

## Product Datasheet

# 52-port 10G Uplink Managed PoE Switch

(ONV-POE56052PFM)



## OVERVIEW

The ONV-POE56052PFM is a 10G uplink managed PoE fiber switch independently developed by ONV. It has 48\*10/100/1000Base-T adaptive RJ45 ports and 4\*1/10G uplink SFP+ fiber ports. Ports 1-48 support the IEEE 802.3 af/at PoE standard, and the max PoE power per port is 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-POE56052PFM has L2+ network management function, supports IPv4/IPv6 management, full-speed forwarding of static routes, comprehensive security mechanisms, robust ACL/QoS policies, and rich VLAN functionality, making it easy to manage and maintain. It supports multiple network redundancy protocols, including STP/RSTP/MSTP

(<50ms) and (ITU-T G.8032) ERPS (<20ms), enhancing link backup and network reliability. In the event of a unidirectional network failure, communication can be quickly restored, ensuring uninterrupted communication for critical applications. Depending on the application requirements, it supports PoE power supply management, port management, routing address management, port flow control, VLAN segmentation, IGMP, security policies, and other application service configurations via Web, CLI, SNMP, Telnet, and other network management methods.

## FEATURE

### ■ Gigabit wire speed 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 uplink 1/10G SFP+ fiber port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

### ■ Smart PoE power supply

- ◇ Support PoE network management function, which can be configured to turn on/off each PoE port and view the port power status.
- ◇ Comply with IEEE802.3af/at PoE standard, automatically identify PoE devices for power supply, and not damage non-PoE devices.
- ◇ 48\*10/100/1000Base-T RJ45 ports support PoE power supply to meet security monitoring, conference call systems, wireless coverage, and other scenarios.

### ■ Security

- ◇ Support IP+MAC+Port+VLAN four-way binding function.
- ◇ Support port isolation and port broadcast storm suppression.
- ◇ Support 802.1X authentication, provide authentication function for LAN computers, and control the authorization status of controlled ports according to the authentication results.

### ■ Strong business processing capability

- ◇ 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.

#### ■ Stable and reliable

- ◇ CE, FCC, RoHS.
- ◇ The user-friendly panel can show the device status through the LED indicators of PWR, Link, and PoE.
- ◇ Using a self-developed power supply with high redundancy provides long-term and stable PoE power output.
- ◇ Low power consumption, with a fan, galvanized steel metal housing, and excellent heat dissipation to ensure stable operation of the switch.

#### ■ Easy O&M management

- ◇ Support CPU monitoring, memory monitoring, and Ping detection.
- ◇ HTTPS, SSLV3, SSHV1/V2, and other encryption methods are more secure in management.
- ◇ System log and port traffic statistics are convenient for network optimization and transformation.
- ◇ LLDP is convenient for the network management system to query and judge the communication status of the link.

- ◇ Various management and maintenance methods such as Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, etc.

## TECHNICAL SPECIFICATION

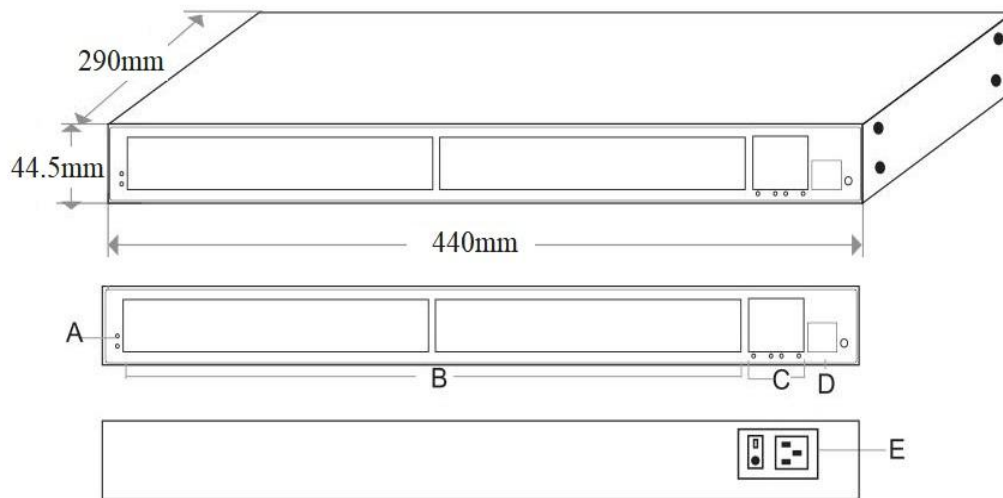
| Model                            | ONV-POE56052PFM                                                                                                                                      |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Interface Characteristics</b> |                                                                                                                                                      |
| Fixed Port                       | 1*Console RS232 port (115200,N,8,1)<br>4*1/10G uplink SFP+ fiber ports (Data)<br>48*10/100/1000Base-T PoE ports (Data/Power)                         |
| Ethernet Port                    | Ports 1-48 can support 10/100/1000Base-T auto-sensing, full/ half duplex<br>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/6 or later UTP (≤100 meters)                |
| Optical Fiber Port               | Default does not 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/ 0-550m (1G), 0-300m (10G), Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km                                                           |
| <b>Chip Parameter</b>            |                                                                                                                                                      |
| 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               | 216Gbps (non-blocking)                                                                                                                               |
| Forwarding Rate@64byte           | 131Mpps                                                                                                                                              |

|                                    |                                                                                              |
|------------------------------------|----------------------------------------------------------------------------------------------|
| CPU(Hz)                            | Dual core 1G                                                                                 |
| DRAM                               | 2G                                                                                           |
| FLASH                              | 256M                                                                                         |
| MAC                                | 32K                                                                                          |
| Buffer Memory                      | 16M                                                                                          |
| Jumbo Frame                        | 12K                                                                                          |
| LED Indicator                      | System: SYS (Green), PoE: PoE (Green), Network: Link (Yellow), 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 1-48                                                                                    |
| PoE Management                     | PoE working status display, Port PoE on/off, power distribution                              |
| Power Supply Pin                   | 1/2(+) 3/6(-)                                                                                |
| Max Power Per Port                 | 30W, IEEE802.3af/at                                                                          |
| Power Consumption                  | Standby<30W, full load<600W                                                                  |
| Power Supply                       | 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~+80°C, 5%~95% RH non-condensing                                                          |
| Dimension (L*W*H)                  | 440*290*44.5mm                                                                               |
| Net /Gross Weight                  | 4.8kg/ 5.7kg                                                                                 |
| Installation                       | Desktop, 1U/19" cabinet                                                                      |
| <b>Certification&amp; Warranty</b> |                                                                                              |
| Lightning Protection               | Lightning protection: 6KV 8/20us, Protection level: IP30                                     |
| Certification                      | CE mark, commercial, CE/LVD EN62368-1, FCC Part 15, RoHS                                     |
| Warranty                           | 3 years, lifelong maintenance                                                                |
| <b>Network Management Feature</b>  |                                                                                              |
| Interface                          | Port real-time flow management (Flow Interval)                                               |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>Broadcast storm suppression based on port rate</p> <p>SFP optical module DDMI real-time digital diagnosis</p> <p>Port EEE Green Ethernet Energy-Saving configuration and status view</p> <p>IEEE802.3x flow control (Full duplex), Port exception protection mechanism</p> <p>Limit the rate of packet traffic on incoming and outgoing ports, the mini granularity is 16Kbps and max 1Gbps</p> |
| L3 Feature        | <p>ARP protocol max 1024 entries, RIPv1/v2, RIPv6, OSPFv1/v2, OSPFv3</p> <p>L2+ network management, IPV4/ IPV6 static routing/ default routing, max 64 entries, Dual-stack management</p>                                                                                                                                                                                                          |
| VLAN              | <p>VLAN based on MAC, VLAN based on the protocol</p> <p>Port configuration of Access, Trunk, Hybrid, GVRP VLAN protocol</p> <p>(4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration</p>                                                                                                                                                                                             |
| Port Aggregation  | <p>LACP dynamic aggregation, Static aggregation</p> <p>Max 26 aggregation groups and 8 ports per group</p>                                                                                                                                                                                                                                                                                         |
| Spanning Tree     | <p>STP BPDU Guard, BPDU filtering and BPDU forwarding</p> <p>STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)</p>                                                                                                                                                                                                                                                                            |
| ERPS Ring Network | ERPS ring network, Recovery time less than 20ms, ITU-T G.8032                                                                                                                                                                                                                                                                                                                                      |
| Multicast         | <p>Multicast VLAN, User quick log out, MVR (Multicast VLAN Registration)</p> <p>MLD Snooping, IGMP Snooping v1/v2/v3 and 256 multicast groups at most</p>                                                                                                                                                                                                                                          |
| Mirroring         | <p>Bidirectional traffic mirroring for basic ports</p> <p>Supports 1-to-multiple mirroring, supports up to 4 port sessions</p>                                                                                                                                                                                                                                                                     |
| QoS               | <p>Queue scheduling algorithm (SP, WRR, SP+WRR)</p> <p>Flow-based rate limiting, Flow-based packet filtering</p> <p>Flow-based based redirection, 8*Output queues of each port</p> <p>802.1p/ DSCP priority mapping, Diff-Serv QoS, Priority Mark/ Remark</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</p>                                                                                                                                                                                      |

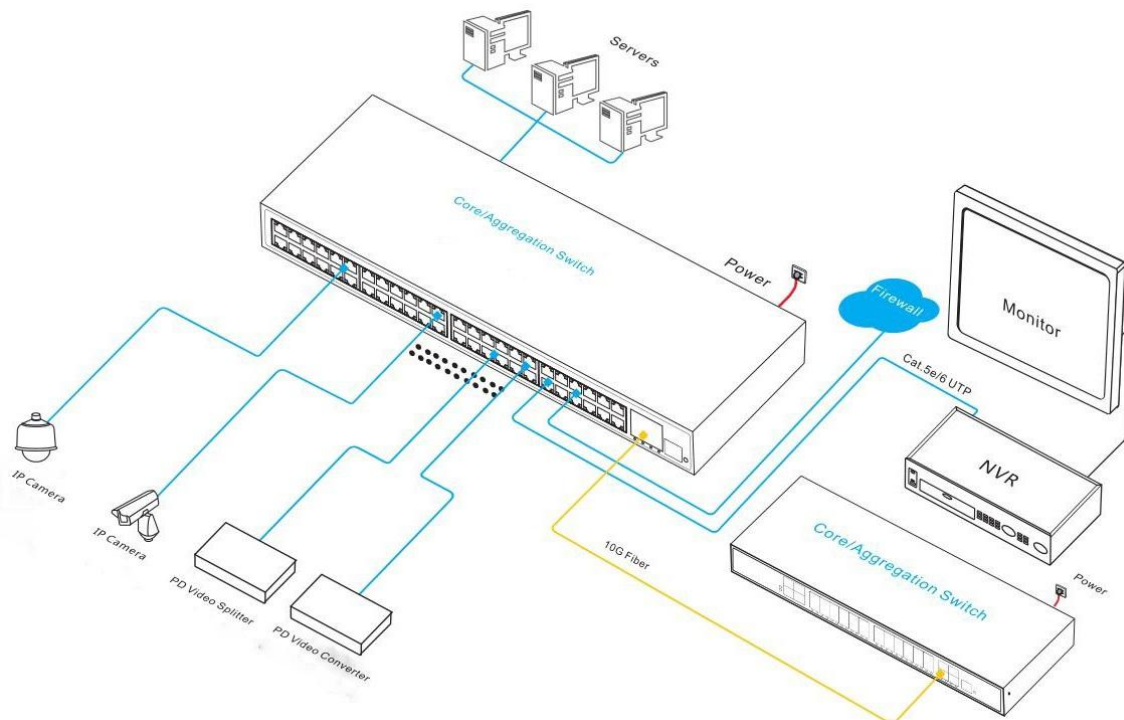
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Security   | <p>SSL guarantees data transmission security</p> <p>Quad binding function of IP+MAC+VLAN+port</p> <p>Port broadcast message suppression, Port isolation</p> <p>IEEE 802.1X authentication based on port and MAC</p> <p>MAC address learning limit, MAC address black hole</p> <p>Hierarchical user management and password protection</p> <p>SSH 2.0 provides a secure encrypted channel for user login</p> <p>Host data backup mechanism, ARP intrusion detection function</p> <p>IP source address protection, ARP message speed limit function</p> <p>Anti DoS attack, AAA&amp;RADIUS certification, IP Source Guard function</p> |
| DHCP       | DHCP Client, DHCP Snooping, DHCP Server                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Management | <p>System work log, Link Layer Discovery Protocol</p> <p>HTTP, TFTP file upload and download management</p> <p>Ping detection, Web network management (HTTPS)</p> <p>NTP clock, Cable length detection, SNMP V1/V2C/V3</p> <p>Console/ SSH/ Telnet/ CLI command line configuration</p> <p>ONV-NMS platform cluster management (LLDP+SNMP)</p> <p>One-click recovery, View CPU real-time utilization status</p>                                                                                                                                                                                                                       |
| System     | <p>Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher,</p> <p>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</p> <p>Cat5 and above Ethernet cable</p>                                                                                                                                                                                                                                                                                                                        |

## DIMENSION



- A. Working indicator                      B. 48\*10/100/1000M PoE ports  
 C. 4\*1/10G uplink SFP+ fiber ports      D. Console port  
 E. Power input port AC100-240V, 50/60Hz

## APPLICATION



## ORDERING INFORMATION

| Model           | Description                                                                                                                                                                                                             | Built-in Power Supply |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| ONV-POE56052PFM | L2+ managed PoE switch with 48*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports.<br>Ports 1-48 can support the IEEE 802.3af/at PoE standard. It has a built-in power supply and 1U/19" cabinet installation. | 600W                  |

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

## PACKING LIST

|              | Content                                     | Qty | Unit |
|--------------|---------------------------------------------|-----|------|
| Packing List | 52-port 10G uplink managed PoE switch       | 1   | PC   |
|              | RJ45-DB9 Adapter Cable                      | 1   | PC   |
|              | AC Power Cable                              | 1   | PC   |
|              | Mounting Kit (Hanging Ear)                  | 1   | Pair |
|              | User Guide                                  | 1   | PC   |
|              | Warranty Card and Certificate of Conformity | 1   | PC   |

## OPTICAL MODULE

| Product              | Model | Description                                                                                                                                | Unit |
|----------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1.25G Optical 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/<br>RX1550nm, transmission distance: 20km, LC interface. support DDM<br>function and hot plugging. | PC |
|                          | 2613-R  | SFP optical module, 1.25G single-mode single fiber TX1550nm/<br>RX1310nm, transmission distance: 20km, LC interface. support DDM<br>function and hot plugging. | PC |
| Power<br>Module          | 2633    | 1.25G SFP optical module transfers to 10/100/1000M RJ45 port.                                                                                                  | PC |
| 10G<br>Optical<br>Module | 6630    | SFP+ optical module, 10G multi-mode dual fiber 850nm, transmission<br>distance: 300m, LC interface. support DDM function and hot<br>plugging.                  | PC |
|                          | 7832    | SFP+ optical module, 10G single-mode dual fiber 1310nm,<br>transmission distance: 20km, LC interface. support DDM function and<br>hot plugging.                | PC |
|                          | 7832-33 | SFP+ optical module, 10G single-mode single fiber TX1330nm/<br>RX1270nm, transmission distance: 20km, LC interface. support DDM<br>function and hot plugging.  | PC |
|                          | 7832-27 | SFP+ optical module, 10G single-mode single fiber TX1270nm/<br>RX1330nm, transmission distance: 20km, LC interface. support DDM<br>function and hot plugging.  | PC |

## RELATED PRODUCT

| Model           | Description                                                                                                                                                                                                                           |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ONV-POE56028PFM | L2+ managed PoE switch with 24*10/100/1000M RJ45 ports and<br>4*1/10G uplink SFP+ fiber ports. Ports 1-24 can support the IEEE<br>802.3af/at PoE standard. It built-in 400W power supply and supports<br>1U/19" cabinet installation. |

## CONTACT US



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