Product Datasheet

6-port Gigabit Managed Industrial Ethernet Switch

(ONV-IPS33006FM)

OVERVIEW

The ONV-IPS33006FM is a Gigabit managed industrial Ethernet fiber switch independently developed by ONV. It has 4*10/100/1000Base-T adaptive RJ45 ports and 2*100/1000Base-X uplink SFP fiber ports. Each port can support wire-speed forwarding.

The ONV-IPS33006FM has L2+ network management functions, supports IPV4 management, static routing forwarding, complete security protection mechanism, perfect ACL/QoS strategy, and rich VLAN functions for easy management and maintenance. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) to improve link backup and network reliability. When a unidirectional network fails, communication can be quickly restored to ensure uninterrupted communication of important applications.

+86 755 33376606

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

According to application needs, port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other application business configurations are performed through network management methods such as Web, CLI, SNMP, Telnet, etc. It is excellent at adapting to industrial field environments (including mechanical stability, climate environment adaptability, electromagnetic environment adaptability, etc.). It is suitable for industrial scenarios such as intelligent transportation, rail transportation, power industry, mining, petroleum, shipping, metallurgy, and green energy construction to form an economical, efficient, stable, and reliable communication network.

FEATURE

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

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE 802.3x and half-duplex based on backpressure.

◇ Support Gigabit RJ45 port and SFP fiber port combination which enables users to flexibly build networking to meet the needs of various scenarios.

■ **Strong business processing capability**

◇ Support IEEE 802.1Q VLAN.

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

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

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

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

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

+86 755 33376606

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

■   **Security**

◇ Port isolation and storm control.

◇ 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, and Link.

◇ Low power consumption, no fan, aluminum housing, and excellent heat dissipation to ensure the stable operation of the switch.

■   **Easy O&M management**

◇ CPU monitoring, memory monitoring, and Ping detection.

◇ 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

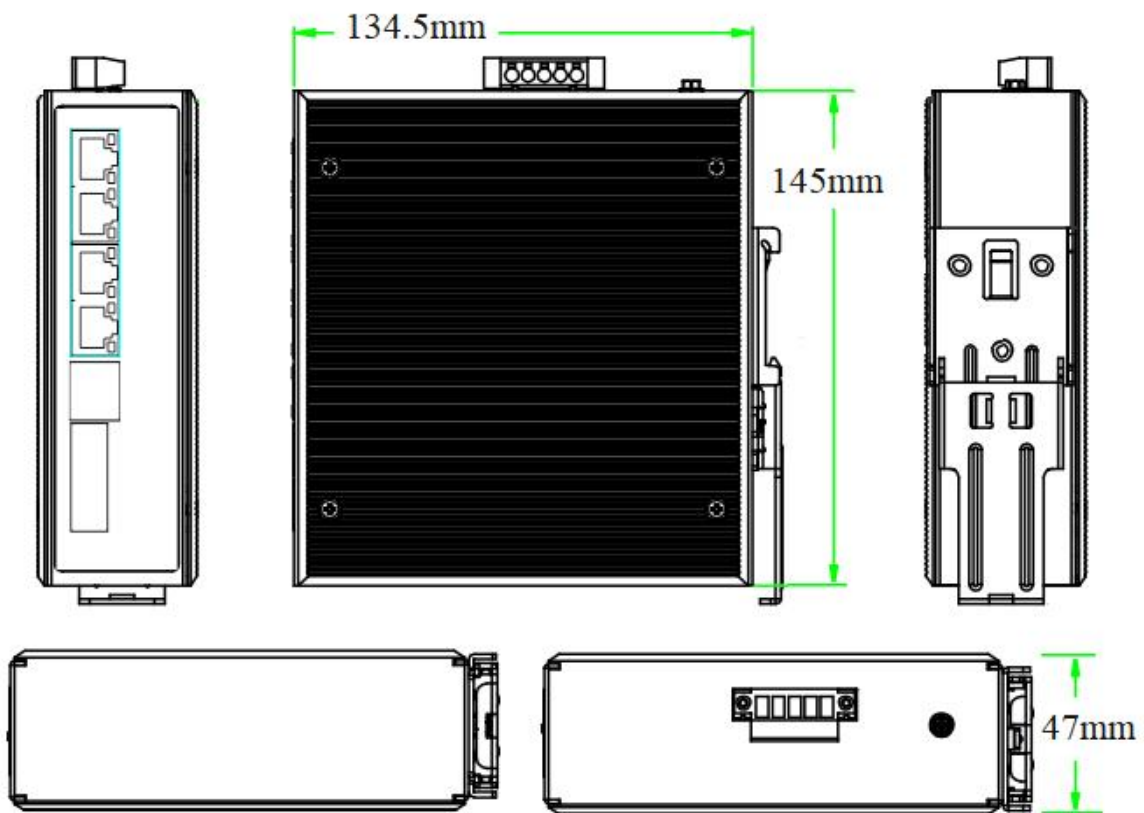| Model	ONV-IPS33006FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 4*10/100/1000Base-T RJ45 ports (Data) 2*100/1000Base-X uplink SFP fiber ports (Data) 2 sets V+, V- redundant DC power port (5P Phoenix terminal)

Ethernet Port	Port 1-4 can 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 module (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	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	12Gbps (non-blocking)
Forwarding Rate @64byte	8.93Mpps
CPU(Hz)	500M
DRAM	1G
Flash	128M
Buffer Memory	4M
MAC	8K
LED Indicator	Power/ System: SYS (Green), Network: Link (Yellow), Fiber port: L/A (Green)
Reset Switch	Yes, Press and hold the reset switch for 10s and release it to restore the factory settings
Power Supply	
Power Consumption	Standby<8W, Full load<12W
Working Voltage	DC12-48V, 5P Phoenix terminal connection, supports anti-reverse connection

+86 755 33376606

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

ONV

|	protection
Power Supply	No, optional 24V/24W industrial power supply
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)	145*134.5*47mm
Net /Gross Weight	0.7kg/ 0.9kg
Installation	Desktop, 35mm DIN Rail
Certification & Warranty	
Lightning Protection	Protection level: IP40 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, 1s-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.

+86 755 33376606

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

Network Management Feature	
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, mini granularity is 16Kbps and max is 1Gbps
L3 Feature	IPV4 static route/ default route
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 3 aggregation groups and 8 ports per group
Spanning Tree	RSTP (IEEE 802.1w)
ERPS	ERPSv2
Multicast	Multicast VLAN, User quick exit mechanism, IGMP Snooping v1/v2
Port Mirroring	Bidirectional data mirroring based on port
QoS	802.1p/ DSCP priority mapping, Diff-Serv QoS Queue scheduling algorithm (SP, WRR, WFQ) Flow-based rate limiting, Flow-based packet filtering Flow-based based redirection, 8*Output queues of each port
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 to define the ACL.
Security	Port isolation, Port broadcast message suppression Port-based and Mac-based IEEE802.1X certification User hierarchical management and password protection AAA&RADIUS certification, IP source address protection
DHCP	DHCP Client, DHCP Snooping

+86 755 33376606

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

Management	Web network management (https), Ping detection
	ONV-NMS platform cluster management (LLDP+SNMP)
	One click recovery, View CPU real-time utilization status
	Link Layer Discovery Protocol (LLDP), System work log
	Console/ Telnet and CLI configuration, SNMP V1/V2/V3
	NTP clock, HTTP file upload and download management
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

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd. ONV

APPLICATION
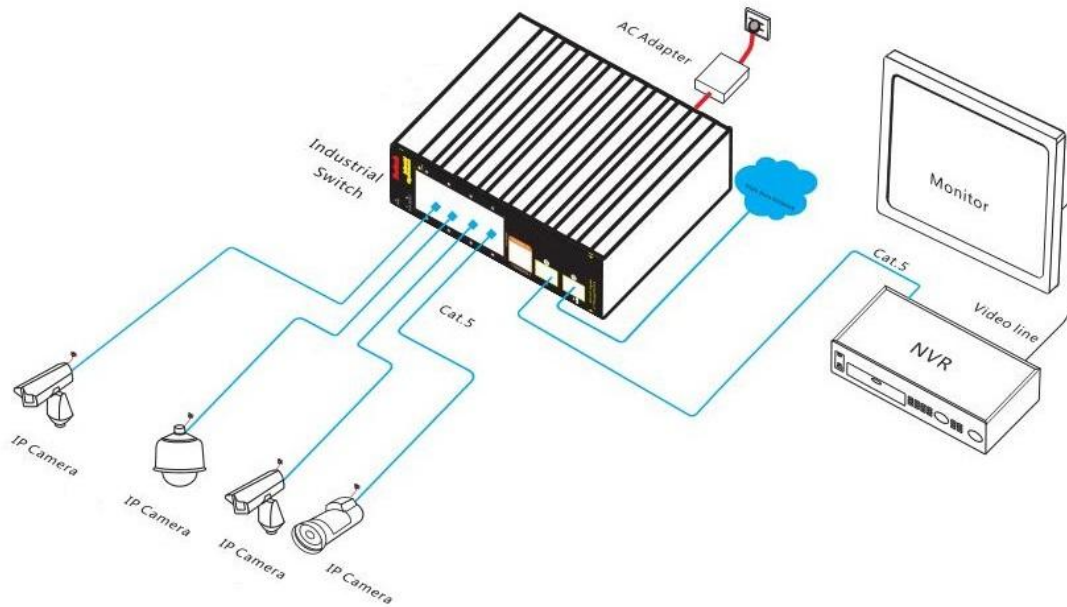
ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33006FM	L2+ managed industrial Ethernet fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. It can support dual DC power supply input and DIN Rail mounting.	24W

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

PACKING LIST

	Content	Qty	Unit
Packing List	6-port Gigabit managed industrial Ethernet switch	1	SET
	RJ45-DB9 Adapter Cable	1	PC
	User Guide	1	PC
	Warranty Card and Certificate of Conformity	1	PC

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd. ONV

POWER SUPPLY

Product	Model	Description	Unit
24W DIN Rail Industrial Power Supply	GWS-DP24-24	DIN Rail 24W single set of output power supply Input Voltage: AC100V~240V 50-60H, 0.35A Output Voltage: DC24V, 1.0A Operation Temperature:-40℃ to +70℃	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 TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd. ONV

Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

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

10

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd.