

## Product Datasheet

# 14-port Full Gigabit Managed PoE Switch

(ONV-POE33148PFM)



## OVERVIEW

The ONV-POE33148PFM is a full gigabit L2+ managed PoE fiber switch independently developed by ONV. It has 10\*10/100/1000Base-T adaptive RJ45 ports and 4\*100/1000Base-X SFP fiber ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. Single-port PoE power up to 30W, and the max PoE output power is 130W (at-250W). A PoE power supply device can automatically detect and recognize the power-receiving equipment that meets the standard and supplies power through the network cable. It can supply power to POE terminal equipment such as wireless AP, IP camera, VoIP phone, building visual access control intercom, etc. through a network cable to meet the network environment that needs a high-density PoE power supply. It is suitable for hotels, campuses, parks, shopping malls, scenic spots, hospitals, factory dormitories, and small and medium-sized enterprises.

The ONV-POE33148PFM has L2+ full network management function. support IPV4/ IPV6 management, static route full line rate forwarding, security protection mechanism, complete ACL/QoS policy, and rich VLAN function, 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 a one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the

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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, gigabit SFP port uplink

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.
- ◇ Support 10/100/1000M RJ45 port and Gigabit SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

### ■ Intelligent PoE power supply

- ◇ 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 supply to meet the PoE power supply needs of security monitoring, conference call systems, wireless coverage, and other scenarios.
- ◇ The POE network management function can be configured through the network management to realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
- ◇ IEEE 802.3 af/at PoE standard automatically identifies PoE devices for power supply without damaging non-PoE devices. The max PoE output power is 130W, and the max single-port PoE output power is 30W.

### ■ Strong business processing capability

- ◇ Support ERPS ring network and STP/RSTP/MSTP to eliminate layer 2 loops and realize link backup.
- ◇ IEEE 802.1Q VLAN, user can divide VLAN according to needs, and support QinQ configuration.

- ◇ Static aggregation and dynamic aggregation, 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, SP+WRR.
- ◇ Support ACL to filter data packets by configuring matching rules, processing operations, and time permissions, and provide flexible security access control strategies.
- ◇ Support IGMP V1/V2 multicast protocol, and IGMP Snooping meets the needs of multi-terminal high-definition video surveillance and video conferencing access.

### ■ 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.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, PoE, and Link.
- ◇ Using self-developed power supply with high redundancy design provides long-term and stable PoE power output.
- ◇ Low power consumption, no fan, galvanized steel metal casing, excellent heat dissipation to ensure the stable operation of the switch.

### ■ Easy O&M management

- ◇ CPU monitoring, memory monitoring, Ping detection, cable length 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.

- ◇ Support LLDP, facilitates the network management system to query and determine the communication status of the link.
- ◇ Support diverse management and maintenance methods such as Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, etc.

## TECHNICAL SPECIFICATION

| Model                            | ONV-POE33148PFM                                                                                                                                                        | ONV-POE33148PFM-at |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <b>Interface Characteristics</b> |                                                                                                                                                                        |                    |
| Fixed Port                       | 1*Console RS232 port (115200,N,8,1)<br>2*10/100/1000Base-T RJ45 ports (Data)<br>4*100/1000Base-X uplink SFP ports (Data)<br>8*10/100/1000Base-T PoE ports (Data/Power) |                    |
| Ethernet Port                    | Port 1-10 can support 10/100/1000Base-T auto-sensing, full/ half duplex<br>MDI/ MDI-X self-adaption                                                                    |                    |
| Twisted Pair<br>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)                                       |                    |
| SFP Slot Port                    | Gigabit SFP optical fiber interface, default no include optical modules<br>(optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)             |                    |
| Optical Cable                    | Multi-mode: 850nm /0-550m<br>Single-mode: 1310nm /0-40km, 1550nm /0-120km.                                                                                             |                    |
| <b>Chip Parameter</b>            |                                                                                                                                                                        |                    |
| Network<br>Management Type       | L2+                                                                                                                                                                    |                    |
| Network Protocol                 | IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX<br>IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3x                                            |                    |
| Forwarding Mode                  | Store and Forward(Full Wire Speed)                                                                                                                                     |                    |

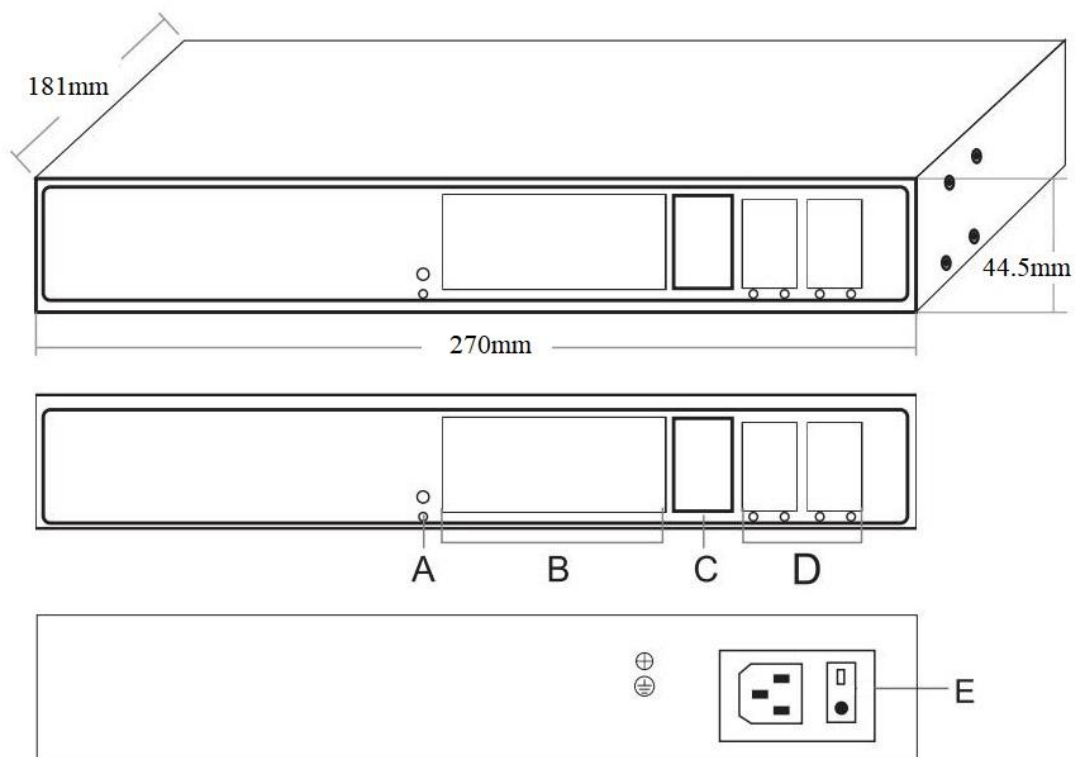
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|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Switching Capacity            | 52Gbps (Non-blocking)                                                                                                                                                                                              |                                                    |
| Forwarding Rate@64byte        | 20.83Mpps                                                                                                                                                                                                          |                                                    |
| CPU(Hz)                       | 416M                                                                                                                                                                                                               |                                                    |
| DRAM                          | 1G                                                                                                                                                                                                                 |                                                    |
| FLASH                         | 128M                                                                                                                                                                                                               |                                                    |
| MAC                           | 8K                                                                                                                                                                                                                 |                                                    |
| Buffer Memory                 | 4M                                                                                                                                                                                                                 |                                                    |
| Jumbo Frame                   | 9.6K                                                                                                                                                                                                               |                                                    |
| LED Indicator                 | System: SYS (Green), PoE: PoE (Green)<br>Network: Link(Yellow), Fiber port: L/A (Green)                                                                                                                            |                                                    |
| Reset Switch                  | Yes, One-button factory reset                                                                                                                                                                                      |                                                    |
| <b>PoE &amp; Power Supply</b> |                                                                                                                                                                                                                    |                                                    |
| PoE Port                      | Port 1 to 8                                                                                                                                                                                                        |                                                    |
| PoE Management                | Total power limit of PoE power supply<br>PoE output power allocation, on/off & af/at<br>PoE working status, Delay start of power supply<br>PoE output priority configuration, Scheduling of PoE operation and time |                                                    |
| Power Supply Pin              | 1/2(+) 3/6(-)                                                                                                                                                                                                      |                                                    |
| Max Power Per Port            | 30W, IEEE 802.3 af/at                                                                                                                                                                                              |                                                    |
| Total PWR / Input Voltage     | 130W /(AC100-240V)                                                                                                                                                                                                 | 250W /(AC100-240V)                                 |
| Power Consumption             | Standby<10W, Full Load<120W                                                                                                                                                                                        | Standby<13W, Full Load<240W                        |
| Power Supply                  | Built-in power supply,<br>AC100~240V 50-60Hz, 2.3A                                                                                                                                                                 | Built-in power supply, AC100~240V<br>50-60Hz, 4.1A |
| <b>Physical Parameter</b>     |                                                                                                                                                                                                                    |                                                    |
| Operation TEMP/<br>Humidity   | -20°C~+55°C, 5%~90% RH Non condensing                                                                                                                                                                              |                                                    |

|                                     |                                                                                                                                                                                                                                                                                             |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Storage TEMP/<br>Humidity           | -40°C~+75°C, 5%~95% RH Non condensing                                                                                                                                                                                                                                                       |
| Dimension (L*W*H)                   | 270*181*44.5mm                                                                                                                                                                                                                                                                              |
| Net /Gross Weight                   | <2.7kg / <3.4kg                                                                                                                                                                                                                                                                             |
| Installation                        | Desktop, wall mount, 19-inch 1U cabinet mount                                                                                                                                                                                                                                               |
| <b>Certification &amp; Warranty</b> |                                                                                                                                                                                                                                                                                             |
| Lightning Protection                | Lightning protection: 4KV 8/20us, Protection level: IP30                                                                                                                                                                                                                                    |
| Certification                       | CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS                                                                                                                                                                                                                       |
| Warranty                            | 3 years, lifelong maintenance.                                                                                                                                                                                                                                                              |
| <b>Network Management Features</b>  |                                                                                                                                                                                                                                                                                             |
| Interface                           | IEEE802.3x flow control (Full duplex)<br>Port temperature protection settings<br>Broadcast storm suppression based on port rate<br>Port EEE green Ethernet energy-saving configuration<br>Limit the rate of packet traffic on incoming and outgoing ports, with mini granularity of 64 Kbps |
| Layer 3 Features                    | ARP protocol, max entries 1024<br>Static routing/ default routing, max entries 128<br>L2+ network management function, IPV4/IPV6 management<br>L3 software routing non-line-speed forwarding supports communication between different network segments and different VLAN                   |
| VLAN                                | Protocol-based VLAN, MAC address-based VLAN<br>Voice VLAN, QinQ configuration, Port-based VLAN(4K), IEEE802.1q<br>Support three types of port configuration: Access, Trunk, and Hybrid                                                                                                      |
| Port Aggregation                    | LACP dynamic aggregation, static aggregation<br>Max 7 aggregation groups and 8 ports per group                                                                                                                                                                                              |
| Spanning Tree                       | STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)                                                                                                                                                                                                                                      |
| Ring Network                        | G.8032 (ERPS), 255 rings at most, max 254 devices per ring. recovery                                                                                                                                                                                                                        |

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protocol       | time less than 20ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Multicast      | IGMP Snooping v1/v2, Max 1024 multicast groups<br>MLD Snooping v1/v2, Multicast VLAN, User quick exit mechanism                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Port Mirroring | Bidirectional traffic mirroring basic ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| QoS            | Diff-Serv QoS, Priority mark/ remark<br>Queue scheduling algorithm (SP, WRR, SP+WRR)<br>Flow-based rate limiting, Flow-based packet filtering<br>8*Output queues of each port, 802.1p/ DSCP priority mapping                                                                                                                                                                                                                                                                                                                                                                        |
| ACL            | Supports ACL delivery based on port and VLAN.<br>The L2-L4 packet filtering function can match the first 80 bytes of the packet and provide filtering 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 Wait to define the ACL.                                                                                                                                                                                                                                             |
| Security       | Port broadcast message suppression<br>AAA& RADIUS& TACACS+ certification<br>SSL ensures data transmission security<br>Limit the number of MAC addresses learned<br>ARP packet rate limit, ARP intrusion detection<br>Port isolation, Anti-DoS attack, Host data backup<br>Quadruple binding function of IP+MAC+VLAN+port<br>User hierarchical management and password protection<br>SSH 2.0 provides a secure encrypted channel for user login<br>MAC addresses the black hole, IP source addresses protection<br>IEEE802.1X authentication/ centralized MAC address authentication |
| DHCP           | DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Management     | Link Layer Discovery Protocol (LLDP)<br>one click recovery, Cable length status detection<br>ONV NMS platform cluster management (LLDP+SNMP)                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|        |                                                                                                                                                                                                                                                                                                                                     |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | <p>NTP clock, Ping detection, Web network management (https)</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</p> <p>Console/ AUX Modem/ Telnet/ SSH2.0, CLI command line configuration</p> <p>System work log, SNMP V1/V2/V3, View CPU real-time utilization status</p>                                          |
| System | <p>Category 5 Ethernet network cable</p> <p><b>Web browser:</b> 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> |

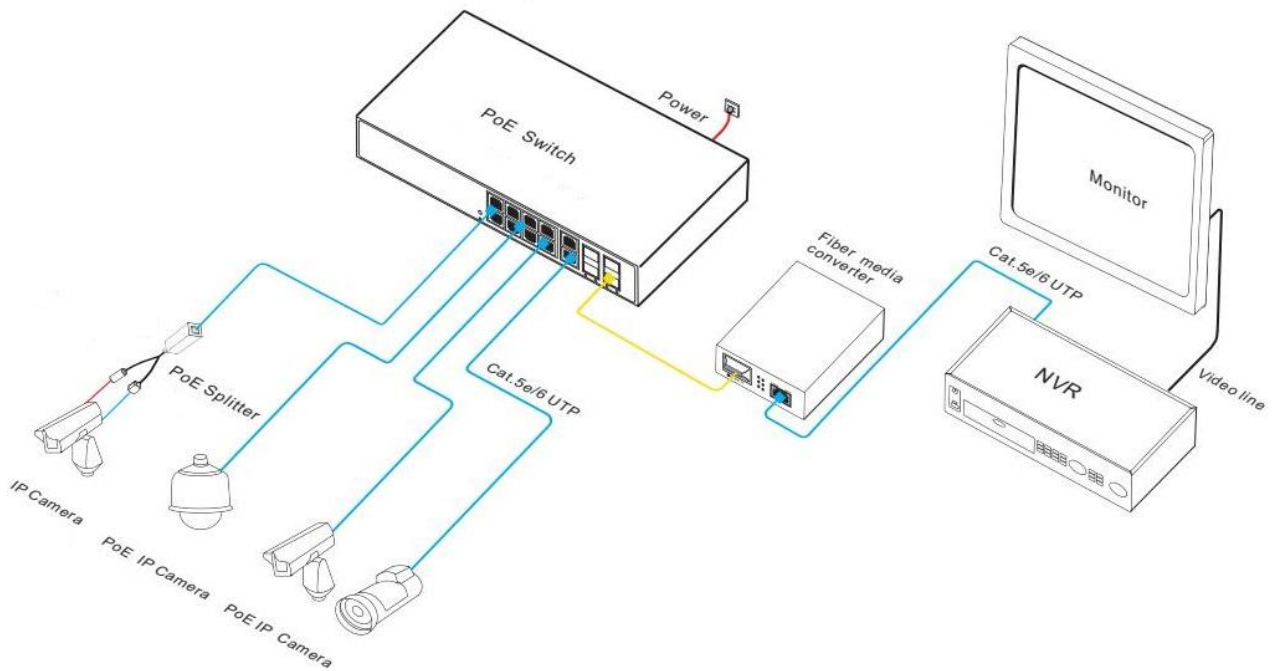
## DIMENSION



- A. Working indicator                      B. 8\*10/100/1000M PoE ports
- C. 2\*10/100/1000M uplink R45 ports      D. 4\* 100/1000M SFP uplink ports
- E. Power input port AC100-240V,50/60Hz



## APPLICATION



## ORDERING INFORMATION

| Model              | Description                                                                                        | Built-in Power Supply |
|--------------------|----------------------------------------------------------------------------------------------------|-----------------------|
| ONV-POE33148PFM    | L2+ managed PoE fiber switch with 10*10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports. | 130W                  |
| ONV-POE33148PFM-at | Port 1-8 support IEEE 802.3 af/at PoE standard.<br>Compatible with 1U/19-inch cabinet mounts.      | 250W                  |

**Note:** The optical module is not included by default and needs to be purchased separately.

## PACKING LIST

| Packing List | Content                                 | Qty | Unit |
|--------------|-----------------------------------------|-----|------|
|              | 14-port full gigabit managed PoE switch | 1   | SET  |
|              | AC Power Cable                          | 1   | PC   |
|              | RJ45-DB9 Line                           | 1   | PC   |
|              | Mounting Kits(Hanging Ear)              | 1   | SET  |
|              | User Guide                              | 1   | PC   |
|              | Warranty Card                           | 1   | PC   |

## OPTICAL MODULE

| Product                    | Model     | Description                                                                                                                                                | Unit |
|----------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1.25G<br>Optical<br>Module | 2630      | SFP optical module, 1.25G, multi mode dual fiber 850nm, transmission distance: 550m, LC interface. supports DDM function and hot plugging.                 | PC   |
|                            | 2632      | SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.               | PC   |
|                            | 2612-T    | SFP optical module, 1.25G, single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging. | PC   |
|                            | 2613-R    | SFP optical module, 1.25G, single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging. | PC   |
|                            | 2612-T-SC | SFP optical module, 1.25G, single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging. | PC   |

|                 |           |                                                                                                                                                                  |    |
|-----------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|                 | 2613-R-SC | SFP optical module, 1.25G, single-mode single fiber<br>TX1550nm/ RX1310nm, transmission distance: 20km, SC<br>interface. supports DDM function and hot plugging. | PC |
| Power<br>Module | 2633      | 1.25G SFP optical module transfers to 10/100/1000M RJ45<br>port.                                                                                                 | PC |

## RELATED PRODUCT

| Model           | Description                                                                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ONV-POE33006PFM | L2+ managed PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*10/1000M SFP slot ports. Port 1-4 can support IEEE 802.3 af/at PoE standard. Built-in 65W power supply.                                 |
| ONV-POE33010PFM | L2+ managed PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*10/1000M SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. Built-in 130W power supply.                                |
| ONV-POE33028PFM | L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. Built-in 400W power supply.                             |
| ONV-POE36036PFM | L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports and 4*1/10G SFP+ slot ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. Built-in 400W power supply. |

## CONTACT US

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