

Product Datasheet

36-Port 10G Uplink Managed Industrial PoE Switch

ONV-IPS36036PFM



OVERVIEW

The ONV-IPS36036PFM is a 10G uplink L2 managed industrial PoE fiber switch independently developed by ONV. It has 24*10/100/1000Base-T RJ45 ports and 8*100/1000Base-X SFP fiber slot ports and 4*1/10G SFP+ fiber slot ports. Port 1-24 can support IEEE 802.3af/at standard PoE power supply. single port PoE power reaches 30W, and the maximum PoE output power is 400W. 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, webcam, VoIP, industrial sensor through the network cable, and meet the network environment that needs high-density PoE power supply. It is suitable for intelligent transportation, rail transit, power industry, mining, petroleum, Industrial scenes such as shipping, metallurgy, and green energy construction form a cost-effective, stable and reliable communication network.

The ONV-IPS36036PFM has L2+ full network management function, supports IPV4/IPV6

management, supports static route full line rate forwarding, supports complete security protection mechanism, complete ACL/QoS policy and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS 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.

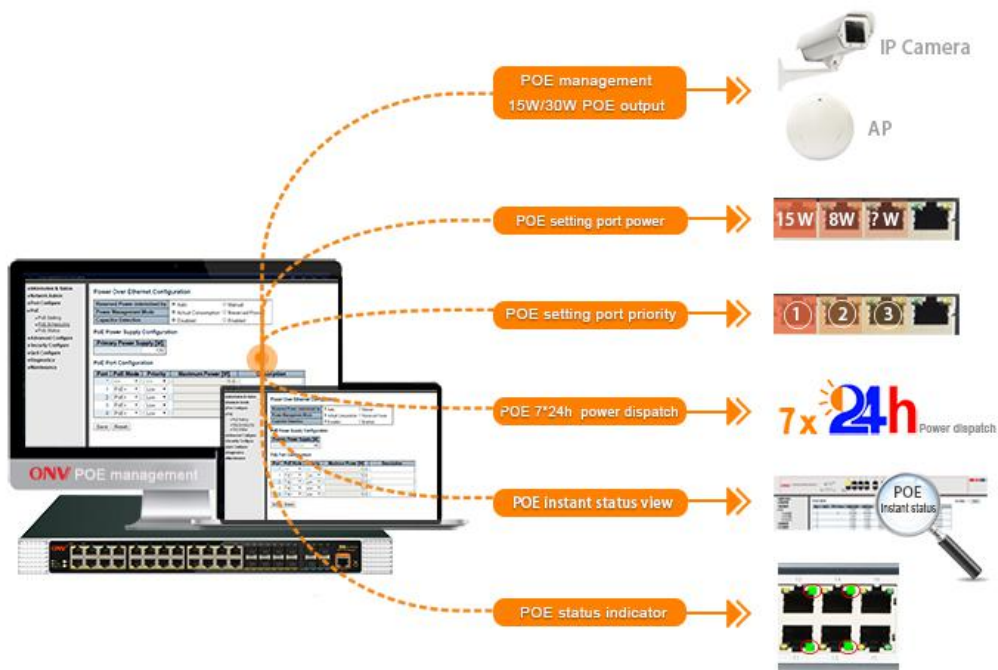
FEATURE

■ Gigabit access, 10G uplink

- ◇ All series supports “Gigabit Ethernet port and 10G SFP+ uplink 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

- ◇ 24*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.



■ Security

- ◇ 802.1X authentication.
- ◇ Port isolation, Storm control.
- ◇ IP-MAC-VLAN-Port binding.

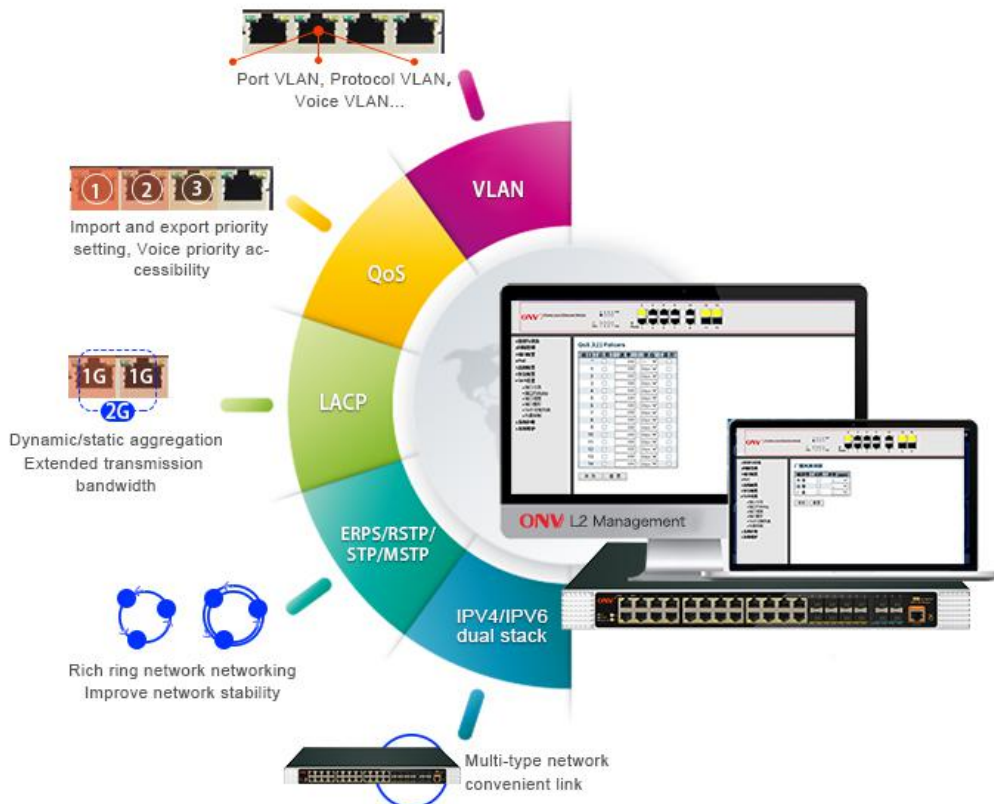


■ Strong business processing capability

- ◇ IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN 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 &

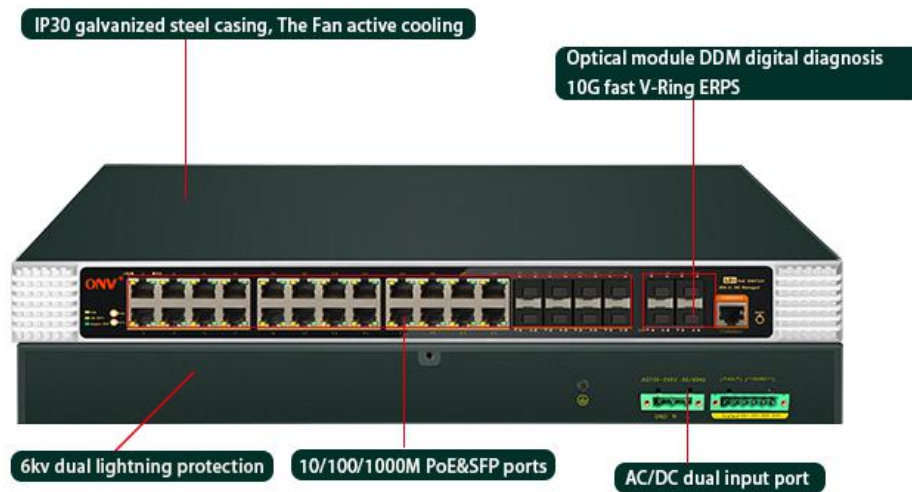
time permission, and provide flexible and safe access control.

- ◇ IGMP V1/V2 and IGMP Snooping.
- ◇ ERPS/STP/RSTP/MSTP.
- ◇ Static and dynamic aggregation.



■ Stable and reliable

- ◇ CCC, CE, FCC, RoHS.
- ◇ Low power consumption, galvanized steel casing, The fan active cooling.
- ◇ The user-friendly panel, it can show the device status through the LED indicator of PWR, Link, PoE.
- ◇ Self-developed power supply, high redundancy design, providing a long term and stable PoE power output.



■ Easy operation and maintenance management

- ◇ HTTPS, SSLV3, and SSHV1/V2.
- ◇ RMON, system log, LLDP, and port traffic statistics.
- ◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.
- ◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

TECHNICAL SPECIFICATION

| Model | ONV-IPS36036PFM | ONV-IPS36036PFM-at |
|----------------------------------|--|--------------------|
| Interface Characteristics | | |
| Fixed Port | 24*10/100/1000Base-T PoE ports (Data/Power) 8*100/1000Base-X SFP fiber slot ports 4*1/10G uplink SFP+ fiber slot ports (Data) 1*Console RS232 port (115200,N,8,1) 1 *AC100-240V power input port 2 * DC12-48V power input ports (support anti-reverse protection) Power-off alarm switch(FAULT) | |
| Ethernet Port | Port 1-24 support 10/100/1000Base-T,auto-sensing,Full/half duplex MDI/MDI-X self-adaption | |

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| 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) |
| Optical Fiber Port | Gigabit SFP /10G 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, 0 ~ 300M (10G); 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-T IEEE802.3z 1000Base-X IEEE802.3ae 10GBase-LR/SR IEEE802.3x |
| Forwarding Mode | Store and Forward(Full Wire Speed) |
| Switching Capacity | 598Gbps (non-blocking) |
| Forwarding Rate@64byte | 107.14Mpps |
| MAC | 32K |
| Buffer Memory | 32M |
| Jumbo Frame | 9.6K |
| LED Indicator | Power: PWR (yellow), system:SYS (yellow); network:Link /Act(yellow); PoE: PoE (green); Fiber port : L/A (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 24 |

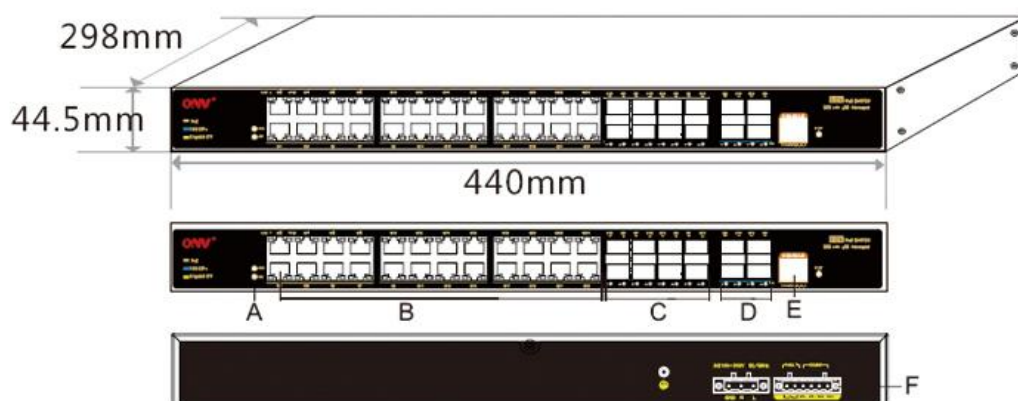
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| PoE Management | PoE working status Delay start of power supply PoE output priority configuration Scheduling of PoE operation and time Total power limit of PoE power supply PoE output power allocation, off& af &at | |
| Power Supply Pin | Default: 1/2 (+), 3/6 (-) | |
| Max Power Per Port | 30W, IEEE802.3af/at | |
| Total PWR / Input Voltage | 400W (AC100-240V) | 600W (AC100-240V) |
| Power Consumption | Standby<40W, Full Load<400W | Standby<45W, Full Load<600W |
| Power Input Interface | Built-in power supply, AC 100~240V 50-60Hz 5.0A | Built-in power supply, AC 100~240V 50-60Hz 6.6A |
| Power Supply | Dual input power interface design, AC power supply priority, support anti-reverse protection, power-off automatic switching DC connection; 2 * DC12-48V power input ports; Power-off alarm switch; 1 *AC power input port | |
| Physical Parameter | | |
| Operation TEMP / Humidity | -40~+80°C;5%~90% RH Non condensing | |
| Storage TEMP / Humidity | -40~+85°C;5%~95% RH Non condensing | |
| Dimension (L*W*H) | 440*298*45.5mm | |
| Net /Gross Weight | <4.8kg / <5.6kg | <5.2kg / <5.8kg |
| Installation | Desktop type ,19 inch 1U cabinet installation | |
| Certification & Warranty | | |
| Lightning protection / protection level | Lightning protection: 6KV 8/20us; Protection level: IP30 IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge IEC61000-4-3(RS):10V/m(80~1000MHz) | |

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| | <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 | <p>CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B;</p> <p>RoHS</p> |
| 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/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> |

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| | <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 18 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 254 devices per ring. |
| Multicast | <p>MLD Snooping v1/v2, Multicast VLAN</p> <p>IGMP Snooping v1/v2, Max 250 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> |

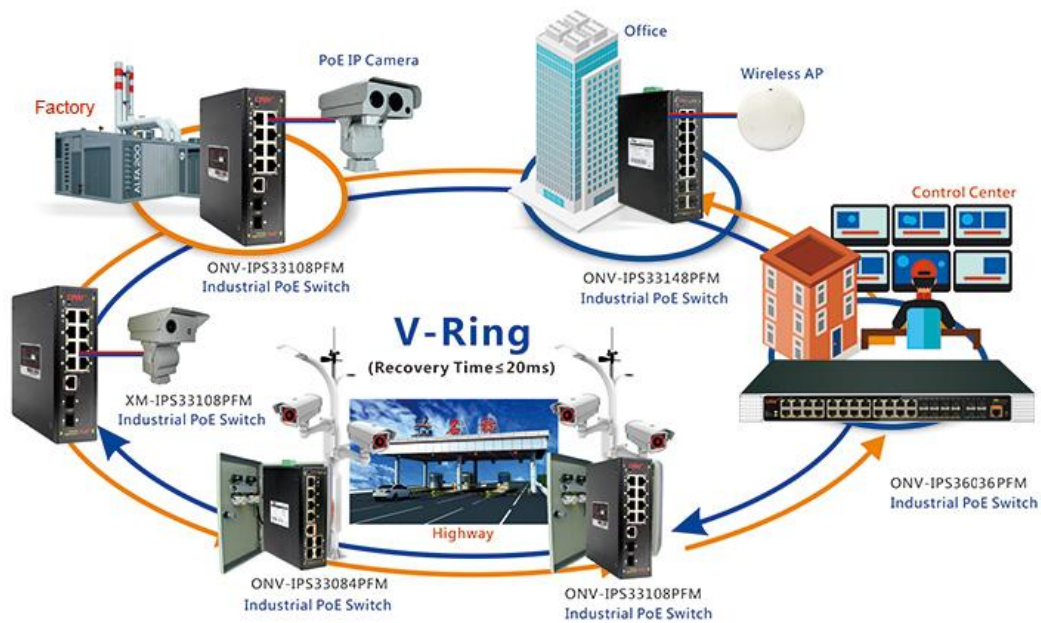
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| DHCP | DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay |
| Management | <p>One-key recovery</p> <p>Cable Diagnose, LLDP</p> <p>Web Management (HTTPS)</p> <p>NTP, System work log, Ping Test</p> <p>CPU instant utilization status view</p> <p>Console/AUX Modem/Telnet/SSH2.0 CLI</p> <p>Download & Management on FTP, TFTP, Xmodem, SFTP, SNMP 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



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|-------------------------|--------------------------|
| A. Power indicator | B. 24* PoE Ports |
| C. 8* Gigabit SFP ports | D. 4* 1/10G SFP Ports |
| E. Console port | F. AC/DC dual input port |

APPLICATION



ORDERING INFORMATION

| Model | Description | Built-in Power Supply |
|--------------------|--|-----------------------|
| ONV-IPS36036PFM | L2+ managed industrial PoE fiber switch with 24* 10/100/1000M RJ45 ports and 8*100/1000M SFP fiber slot ports and 4*1/10G SFP+ fiber slot ports, Port 1-24 can support IEEE 802.3af/at PoE standard, Support 1U/19 inch rack installation. | 400W |
| ONV-IPS36036PFM-at | | 600W |

Note: Industrial PoE switch does not match SFP module by default.

PACKING LIST

| Packing List | CONTENT | QTY | UNIT |
|--------------|--|-----|------|
| | 36-port 10G uplink managed industrial PoE fiber switch | 1 | SET |
| | RJ45-DB9 Line | 1 | PC |
| | AC Power Cable | 1 | PC |
| | Mounting Kits (Hanging Ear) | 1 | SET |
| | 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 | PC |

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| | | 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 |
| | ONV-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 |
| | ONV-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 |
| Power Module | ONV-2633 | 1.25G SFP optical module transfers to 10/100/1000M RJ45 port. | PC |
| 10G Optical Module | ONV-6630 | SFP+ optical module, 10G Multi-mode dual fiber 850nm, transmission distance: 300m, LC interface, support DDM function, support hot plug and pull. | PC |
| | ONV-7832 | SFP+ optical module, 10G Single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull. | PC |
| | ONV-7832-33 | SFP+ optical module, 10G Single-mode single fiber TX1330nm/RX1270nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull. | PC |

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| | ONV-7832-27 | SFP+ optical module, 10G Single-mode single fiber TX1270nm/RX13300nm , transmission distance: 20km, LC interface, support DDM function, support hot plug and pull. | PC |
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