Product Datasheet

28-port 10G Uplink L3 Managed PoE Switch

(ONV-POE58028PFM)

OVERVIEW

The ONV-POE58028PFM is a 10G uplink L3 managed PoE switch independently developed by ONV. It has 24*10/100/1000Base-T RJ45 ports 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 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-POE58052PFM 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 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 SFP+ 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+ uplink 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.

■ **Security**

◇ 802.1X authentication.

◇ Port isolation,Storm control.

◇ IP-MAC-VLAN-Port binding.

■ **Strong business processing capability**

◇ ERPS/STP/RSTP/MSTP.

◇ Static and dynamic aggregation.

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◇ IGMP V1/V2 and IGMP Snooping.

◇ IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN, and QinQ configuration.

◇ QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.

◇ ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.

■ **Stable and reliable**

◇ CCC,CE, FCC, RoHS.

◇ Low power consumption, with fan, galvanized steel casing.

◇ The user-friendly panel 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**

◇ HTTPS, SSLV3, and SSHV1/V2.

◇ RMON, system log, LLDP, and port traffic statistics.

◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

TECHNICAL SPECIFICATION

Model	ONV-POE58028PFM	ONV-POE58028PFM-at
Interface Characteristics		
Fixed Port	1*Console RS232 port (115200,N,8,1) 4*1/10G uplink SFP+ fiber slot ports (Data) 24*10/100/1000Base-T PoE ports (Data/Power)	

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Ethernet Port	Port 1-24 can support 10/100/1000BaseT 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 optical fiber port and 10G SFP+ optical fiber port, 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(1G), 850nm/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 IEEE802.3ae 10GBase-LR/SR, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	336Gbps (non-blocking)
Forwarding Rate@64byte	95.23Mpps
CPU	800MHz
DRAM	1GB
FLASH	128MB
MAC	16K
Buffer Memory	12MB
Jumbo Frame	12KB

LED Indicator	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 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

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)	440*290*44.5mm	
Net /Gross Weight	<5.0kg / <5.5kg	<5.3kg / <5.8kg
Installation	Desktop type ,19 inch 1U cabinet installation	

Certification & Warranty

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.

Network Management Features

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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 Features	IPV4 Equal Cost Routing
	NG protocol, maximum 1000 entries
	ARP protocol, maximum 1000 entries
	Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6
	IPV4/IPV6 VRRP, the maximum group is 255
	IPV4/IPV6 VLANIF interface supports up to 128
	IPV4/IPV6 static route/default route supports up to 128 entries
	IPV4 dynamic routing, RIPv1/v2, OSPFv2, BGP4+, 4000 routing entries
	IPV6 dynamic routing OSPFv3, BGP+, RIPng, IPV6 management, 1000 routing entries
	L3 network management function, IPV4/IPV6 dual-stack management
	Layer 3 routing and forwarding, support communication between different network segments and different VLANs
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 1-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) Link Layer Discovery Protocol(LLDP)

	Viewing CPU Instant Utilization Status
	NTP clock, One click restore, SNMP V1/V2C/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	Category 5 Ethernet network cable
	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later
	TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

DIMENSION
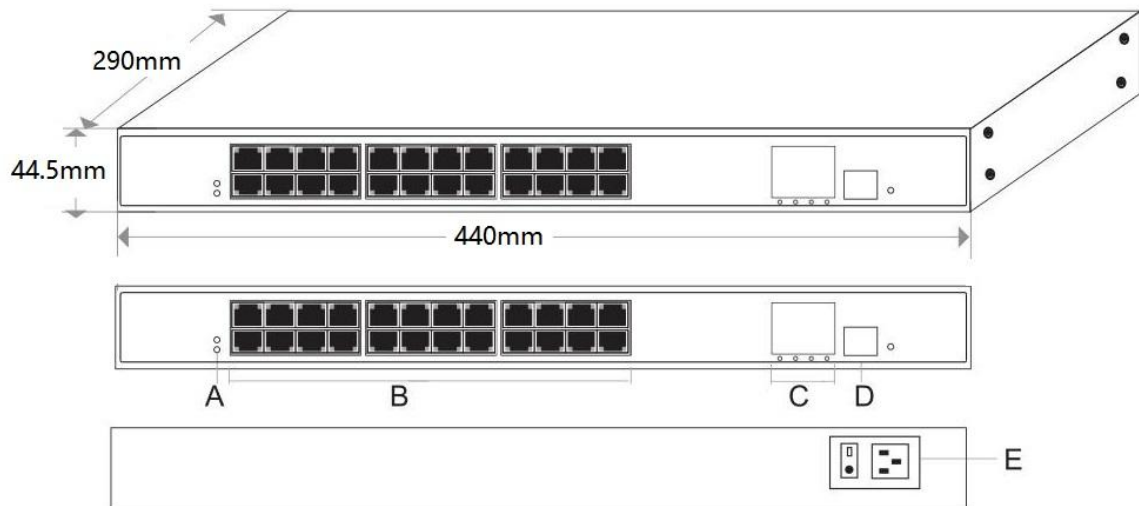
A. Working indicator

B. 24*10/100/1000M PoE ports

C. 4*1/10G SFP+ ports

D. Console port

E. Power input port AC100- 240V, 50/60Hz

APPLICATION
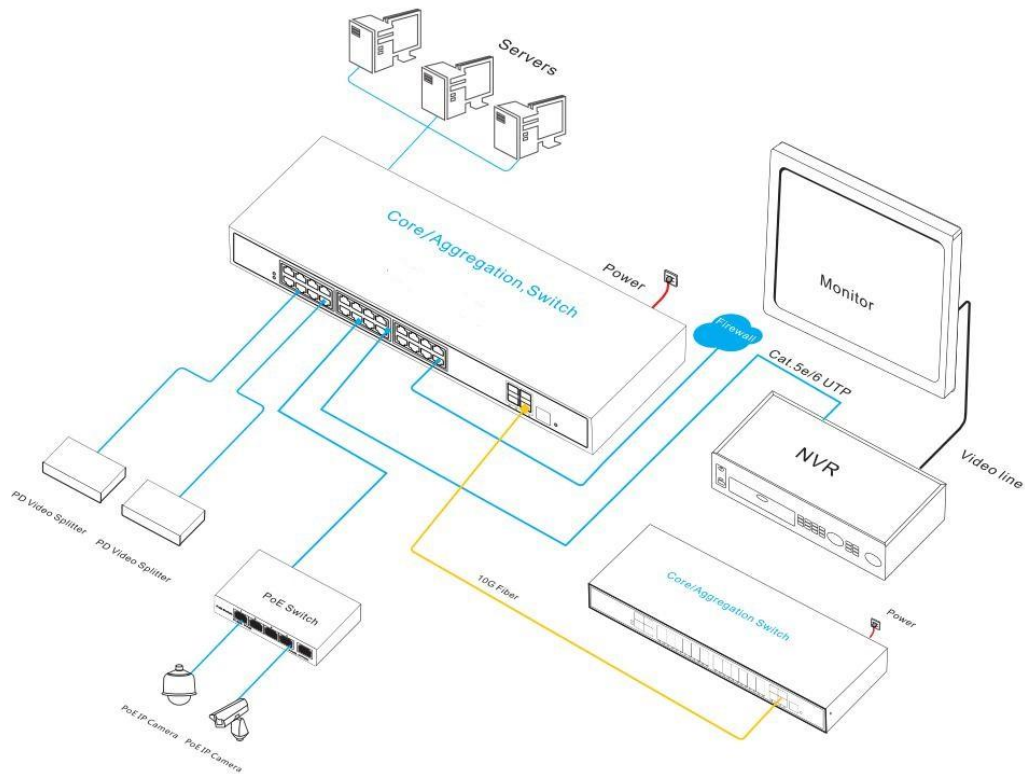
ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV-POE58028PFM	L3 managed PoE fiber switch with 4*1/10G SFP+ fiber ports and 24*10/100/1000M RJ45 ports. Port 1-24 can support IEEE802.3af/at PoE standard. Support 1U/19 inch rack installation.	400W
ONV-POE58028PFM-at		600W
Note: The SFP optical module is not included by default and needs to be purchased separately.		

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PACKING LIST

Packing List	Content	Qty	Unit
	28-port 10G uplink L3 managed PoE switch	1	SET
	AC Power Cable	1	PC
	RJ45-DB9 Line	1	PC
	Mounting Kits(Hanging Ear)	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 interface, support DDM function, support hot plug and pull.	PC

	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-POE58036PFM	L3 managed PoE switch with 16*10/100/1000M RJ45 ports and 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP combo ports and 4*1/10G SFP+ ports.Port 1-24 support IEEE802.3af/at PoE standard. Support 1U/19 inch rack installation.
ONV-POE58052PFM	L3 managed PoE switch with 48*10/100/1000M RJ45 ports and 4*1/10G SFP+ ports. Port 1-48 support IEEE802.3af/at PoE standard. Support 1U/19 inch rack installation.

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