

## Product Datasheet

# 36-port 10G Uplink L3 Managed PoE Switch (ONV-POE58036PFM)



## OVERVIEW

The ONV-POE58036PFM is a 10G uplink L3 managed PoE fiber switch independently developed by ONV. It has 4\*1/10G uplink SFP+ fiber ports and 24\*10/100/1000Base-T adaptive RJ45 ports and 8\*100/1000Base-X SFP fiber ports (combo port). Port 1-24 can support IEEE 802.3 af/at PoE standard and single-port PoE power reaches 30W. As a PoE power supply device, it can automatically detect and recognize the power-receiving equipment that meets the standard and supply 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, factory dormitories, and small and medium-sized enterprises.

The ONV-POE58036PFM has L3 full network management function, supports IPV4/ IPV6 management, dynamic route full-speed forwarding, 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 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, uplink 1/10G SFP+ fiber port

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.
- ◇ Support Gigabit RJ45 port and 1/10G 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.
- ◇ PoE ports support priority. When the remaining power is insufficient, priority is given to high-priority ports to avoid equipment overload.
- ◇ Comply with IEEE 802.3 af/at PoE standard, automatically identify PoE devices for power supply, and not damage non-PoE devices.
- ◇ 24\*10/100/1000Base-T RJ45 ports support PoE power supply to meet security monitoring, conference call systems, wireless coverage, and other scenarios.

### ■ Strong business processing capability

- ◇ IEEE802.1Q VLAN, flexible VLAN division, and QinQ configuration.
- ◇ ERPS/STP/RSTP/MSTP spanning tree protocol eliminates layer 2 loops and realizes link backup.
- ◇ QoS, port-based, 802.1P-based and DSCP-based three priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.
- ◇ ACL to filter data packets by configuring matching rule processing operations and time permissions, and provide flexible security access control policies.
- ◇ Static aggregation and dynamic aggregation effectively increase link bandwidth, achieve load balancing, and link backup, and improve link reliability.

- ◇ Support IGMP V1/V2/V3 multicast protocol and IGMP Snooping to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.

### ■ Security

- ◇ Port isolation and storm control.
- ◇ 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, Link, and PoE.
- ◇ Using self-developed power supply with high redundancy design provides long-term and stable PoE power output.
- ◇ Low power consumption, with fan, Galvanized steel metal shell, and excellent heat dissipation to ensure the stable operation of the switch.

### ■ Easy O&M management

- ◇ CPU monitoring, memory monitoring, Ping detection, and cable length detection.
- ◇ Encryption management methods such as HTTPS, SSLV3, and SSHV1/V2 are 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 command line (Console, Telnet), SNMP (V1/V2/V3), Telnet and other diversified management and maintenance methods.

## TECHNICAL SPECIFICATION

| Model                            | ONV-POE58036PFM   | ONV-POE58036PFM-at |
|----------------------------------|---|--------------------|
| <b>Interface Characteristics</b> |   |                    |
| Fixed Port                       | 1*Console RS232 port (115200,N,8,1)<br>4*1/10G uplink SFP+ fiber ports (Data)<br>24*10/100/1000Base-T PoE ports (Data/ Power)<br>8*100/1000Base-X SFP fiber ports (combo port) (Data) |                    |
| Ethernet Port                    | Port 1-24 can support 10/100/1000Base-T(X) 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               | 1/10G SFP+ optical fiber port, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)                                      |                    |
| Optical Fiber Port Expansion     | Turbo overclocking 2.5G optical module expansion and ring network   |                    |
| Optical Cable/ Distance          | Multi-mode: 850nm / 0-500m (1G), 0-300m (10G)<br>Single-mode: 1310nm / 0-40km, 1550nm / 0-120km   |                    |
| <b>Chip Parameter</b>            |   |                    |
| Network Management Type          | L3  |                    |
| Network Protocol                 | IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u<br>100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X,<br>IEEE 802.3ae 10GBase-LR/SR, IEEE 802.3x                     |                    |
| Forwarding Mode                  | Store and Forward (Full Wire Speed)   |                    |
| Switching Capacity               | 176Gbps(non-blocking)   |                    |
| Forwarding                       | 95.23Mpps   |                    |

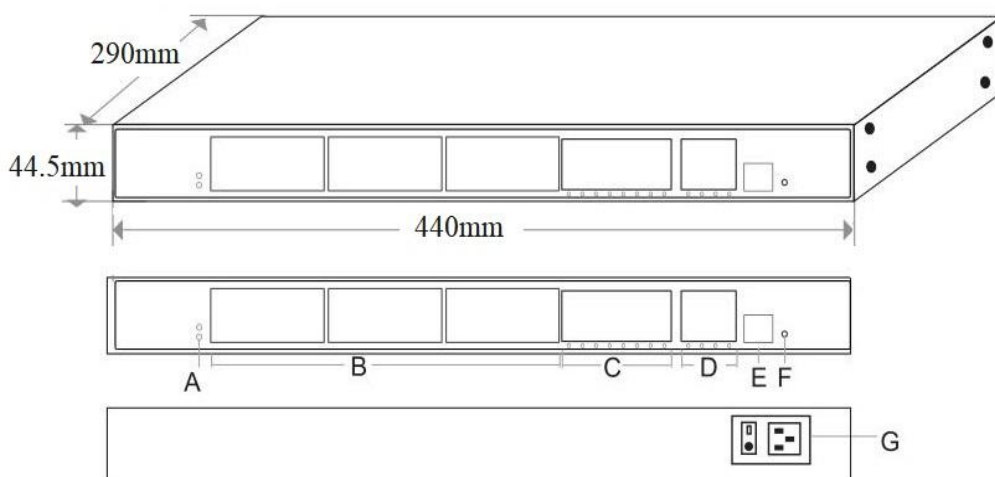
|                               |  |   |
|-------------------------------|--|---|
| Rate@64byte                   |  |   |
| CPU                           | 800MHz   |   |
| DRAM                          | 1Gbit  |   |
| FLASH                         | 128Mbit  |   |
| MAC                           | 16K  |   |
| Buffer Memory                 | 12Mbit   |   |
| Jumbo Frame                   | 12000byte  |   |
| 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 switch for 10 seconds and release it to restore the factory settings                     |   |
| <b>PoE &amp; Power Supply</b> |  |   |
| PoE Port                      | Port 1-24  |   |
| PoE Management                | PoE working status display, Port PoE on/off, af/at power distribution  |   |
| Power Supply Pin              | 1/2(+) 3/6(-)  |   |
| Max Power Per Port            | 30W, IEEE 802.3 af/at  |   |
| Total PWR / Input Voltage     | 400W/ (AC100-240V)   | 600W/ (AC100-240V)                              |
| Power Consumption             | Standby<20W, Full Load<380W  | Standby<22W, Full Load<600W                     |
| Power Supply                  | Built-in power supply, AC100-240V 50-60Hz, 5.0A  | Built-in power supply, AC100-240V 50-60Hz, 6.6A |
| <b>Physical Parameter</b>     |  |   |
| Operation TEMP / Humidity     | -20~+55°C, 5%~90% RH Non condensing  |   |
| Storage TEMP / Humidity       | -40~+75°C, 5%~95% RH Non condensing  |   |
| Dimension (L*W*H)             | 440*290*44.5mm   |   |
| Net /Gross Weight             | 4.1kg / 4.9kg  | 4.4kg / 5.3kg                                   |
| Installation                  | Desktop, 1U/19" cabinet  |   |

| <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 Feature</b>   |  |
| Interface                           | <p>IEEE802.3x flow control (Full duplex)</p> <p>Port exception protection mechanism</p> <p>Jumbo frame configuration, max 12000byte</p> <p>Port real-time flow management (Flow Interval)</p> <p>Optical module DDMI real-time digital diagnosis</p> <p>Broadcast storm suppression based on port rate</p> <p>Port EEE Green Ethernet Energy-Saving configuration and status view</p> <p>Limit the rate of packet traffic on incoming and outgoing ports, the mini granularity 16Kbps and max 1Gbps</p>  |
| L3 Routing                          | <p>ARP protocol, max 1000 entries</p> <p>IPV4/IPV6 VRRP, the max group is 255</p> <p>Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6</p> <p>IPV4/IPV6 VLANIF interface supports up to 128</p> <p>IPV4 Equal Cost Routing, NG protocol, max1000 entries</p> <p>IPV4/IPV6 static route/default route supports up to 128 entries</p> <p>L3 network management function, IPV4/IPV6 dual-stack management</p> <p>IPV4 dynamic routing, RIPv1/v2, OSPFv2, BGP4+, 4000 routing entries</p> <p>IPV6 dynamic routing OSPFv3, BGP+, RIPv6, IPV6 management, 1000 routing entries</p> <p>L3 routing and forwarding, support communication between different network segments and different VLAN</p> |
| VLAN                                | <p>VLAN based on MAC, VLAN based on the protocol</p> <p>Port configuration of Access, Trunk, Hybrid, GVRP VLAN protocol</p>  |

|                   |  |
|-------------------|--|
|                   | (4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration  |
| Port Aggregation  | LACP dynamic aggregation, static aggregation<br>Max 14 aggregation groups and 8 ports per group.   |
| Spanning Tree     | STP BPDU Guard, BPDU filtering and BPDU forwarding<br>STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)   |
| ERPS Ring Network | ERPS ring network, Recovery time less than 20ms, ITU-T G.8032  |
| Multicast         | MLD Snooping, Multicast VLAN<br>User quick log out, MVR (Multicast VLAN Registration)<br>IGMP Snooping v1/v2/v3 and 1024 multicast groups at most  |
| Mirroring         | Bidirectional traffic mirroring for basic ports<br>Supports 1-to-multiple mirroring, supports up to 4 port sessions  |
| QoS               | Flow-based Rate Limiting, Flow-based redirection<br>Flow-based Packet Filtering, Priority Mark/ Remark<br>802.1p/DSCP priority mapping, 8*Output queues of each port<br>Diff-Serv QoS, Queue Scheduling Algorithm (SP, WRR, SP+WRR)  |
| ACL               | Port-based Issuing ACL, ACL based on port and VLAN<br>L2 to L4 packet filtering, matching the first 80-byte message. Provide<br>ACL based on MAC, Destination MAC address, IP Source, Destination<br>IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN,<br>etc.   |
| Security          | ARP message rate limiting function<br>Port broadcast message suppression<br>SSL ensures data transmission security<br>AAA & RADIUS & TACACS+ certification<br>Port isolation, Host data backup mechanism<br>Limit the number of MAC addresses learned<br>Anti-DoS attack, ARP intrusion detection function<br>Quadruple binding function of IP+MAC+VLAN+port<br>IP source address protection, MAC address black hole |

|            |   |
|------------|---|
|            | <p>User hierarchical management and password protection</p> <p>SSH 2.0 provides a secure encrypted channel for user login</p> <p>IEEE802.1X authentication/ centralized MAC address authentication</p>  |
| DHCP       | DHCP Client, DHCP Snooping, DHCP Server   |
| Management | <p>System work log, Link Layer Discovery Protocol</p> <p>NTP clock, Cable length detection, SNMP V1/V2/V3</p> <p>Ping detection, Web network management (HTTPS)</p> <p>ONV-NMS platform cluster management (LLDP+SNMP)</p> <p>One click recovery, View CPU real-time utilization status</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</p> <p>Console/ AUX Modem/ Telnet/ SSH2.0 CLI command line configuration</p> |
| System     | <p>Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable</p> <p>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable</p>   |

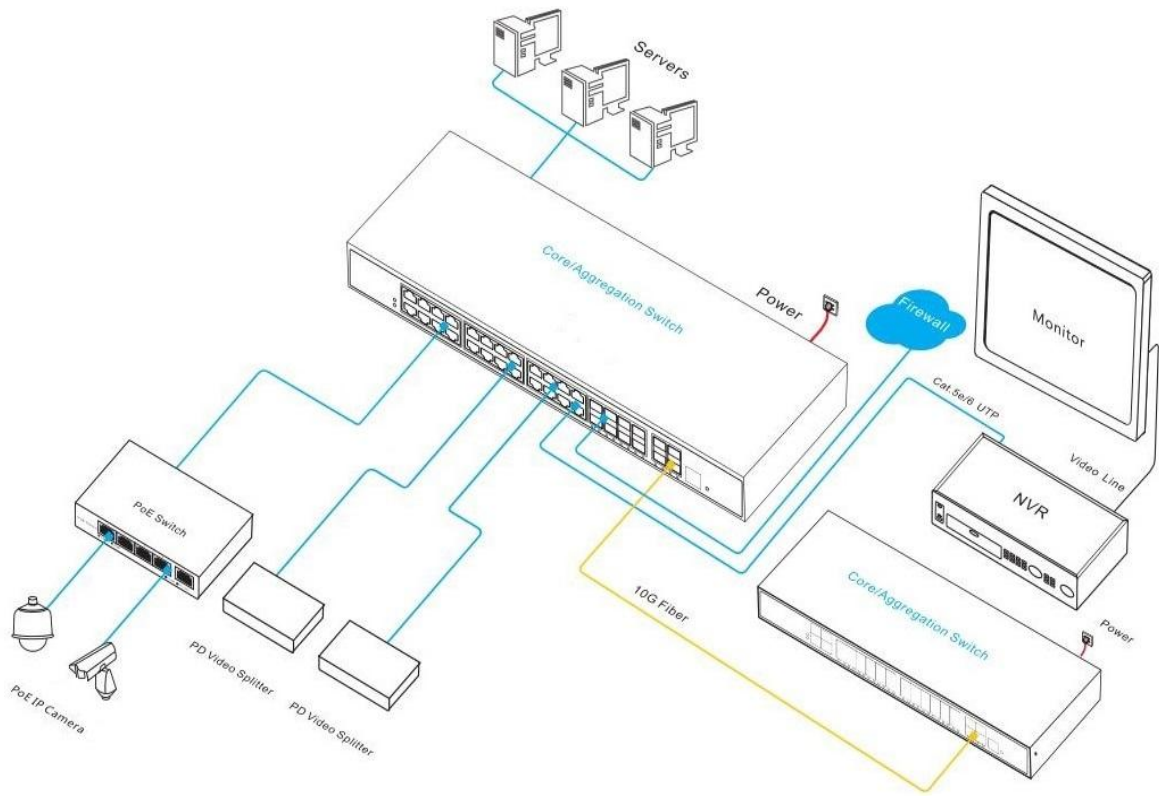
## DIMENSION



- A. Working indicator
- B. 24\*10/100/1000M PoE ports
- C. 8\*100/1000M SFP fiber ports (Combo port)
- D. 4\*1/10G uplink SFP+ fiber ports
- E. Console port
- F. Reset port
- G. Power input port AC100-240V, 50/60Hz



## APPLICATION



## ORDERING INFORMATION

| Model              | Description  | Built-in Power Supply |
|--------------------|--|-----------------------|
| ONV-POE58036PFM    | L3 managed PoE switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP fiber ports (combo port) and 4*1/10G uplink SFP+ fiber ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. It built-in power supply and 1U/19" cabinet installation. | 400W                  |
| ONV-POE58036PFM-at |  | 600W                  |

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

## PACKING LIST

| Packing List | Content                                  | Qty | Unit |
|--------------|--|-----|------|
|              | 36-port 10G uplink L3 managed PoE switch | 1   | SET  |
|              | AC Power Cable                           | 1   | PC   |
|              | RJ45-DB9 Line                            | 1   | PC   |
|              | Mounting Kits                            | 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. support DDM function and hot plugging.                | PC   |
|                            | 2632      | SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.              | PC   |
|                            | 2612-T    | 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    | 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-SC | 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-SC | SFP optical module, 1.25G single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface. support DDM function and hot plugging. | PC   |

|                    |         |   |    |
|--------------------|---------|---|----|
|                    |         | RX1310nm, transmission distance: 20km, SC interface. support DDM function and hot plugging.   |    |
| Power Module       | 2633    | 1.25G SFP optical module transfers to 10/100/1000M RJ45 port.   | PC |
| 10G Optical Module | 6630    | SFP+ optical module, 10G multi-mode dual fiber 850nm, transmission distance: 300m, LC interface. support DDM function and hot plugging.                 | PC |
|                    | 7832    | SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.               | PC |
|                    | 7832-33 | SFP+ optical module, 10G single-mode single fiber TX1330nm/RX1270nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.  | PC |
|                    | 7832-27 | SFP+ optical module, 10G single-mode single fiber TX1270nm/RX13300nm, transmission distance: 20km, LC interface. support DDM function and hot plugging. | PC |

## RELATED PRODUCT

| Model           | Description   |
|-----------------|---|
| ONV-POE58028PFM | L3 managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. It built-in 400W power supply and 1U/19" cabinet installation. |
| ONV-POE58052PFM | L3 managed PoE fiber switch with 48*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber ports. Port 1-48 can support IEEE 802.3 af/at PoE standard. It built-in 600W power supply and 1U/19" cabinet installation. |

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