

Product Datasheet

12-port 2.5G Managed PoE Switch

(ONV-POE57128PFM)



OVERVIEW

The ONV-POE57128PFM is a 2.5G managed PoE fiber switch independently developed by ONV. It has 8*10/100/1000/2500Base-T adaptive RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Port 1-8 can support the IEEE802.3af/at PoE standard, and the single-port max PoE power is 30W. As a PoE power supply device, it can automatically detect and identify powered devices that meet standards and power them through network cables. It can power PoE terminal equipment such as wireless APs, IP cameras, Internet telephones, video access control intercoms, etc., through network cables to meet the network environment that requires a high-density PoE power supply. It is suitable for hotels, campuses, factories, parks, supermarkets, and small and medium-sized enterprises to establish cost-effective networks.

The ONV-POE57128PFM has L3 network management functions, supports IPV4/ IPV6 management, dynamic routing and forwarding, complete security protection mechanism,

complete ACL/QoS policy, and rich VLAN functions for easy management and maintenance. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure uninterrupted communication for important applications. According to application needs, PoE power supply management, port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other application service configurations are performed through network management methods such as Web, CLI, SNMP, and Telnet.

FEATURE

■ 2.5G access, uplink 1/10G SFP+ fiber port

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE 802.3x and half-duplex based on Backpressure.
- ◇ Support 2.5G RJ45 port and 1/10G uplink SFP+ fiber port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ Smart PoE power supply

- ◇ Comply with IEEE802.3af/at PoE standard, automatically identify PoE devices for power supply, and not damage non-PoE devices.
- ◇ 8*10/100/1000/2500Base-T RJ45 ports support PoE power to meet security monitoring, conference call systems, wireless coverage, and other scenarios.
- ◇ The PoE port supports the priority mechanism. When the remaining power is insufficient, the power of the high-priority port is given priority to avoid overloading of the device.
- ◇ Support PoE network management function, which can be configured through the network management to realize PoE port on/off, port power status check, time scheduling, etc.

■ 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.

■ Security

- ◇ Support port isolation and port broadcast storm suppression.
- ◇ IP+MAC+port+VLAN quadruple flexible combination binding function.
- ◇ Support 802.1X authentication, provide authentication function 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, SYS, Link, L/A, and PoE.
- ◇ Low power consumption, galvanized steel housing, and excellent heat dissipation to ensure stable operation of the switch.

■ Easy O&M management

- ◇ Support CPU monitoring, memory monitoring, Ping detection, and cable length detection.
- ◇ HTTPS, SSLV3, SSHV1/V2, and other encryption methods are more secure in management.

- ◇ RMON, 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-POE57128PFM	ONV-POE57128PFM-at
Interface Characteristics		
Fixed Port	1*Console RS232 port (115200, N, 8,1)	
	4*1/10G uplink SFP+ fiber ports (Data)	
	8*10/100/1000/2500Base-T PoE ports (Data/ Power)	
Ethernet Port	Port 1-8 can support 10/100/1000/2500Base-T 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 or later UTP (≤100 meters)	
	2500BASE-T: Cat6a or later UTP (≤100 meters)	
Optical Fiber Port	Default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)	
Optical Cable/ Distance	Multi-mode: 850nm/ 0-550m, 0-300m(10G), Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km	
Chip Parameter		
Network Management Type	L3	
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3bz	

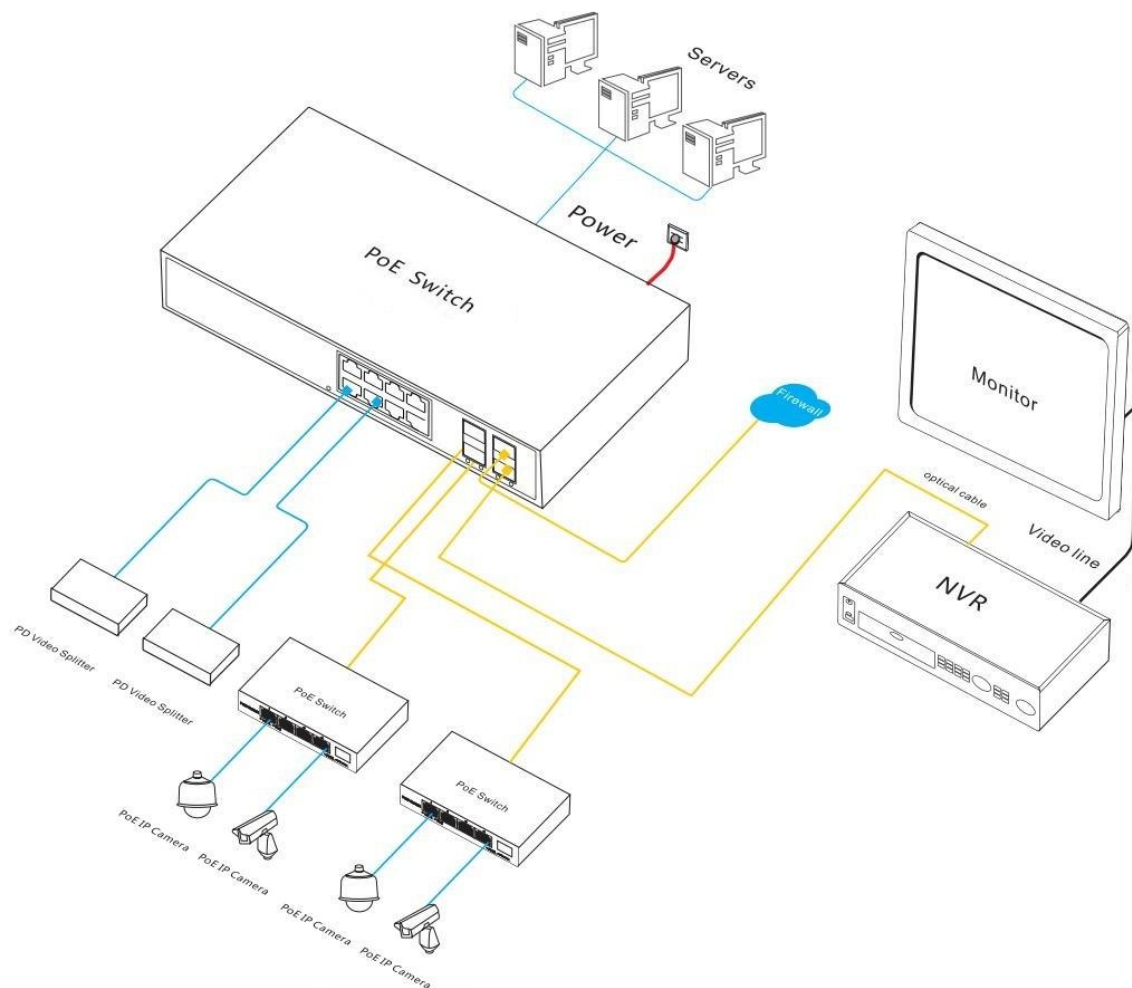
	2.5GBase-T, IEEE802.3ae 10GBase-SR/LR, IEEE802.3x	
Forwarding Mode	Store and forward (Full wire speed)	
Switching Capacity	96Gbps (non-blocking)	
Forwarding Rate@64byte	89.28Mpps	
CPU(Hz)	Dual Core 1G	
DRAM	2G	
FLASH	256M	
MAC	32K	
Buffer Memory	16M	
Jumbo Frame	12K	
LED Indicator	Power/ System: SYS (Green), Network: Link (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	
PoE& Power Supply		
PoE Port	Port 1-8	
PoE Management	Port PoE working status display, Port PoE on/off, af/at power allocation	
Power Supply Pin	1/2(+) 3/6 (-)	
Max Power Per Port	30W, IEEE802.3 af/at	
Total PWR/ Input Voltage	130W/ (AC100-240V)	250W/ (AC100-240V)
Power Consumption	Standby<13W, full load<130W	Standby<13W, full load<250W
Power Supply	Built-in power supply, AC100-240V 50-60Hz, 2.3A	Built-in power supply, AC100-240V 50-60Hz, 4.8A
Physical Parameter		
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)	270*181*44.5mm	
Net /Gross Weight	1.45kg/ 2.1kg	1.6kg/ 2.2kg
Installation	Desktop, 1U/19” cabinet	

Certification& Warranty	
Lightning Protection	Protection level: IP30, Lightning protection: 4KV 8/20us
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Feature	
Interface	<p>Port real-time flow management (Flow Interval)</p> <p>Broadcast storm suppression based on port rate</p> <p>SFP optical module DDMI real-time digital diagnosis</p> <p>Port IEEE 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>Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6</p> <p>VLANIF interfaces for IPV4/IPV6, up to 64 entries</p> <p>IPV4/IPV6 static routing/default routing, up to 64 entries</p> <p>NG protocol max 1000 entries, ARP protocol max 1000 entries</p> <p>IPV4 equal cost routing, VRRP for IPV4/IPV6, up to 255 entries</p> <p>IPV4 dynamic routing, RIPv1/v2, OSPFv2, routing 2000 entries</p> <p>L3 network management function, IPV4/ IPV6 dual-stack management</p> <p>L3 routing and forwarding, support communication between different network segments and different VLAN</p>
VLAN	<p>Port configuration of Access, Trunk, Hybrid, IEEE 802.1q</p> <p>Voice VLAN, GVRP VLAN protocol, Port-based VLAN (4K)</p> <p>Protocol-based VLAN, MAC address-based VLAN, QinQ configuration</p>
Port Aggregation	LACP dynamic aggregation, Static aggregation, Max 6 aggregation groups and max 8 ports per group.
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

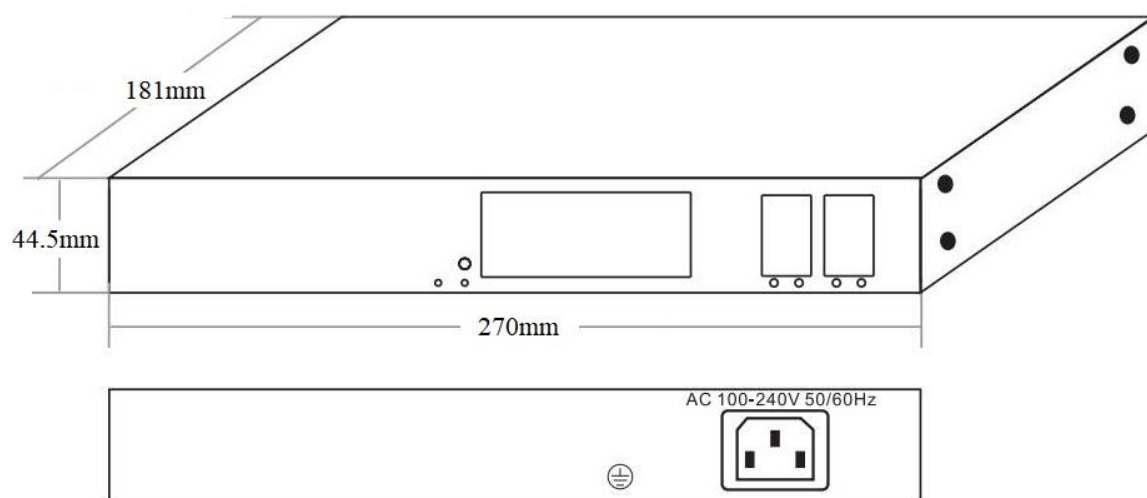
Multicast	Multicast VLAN, User quick log out, MLD Snooping, MVR (Multicast VLAN Registration), IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	Bidirectional traffic mirroring for basic ports one-to-multiple mirroring, supports up to 4 port sessions
QoS	Flow-based Rate Limiting, Flow-based redirection Queue Scheduling Algorithm (SP, WRR, SP+WRR) Flow-based Packet Filtering, 8*Output queues of each port 802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/Remark
ACL	ACL is issued based on port and VLAN L2-L4 packet filtering function can match the first 80 bytes of the message and provide ACL definition based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port range, VLAN, etc.
Security	Port based IEEE802.1X authentication Port isolation, IP Source Guard function 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 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 IP source address protection, ARP message speed limit function Support AAA, RADIUS, TACACS+ authentication (only supports authentication, not authorization and accounting)
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	System work log, Link Layer Discovery Protocol NTP clock, Cable length detection, SNMP V1/V2/V3 Ping detection, Web network management (HTTPS)

	<p>HTTP, TFTP file upload and download management</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, 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>

APPLICATION



DIMENSION



ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV-POE57128PFM	L3 managed PoE switch with 8*10/100/1000/2500M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Port	130W
ONV-POE57128PFM-at	1-8 can support IEEE802.3af/at PoE standard. It built-in power supply and 1U/19" cabinet installation.	250W

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

PACKING LIST

	Content	Qty	Unit
Packing List	12-port 2.5G managed PoE switch	1	Set
	RJ45-DB9 Adapter Cable	1	PC
	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. 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 TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC
10G Optical Module	6630	SFP+ optical module, 10G multi-mode dual fiber 850nm, transmission distance: 300m, LC interface. supports DDM function and hot plugging.	PC
	7832	SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	7832-33	SFP+ optical module, 10G single-mode single fiber TX1330nm/ RX1270nm, transmission distance: 20km, LC interface. supports	PC

		DDM function and hot plugging.	
	7832-27	SFP+ optical module, 10G single-mode single fiber TX1270nm/ RX1330nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC

CONTACT US



Optical Network Video Technologies (Shenzhen) Co., Ltd.

Tel: 0086-755-33376606

Fax: 0086-755-33376608

WeChat: ONV-PoE-IoT

Email: onv@onv.com.cn

Skype: onv@onv.com.cn

Teams: onv@onv.com.cn

Website: www.onvcom.com

Headquarter Address: Room 1003, Block D, Terra Building, Futian District, Shenzhen

Factory Address: Building B3, Galaxy Artificial Intelligence Industrial Park, No. 333,

Zhongkai 6th Road, Chenjiang Street, Zhongkai High-tech Zone, Huizhou

