Product Datasheet

20-port Full Gigabit Managed PoE Switch

(ONV-POE33020PFM)

OVERVIEW

The ONV-POE33020PFM is a full Gigabit L2+ managed PoE fiber switch independently developed by ONV. It has 16*10/100/1000Base-T adaptive RJ45 ports and 4*100/1000Base-X SFP slot ports. Port 1-16 can support IEEE 802.3 af/at PoE standard, and single-port PoE power up to 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, IP camera, Internet telephone, and building visual access control intercoms through network cables to meet network environments that require high-density PoE power supply. It is suitable for hotels, campuses, parks, supermarkets, scenic spots, factory dormitories, and SMB small and medium-sized enterprises to establish cost-effective networks.

The ONV-POE33020PFM has L2+ network management functions. It supports IPV4 management and static routing forwarding, complete security protection mechanisms, complete ACL/QoS policies, and rich VLAN functions, making it easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure uninterrupted communication of important transmissions. According to application needs, PoE power supply management, port flow control, VLAN division, QoS, and other application service configurations can be performed through network management methods such as Web, CLI, SNMP, and Telnet.

FEATURE

Full Gigabit access, Gigabit SFP port uplink

◇ Support non-blocking line-speed forwarding, making transmission smoother.

◇ Support IEEE 802.3x full-duplex flow control and Backpressure half-duplex flow control.

◇ Support Gigabit Ethernet port and Gigabit SFP port uplink combination to facilitate users' flexible networking and meet the networking needs of various scenarios.

Intelligent PoE power supply

◇ Comply with IEEE 802.3 af/at PoE power supply standard, automatically identify PoE equipment for power supply.

◇ 16*10/100/1000Base-T RJ45 ports support PoE power to meet the power supply needs of security monitoring, conference call systems, wireless coverage, and other scenarios.

◇ PoE ports support priority mechanism. When the remaining power is insufficient, priority is given to ensuring the power supply of high-priority ports to avoid equipment overload.

◇ Support PoE network management function, which can realize power allocation of each PoE port, priority setting, port power status viewing, time scheduling, etc. through network management configuration.

Strong business processing capability

◇ Support IEEE 802.1Q VLAN and protocol VLAN, users can flexibly divide VLAN according to needs.

◇ Ring network STP/RSTP/MSTP spanning tree protocol eliminates layer 2 loops and realizes link backup.

◇ Support QoS, three priority modes based on port, 802.1P-based and DSCP-based, and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.

◇ Support ACL to filter data packets by configuring matching rules, processing operations, and time permissions to provide flexible security access control strategies.

◇ Support IGMP V1/V2 multicast protocol and IGMP Snooping to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.

◇ Static aggregation and dynamic aggregation effectively increase link bandwidth, achieve load balancing, and link backup, and improve link reliability.

■ 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.

■ Stable and reliable

◇ CCC, CE, FCC, RoHS.

◇ The user-friendly panel can show the device status through the LED indicator of PWR, PoE, and Link.

◇ Using self-developed power supply with high redundancy design provides long-term and stable PoE power output.

◇ Low power consumption, with fan, galvanized steel metal casing, excellent heat dissipation to ensure the stable operation of the switch.

■ Easy O&M management

◇ CPU monitoring, memory monitoring, Ping detection, cable detection.

◇ HTTPS, SSLV3, SSH V1/V2 and other encryption methods make management more secure.

◇ RMON, system logs, and port traffic statistics facilitate network optimization and transformation.

◇ LLDP facilitates the network management system to query and determine the communication status of the link.

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

TECHNICAL SPECIFICATION

Model	ONV-POE33020PFM	ONV-POE33020PFM-at
Interface Characteristics		
Fixed Port	1*Console RS232 port (115200,N,8,1) 4*100/1000Base-X uplink SFP ports (Data) 16*10/100/1000Base-T PoE ports (Data /Power)	
Ethernet Port	Port 1-16 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 or later UTP(≤100 meters)	
SFP Slot Port	Gigabit SFP optical fiber interface, default no include optical modules (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 Type	L2+	
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3x	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	56Gbps	
Forwarding Rate@64byte	29.76Mpps	
CPU(Hz)	500M	
DRAM	1G	

Flash	256M	
MAC	8K	
Buffer Memory	4.1M	
Jumbo Frame	10K	
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow) Network: Link (Yellow), POE: PoE (Green), Fiber port: L/A (Green)	
Reset Switch	Yes, One-button factory reset	
PoE & Power Supply		
PoE Port	Port 1 to 16	
PoE Management	Port PoE output priority configuration PoE power supply total power limit configuration PoE work and time scheduling, Port PoE working status display Port PoE output power distribution, PoE on/off, af/at power distribution	
Power Supply Pin	1/2(+) 3/6(-)	
Max Power Per Port	30W, IEEE 802.3 af/at	
Total PWR / Input Voltage	250W/ (AC100-240V)	400W/ (AC100-240V)
Power Consumption	Standby<16W, Full load< 240W	Standby<18W, Full load< 380W
Power Supply	Built-in power supply. AC100~240V 50-60Hz, 4.1A	Built-in power supply. AC100~240V 50-60Hz, 5.0A
Physical Parameter		
Operation TEMP/ Humidity	-20°C~+55°C, 5%~90% RH Non condensing	
Storage TEMP/ Humidity	-40°C~+75°C, 5%~95% RH Non condensing	
Dimension (L*W*H)	440*290*44.5mm	
Net /Gross Weight	<4.0kg / <4.5kg	<4.2kg / <4.7kg
Installation	Desktop, 19-inch 1U cabinet	

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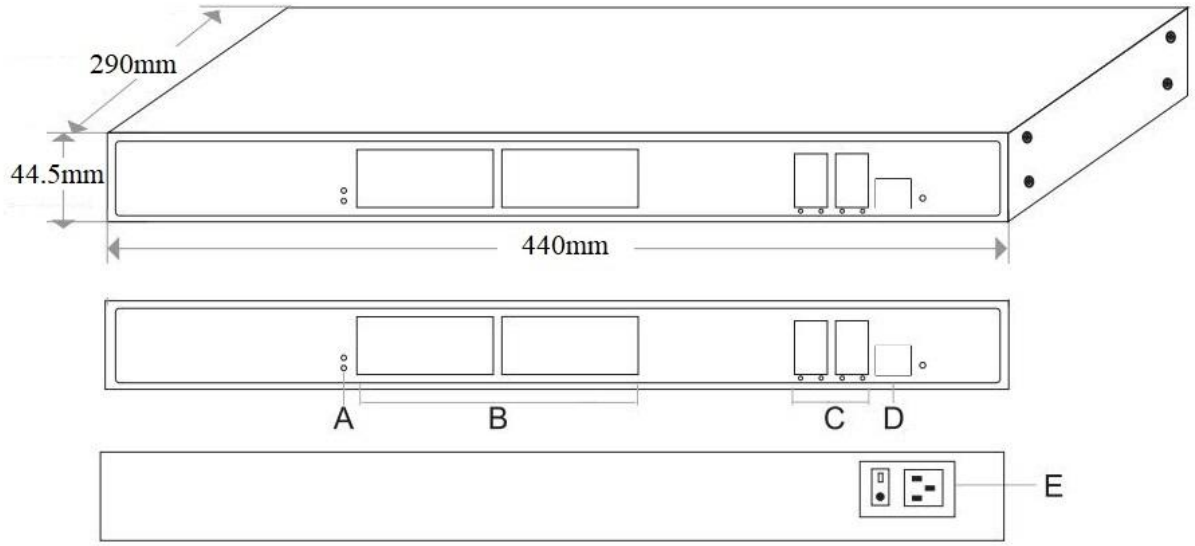
Certification & Warranty	
Lightning Protection	Lightning protection: 4KV 8/20us, Protection level: IP30
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Features	
Interface	IEEE802.3x flow control (Full duplex) Broadcast storm suppression based on port rate Port real-time traffic management (Flow Interval) Limit the rate of packet traffic on incoming and outgoing ports, with mini granularity is 16Kbps and max is 1Gbps
Layer 3 Features	IPV4 static route/default route, max entries 128 L2+ network management function, ARP protocol, max 1024 entries
VLAN	Port-based VLAN (4K), VLAN based on the protocol IEEE802.1q, Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP dynamic aggregation, static aggregation Max 10 aggregation groups and 8 ports per group
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	Multicast VLAN, User quick exit mechanism IGMP Snooping v1/v2, Max 1024 multicast groups
Port Mirroring	Bidirectional data mirroring based on port
QoS	Queue scheduling algorithm (SP, WRR, SP+WRR) Flow-based rate limiting, Flow-based packet filtering Flow-based based redirection, 8*Output queues of each port 802.1p/ DSCP priority mapping, Diff-Serv QoS, Priority Mark/ Remark
ACL	Port-based and VLAN-delivered ACL The L2-L4 packet filtering function can match the first 80 bytes of the packet and provide information based on source MAC address, destination MAC address, source IP address, destination IP address, IP

	protocol type, TCP/UDP port, TCP/UDP port range, and VLAN Wait to define the ACL.
Security	ARP intrusion detection function ARP message rate limiting function Port-based IEEE802.1X certification Port broadcast message suppression SSL ensures data transmission security Port isolation, IP source address protection Host data backup mechanism, Anti-DoS attack Limit on the number of MAC addresses learned AAA&RADIUS certification, MAC address black hole User hierarchical management and password protection SSH 2.0 provides a secure encrypted channel for user login
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	Web network management (https) View CPU real-time utilization status Link Layer Discovery Protocol (LLDP) NTP clock, SNMP V1/V2/V3, System work log One click recovery, Ping detection, Cable status check ONV NMS platform cluster management (LLDP+SNMP) Console/ AUX Modem/ Telnet/ SSH2.0 and CLI configuration FTP, TFTP, Xmodem, SFTP file upload and download management
System	Category 5 and above Ethernet cables Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Microsoft Internet Explorer 10 or higher TCP/IP, network adapters, and network operating systems (such as Microsoft Windows, Linux, or Mac OS X) are installed on each computer in the network over Category 5 and above Ethernet cables.

DIMENSION

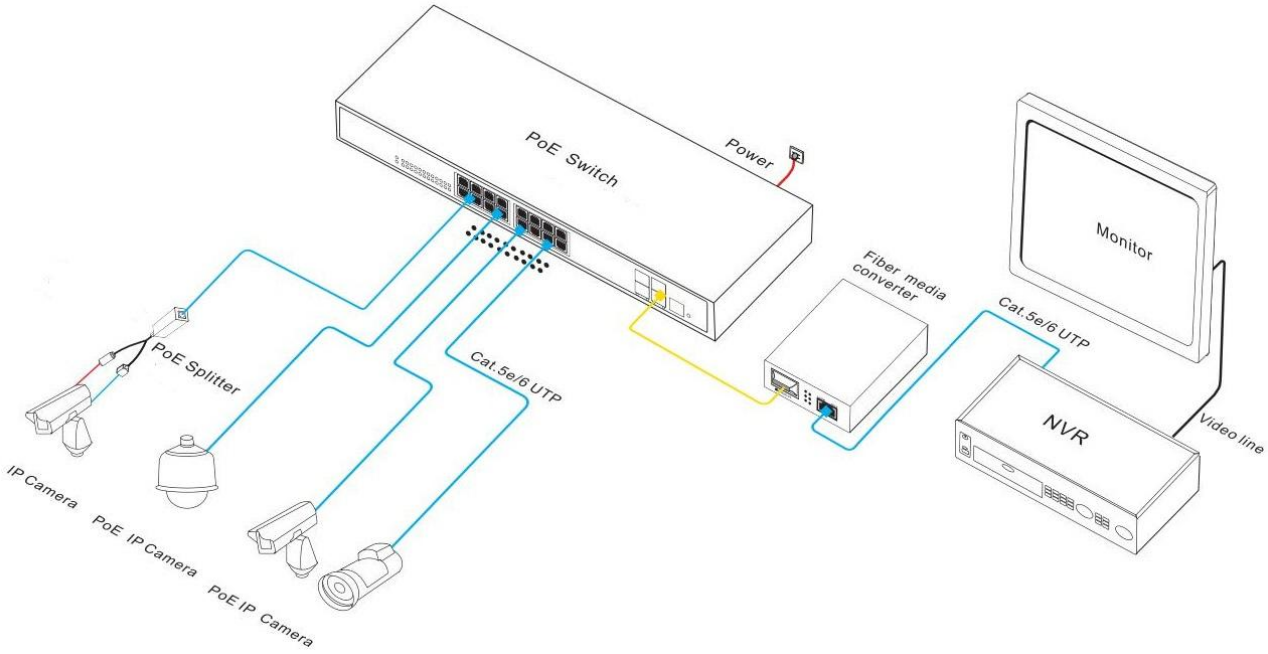


A. Working indicator B. 16*10/100/1000M PoE ports

C. 4*100/1000M SFP ports D. Console port

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

APPLICATION



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ORDERING INFORMATION

Model	Description	Power Supply
ONV-POE33020PFM	L2+ managed PoE switch with 16*10/100/1000M RJ45 ports and 4*100/1000M SFP ports. Port 1-16 can support IEEE 802.3 af/at PoE standard. Built-in power supply and support 1U/19-inch cabinet mount.	250W
ONV-POE33020PFM-at		400W
Note: Does not include optical module and purchase additionally as needed.		

PACKING LIST

	Content	Qty	Unit
Packing List	20-port full gigabit managed PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	AC Power Cable	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. 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	PC

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		TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	
	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

RELATED PRODUCT

Model	Description
ONV-POE33010PFM	L2+ managed PoE fiber switch with 8*10/100/1000M RJ45 ports and and 4*10/1000M SFP ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. Built-in 130W power supply.
ONV-POE33026PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 2*100/1000M SFP ports(Combo port). Port 1-24 can support IEEE 802.3 af/at PoE standard. Built-in 400W power supply.
ONV-POE33028PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. Built-in 400W power supply.
ONV-POE36036PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP ports and 4*1/10G SFP+ ports. Port 1-24 can

	support IEEE 802.3 af/at PoE standard. Built-in 400W power supply.

CONTACT US

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