support the number of MAC address learning restrictions</p> <p>Support MAC address black hole</p> <p>Support SSH 2 to provide secure passwords for user login.</p> <p>Support SSL to ensure data transmission security</p> <p>Support port isolation</p> <p>Support the speed limit function of ARP message</p> <p>Support IP source address protection</p> <p>Support ARP intrusion detection function</p> <p>Support against DoS attacks</p> <p>Support port broadcast message suppression</p> <p>Support host data backup mechanism</p> <p>Binding capabilities of IP+MAC+VLAN+ ports</p>
DHCP	<p>Support DHCP Client</p> <p>Support DHCP Snooping</p>
Management And Maintenance	<p>Support Console/AUX Modem/Telnet/SSH2.0 CLI command line configuration</p> <p>Support WEB network management (support for HTTPS)</p>



	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 the English command line to help information Support Ping detection Support cable state detection Support CPU instant utilization status view Support link layer discovery protocol LLDP NMS cluster management supporting service (LLDP+SNMP)
System Requirements	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; 5 types and above Ethernet cable; TCP/ IP, network adapter and network operating system (such as Microsoft Windows, Linux or Mac OS X) are installed on computers in the network.

PACKING LIST

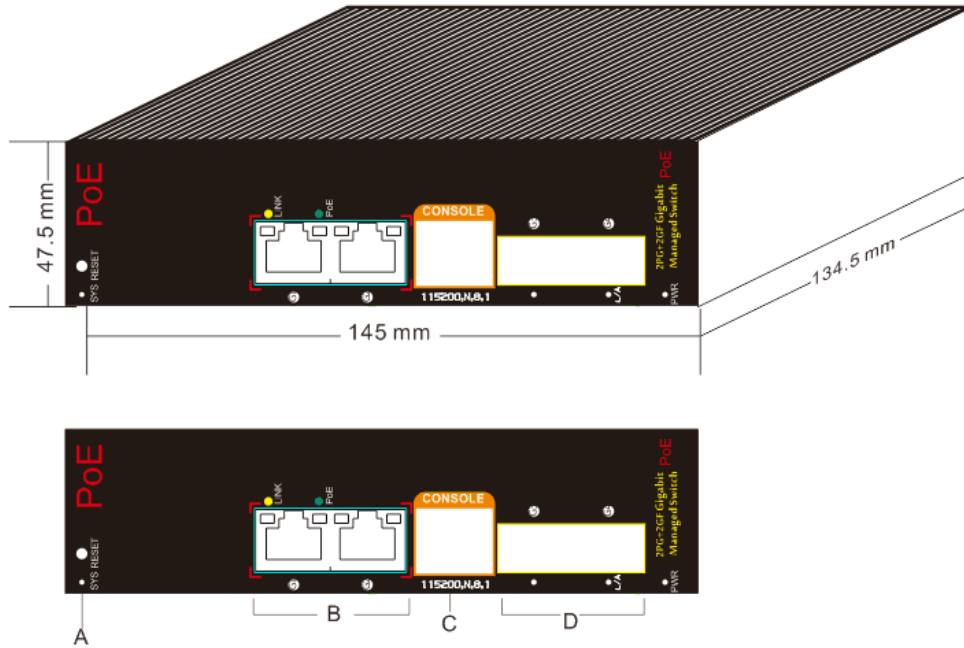
PACKING LIST	CONTENT	QTY	UNIT
	4-port full gigabit managed industrial PoE switch (IPS33042PFM)	1	SET
User Guide	1	PC	
Warranty Card	1	PC	

ORDERING INFORMATION

Model	Description
IPS33042PFM	Managed 2*10/100/1000M PoE Ports + 2*100/1000 uplink SFP fiber slot ports, industrial PoE switch, Port 1-2 supports IEEE 802.3af/at POE standard. Total power is 36W. Support DC dual power supply, support DIN rail mounting.
IPS33042PFM-at	Managed 2*10/100/1000M PoE Ports + 2*100/1000 uplink SFP fiber slot ports, industrial PoE switch, Port 1-2 supports IEEE 802.3af/at POE standard. Total power is 60W. Support DC dual power supply, support DIN rail mounting.

Note: industrial PoE switch does not match the power supply and SFP module by default. If you need to purchase it, please refer to the accessory product information.

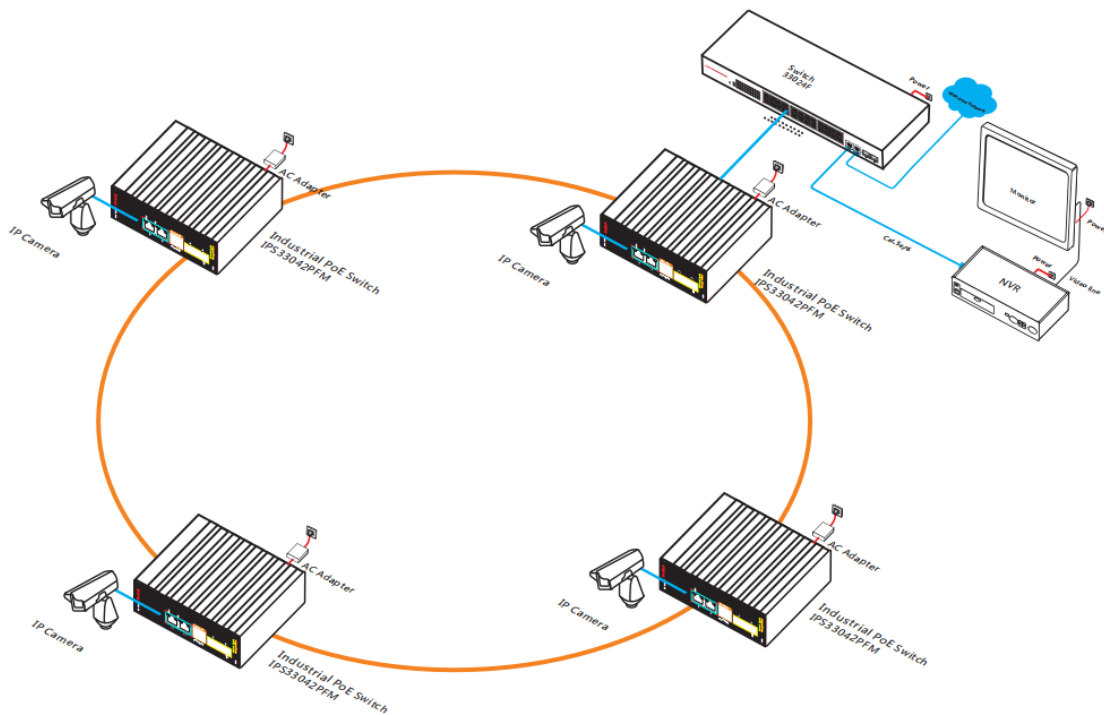
DIMENSION



A. System Work indicator
C. Console Port

B. 2* Gigabit PoE Ports
D. 2* 100/1000M SFP Ports

APPLICATION



Fiber Module Selection Table

Product	Model	Description	Unit
1.25G Fiber Module	2630	SFP optical module, 1.25G, multi mode dual fiber 850nm, transmission distance: 550m, LC interface, support DDM function, support hot plug and pull.	PC
	2632	SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2612-T	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2613-R	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2612-T-SC	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
	2613-R-SC	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
Electric Module	SFP/TP	1.25G SFP optical module transfers to 10/100/1000M RJ45 net port.	PC

POWER SUPPLY SELECTION TABLE

Product	Model	Description	Unit
36W Desktop Power Adaptor	PWR-AP36-52	Desktop tape 36W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,0.65A Output Voltage:DC 52V 0.7A Operation Temperature:-20°C—+65°C	PC
65W Desktop Power Adaptor	PWR-AP65-52	Desktop tape 65W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,1.1A Output Voltage:DC 52V 1.25A Operation Temperature:-20°C —+65°C	PC
36W DIN Rail Industrial Power Supply	PWR-DP36-48	Din Rail type 36W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,0.65A Output Voltage:DC 48V 0.75A Operation Temperature:-40°C —+70°C	PC
60W DIN Rail Industrial Power Supply	PWR-DP60-48	Din Rail type 60W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,1.1A Output Voltage:DC 48V 1.25A Operation Temperature:-40°C —+70°C	PC