

## Product Datasheet

# 10-port Full Gigabit Managed Industrial PoE Switch

(GWS-IPS5010PFM)



## Overview

GWS-IPS5010PFM is a full Gigabit managed industrial PoE fiber switch. It has 8\*10/100/1000M PoE ports and 2\*100/1000M SFP fiber ports. Port 1-8 can support IEEE802.3af/at standard POE. 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-IPS5010PFM has L2+ network management function, support IPV4 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) 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 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.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on backpressure.

### ■ Intelligent PoE power supply

- ◇ 8\*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.
- ◇ IEEE802.3af/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.
- ◇ 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, aluminum shell. No fan.
- ◇ 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.

## Technical Specification

Model	GWS-IPS5010PFM
Interface Characteristics	

Fixed Port	<p>8*10/100/1000Base-T PoE ports (Data/Power)</p> <p>2*100/1000Base-X uplink SFP slot ports (Data)</p> <p>1 * RS232 console port(115200,N,8,1)</p> <p>2 set of V+, V- redundant DC power interface (5 Pin Phoenix terminal)</p>
Ethernet Port	<p>Port 1-8 support 10/100/1000Base-T,auto-sensing,Full/half duplex</p> <p>MDI/MDI-X self-adaption</p>
Twisted Pair Transmission	<p>10BASE-T: Cat3,4,5 UTP(≤100 meter)</p> <p>100BASE-TX: Cat5 or later UTP(≤100 meter)</p> <p>1000BASE-T: Cat5e or later UTP(≤100 meter)</p>
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	<p>Multi-mode: 850nm/0 ~ 550M,</p> <p>single-mode: 1310nm/0 ~ 40KM, 1550nm/0 ~ 120KM.</p>
<b>Chip Parameter</b>	
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	14.88Mpps
MAC	8K
Buffer Memory	4.1Mb
Jumbo Frame	10KB
CPU(Hz)	500M
DRAM	1Gb
Flash	128Mb

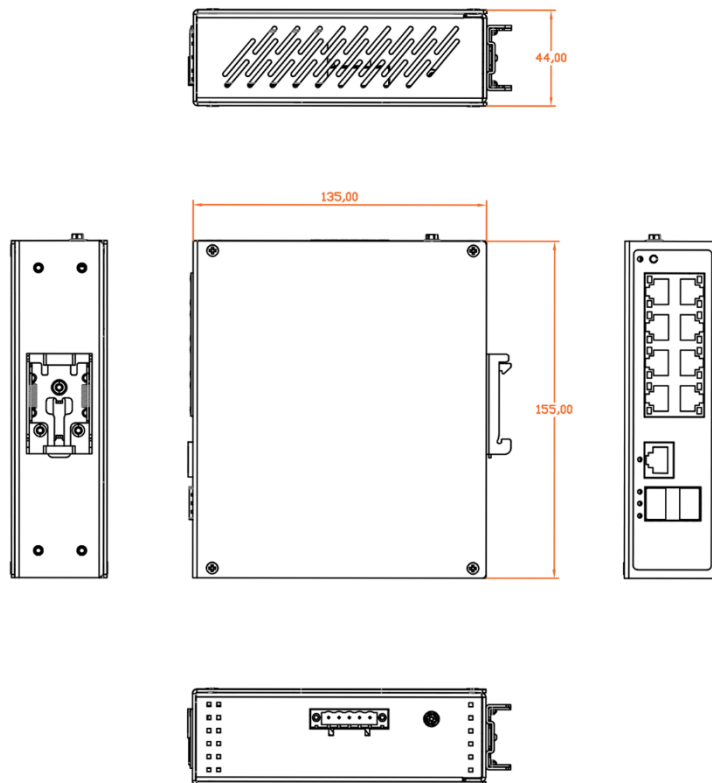
LED Indicator	Power: PWR (Green), System: SYS (Green), Network: Link G1-G8(Yellow), Fiber port: L/A G9-G10 (Green), PoE: PoE G1-G8 (Green)
Reset Switch	Yes. Press and hold the reset switch for 10 seconds and release it to restore factory settings
<b>PoE &amp; Power Supply</b>	
PoE Port	Port 1 to port 8
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	120W-240W/48VDC
Power Consumption	Standby<8W, Full load af<120W/at<240W
Input Voltage/ Interface	44-56VDC, 5P industrial phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 48V/120W or 48V/240W industrial power supply
<b>Physical Parameter</b>	
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	<0.65kg / <0.8kg
Installation	Desktop, DIN rail

<b>Certification &amp; Warranty</b>	
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	<p>CCC,CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B;</p> <p>RoHS</p>
Warranty	<p>5 years, lifelong maintenance.</p>
<b>Network Management Features</b>	
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 5 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, 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 &amp; RADIUS,MAC learning limit</p> <p>Mac black holes,IP source protection</p> <p>IEEE802.1X &amp; 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	One-key recovery

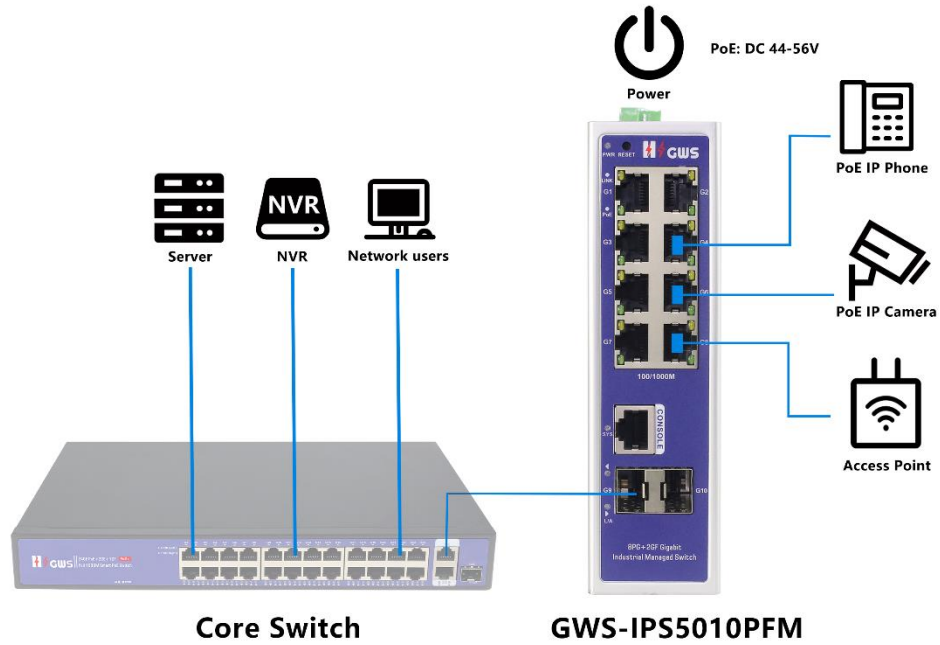
	<p>Cable Diagnose,LLDP</p> <p>Web Management (HTTPS)</p> <p>NTP,System work log,Ping Test</p> <p>CPU instant utilization status view</p> <p>Console/AUX Modem/Telnet/SSH2.0 CLI</p> <p>Download &amp; Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3</p> <p>NMS - smart network management system platform(LLDP+SNMP)</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-IPS5010PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP ports, Port 1-8 can support IEEE802.3af/at PoE. Support dual DC power supply input and DIN rail mounting.	120W/240W

**Note:** The industrial PoE switch not including SFP optical module and power supply. and needs to be purchased separately.

## Packing List

PACKING LIST	CONTENT	QTY	UNIT
	10-port full gigabit managed industrial PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	User Guide	1	PC
	Warranty Card	1	PC

## Optical Module Information

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 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	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	PC

		TX1550nm/RX1310nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

## Power Supply

Product	Model	Description	Unit
130W Desktop Power Adaptor	AP130-52	Desktop tape 130W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz, 2.3A Output Voltage:DC 52V 2.5A Operation Temperature:-20°C—+65°C	PC
250W Desktop Power Adaptor	AP250-52	Desktop tape 250W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz. 5.0A Output Voltage:DC 52V 4.8A Operation Temperature:-20°C—+65°C	PC
120W DIN Rail Industrial Power Supply	DP120-48	Din Rail type 120W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz,1.5A Output Voltage:DC 48V 2.5A Operation Temperature:-40°C—+70°C	PC
240W DIN Rail Industrial Power Supply	DP240-48	Din Rail type 240W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz, 3.0A Output Voltage:DC 48V 5.0A Operation Temperature:-40°C—+70°C	PC



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