

Product Datasheet

26-port Full Gigabit L2+ Managed Industrial Ethernet Switch (ONV-IPS33026FM)



OVERVIEW

The ONV-IPS33026FM is a full gigabit L2+ managed industrial Ethernet fiber switch independently developed by ONV. It has 24*10/100/1000Base-T adaptive RJ45 ports and 4*100/1000Base-X uplink SFP fiber ports (including 2 combo ports). Each port can support wire-speed forwarding.

The ONV-IPS33026FM has L2+ network management function, supports IPV4/IPV6 management, static route forwarding, complete security protection mechanism, complete ACL/QoS policy, and rich VLAN functions for easy management and maintenance. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability, and can quickly restore communications when a one-way network fails. Ensure uninterrupted communication for important applications. According to the application needs, various application services configurations such as port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other network management methods are carried out through Web, CLI, SNMP, Telnet, and other network management methods. It meets the needs of various industrial Ethernet application environments and is suitable for establishing economical, efficient, stable, and reliable communication networks in industrial scenarios such as intelligent transportation, rail transportation, power industry, mining, petroleum, shipping, metallurgy, and green energy construction.

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.

■ 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, and L/A.

- ◇ 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, 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-IPS33026FM
Interface Characteristics	
Fixed Port	2*DC12-48V input ports 2*AC100-240V input ports 1*Console port (115200,N,8,1) Power-off alarm switch (FAULT) 24*10/100/1000Base-T RJ45 ports (Data) 4*100/1000M uplink SFP fiber ports (including 2 combo ports) (Data)
Ethernet Port	Port 1-24 support 10/100/1000Base-T auto-sensing, full/ half duplex MDI/MDI-X self-adaption
Twisted Pair	10BASE-T: Cat3,4,5 UTP (≤100 meters)
Transmission	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 Fiber Port Expansion	Turbo overclocking 2.5G optical module expansion and ring network
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(Hz)	416MHz
DRAM	1G
Flash	128M
MAC	8K
Buffer Memory	8M
Jumbo Frame	9.6K
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow), Network: Link (Yellow), Fiber port: L/A (Green)
Reset Switch	Yes, Press and release for 10 seconds to restore factory settings
Power Supply	
Total PWR / Input Voltage	60W/ (AC100-240V)
Power Consumption	Standby<18W, Full load<35W

Power Supply	Built-in power adapter, AC100~240V 50-60Hz, 0.56A
Power Input Port	Alarm switch port, 2*AC power input ports, 2*DC12-48V 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*298*44mm
Net /Gross Weight	3.9kg / 4.7kg
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	
Interface	<p>Port temperature protection settings</p> <p>IEEE 802.3x flow control (Full duplex)</p> <p>Broadcast storm control based on port speed</p> <p>Port EEE Green Ethernet energy-saving configuration</p> <p>Limit the speed of the message traffic at the inbound and outbound ports, with mini granularity of 64Kbps</p>
L3 Feature	<p>ARP protocol, max 1024 entries</p> <p>Static route/ default route, max 128 entries</p> <p>L2+ network management function, IPV4/IPV6 dual-stack management</p> <p>L3 routing and forwarding, support communication between different network segments and different VLAN</p>
VLAN	<p>Voice VLAN, QinQ configuration, IEEE802.1q</p> <p>VLAN based on MAC, VLAN based on the protocol</p> <p>4K VLAN based on port, Port configuration of Access, Trunk, Hybrid</p>
Port Aggregation	<p>LACP dynamic aggregation, Static aggregation</p> <p>Max 13 aggregation groups and 8 ports per group.</p>
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Industrial Ring Network Protocol	<p>G.8032 (ERPS), Recovery time less than 20ms</p> <p>255 Ring at most, Max 254 devices per ring.</p>
Multicast	<p>IGMP Snooping v1/v2/v3, Max 1024 multicast groups</p> <p>MLD Snooping, Multicast VLAN, User quick exit mechanism</p>
Port Mirroring	Bidirectional data mirroring based on port
QoS	<p>Queue Scheduling Algorithm (SP, WRR, SP+WRR)</p> <p>Flow-based rate limiting, Flow-based packet filtering</p> <p>Flow-based redirection, Diff-Serv QoS, Priority Mark/ Remark</p> <p>8*Output queues of each port, 802.1p/DSCP priority mapping</p>

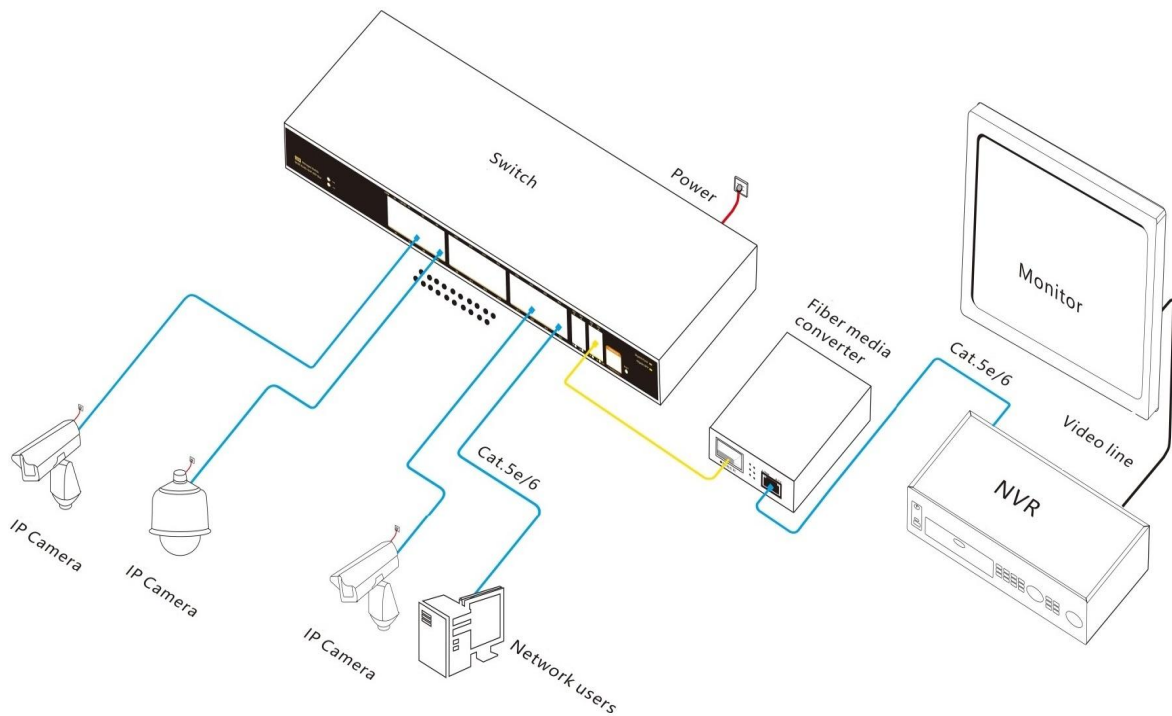
ACL	<p>ACL issued based on port and VLAN</p> <p>L2-L4 packet filtering function can match the first 80 bytes of the message and provide ACL definition based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN, etc.</p>
Security	<p>Port-based IEEE802.1X authentication</p> <p>MAC address the learning number limit</p> <p>SSL ensures data transmission security</p> <p>Port isolation, MAC address the black hole</p> <p>IP+MAC+VLAN+port four-way binding function</p> <p>User hierarchical management and password protection</p> <p>AAA & RADIUS & TACACS+ certification, ARP inspection</p> <p>IP source address protection, Host data backup mechanism</p> <p>SSH 2.0 provides a secure encrypted channel for user login</p> <p>DoS attack prevention, Port broadcast message suppression</p> <p>ARP message rate limit function, ARP intrusion detection function</p>
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	<p>System work log, Link Layer Discovery Protocol</p> <p>NTP clock, Cable length detection, SNMP V1/V2/V3</p> <p>Ping detection, Web network management (HTTPS)</p> <p>ONV-NMS platform cluster management (LLDP+SNMP)</p> <p>One click recovery, View CPU real-time utilization status</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</p> <p>Console/ AUX Modem/ Telnet/ SSH2.0 CLI command line configuration</p>
System	<p>Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher,</p> <p>Cat5 and above Ethernet cable</p> <p>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</p>

DIMENSION



- A. Working indicator
- B. 24*10/100/1000M RJ45 ports
- C. 4*100/1000M SFP fiber ports (including 2 combo ports)
- D. Console port

APPLICATION



ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33026FM	L2+ managed industrial Ethernet fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP fiber ports (including 2 combo ports). It built-in power supply and supports 2AC+DC power terminal input and 1U/19-inch cabinet installation.	2*60W

Note: The optical module is not included and needs to be purchased separately.

PACKING LIST

	Content	Qty	Unit
Packing List	26-port full gigabit managed industrial Ethernet switch	1	SET
	AC Power Cable	1	PC
	Mounting Kits	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	PC

		TX1310nm/ RX1550nm, transmission distance: 20km, LC interface, supports DDM function and hot plugging.	
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 TX1550nm/ RX1310nm, transmission distance: 20km, SC interface, supports DDM function and hot plugging.	PC

RELATED PRODUCT

Model	Description
ONV-IPS33018FM	L2+ managed industrial Ethernet fiber switch with 16*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. It built-in power supply and supports 2AC+DC power terminal input and 1U/19-inch cabinet installation.
ONV-IPS36028FM	L2+ managed industrial Ethernet switch with 24*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and supports 2AC+DC power terminal input and 1U/19-inch cabinet installation.
ONV-IPS36036FM	L2+ managed industrial Ethernet switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and supports 2AC+DC power terminal input and 1U/19-inch cabinet installation.
ONV-IPS36368FM	L2+ managed industrial Ethernet switch with 8*10/100/1000M RJ45 ports and 24*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and supports 2AC+DC power terminal input and 1U/19-inch cabinet installation.

ONV-IPS36448FM

L2+ managed industrial Ethernet switch with 12*10/100/1000M RJ45 ports and 28*100/1000M uplink SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and supports 2AC+DC power terminal input and 1U/19-inch cabinet installation.

CONTACT US



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

Tel: 0086-755-33376606

Fax: 0086-755-33376608

WeChat: ONV-PoE-IoT

Email: onv@onv.com.cn

Skype: onv@onv.com.cn

Website: www.onvcom.com

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

Factory Address: Building B3, Galaxy Artificial Intelligence Industrial Park, No. 333, Zhongkai 6th Road, Chenjiang Street, Zhongkai High-tech Zone, Huizhou

