

Product Datasheet

6-port Full Gigabit Managed Industrial PoE Switch (GWS-IPS5006PFM)



Overview

The GWS-IPS5006PFM is a full Gigabit L2+ managed industrial PoE fiber switch. It has 4*10/100/1000M adaptive RJ45 ports and 2*100/1000M SFP fiber ports. Port 1-4 can support IEEE802.3af/at PoE standard. Single-port PoE power up to 30W. 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 transit, electric power, mining, metallurgy and green energy industrial scenes such as construction set up a cost-effective and stable communication network. The GWS-IPS5006PFM has L2+ network management function, support IPV4 static route 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) 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.

Feature

■ Gigabit access, SFP fiber port uplink

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

■ Intelligent PoE power supply

- ◇ IEEE802.3af/at PoE standard, without damaging non-PoE devices.
- ◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
- ◇ 4*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.
- ◇ 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 and fast Ring function

- ◇ Support STP/RSTP/MSTP production tree protocol to eliminate layer 2 loops and realize link backup.
- ◇ Support static and dynamic aggregation to effectively increase link bandwidth, realize load balancing, link backup, and improve link reliability.
- ◇ Support QoS, port-based, 802.1P-based and DSCP-based three priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.
- ◇ Support IEEE 802.1Q VLAN Users can flexibly divide VLANs according to needs, and

support three types of port configurations: Access, Trunk, and Hybrid.

- ◇ Support ACL to filter data packets by configuring matching rule processing operations and time permissions, and provide flexible security access control policies.
- ◇ Support IGMP V1/V2/V3 multicast protocol, IGMP Snooping meets multi-terminal high-definition video surveillance and video conference access requirements.

■ **Security**

- ◇ Support port isolation.
- ◇ Support port broadcast storm suppression.
- ◇ Support IP+MAC+port+VLAN quadruple flexible combination binding function.
- ◇ Support 802.1X authentication to provide authentication functions for LAN computers, and control the authorization status of controlled ports according to the authentication results.

■ **Stable and reliable**

- ◇ CCC, CE, FCC, RoHS.
- ◇ Low power consumption, No fan, aluminum shell.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, L/A, PoE.

■ **One-stop remote control and management**

- ◇ Support CPU monitoring, memory monitoring, Ping detection, cable length detection.
- ◇ Support HTTPS, SSLV3, SSHV1/V2 and other encryption methods, making management more secure.
- ◇ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.
- ◇ Support LLDP to facilitate the network management system to query and judge the communication status of the link.
- ◇ Support Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3) and other diversified management and maintenance.

Technical Specification

Model	GWS-IPS5006PFM
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
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 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/ Distance	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	64Gbps
Forwarding Rate@64byte	8.93Mpps
MAC	8K

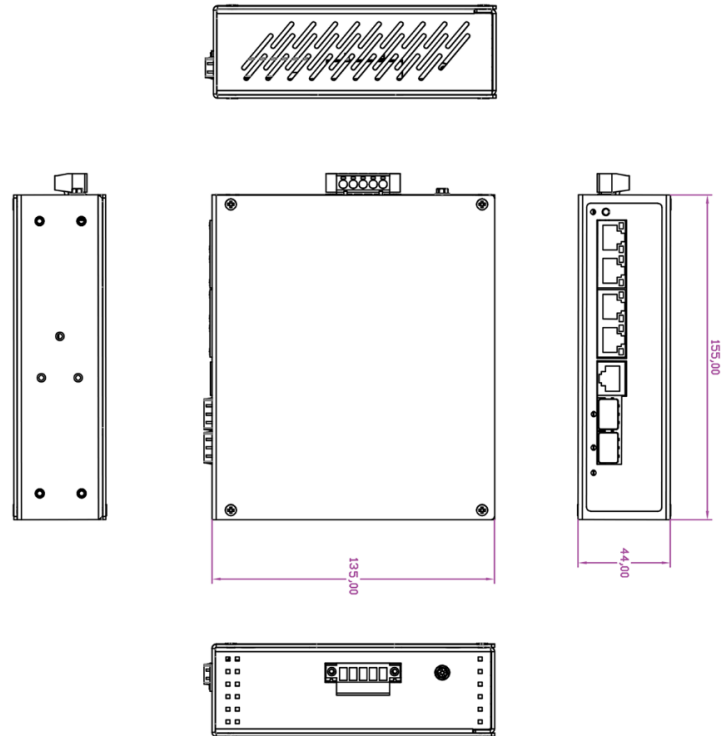
Buffer Memory	4.1Mb
Jumbo Frame	10KB
CPU(Hz)	500M
DRAM	1Gb
Flash	128Mb
LED Indicator	Power: PWR (Green), System: SYS (Green), Network: Link G1-G4(Yellow), Fiber port: L/A G5-G6 (Green), PoE: PoE G1-G4 (Green)
Reset Switch	Yes. Press and hold the reset switch for 10 seconds and release it to restore factory settings
PoE & Power Supply	
PoE Port	Port 1- 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	1/2 (+), 3/6 (-)
Max Power Per Port	30W, IEEE802.3af/at
Total Power/ Input Voltage	60W-120W/48VDC
Power Consumption	Standby<6W, Full load af<60W/at<120W
Input Voltage/ Interface	44-56VDC, 5P 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~+75°C, 5%~90% RH Non condensing

Storage TEMP / Humidity	-40~+85°C, 5%~95% RH Non condensing
Dimension (L*W*H)	155*135*44mm
Net /Gross Weight	<0.6kg / <0.75kg
Installation	Desktop, DIN rail
Certification & Warranty	
Lightning Protection/ Protection Level	<p>Lightning protection: 6KV 8/20us; Protection level: IP30</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 B</p> <p>IEC61000-6-2(Common Industrial Standard)</p>
Mechanical Properties	<p>IEC60068-2-6 (anti vibration), IEC60068-2-27 (anti shock)</p> <p>IEC60068-2-32 (free fall)</p>
Certification	CCC,CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B; RoHS
Warranty	5 years, lifelong maintenance.
Network Management Features	
Interface	<p>IEEE802.3X (Full-duplex)</p> <p>Port temperature protection setting</p> <p>Port green Ethernet Energy-saving setting</p> <p>Broadcast storm control based on port speed</p>

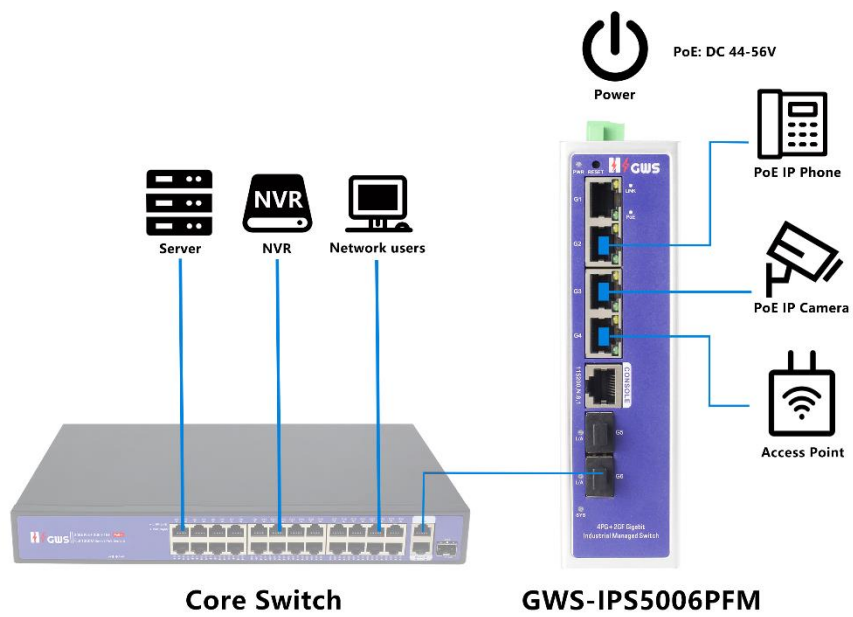
	<p>The speed limit of the message flow in the access port.</p> <p>The minimum particle size is 64Kbps.</p>
Layer 3 Features	<p>L2+ network management ,IPV4 management</p> <p>Static route, Default route @ 64 pcs, APR @ 1024 pcs</p>
VLAN	<p>4K VLAN based on port, IEEE802.1q</p> <p>VLAN based on the protocol, VLAN based on MAC</p> <p>QinQ configuration, Port configuration of Access, Trunk, Hybrid</p>
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	250 Ring at most, Max 250 devices per ring.
Multicast	<p>MLD Snooping v1/v2,Multicast VLAN</p> <p>IGMP Snooping v1/v2/v3, Max 1024 multicast groups, Fast log out</p>
Port Mirroring	Bidirectional data mirroring based on port
QoS	<p>Flow-based Rate Limiting</p> <p>Flow-based Packet Filtering</p> <p>8*Output queues of each port</p> <p>802.1p/DSCP priority mapping</p> <p>Diff-Serv QoS,Priority Mark/Remark</p> <p>Queue Scheduling Algorithm (SP, WRR, SP+WRR)</p>
ACL	<p>Port-based Issuing ACL,ACL based on port and VLAN</p> <p>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.</p>
Security	<p>IP-MAC-VLAN-Port binding</p> <p>ARP inspection,Anti-DoS attack</p> <p>AAA & RADIUS,MAC learning limit</p> <p>Mac black holes,IP source protection</p> <p>IEEE802.1X & MAC address authentication</p>

	<p>Broadcast storm control,Backup for host datum</p> <p>SSH 2.0,SSL,Port isolation,ARP message speed limit</p> <p>User hierarchical management and password protection</p>
DHCP	DHCP Client,DHCP Snooping,DHCP Server,DHCP Relay
Management	<p>One-key recovery</p> <p>Cable Diagnose,LLDP</p> <p>Web Management (HTTPS)</p> <p>NTP,System work log,Ping Test</p> <p>CPU instant utilization status view</p> <p>Console/AUX Modem/Telnet/SSH2.0 CLI</p> <p>Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP</p> <p>V1/V2C/V3</p> <p>NMS - smart network management system platform(LLDP+SNMP)</p>
System	<p>Category 5 Ethernet network cable</p> <p>Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later;</p> <p>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network</p>

Dimension



Application



Ordering Information

Model	Description	Recommended Power Supply
GWS-IPS5006PF M	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP ports. Port 1-4 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.	60W/120W

Note: The industrial switch not include optical module and power supply. and needs to be purchased separately.

Packing List

	Content	Qty	Unit
Packing List	6-port full gigabit managed industrial PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	User Guide	1	PC
	Warranty Card	1	PC

Optical Module

Product	Model	Description	Unit
1.25G Optical Module	2630-G	Industrial 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-G	Industrial SFP optical module, 1.25G, single-mode dual fiber	PC

		1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	
	2612-T-G	Industrial 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-G	Industrial 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-G-SC	Industrial 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-G-SC	Industrial 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
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

Power Supply

Product	Model	Description	Unit
65W Desktop Power Adapter	AP65-52	Desktop 65W single set of output power adapter Input Voltage: AC100V~240V 50-60Hz, 1.1A Output Voltage: DC52V 1.25A Operation Temperature: -20°C to +65°C	PC
110W Desktop Power Adapter	AP110-52	Desktop 110W single set of output power adapter Input Voltage: AC100V~240V 50-60Hz, 2.0A Output Voltage: DC52V 2.15A Operation Temperature: -20°C to +65°C	PC

<p>60W DIN Rail Industrial Power Supply</p>	<p>DP60-48</p>	<p>Din Rai 60W single set of output power supply Input Voltage: AC100V~240V 50-60Hz, 1.0A Output Voltage: DC48V 1.25A Operation Temperature:-40°C to +70°C</p>	<p>PC</p>
<p>120W DIN Rail Industrial Power Supply</p>	<p>DP120-48</p>	<p>Din Rail 120W single set of output power supply Input Voltage: AC100V~240V 50-60Hz, 1.5A Output Voltage: DC48V 2.5A Operation Temperature: -40°C to +70°C</p>	<p>PC</p>

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