

Product Datasheet

12-Port Full Gigabit Managed Industrial PoE Switch

(ONV-IPS33128PFM)



OVERVIEW

ONV-IPS33128PFM is a full Gigabit managed industrial PoE switch independently developed by ONV. It has 10*10/100/1000M RJ45 ports and 2*100/1000M SFP fiber slot ports, port 1-8 can support IEEE 802.3af/at standard POE power supply, single port POE power up to 30W, and the maximum POE output power is 120W (at-240W). 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 so on. A reliable communication network.

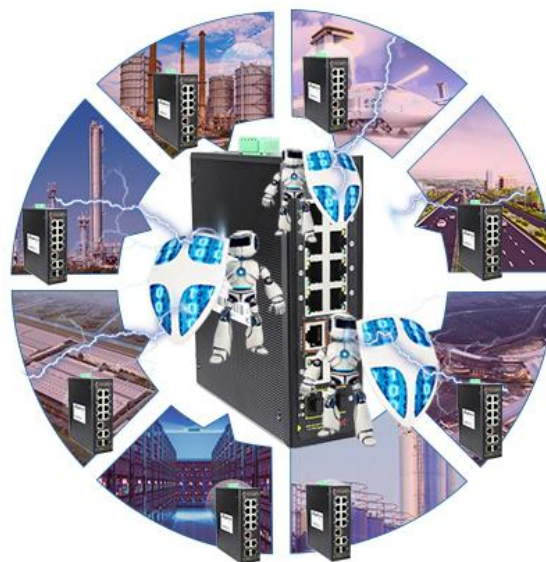
The ONV-IPS33128PFM has L2+ full network management function, support IPV4/IPV6 management, static route full line rate forwarding, security protection mechanism,

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.

FEATURE

■ 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
- ◇ Non-PoE DC INPUT: 12-48V.



Contact discharge 8KV

Air discharge 15KV

Port lightning protection 6KV

■ Gigabit access, SFP fiber port uplink

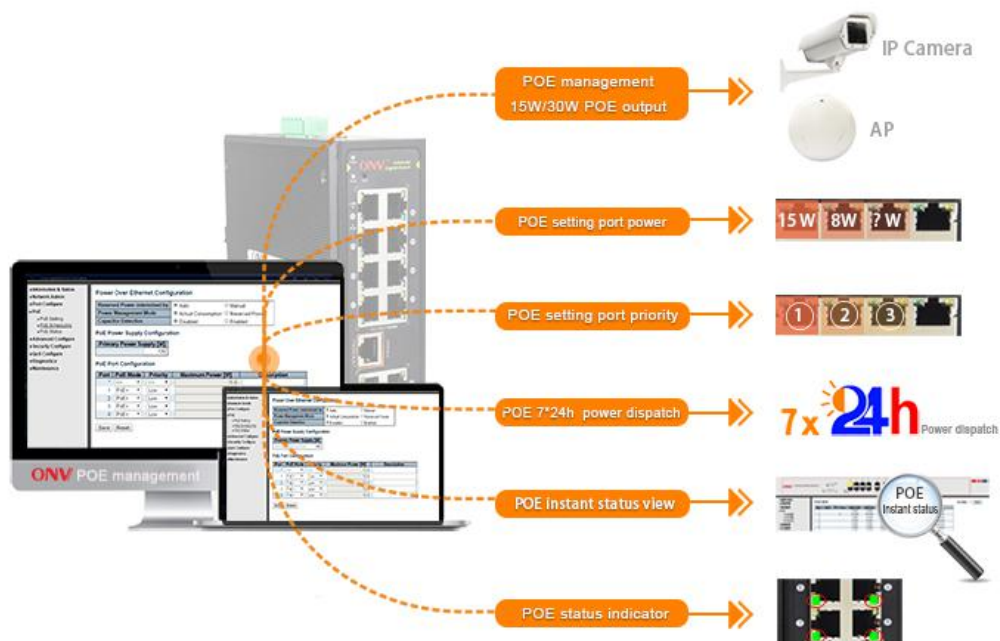
- ◇ All series support “Gigabit Ethernet port and Gigabit SFP port” combination, which

enables users to flexibly build networking to meet the needs of various scenarios.

- ◇ Support non-blocking wire-speed forwarding.
- ◇ 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.
- ◇ 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.

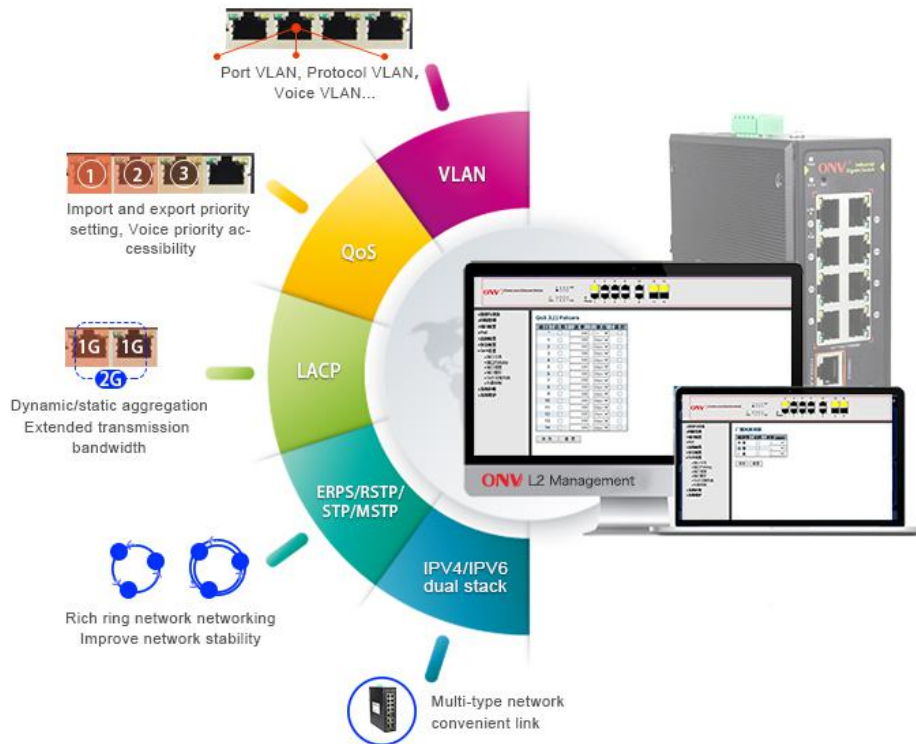


■ PoE network management and fast Ring function

- ◇ 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.



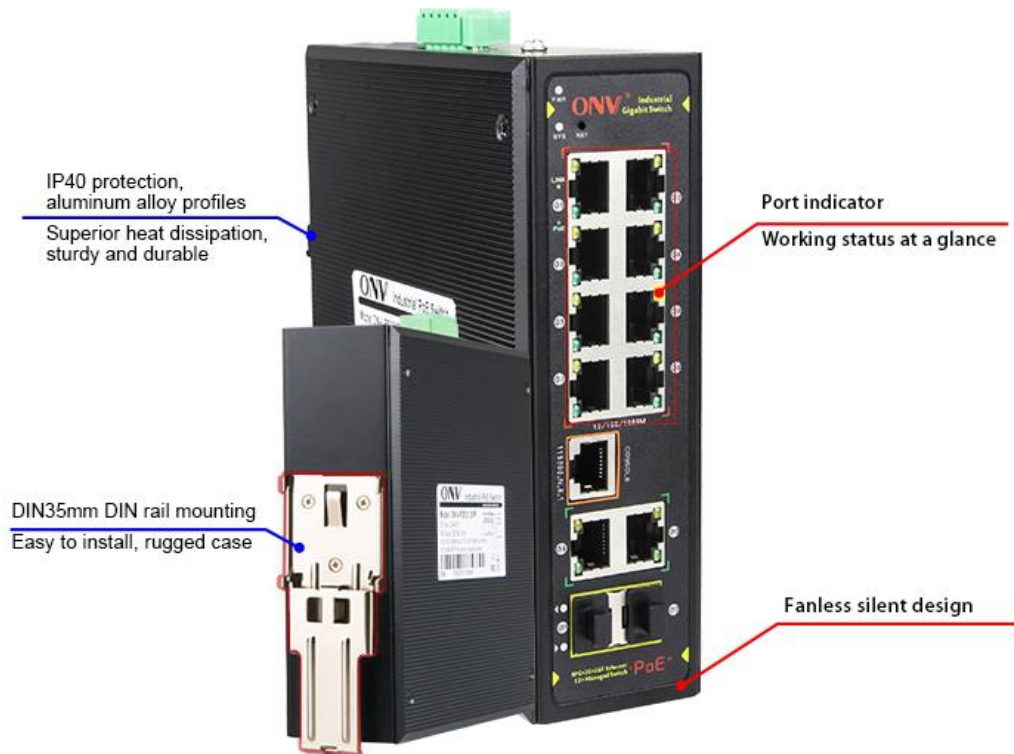
■ Security

- ◇ 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.

TECHNICAL SPECIFICATION

| Model | ONV-IPS33128PFM | ONV-IPS33128PFM-at |
|----------------------------------|---|--------------------|
| Interface Characteristics | | |
| Fixed Port | 8*10/100/1000Base-T PoE ports (Data/Power) 2*10/100/1000Base-T RJ45 ports (Data) 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 1-12 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 ~ 500M, 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 | 192Gbps | |
| Forwarding Rate@64byte | 17.86Mpps | |

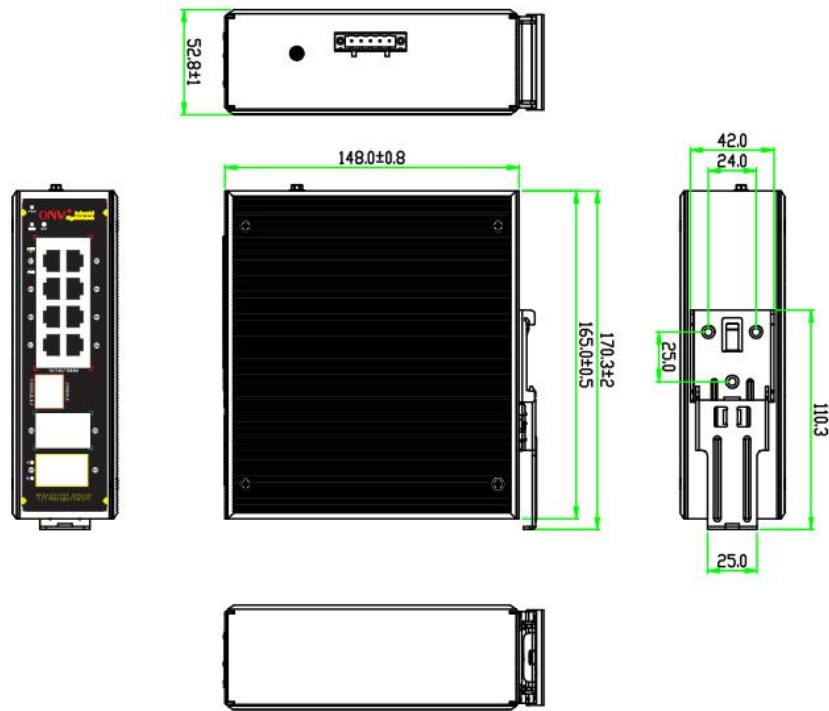
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| MAC | 8K | |
| Buffer Memory | 6M | |
| Jumbo Frame | 9.6K | |
| LED Indicator | Power: PWR (green), System : SYS (green) , Network: Link (yellow), Fiber port: L/A (green), PoE: PoE (green) | |
| Reset Switch | Yes, Press and hold the reset switch for 10s and release it to restore the factory settings | |
| PoE & Power | | |
| 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 | Default: 1/2 (+), 3/6 (-) | |
| Max Power Per Port | 30W; IEEE802.3af/at | |
| Total PWR / Input Voltage | 120W/48VDC | 240W/48VDC |
| Power Consumption | Standby<8W, Full load<120W | Standby<10W, Full load<240W |
| Working Voltage | 48-57VDC; 5 Pin 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 | |
| Storage TEMP / Humidity | -40~+85°C;5%~95% RH Non condensing | |

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| Dimension (L*W*H) | 165*148*54mm |
| Net /Gross Weight | <0.8kg / <1.3kg |
| Installation | Desktop, DIN rail |
| Certification & Warranty | |
| Lightning protection / protection level | <p>Lightning protection: 6KV 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 | CCC;CE mark, commercial; CE/LVD EN60950;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> |

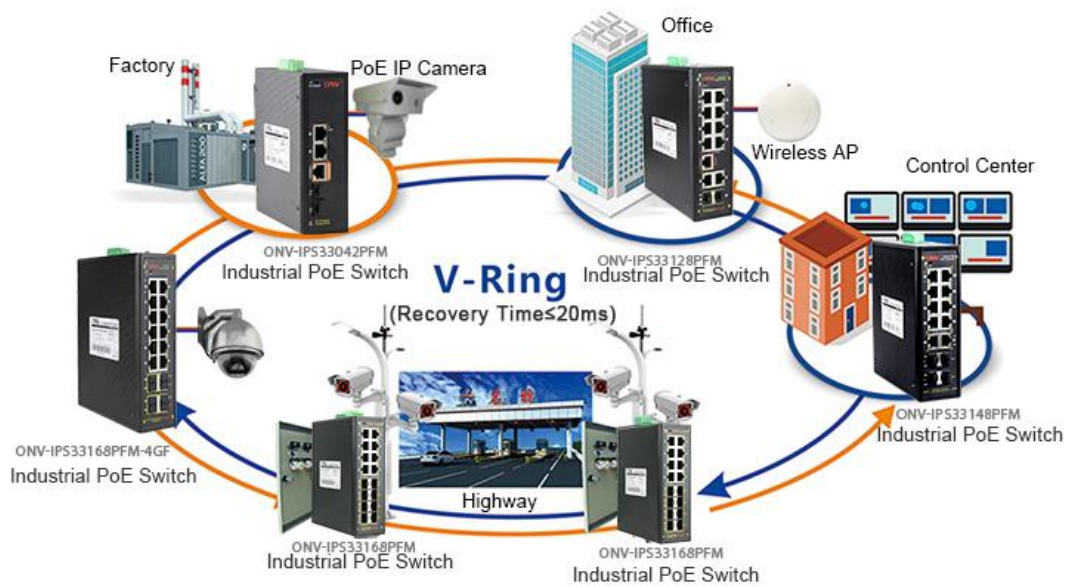
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| | <p>The speed limit of the message flow in the access port.</p> <p>The minimum particle size is 64Kbps.</p> |
| Layer 3 Features | <p>L2+ network management ,IPV4/IPV6 management</p> <p>L3 soft routing forwarding,</p> <p>Static route, Default route @ 128 pcs, APR @ 1024 pcs</p> |
| VLAN | <p>4K VLAN based on port, IEEE802.1q</p> <p>VLAN based on the protocol</p> <p>VLAN based on MAC</p> <p>Voice VLAN, QinQ configuration</p> <p>Port configuration of Access, Trunk, Hybrid</p> |
| Port Aggregation | <p>LACP, Static aggregation</p> <p>Max 6 aggregation groups and 8 ports per group.</p> |
| Spanning Tree | STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s) |
| Industrial Ring | G.8032 (ERPS),Recovery time less than 20ms |
| Network Protocol | 250 Ring at most, Max 1024 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 | IP-MAC-VLAN-Port binding |

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| | <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>ONV 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 Explorer 10 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 |
|--|--|--------------------------|
| ONV-IPS33128PFM | L2+ managed industrial PoE fiber switch with 10*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports, Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting. | 120W |
| ONV-IPS33128PFM-at | | 240W |
| Note: Industrial PoE switch does not match the SFP optical module and power supply. | | |

PACKING LIST

| | CONTENT | QTY | UNIT |
|--------------|--|-----|------|
| PACKING LIST | 12-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 | ONV-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 |
| | ONV-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 |
| | ONV-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 |
| | ONV-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-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 |
| | ONV-2612-T-S C | SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface, support DDM function, support hot plug | PC |

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|-----------------|-------------------|--|----|
| | | and pull. | |
| | ONV-2613-R-S C | 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 | ONV-2633 | 1.25G SFP optical module transfers to 10/100/1000M RJ45 port. | PC |

POWER SUPPLY SELECTION TABLE

| Product | Model | Description | Unit |
|---|--------------|---|------|
| 130W Desktop Power Adaptor | GWS-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℃—+65℃ | PC |
| 250W Desktop Power Adaptor | GWS-AP250-52 | Desktop tape 250W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,4.1A Output Voltage:DC 52V 4.8A Operation Temperature:-20℃—+65℃ | PC |
| 120W DIN Rail Industrial Power Supply | GWS-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℃—+70℃ | PC |
| 240W DIN Rail | GWS-DP240-48 | Din Rail type 240W single set of output | PC |

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|-------------------------|---|
| Industrial Power Supply | power supply; Input Voltage:AC 100V~240V 50-60Hz,3A Output Voltage:DC 48V 5A Operation Temperature:-40℃—+70℃ |
|-------------------------|---|

RELATED PRODUCT

| Model | Description |
|-------------------------|--|
| ONV-IPS33064PFM | L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-4 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting. |
| ONV-IPS33084PFM | L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-4 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting. |
| ONV-IPS33108PFM | L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting. |
| ONV-IPS33148PFM | L2+ managed industrial PoE fiber switch with 10*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting. |
| ONV-IPS33168PFM-4 GF | L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting. |

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