Product Datasheet

# 14-port Gigabit Managed Industrial PoE Switch

## (GWS-IPS33148PFM)


## OVERVIEW

The GWS-IPS33148PFM is a Gigabit managed industrial PoE switch independently developed by GWS. It has 4*100/1000Base-X SFP fiber ports and 10*10/100/1000Base-T adaptive RJ45 ports. Port 1-8 can support IEEE 802.3 af/at PoE standard and the single-port PoE power up to 30W. As a PoE power supply device, it can automatically detect and recognize power-compliant devices that meet the standard and supply power through the network cable. It can supply power to PoE terminal equipment such as wireless AP, IP camera, VoIP, and industrial sensors through the network cable, and meet the network environment that needs a high-density PoE power supply. It is suitable for intelligent transportation, rail transit, power industry, mining, petroleum, and industrial scenes such as shipping, metallurgy, and green energy construction forming a cost-effective, stable, and reliable communication network.

The GWS-IPS33148PFM has L2+ network management function, supports IPV4/ IPV6 management, 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) and (ITU-T G.8032) ERPS(<20ms) to improve link backup and network reliability. When a 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

◇ Support non-blocking wire-speed forwarding.

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

◇ Support Gigabit RJ45 port and SFP fiber port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

## ■ Smart PoE power supply

◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.

◇ Comply with IEEE 802.3 af/at PoE standard, automatically identify PoE devices for power supply, and not damage non-PoE devices.

◇ PoE port support priority. When the remaining power is insufficient, priority is given to ensuring the power supply of high-priority ports to avoid equipment overload.

◇ 8*10/100/1000Base-T RJ45 ports support PoE power, meeting the PoE power requirements of security monitoring, industrial automation systems, wireless coverage and other scenarios.

## ■ Strong business processing ability

◇ Support ERPS ring network and STP/RSTP/MSTP to eliminate layer 2 loops and

realize link backup.

◇ Support IEEE802.1Q VLAN, Users can flexibly divide VLAN, Voice VLAN, and QinQ configuration according to their needs.

◇ 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 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

◇ Port isolation and storm control.

◇ IP+MAC+port+VLAN quadruple flexible combination binding function.

◇ 802.1X authentication provides authentication functions for LAN computers and controls the authorization status of controlled ports according to the authentication results.

## ■ Stable and reliable

◇ CCC, CE, FCC, RoHS.

◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, L/A, and PoE.

◇ Low power consumption, aluminum alloy housing, and excellent heat dissipation to ensure stable operation of the switch.

## ■ Easy O&M management

◇ CPU monitoring, memory monitoring, Ping detection, and cable detection.

◇ HTTPS, SSLV3, SSH V1/V2, and other encryption methods make management more secure.

◇ RMON, system logs, and port traffic statistics facilitate network optimization and

transformation.

◇ LLDP facilitates the network management system to query and determine the communication status of the link.

◇ Web network management, CLI (Console, Telnet), SNMP (V1/V2/V3), Telnet and other diversified management and maintenance methods.

## TECHNICAL SPECIFICATION

| Model | GWS-IPS33148PFM |
|---|---|
| **Interface Characteristics** | |
| Fixed Port | Power off alarm switch port (FAULT)<br>1*Console RS232 port (115200, N, 8,1)<br>4*100/1000Base-X uplink SFP ports (Data)<br>2*10/100/1000Base-T uplink RJ45 ports (Data)<br>8*10/100/1000Base-T PoE ports (Data/ Power)<br>2 set V+, V- redundant DC power port (6P industrial Phoenix terminal) |
| Ethernet Port | Port 1-10 can 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 meters)<br>100BASE-TX: Cat5 or later UTP (≤100 meters)<br>1000BASE-T: Cat5e or later UTP (≤100 meters) |
| Optical Fiber Port | Gigabit optical fiber port, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC) |
| Optical Fiber Port Expansion | Support Turbo overclocking 2.5G optical module expansion and ring network |
| Optical Cable/ Distance | Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km. |
| **Chip Parameter** | |
| Network Management | L2+ |

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| Type | |
| Network Protocol | IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3x |
| Forwarding Mode | Store and Forward (Full Wire Speed) |
| Switching Capacity | 52Gbps (non-blocking) |
| Forwarding Rate@64byte | 20.83Mpps |
| CPU | 416M |
| DRAM | 1G |
| FLASH | 128M |
| MAC | 8K |
| Buffer Memory | 6M |
| Jumbo Frame | 9.6K |
| LED Indicator | Power/ System: SYS (Green), Network: Link (Yellow), PoE: PoE (Green), Fiber port: L/A(Green) |
| Reset Switch | Yes, press and hold the switch for 10 seconds and release it to restore the factory settings |
| **PoE& Power Supply** | |
| PoE Port | Port 1-8 |
| PoE Management | PoE power supply total power limit configuration<br>Power delay start, PoE work and time scheduling<br>Port PoE working status display, Port PoE output priority configuration<br>Port PoE output power distribution, PoE on/off, af/at power distribution |
| Power Supply Pin | 1/2 (+) 3/6 (-) |
| Max Power Per Port | 30W, IEEE 802.3 af/at |
| Power Consumption | Standby<10W, Full load af<120W, at<240W |
| Input Voltage/ Interface | DC48-57V, 6P industrial Phoenix terminal, support anti-reverse protection. |
| Power Supply | No, optional 48V/120W or 48V/240W industrial power supply |
| **Physical Parameter** | |
| Operation Temp/ Humidity | -40~+80°C, 5%~90% RH Non condensing |

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| Storage Temp/ Humidity | -40~+85°C, 5%~95% RH Non condensing |
| Dimension (L*W*H) | 165*148*54mm |
| Net /Gross Weight | 1.1kg / 1.3kg |
| Installation | Desktop, 35mm DIN Rail |
| **Certification & Warranty** | |
| Lightning Protection | IEC61000-4-3 (RS):10V/m (80-1000MHz)<br>FCC Part 15/CISPR22 (EN55022): Class A<br>IEC61000-6-2 (Common Industrial Standard)<br>IEC61000-4-9 (Pulsed magnet field): 1000A/m<br>IEC61000-4-10 (Damped oscillation): 30A/m 1MHz<br>IEC61000-4-12/18 (Shockwave): CM2.5kV, DM1kV<br>Protection level: IP40, Lightning protection: 6KV 8/20us<br>IEC61000-4-4(EFT): Power cable: ±4kV, data cable: ±2kV<br>IEC61000-4-16 (Common-mode transmission): 30V, 300V, 1s<br>IEC61000-4-2 (ESD): ±8kV contact discharge, ±15kV air discharge<br>IEC61000-4-6 (Radio frequency transmission): 10V(150kHz~80MHz)<br>IEC61000-4-8 (Power frequency magnetic field): 100A/m, 1000A/m, 1s-3s<br>IEC61000-4-5 (Surge): Power cable: CM±4kV/ DM±2kV, data cable: ±4kV |
| Mechanical Properties | IEC60068-2-6 (Anti Vibration), IEC60068-2-27 (Anti Shock),<br>IEC60068-2-32 (Free Fall) |
| Certification | CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class A, RoHS |
| Warranty | 5 years, lifelong maintenance. |
| **Network Management Feature** | |
| Interface | Port green Ethernet Energy-saving setting<br>Broadcast storm control based on port speed<br>Port temperature protection setting, IEEE 802.3x flow control (Full duplex)<br>The speed limit of the message flow in the access port, mini particle size is 64Kbps. |
| L3 Feature | ARP protocol max 1024 entries |

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| | Static routing/ default routing max 128 entries<br>L2+ network management, IPV4/IPV6 dual stack management<br>L3 routing and forwarding, and communication between different network segments and different VLAN |
| VLAN | Access, Trunk, and Hybrid port configurations<br>Port-based VLAN (4K), IEEE802.1q, QinQ configuration<br>Voice VLAN, Protocol-based VLAN, MAC address-based VLAN |
| Port Aggregation | LACP, Static aggregation, Max 7 aggregation groups and 8 ports per group. |
| Spanning Tree | STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s) |
| Ring Network Protocol | G.8032 (ERPS), Recovery time less than 20ms. 250 Ring at most, Max 250 devices per ring. |
| Multicast | MLD Snooping, Multicast VLAN, IGMP Snooping v1/v2/v3, Max 1024 multicast groups, Fast log out |
| Port Mirroring | Bidirectional data mirroring based on port |
| QoS | Flow-based Rate Limiting, Flow-based redirection<br>Queue Scheduling Algorithm (SP, WRR, SP+WRR)<br>Flow-based Packet Filtering, 8*Output queues of each port<br>802.1p/ DSCP priority mapping, Diff-Serv QoS, Priority Mark/ Remark |
| ACL | ACL distribution based on port and VLAN<br>L2-L4 packet filtering function, matching the first 80 bytes message, and provides ACL definitions based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN, etc. |
| Security | Mac black holes, IP source protection<br>IEEE802.1X & MAC address authentication<br>Broadcast storm control, Backup for host datum<br>SSH 2.0, SSL, Port isolation, ARP message speed limit<br>User hierarchical management and password protection<br>Anti-DoS attack, AAA & RADIUS & TACACS+ certification |

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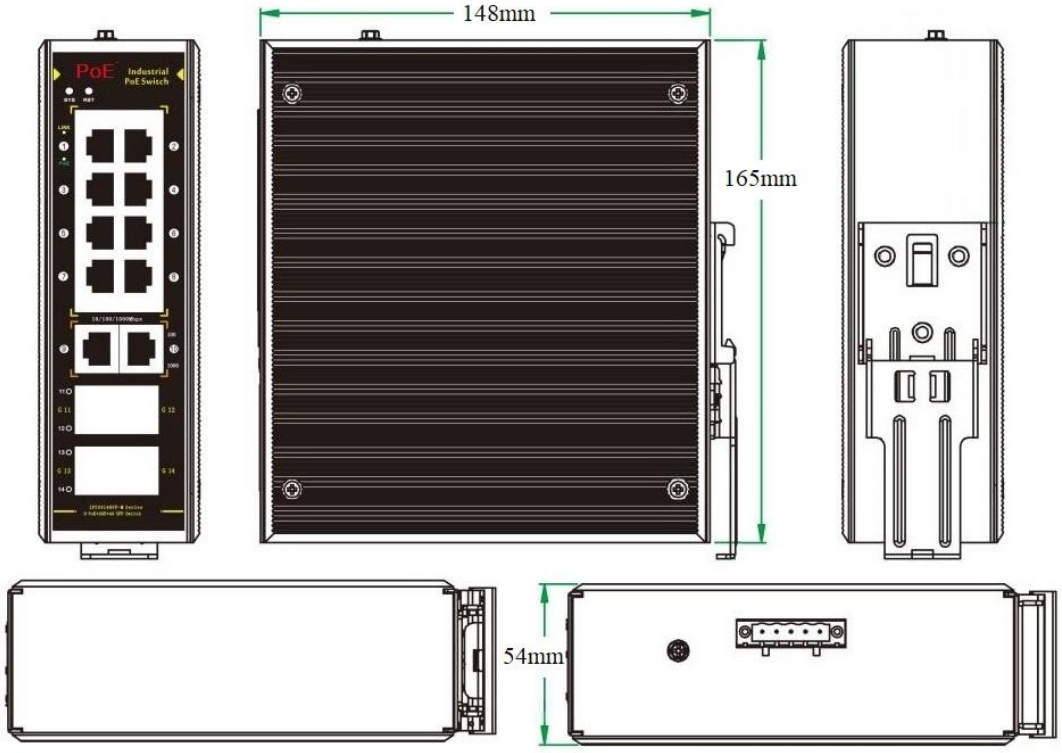
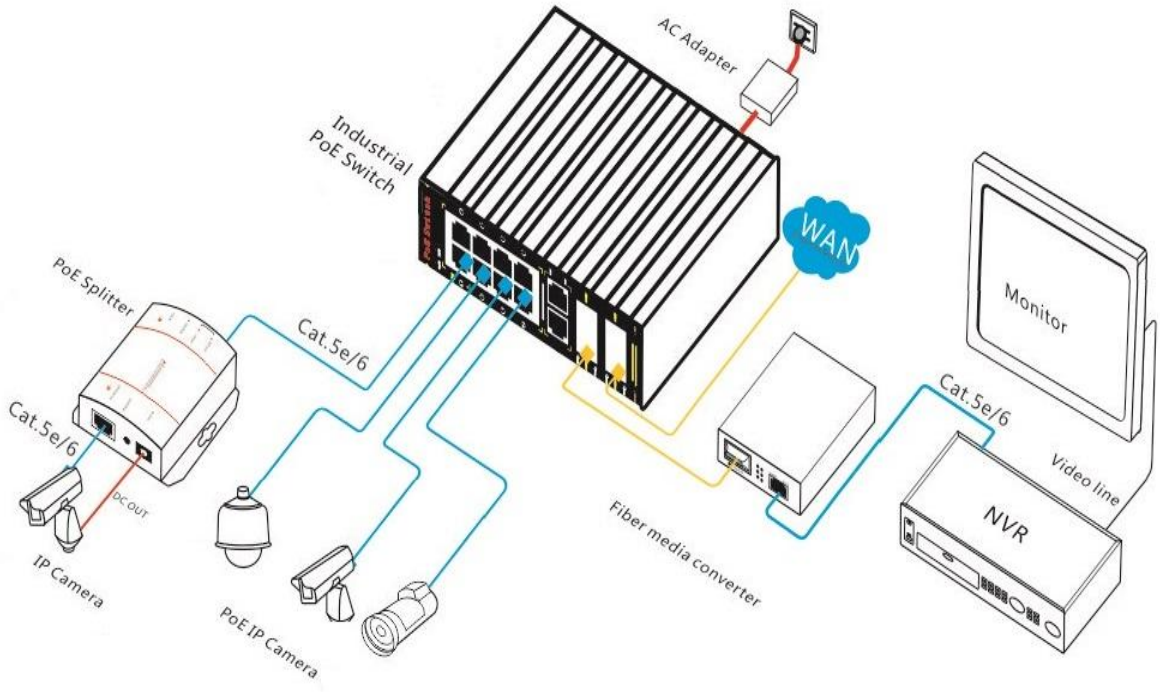
| | IP-MAC-VLAN-Port binding, ARP inspection, MAC learning limit |
| DHCP | DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay |
| Management | NTP clock, One click restore, SNMP V1/V2/V3<br>System work log, Web network management (https)<br>Ping detection, Link Layer Discovery Protocol (LLDP)<br>GWS-NMS platform cluster management (LLDP+SNMP)<br>Cable status check, Viewing CPU Instant Utilization Status<br>Console/ AUX Modem/ Telnet/ CLI command line configuration<br>FTP, TFTP, Xmodem, SFTP file upload and download management |
| System | Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher,<br>Cat5 and above Ethernet cable<br>TCP/IP, network adapter, and network operating system (such as Microsoft<br>Windows, Linux, Mac OS X) installed on each computer in the network Cat5<br>and above Ethernet cable |

## DIMENSION



## APPLICATION




## ORDERING INFORMATION

| Model | Description | Recommended Power Supply |
|---|---|---|
| GWS-IPS33148PFM | L2+ managed industrial PoE switch with 4*100/1000M uplink SFP fiber ports and 10*10/100/1000M RJ45 ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting. | 120W/240W |
| **Note:** The optical module and power supply are not included and need to be purchased. | | |

## PACKING LIST

| | Content | Qty | Unit |
|---|---|---|---|
| Packing List | 14-port Gigabit managed industrial PoE switch | 1 | Set |
| | RJ45-DB9 Adapter Cable | 1 | PC |
| | User Guide | 1 | PC |
| | Warranty Card and Certificate of Conformity | 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 and hot plugging. | PC |
| | 2632-G | Industrial SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. Support DDM function and hot plugging. | PC |
| | 2612-T-G | Industrial SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. support DDM function and hot plugging. | PC |
| | 2613-R-G | Industrial SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging. | 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 and hot plugging. | 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 and hot plugging. | PC |

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| Power Module | 2633 | 1.25G SFP optical module transfers to 10/100/1000M RJ45 port. | PC |

## POWER SUPPLY

| Product | Model | Description | Unit |
|---|---|---|---|
| 120W DIN Rail Industrial Power Supply | GWS-DP120-48 | DIN Rail 120W single set of output power supply<br>Input Voltage: AC100V~240V 50-60Hz, 2.3A<br>Output Voltage: DC48V, 2.5A<br>Operation Temperature: -40℃ to +70℃ | PC |
| 240W DIN Rail Industrial Power Supply | GWS-DP240-48 | DIN Rail 240W single set of output power supply<br>Input Voltage: AC100V~240V 50-60Hz, 3.0A<br>Output Voltage: DC48V, 5.0A<br>Operation Temperature: -40℃ to +70℃ | PC |

## RELATED PRODUCT

| Model | Description |
|---|---|
| GWS-IPS33064PFM | L2+ managed industrial PoE switch with 4*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. Port 1-4 can support IEEE 802.3 af/at PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting. |
| GWS-IPS33084PFM | L2+ managed industrial PoE switch with 4*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP fiber ports. Port 1-4 can support IEEE 802.3 af/at PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting. |
| GWS-IPS33108PFM | L2+ managed industrial PoE switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP fiber ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting. |

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| GWS-IPS33168PFM | L2+ managed industrial PoE switch with 8*10/100/1000M RJ45 ports and 8*100/1000M uplink SFP fiber ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support dual DC redundant power input (Phoenix terminal connection) and DIN rail mounting. |

## CONTACT US


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