

Product Datasheet

24-port Full Gigabit Managed Industrial PoE Switch

(ONV-IPS33024PFM-8F)



OVERVIEW

The ONV-IPS33024PFM-8F is a full gigabit L2+ managed industrial PoE fiber switch independently developed by ONV. It has 16*10/100/1000Base-T RJ45 ports and 8*100/1000Base-X SFP fiber ports. Port 1-16 can support IEEE 802.3 af/at PoE standard. Single-port PoE power up to 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, IP cameras, VoIP phones, and industrial sensors through the network cable, and meet the network environment that needs a high-density PoE power supply. It is suitable for intelligent transportation, rail transit, electric power, mining, metallurgy, and green energy, industrial scenes such as construction setting up a cost-effective and stable communication network.

The ONV-IPS33024PFM-8F has L2+ network management function, supports IPV4/ IPV6 management, static route full line rate 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 (<20ms) to improve link backup and network reliability. When a 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 , SFP port uplink

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

■ Intelligent PoE power supply

- ◇ PoE network management, realize PoE port on/off , priority setting, port power status viewing, time scheduling, etc.
- ◇ Comply with IEEE 802.3 af/at PoE standard, automatically identify PoE devices for power supply, and not damage non-PoE devices.
- ◇ 16*10/100/1000Base-T RJ45 ports can support PoE power, meeting the demand for high power PoE power supply in various 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.

■ Strong business processing capability

- ◇ Support ERPS ring network and STP/RSTP/MSTP to eliminate layer 2 loops and realize link backup.
- ◇ Support IEEE 802.1Q 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 Snooping V1/V2/V3 multicast protocol IGMP to meet the multi-terminal high-definition video surveillance and video conference access requirements.

■ Security

- ◇ Port isolation, 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, RoHS.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, L/A, PoE.
- ◇ Low power consumption, no fan, aluminum shell, 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.

TECHNICAL SPECIFICATION

Model	ONV-IPS33024PFM-8F
Interface Characteristics	
Fixed Port	Power-off alarm switch (FAULT) 1*RS232 console port(115200,N,8,1) 8*100/1000Base-X uplink SFP ports (Data) 16*10/100/1000Base-T PoE ports (Data/ Power) 2 set of V+, V- redundant DC power interface (6 Pin Phoenix terminal)
Ethernet Port	Port 1-16 support 10/100/1000Base-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)
Optical Fiber Port	Gigabit optical fiber interface, default no include optical modules (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
SFP Port Expansion	Turbo overclocking 2.5G optical module and ring
Optical Cable/ Distance	Multi mode: 850nm/ 0-500m, 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

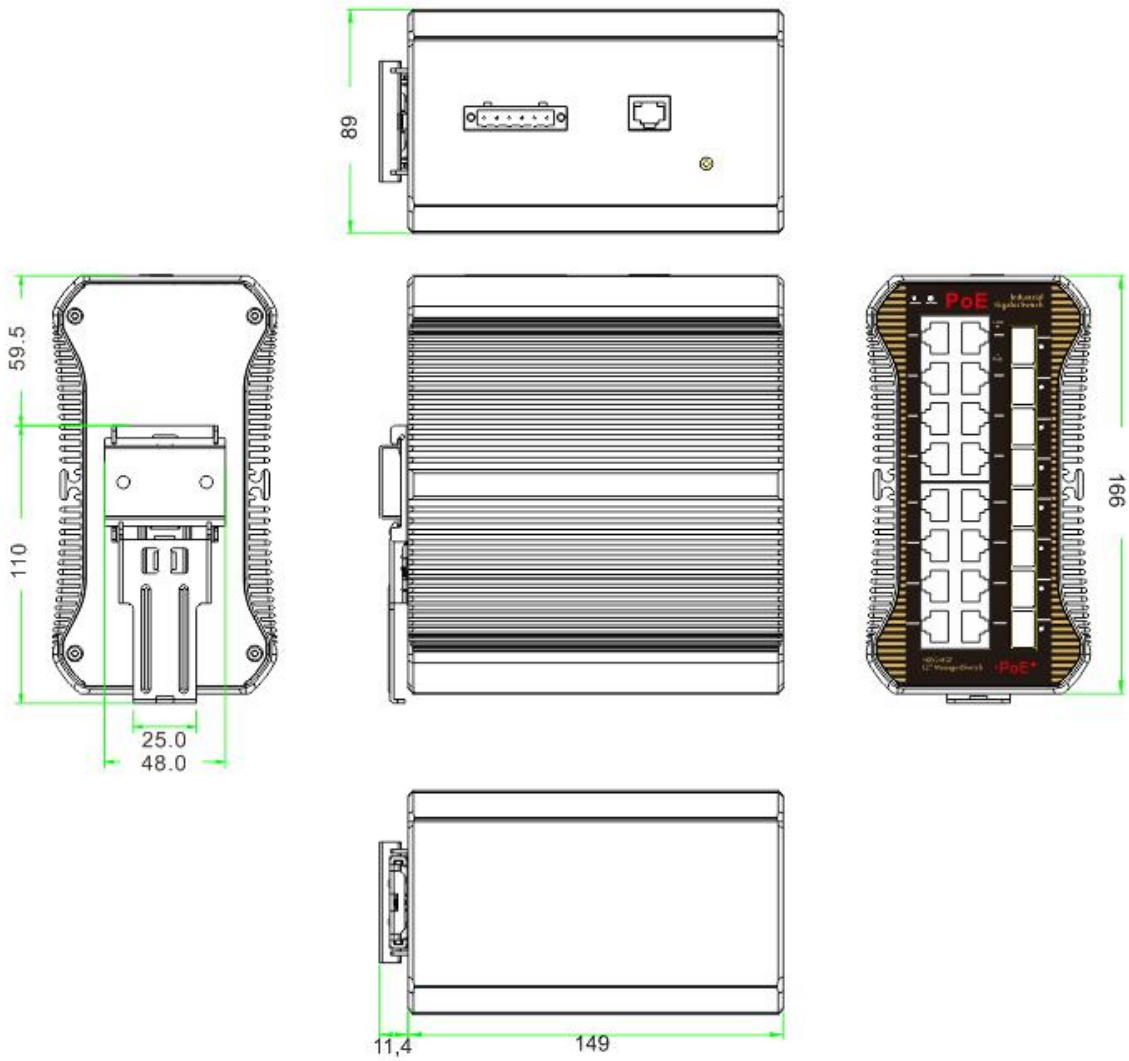
	IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	52Gbps
Forwarding Rate@64byte	35.71Mpps
MAC	8K
Buffer Memory	8M
Jumbo Frame	9.6K
LED Indicator	Power: PWR (Green), System: SYS (Green), Network: Link (Yellow), Fiber Port : L/A (Green), PoE: PoE (Green)
Reset Switch	Yes. press and hold for 10 seconds and then release to restore factory settings
PoE & Power Supply	
PoE Port	Port 1 to 16
PoE Management	Total power limit of PoE power supply PoE output power allocation, PoE on/off &af/at PoE working status, Delay start of power supply PoE output priority configuration, Scheduling of PoE operation and time
Power Supply Pin	1/2 (+) 3/6 (-)
Max Power Per Port	30W, IEEE 802.3 af/at
Power Consumption	Standby<15W, Full load af<240W, at<480W
Working Voltage	DC48-57V, 6 Pin industrial Phoenix terminal, support anti-reverse protection
Power Supply	No, optional 48V/240W or 48V/480W industrial power supply
Physical Parameter	
Operation TEMP / Humidity	-40°C~+80°C, 5%~90% RH Non condensing
Storage TEMP /	-40°C~+85°C, 5%~95% RH Non condensing

Humidity	
Dimension (L*W*H)	166*149*89mm
Net /Gross Weight	<2.2kg / <2.8kg
Installation	Desktop, DIN rail
Certification & Warranty	
Lightning Protection	<p>Protection level: IP40</p> <p>Lightning protection: 6KV 8/20us</p> <p>IEC61000-4-3 (RS):10V/m (80~1000MHz)</p> <p>FCC Part 15/CISPR22 (EN55022): Class B</p> <p>IEC61000-6-2 (Common Industrial Standard)</p> <p>IEC61000-4-9 (Pulsed magnet field):1000A/m</p> <p>IEC61000-4-10 (Damped oscillation): 30A/m, 1MHz</p> <p>IEC61000-4-12/18 (Shockwave): CM 2.5kV, DM 1kV</p> <p>IEC61000-4-4(EFT): Power cable:±4kV, Data cable: ±2kV</p> <p>IEC61000-4-16 (Common-mode transmission): 30V, 300V, 1s</p> <p>IEC61000-4-2 (ESD): ±8kV contact discharge, ±15kV air discharge</p> <p>IEC61000-4-6 (Radio frequency transmission): 10V(150kHz~80MHz)</p> <p>IEC61000-4-8 (Power frequency magnetic field):100A/m, 1000A/m,1s to 3s</p> <p>IEC61000-4-5 (Surge): Power cable: CM±4kV/ DM±2kV, Data cable:±4kV</p>
Mechanical Properties	IEC60068-2-6 (Anti vibration)
	IEC60068-2-32 (Free fall), IEC60068-2-27 (Anti shock)
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	5 years, lifelong maintenance.
Network Management Features	
Interface	<p>Port green Ethernet Energy-saving setting</p> <p>Broadcast storm control based on port speed</p>

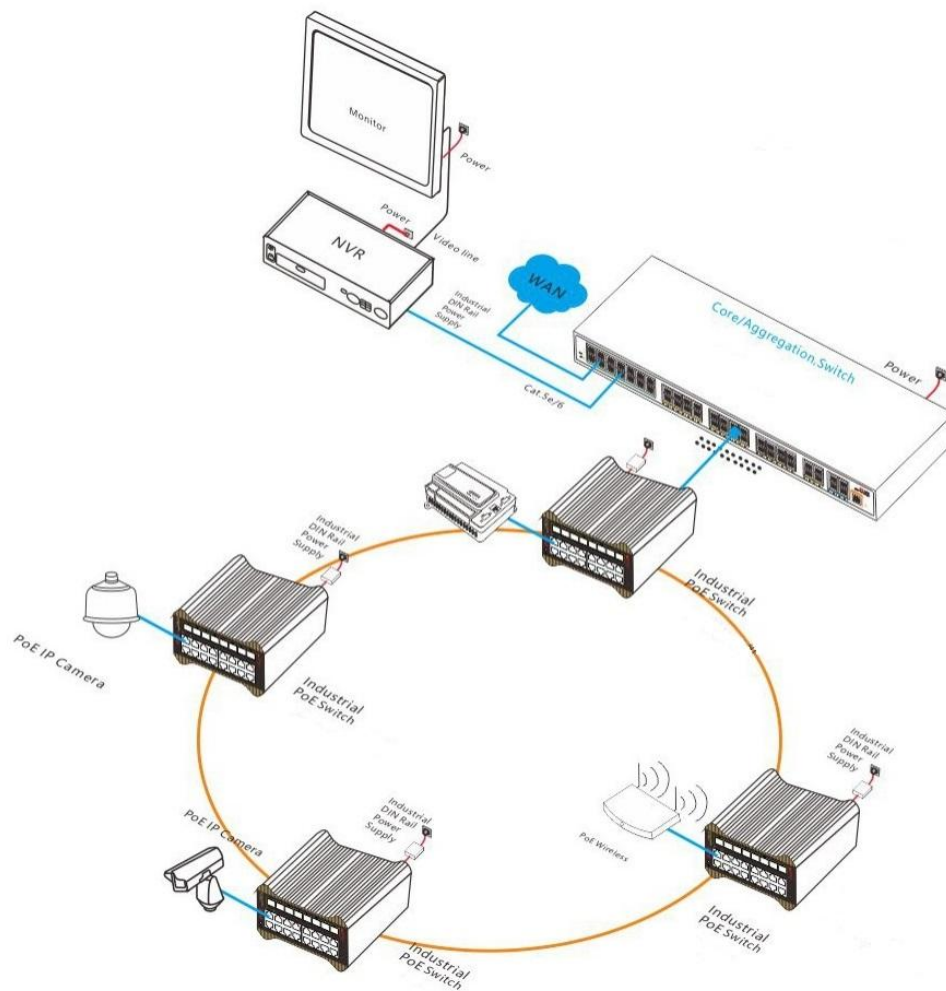
	IEEE802.3X (Full-duplex), Port temperature protection setting The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.
Layer 3 Features	L2+ network management ,IPV4/ IPV6 management, L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs
VLAN	Port configuration of Access, Trunk, Hybrid VLAN based on the protocol, VLAN based on MAC 4K VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration
Port Aggregation	LACP, Static aggregation, Max 12 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Industrial Ring	G.8032 (ERPS), Recovery time less than 20ms
Network Protocol	255 Ring at most, Max 1024 devices per ring.
Multicast	MLD Snooping v1/v2, Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	8*Output queues of each port, 802.1p/ DSCP priority mapping Queue scheduling algorithm (SP, WRR, SP+WRR), Diff-Serv QoS Flow-based rate limiting, Flow-based packet filtering, Priority Mark/ Remark
ACL	Port-based Issuing ACL, ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and 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

	<p>Hierarchical user management and password protection</p> <p>SSH 2.0 provides a secure encrypted channel for user login</p> <p>Host data backup mechanism, ARP intrusion detection function</p> <p>Port isolation, IP Source Guard, ARP message speed limit function</p> <p>IP Source Guard function, AAA & RADIUS & TACACS+ certification</p>
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	<p>Web network management (https)</p> <p>Link Layer Discovery Protocol(LLDP)</p> <p>Viewing CPU Instant Utilization Status</p> <p>NTP clock, One click restore, SNMP V1/V2/V3</p> <p>Cable status check, Ping detection, System work log</p> <p>ONV NMS platform cluster management (LLDP+SNMP)</p> <p>Console/AUX Modem/Telnet/CLI command line configuration</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</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



APPLICATION



ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33024PFM-8F	L2+ managed industrial PoE fiber switch with 16*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports. Port 1-16 can support IEEE 802.3 af/at PoE standard. It can support DC dual power supply input and DIN rail mounting.	240W/480W

Note: The optical module and power supply are not included, need to be purchased separately.

PACKING LIST

	Content	Qty	Unit
Packing List	24-port full gigabit managed industrial PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	User Guide	1	PC
	Warranty Card	1	PC

OPTICAL MODULE

Product	Model	Description	Unit
1.25G Optical Module	2630-G	Industrial 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-G	Industrial 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-G	Industrial 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-G	Industrial 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-G-SC	Industrial 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-G-SC	Industrial 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

POWER SUPPLY

Product	Model	Description	Unit
250W Desktop Power Adapter	GWS-AP250-52	Desktop 250W single set of output power adapter Input Voltage: AC100V~240V 50-60Hz, 4.1A Output Voltage: DC52V 4.8A Operation Temperature: -20℃ to +65℃	PC
240W DIN Rail Industrial Power Supply	GWS-DP240-48	Din Rail 240W single set of output power supply Input Voltage: AC100V~240V 50-60Hz, 3A Output Voltage: DC48V 5.0A Operation Temperature: -40℃ to +70℃	PC
480W DIN Rail Industrial Power Supply	GWS-DP480-48	Din Rail 480W single set of output power supply Input Voltage: AC100V~240V 50-60Hz, 5.0A Output Voltage: DC48V 10A Operation Temperature: -40℃ to +70℃	PC

RELATED PRODUCT

Model	Description
ONV-IPS33084PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-4 can support IEEE 802.3 af/at PoE standard. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33108PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33148PFM	L2+ managed industrial PoE fiber switch with 10*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33168PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33168PFM -4GF	L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It can support DC dual power supply input and DIN rail mounting.

CONTACT US

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

Tel: 0086-755-33376606

Fax: 0086-755-33376608

Email: onv@onv.com.cn

Skype: [onv@onv.com.cn](https://www.skype.com/people/onv@onv.com.cn)

WeChat ID: ONV-PoE-IoT

Website: www.onvcom.com

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

Factory Address: The 4-6th Floor, No. 59, Huaning Road, Xinwei Community, Dalang Street, Longhua District, Shenzhen, China

