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 SFP+ fiber ports. Port 1-8 support IEEE 802.3 af/at PoE standard and the single-port PoE power reaches 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 AP (WIFI6/WIFI7), IP cameras, Internet telephones, video access control intercoms, etc. through network cables to meet the network environment that requires 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 L2+ network management function, supports IPV4/IPV6 management, static route 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

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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

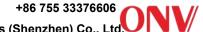◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE 802.3x and half-duplex based on Backpressure.

◇ Support 2.5G RJ45 port and 1/10G SFP+ port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ Smart PoE power supply

◇ Comply with IEEE 802.3 af/at PoE standard, automatically identify PoE devices for power supply, and not damage non-PoE devices.

◇ 8*10/100/1000/2500Base-T RJ45 port support PoE power, meeting the needs of security monitoring, teleconferencing system, 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 network management to enable PoE port opening/closing, port power status viewing, 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

◇ Port isolation and storm control.

◇ IP+MAC+port+VLAN quadruple flexible combination binding function.

◇ 802.1X authentication provides authentication functions for LAN computers, and controls the authorization status of controlled ports according to the authentication results.

■ Stable and reliable

◇ CCC,CE, FCC, and 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, no fan, aluminum alloy metal housing, and excellent heat dissipation to ensure the stable operation of the switch.

■ Easy O&M management

◇ 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.

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TECHNICAL SPECIFICATION

Model	ONV-POE57128PFM	ONV-POE57128PFM-at
Interface Characteristics		
Fixed Port	1*RS232 console 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	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, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km	
Chip Parameter		
Network Management	L2+	
Network Protocol	IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3bz 2.5GBase-T, IEEE 802.3ae 10GBase-SR/LR, IEEE 802.3x	
Forwarding Mode	Store and Forward (Full Wire Speed)	
Switching Capacity	96Gbps (non-blocking)	
Forwarding Rate @64byte	89.28Mpps	
CPU	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), Rate: 100/1000 (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 real-time load power display, Port PoE output on/off, PoE work and time scheduling	
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<13W, Full load<120W	Standby<15W, Full load<240W
Power Supply	Built-in power supply, AC100-240V 50-60Hz, 2.3A	Built-in power supply, AC100-240V 50-60Hz, 4.0A
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" Rack	
Certification & Warranty		
Lightning Protection	Protection level: IP30, Lightning protection: 4KV 8/20us	
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS	

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Warranty	3 years, lifelong maintenance.
Network Management Feature	
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 Port EEE Green Ethernet Energy-Saving configuration and status view Limit the rate of packet traffic on incoming and outgoing ports, mini granularity is 16Kbps and max is 1Gbps
L3 Feature	L2+ network management function, dual-stack IPv4/IPv6 management Static routing, RIPv1/v2, RIPng, OSPFv1/v2, OSPFv3, ARP protocol max entries 1024
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 dynamic aggregation, Static aggregation, Max 6 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	ERPS ring network, ring network recovery time less than 20ms, ITU-T G.8032
Multicast	MLD Snooping, Multicast VLAN User quick log out, 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	Queue Scheduling Algorithm (SP, WRR, SP+WRR) Flow-based Rate Limiting, Stream based redirection

7	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) Link Layer Discovery Protocol(LLDP) Viewing CPU Instant Utilization Status NTP clock, One click restore, SNMP V1/V2/V3 Cable status check, Ping detection, System work log ONV NMS platform cluster management (LLDP+SNMP) Console/AUX Modem/Telnet/CLI command line configuration FTP, TFTP, Xmodem, SFTP file upload and download management
System	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable TCP/IP, network adapter, and network operating system (such as

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8	Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable

DIMENSION

APPLICATION

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ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV-POE57128PFM	L2+ managed PoE switch with 8*10/100/1000/2500M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It built-in power supply and 1U/19" cabinet installation.	130W
ONV-POE57128PFM-at		250W
Note: The optical module is not included and needs to be purchased.		

PACKING LIST

Packing List	Content	Qty	Unit
	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

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	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
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. 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 DDM function and hot plugging.	PC
	7832-27	SFP+ optical module, 10G single-mode single fiber TX1270nm/ RX13300nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC

CONTACT US

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