

## Product Datasheet

# 36-port 10G Uplink Managed PoE Switch (ONV-POE56036PFM)



## OVERVIEW

The ONV-POE56036PFM is a 10G uplink L2+ managed PoE fiber switch independently developed by ONV. It has 24\*10/100/1000Base-T adaptive RJ45 ports and 8\*100/1000Base-X SFP fiber ports (combo port) and 4\*1/10G SFP+ fiber slot ports. Port 1-24 can support IEEE802.3af/at PoE standard. 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, webcam, VoIP phone, building visual access control intercom, etc. through a network cable to meet the network environment that needs high-density PoE power supply. It is suitable for hotel, campus, factory dormitory and small and medium-sized enterprise.

The ONV-POE56036PFM has L2+ full network management function, supports IPV4/IPV6 management, static route full wire-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(<20ms) to improve link backup and network reliability. When one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as PoE power

management, port traffic control, VLAN division, and SNMP through the Web network management mode.

## FEATURE

### ■ Gigabit access, 10G fiber uplink

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

### ■ Intelligent PoE power supply

- ◇ IEEE802.3af/at PoE standard, without damaging non-PoE devices.
- ◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
- ◇ 24\*10/100/1000Base-T RJ45 ports can support POE power supply to meet the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.
- ◇ 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.

### ■ 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.

### ■ 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

- ◇ CCC, CE, FCC, RoHS.
- ◇ Low power consumption, with fan, galvanized steel casing.
- ◇ 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

- ◇ Support CPU monitoring, memory monitoring, Ping detection, cable length detection.
- ◇ Support HTTPS, SSLV3, SSHV1/V2 and other encryption methods, making management more secure.
- ◇ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.
- ◇ Support LLDP to facilitate the network management system to query and judge the communication status of the link.

- ◇ Support Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3) and other diversified management and maintenance.

## TECHNICAL SPECIFICATION

Model	ONV-POE56036PFM	ONV-POE56036PFM-at
<b>Interface Characteristics</b>		
Fixed Port	4*1/10G uplink SFP+ fiber ports (Data) 1*Console RS232 port (115200,N,8,1) 24*10/100/1000Base-T PoE ports (Data/Power) 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) 100BASE-TX: Cat5 or later UTP(≤100 meters) 1000BASE-T: Cat5e/6 or later UTP(≤100 meters)	
Optical Fiber Port	Gigabit SFP/10G SFP+ optical fiber interface, default no include optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
Optical Fiber Port Expansion	Support Turbo overclocking 2.5G optical module expansion and ring network	
Optical Cable/Distance	Multi-mode:850nm/ 0-500M, 850nm/ 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	

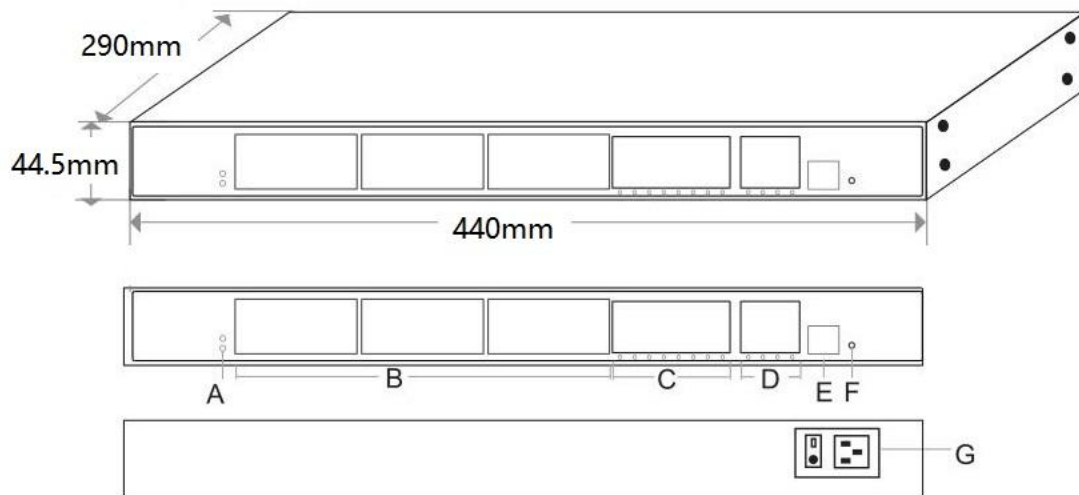
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	216Gbps (non-blocking)	
Forwarding Rate@64byte	95.23Mpps	
CPU	800MHz	
DRAM	1Gbit	
FLASH	128Mbit	
MAC	16K	
Buffer Memory	12Mbit	
Jumbo Frame	12000byte	
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow), Network: Link/Act (Yellow), 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 to 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, IEEE802.3af/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/	-40~+75°C, 5%~95% RH Non condensing	

Humidity	
Dimension	440*290*44.5mm
Net /Gross Weight	<5.0kg / <5.5kg      <5.3kg / <5.8kg
Installation	Desktop, 19 inch 1U 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 Features</b>	
Interface	IEEE802.3x flow control (full duplex) Port exception protection mechanism Port real-time flow management (Flow Interval) Broadcast storm suppression based on port rate Optical port SFP module DDMI real-time digital diagnosis Limit the rate of incoming and outgoing packet traffic, with a minimum granularity of 16Kbps and a maximum of 1Gbps Port EEE Green Ethernet Energy-Saving configuration and status view Jumbo frame configuration, the largest 12000byte
Layer 3 Function	ARP protocol, 1024 entries at most RIPv1/v2, RIPng , OSPFv1/v2, OSPFv3 Support L2+network management function, support 128 entries of IPv4/IPv6 static routes, and dual stack management
VLAN	VLAN based on MAC, VLAN based on the protocol Port configuration of Access, Trunk, Hybrid. GVRP VLAN protocol (4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration
Port Aggregation	LACP, Static aggregation Max 14 aggregation groups and 8 ports per group.
Spanning Tree	STP BPDU Guard, BPDU filtering and BPDU forwarding

	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
ERPS Ring Network	Support ERPS ring network, ring network self-healing time is less than 20ms, ITU-T G.8032
Multicast	MLD Snooping, IGMP Snooping, Multicast VLAN User quick log out, MVR (Multicast LAN registration) IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	Bidirectional traffic mirroring for basic ports Supports one-to-multiple mirroring, supports up to 4 port sessions
QoS	Queue Scheduling Algorithm (SP, WRR, SP+WRR) Flow-based Rate Limiting, Stream based redirection Flow-based Packet Filtering, 8*Output queues of each port 802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/Remark
ACL	ACL distribution based on port and VLAN L2-L4 packet filtering function, matching the first 80 bytes message, and provides ACL definitions 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, etc.
Security	Port based IEEE802.1X authentication SSL guarantees data transmission security Quad binding function of IP+MAC+VLAN+ports MAC address learning limit, MAC address black hole Anti DoS attack, Port broadcast message suppression IP Source Guard function, AAA&RADIUS certification Hierarchical user management and password protection SSH 2.0 provides a secure encrypted channel for user login Host data backup mechanism, ARP intrusion detection function Port isolation, IP Source Guard, ARP message speed limit function
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	Web network management (https)

	<p>Link Layer Discovery Protocol(LLDP)</p> <p>Viewing CPU Instant Utilization Status</p> <p>NTP clock, One click restore, SNMP V1/V2/V3</p> <p>Cable status check, Ping detection, System work log</p> <p>ONV NMS platform cluster management (LLDP+SNMP)</p> <p>Console/AUX Modem/Telnet/CLI command line configuration</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</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 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>

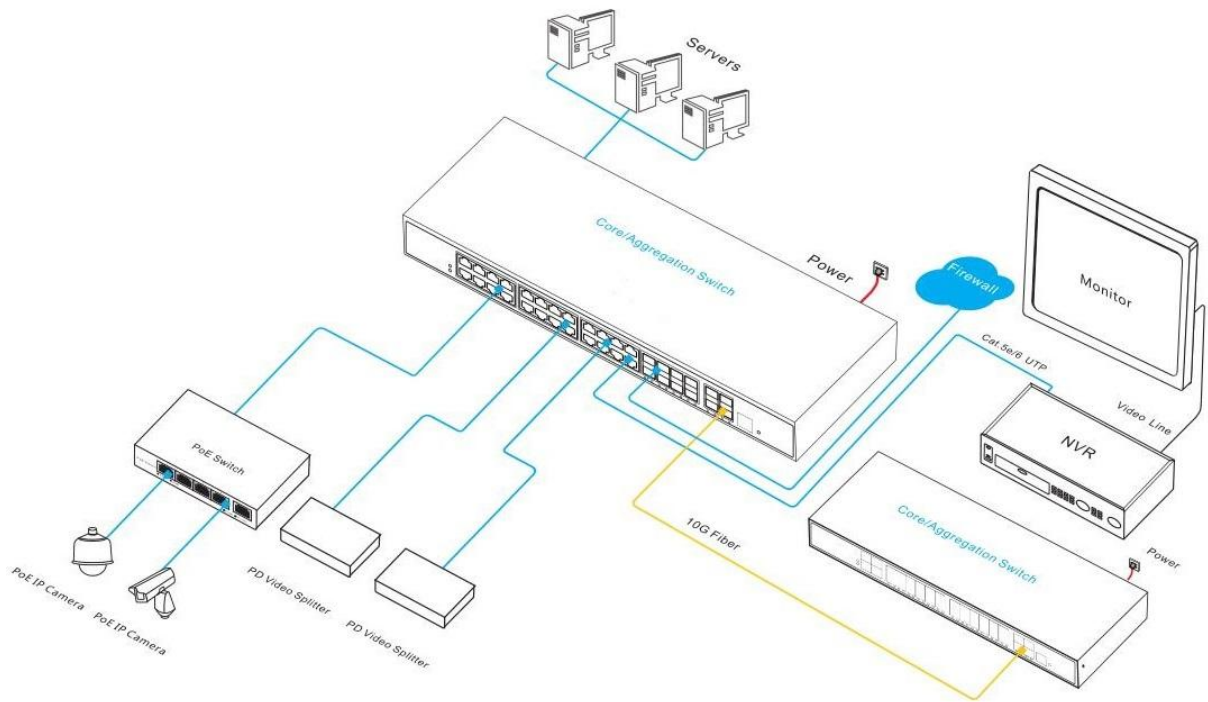
## DIMENSION



- A. Working indicator
- B. 24\*10/100/1000M PoE ports
- C. 8\*100/1000M SFP ports (Combo port)
- D. 4\*1/10G SFP+ 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-POE56036PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP fiber ports (Combo port) and 4*1/10G SFP+ fiber slot ports. Port 1-24 can support	400W
ONV-POE56036PFM-at	IEEE802.3af/at PoE standard. Support 1U/19 inch rack installation.	600W

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

## PACKING LIST

Packing List	Content	Qty	Unit
	36-port 10G uplink 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 Optical Module	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
	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
	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
	2613-R	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2612-T-SC	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC	PC

		interface, support DDM function, support hot plug and pull.	
	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	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, support hot plug and pull.	PC
	7832	SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	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
	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

## RELATED PRODUCT

Model	Description
ONV-POE56028PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber ports. Port 1-24 can support IEEE802.3af/at PoE standard. Built-in 400W power supply. Support 1U/19 inch rack installation.

ONV-POE56052PFM

L2+ managed PoE fiber switch with 48\*10/100/1000M RJ45 ports and 4\*1/10G SFP+ fiber ports. Port 1-48 can support IEEE802.3af/at PoE standard. Built-in 600W power supply. Support 1U/19 inch rack installation.

## CONTACT US

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