Product Datasheet

26-port Gigabit L2+ Managed Industrial PoE Switch
(ONV-IPS33026PFM)

OVERVIEW

The ONV-IPS33026PFM is a gigabit L2+ managed industrial PoE fiber switch independently developed by ONV. It has 24*10/100/1000Base-T adaptive RJ45 ports and 4*100/1000Base-X uplink SFP fiber (including 2 combo ports). Port 1-24 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 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 a 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-IPS33026PFM has L2+ network management function, supports IPV4/ IPV6 management, static routing forwarding, complete security protection mechanism, perfect ACL/ QoS strategy, and rich VLAN functions, and is easy to manage and maintain. Support various network redundancy protocols STP/ RSTP/ MSTP (< 50ms) and (ITU-R T G. 8032) ERPS (< 20ms) to improve link backup and network reliability. When the one-way network fails, it can quickly restore communication and ensure the uninterrupted communication of important transmission. PoE power supply management, port flow control, VLAN division, QoS, and other

functions are configured according to the actual application needs through Web, CLI, SNMP, Telnet, and other network management methods.

FEATURE

■ **Gigabit access, uplink SFP fiber port**

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.

◇ Support Gigabit PoE port and Gigabit SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ **Smart PoE power supply**

◇ PoE network management, realize PoE port power allocation, 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.

◇ 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.

◇ 24*10/100/1000Base-T RJ45 ports support PoE power, meeting the PoE power requirements of security monitoring, industrial automation systems, wireless coverage and other scenarios.

■ **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.

■ **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.

■ 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, and PoE.

◇ Self-developed power supply, high redundancy design, providing a long-term and stable PoE power output.

◇ Low power consumption, no fan, galvanized steel metal shell, and excellent heat dissipation to ensure the stable operation of the switch.

■ Easy O&M management

◇ Support CPU monitoring, memory monitoring, Ping detection, and cable length detection.

◇ 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.

◇ Support diverse management and maintenance methods such as Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, etc.

TECHNICAL SPECIFICATION

Model	ONV-IPS33026PFM	ONV-IPS33026PFM-at
Interface Characteristics		
Fixed Port	2*DC48-57V input ports 2*AC100-240V input ports 1*Console port (115200,N,8,1) Power-off alarm switch (FAULT) 24*10/100/1000Base-T PoE ports (Data/ Power) 4*100/1000M uplink SFP fiber ports (including 2 combo ports) (Data)	
Ethernet Port	Port 1-24 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)	
Optical Fiber Port	Gigabit optical fiber interface, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)	
Optical Cable/ Distance	Multi-mode: 850nm/ 0-500m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km	
Chip Parameter		
Network Management Type	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 802.3x	
Forwarding Mode	Store and Forward (Full Wire Speed)	
Switching Capacity	52Gbps (non-blocking)	
Forwarding Rate@64byte	38.69Mpps	
CPU	416MHz	

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DRAM	1G
FLASH	128M
MAC	8K
Buffer Memory	8M
Jumbo Frame	9.6K
LED Indicator	Power: PWR(Yellow), System: SYS(Yellow), Network: Link/Act (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 1-24
PoE Management	PoE power supply total power limit configuration Power delay start, PoE work and time scheduling Port PoE working status display, Port PoE output priority configuration 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	400W/ (AC100-240V)	600W/ (AC100-240V)
Power Consumption	Standby<18W, 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
Power Input Port	Alarm switch port, 2*AC power input ports, 2*DC48-57V input ports Dual input power port design: AC power supply priority to support anti-reverse connection protection, and automatically switches to DC connection when power fails.	
Physical Parameter	
Operation TEMP / Humidity	-40~+80°C, 5%~90% RH Non condensing	

Storage TEMP / Humidity	-40~+85°C, 5%~95% RH Non condensing	
Dimension (L*W*H)	440*378*44.5mm	
Net /Gross Weight	5.4kg/6.2kg	6.2kg / 7.0kg
Installation	Desktop, 1U/19'' cabinet	

Certification & Warranty

Lightning Protection	Protection level: IP30
	Lightning protection: 6KV 8/20us
	IEC61000-4-3(RS):10V/m (80~1000MHz)
	FCC Part 15/CISPR22 (EN55022): Class B
	IEC61000-6-2 (Common Industrial Standard)
	IEC61000-4-9 (Pulsed magnet field): 1000A/m
	IEC61000-4-10 (Damped oscillation): 30A/m, 1MHz
	IEC61000-4-12/18 (Shockwave): CM 2.5kV, DM 1kV
	IEC61000-4-4(EFT): Power cable:±4kV, Data cable: ±2kV
	IEC61000-4-16 (Common-mode transmission): 30V, 300V, 1s
	IEC61000-4-2 (ESD): ±8kV contact discharge, ±15kV air discharge
	IEC61000-4-6 (Radio frequency transmission): 10V(150kHz~80MHz)
	IEC61000-4-8 (Power frequency magnetic field):100A/m,1000A/m,1-3s
	IEC61000-4-5(Surge): Power cable: CM±4kV/DM±2kV, Data cable: ±4kV
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 Feature

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Interface	Port temperature protection settings
	IEEE 802.3x flow control (Full duplex)
	Broadcast storm control based on port speed
	Port EEE Green Ethernet energy-saving configuration

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	Limit the speed of the message traffic at the inbound and outbound ports, with mini granularity of 64Kbps
L3 Feature	Static routing/ default routing max 128 entries L2+ network management, ARP protocol, max 1024 entries L3 routing and forwarding, support communication between different network segments and different VLAN
VLAN	Voice VLAN, QinQ configuration, IEEE802.1q VLAN based on MAC, VLAN based on the protocol 4K VLAN based on port, Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP dynamic aggregation, Static aggregation Max 13 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Industrial Ring Network Protocol	G.8032 (ERPS), Recovery time less than 20ms 255 Ring at most, Max 250 devices per ring.
Multicast	IGMP Snooping v1/v2/v3, Max 1024 multicast groups MLD Snooping, Multicast VLAN, User quick exit mechanism
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 redirection, Diff-Serv QoS, Priority Mark/ Remark 8*Output queues of each port, 802.1p/DSCP priority mapping
ACL	ACL issued based on port and VLAN L2-L4 packet filtering function can match the first 80 bytes of the message and provide ACL definition 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 MAC address the learning number limit SSL ensures data transmission security

	Port isolation, MAC address the black hole
	IP+MAC+VLAN+port four-way binding function
	User hierarchical management and password protection
	AAA & RADIUS & TACACS+ certification, ARP inspection
	IP source address protection, Host data backup mechanism
	SSH 2.0 provides a secure encrypted channel for user login
	DoS attack prevention, Port broadcast message suppression
	ARP message rate limit function, ARP intrusion detection function
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	System work log, Link Layer Discovery Protocol
	NTP clock, Cable length detection, SNMP V1/V2/V3
	Ping detection, Web network management (HTTPS)
	ONV-NMS platform cluster management (LLDP+SNMP)
	One click recovery, View CPU real-time utilization status
	FTP, TFTP, Xmodem, SFTP file upload and download management
	Console/ AUX Modem/ Telnet/ SSH2.0 CLI command line configuration
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 Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable

DIMENSION

378mm, 44.5mm, 440mm

APPLICATION
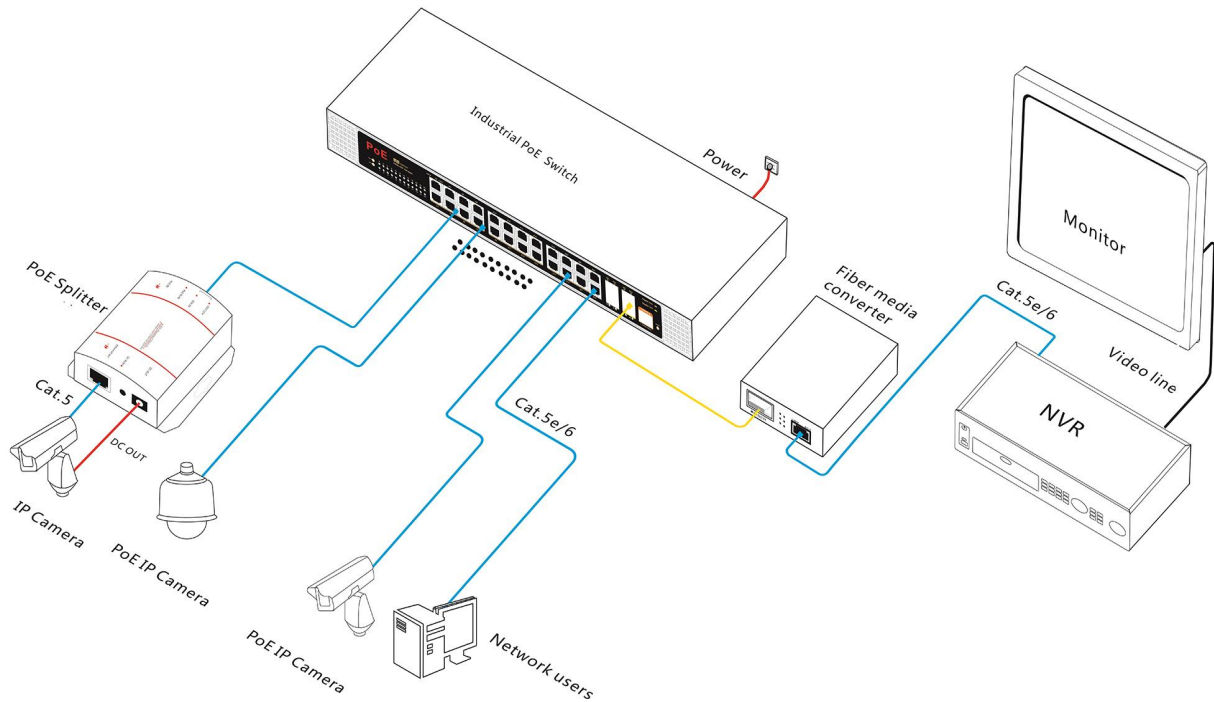
ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV-IPS33026PFM	L2+ managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP fiber ports (including 2 combo ports). Port 1-24 can support IEEE 802.3 af/at PoE standard. It built-in power supply and 1U/19" cabinet installation.	2*400W
ONV-IPS33026PFM-at		2*600W
Note: The optical module is not included and needs to be purchased separately.		

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PACKING LIST

	Content	Qty	Unit
Packing List	26-port full gigabit L2+ managed industrial PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	AC Power Cable	1	PC
	Mounting Kit (Hanging Ear)	1	SET
	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, supports DDM function and hot plugging.	PC
	2632-G	Industrial SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, supports DDM function and hot plugging.	PC
	2612-T-G	Industrial SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface, supports DDM function and hot plugging.	PC
	2613-R-G	Industrial 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-G	Industrial 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-G	Industrial SFP optical module, 1.25G single-mode single fiber	PC

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| | | TX1550nm/ RX1310nm, transmission distance: 20km, SC interface, supports DDM function and hot plugging. | |

RELATED PRODUCT

Model	Description
ONV-IPS33018PFM	L2+ managed industrial PoE fiber switch with 16*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. Port 1-16 can support IEEE 802.3 af/at PoE standard. It supports redundant 2DC+AC power input and 1U/19" cabinet installation.
ONV-IPS36036PFM	L2+ managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. It supports redundant 2DC+AC power input and 1U/19" cabinet installation.
ONV-IPS36048PFM	L2+ managed industrial PoE fiber switch with 48*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Port 1-48 can support IEEE 802.3 af/at PoE standard. It supports redundant 2DC+AC power input and 1U/19" cabinet installation.
ONV-IPS38036PFM	L3 managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. Port 1-24 can support IEEE 802.3 af/at PoE standard. It supports redundant 2DC+AC power input and 1U/19" cabinet installation.
ONV-IPS38048PFM	L3 managed industrial PoE fiber switch with 48*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Port 1-48 can support IEEE 802.3 af/at PoE standard. It supports redundant 2DC+AC power input and 1U/19" cabinet installation.

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