

## Product Datasheet

# 20-port Full Gigabit Managed PoE Switch

## ONV-POE33020PFM



## OVERVIEW

The ONV-POE33020PFM is a gigabit L2+ managed PoE fiber switch independently developed by ONV. It has 16\*10/100/1000Base-T RJ45 ports and 4\*100/1000Base-X SFP fiber slot ports. Port 1-16 can support IEEE802.3af/at standard PoE power supply. single port PoE power reaches 30W, and the maximum PoE output power is 250W(at-400W). 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 through network cable, to meet the network environment that needs high-density PoE power supply, suitable for hotels, campuses, parks, supermarkets, scenic spots, Factory quarters and SMB small and medium-sized enterprises form a cost-effective network.

The ONV-POE33020PFM has the L2+ full network management, support IPV4 management, static route full line rate forwarding, 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) 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, Gigabit SFP fiber port uplink

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

### ■ Intelligent PoE power supply

- ◇ 16\*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.
- ◇ IEEE802.3af/at PoE standard, without damaging non-PoE devices.
- ◇ 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.
- ◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.

### ■ Strong business processing capability

- ◇ IEEE802.1Q VLAN, flexible VLAN division 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.
- ◇ IGMP V1/V2 and IGMP Snooping.
- ◇ STP/RSTP/MSTP.

◇ Static and dynamic aggregation.

### ■ Security

- ◇ 802.1X authentication.
- ◇ Port isolation, Storm control.
- ◇ IP-MAC-VLAN-Port binding.

### ■ Stable and reliable

- ◇ Low power consumption, galvanized steel casing, The fan active cooling.
- ◇ Self-developed power supply, high redundancy design, providing a long term and stable PoE power output.
- ◇ CCC, CE, FCC, RoHS.
- ◇ The user-friendly pane can show the device status through the LED indicator of PWR, Link, PoE.

### ■ Easy operation and maintenance management

- ◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).
- ◇ HTTPS, SSLV3, and SSHV1/V2.
- ◇ RMON, system log, LLDP, and port traffic statistics.
- ◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

## TECHNICAL SPECIFICATION

Model	ONV-POE33020PFM	ONV-POE33020PFM-at
<b>Interface Characteristics</b>		
Fixed Port	16*10/100/1000Base-T PoE ports (Data/Power) 4*100/1000Base-X uplink SFP slot ports (Data)	

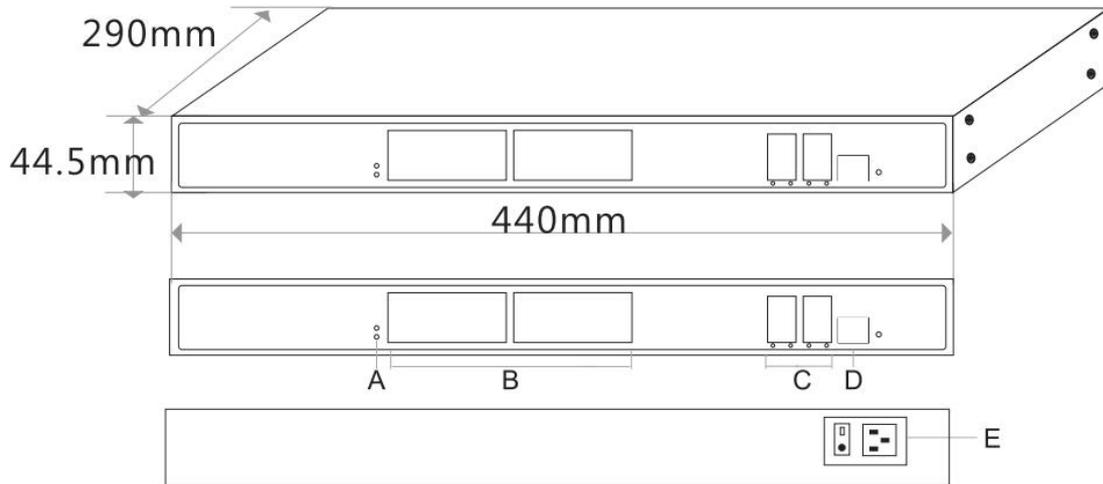
	1*RS232 console port(115200,N,8,1)
Ethernet Port	Port 1-16 can support 10/100/1000Base-T(X) auto-sensing, Full/half duplex MDI/MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)
SFP Slot 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.
<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, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	192Gbps
Forwarding Rate@64byte	29.76Mpps
MAC	8K
Buffer Memory	4.1M
Jumbo Frame	10K
CPU(Hz)	500M
DRAM	1G
Flash	256M
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	
<b>PoE &amp; Power Supply</b>		
PoE Port	Port 1 to 16 IEEE802.3af/at @ POE	
PoE Management	PoE working status Delay start of power supply PoE output priority configuration Total power limit of PoE power supply Scheduling of PoE operation and time PoE output power allocation, off & af & at	
Power Supply Pin	Default 1/2 (+), 3/6 (-)	
Max Power Per Port	30W, IEEE802.3af/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. AC 100~240V 50-60Hz 4.1A	Built-in power supply. AC 100~240V 50-60Hz 5.0A
<b>Physical Parameter</b>		
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	<4.0kg / <4.5kg	<4.2kg / <4.7kg
Installation	Desktop, 19 inch 1U cabinet	
<b>Certification &amp; Warranty</b>		
Lightning Protection	Lightning protection: 6KV 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	<p>IEEE802.3X (Full-duplex)</p> <p>Port temperature protection setting</p> <p>Port green Ethernet Energy-saving setting</p> <p>Broadcast storm control based on port speed</p> <p>The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.</p>
Layer 3 Features	<p>L2+ Network management, IPV4 management</p> <p>L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs</p>
VLAN	<p>4K VLAN based on port, IEEE802.1q</p> <p>Port configuration of Access, Trunk, Hybrid</p> <p>VLAN based on MAC, VLAN based on the protocol, QinQ configuration</p>
Port Aggregation	<p>LACP, Static aggregation</p> <p>Max 10 aggregation groups and 8 ports per group.</p>
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	<p>IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out</p> <p>MLD Snooping v1/v2, Multicast VLAN</p>
Port Mirroring	Bidirectional data mirroring based on port
QoS	<p>Flow-based Rate Limiting</p> <p>Flow-based Packet Filtering</p> <p>8*Output queues of each port</p> <p>802.1p/DSCP priority mapping</p> <p>Diff-Serv QoS, Priority Mark/Remark</p> <p>Queue Scheduling Algorithm (SP, WRR, SP+WRR)</p>
ACL	<p>Port-based Issuing ACL, ACL based on port and VLAN</p> <p>L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP</p>

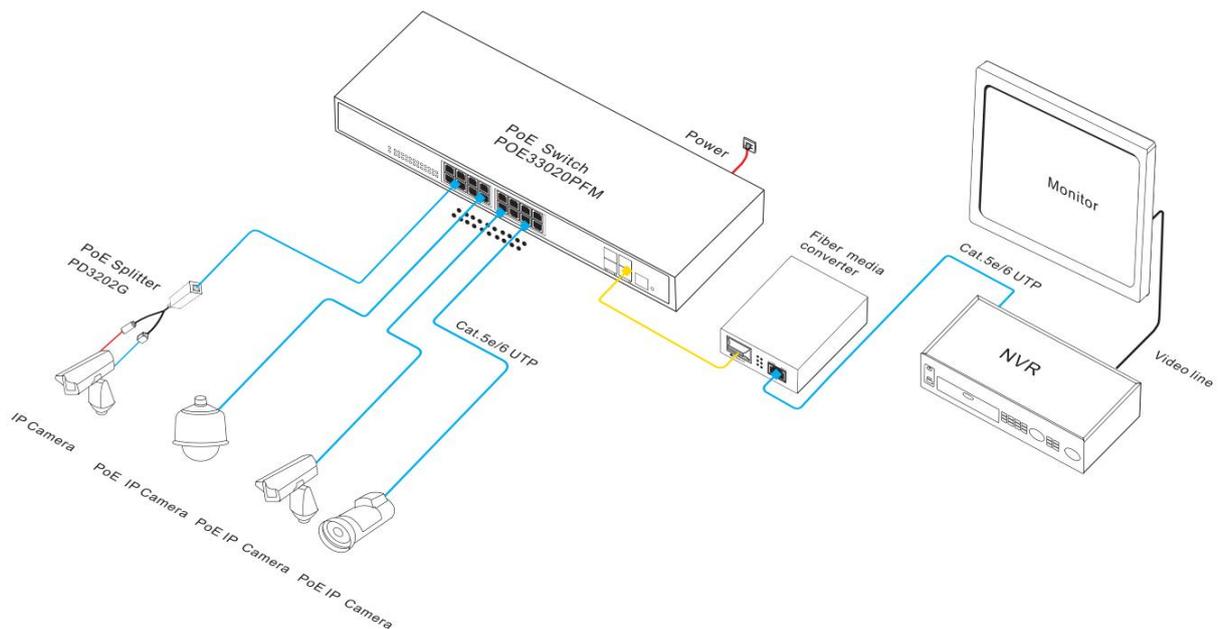
	Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	<p>IEEE802.1X &amp; MAC address authentication</p> <p>Broadcast storm control, Backup for host datum</p> <p>SSH 2.0, SSL, Port isolation, ARP message speed limit</p> <p>User hierarchical management and password protection</p> <p>IP-MAC-VLAN-Port binding, ARP inspection, Anti-DoS attack</p> <p>AAA &amp; RADIUS, MAC learning limit, Mac black holes, IP source protection</p>
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	<p>CPU instant utilization status view</p> <p>One-key recovery, Cable Diagnose, LLDP</p> <p>Console /AUX Modem /Telnet /SSH2.0 CLI</p> <p>Web Management (HTTPS), NTP, System work log, Ping Test</p> <p>Download &amp; Management on FTP, TFTP, Xmodem, SFTP, SNMP</p> <p>V1/V2C/V3</p> <p>ONV NMS-Smart Network Management System Platform (LLDP+SNMP)</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. 16\*10/100/1000M PoE Ports
- C. 4\*100/1000M SFP Ports
- D. Console Port
- E. Power Input Port 100-240V AC, 50/60Hz

## APPLICATION



## ORDERING INFORMATION

Model	Description
ONV-POE33020PFM	L2+ managed PoE fiber switch with 16* 10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports. Port 1-16 can support IEEE802.3af/at PoE standard. Built-in 250W power supply.
ONV-POE33020PFM-at	L2+ managed PoE fiber switch with 16* 10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports. Port 1-16 can support IEEE802.3af/at PoE standard. Built-in 400W power supply.

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

## 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 INFORMATION

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, hot plug and pull.	PC

	2632	SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM, 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, 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, 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, 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, hot plug and pull.	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 slot ports, Port 1-8 can support IEEE802.3af/at PoE. Built-in 130W power supply.
ONV-POE33026PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-24 can support IEEE802.3af/at PoE. Built-in 400W power supply.

ONV-POE33028PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports, Port 1-24 can support IEEE802.3af/at PoE. Built-in 400W power supply.
ONV-POE36036PFM	L2+ managed PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports and 4*1/10G SFP+ slot ports, Port 1-24 can support IEEE802.3af/at PoE. Built-in 400W power supply.

## CONTACT US



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