Product Datasheet

8-port Full Gigabit Managed Industrial Ethernet Switch
(ONV-IPS33084FM)

OVERVIEW

The ONV-IPS33084FM is a gigabit L2+ managed industrial Ethernet switch independently developed by ONV. It has 4*100/1000Base-X SFP fiber ports and 4*10/100/1000Base-T adaptive RJ45 ports. Each port can support wire-speed forwarding.

The ONV-IPS33084FM has L2+ network management function, support IPV4/IPV6 management, static route forwarding, complete security protection mechanism, perfect ACL/ QoS policy and rich VLAN functions, easy to manage and maintain. Support multiple network redundancy protocols STP/ RSTP/ MSTP(<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability. Communication can be quickly restored when a one-way network fails, to ensure uninterrupted communication of important applications. According to actual application needs, port management, routing address management, port flow control, VLAN division, IGMP, security policy and other application service configurations are performed through Web, CLI, SNMP, Telnet and other network management methods. ONV-IPS33084FM industrial-grade series products follow the design materials of industrial products, and the shell is made of aluminum alloy

to enhance heat dissipation, which has excellent industrial field environmental adaptability (mechanical stability, climate environment adaptability, electromagnetic environment adaptability, etc.), protection level IP40, support dual redundant power supply, low power consumption without fan, 35-year MTBF, and 5-year warranty. The industrial switch is suitable for building cost-effective, 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

■ Full gigabit access, SFP port uplink

◇ Support non-blocking wire-speed forwarding.

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

◇ A combination of Gigabit Ethernet port and Gigabit SFP port to meet the networking requirements of various scenarios.

■ 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 Snooping V1/V2/V3 multicast protocol IGMP Snooping to meet the high-definition video surveillance and video conference access requirements.

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■ **Security**

◇ Support port isolation.

◇ Support port broadcast storm suppression.

◇ Support IP+MAC+port+VLAN quadruple flexible combination binding function.

◇ Support 802.1X authentication to provide authentication functions for LAN computers, and control the authorization status of controlled ports according to the authentication results.

■ **Stable and reliable**

◇ CCC, CE, FCC, RoHS.

◇ Low power consumption, No fan, aluminum shell.

◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, L/A.

■ **Easy operation and maintenance management**

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

◇ Support HTTPS, SSLV3, SSHV1/V2 and other encryption methods, making management more secure.

◇ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.

◇ Support LLDP to facilitate the network management system to query and judge the communication status of the link.

◇ Support Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3) and other diversified management and maintenance.

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TECHNICAL SPECIFICATION

Model	ONV-IPS33084FM
Interface Characteristics	
Fixed Port	1*RS232 console port (115200,N,8,1) 4*10/100/1000Base-T RJ45 ports (Data) 4*100/1000Base-X uplink SFP fiber slot ports (Data) 2 sets of V+, V- redundant DC power interface (5 Pin Phoenix terminal)
Ethernet Port	Port 1-4 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)
SFP Slot Port	Gigabit SFP optical fiber port, default no include optical modules (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	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-TX, IEEE802.3z 1000Base-X, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	16Gbps
Forwarding Rate@64byte	11.9Mpps
CPU	416M

DRAM	1G
FLASH	128M
MAC	8K
Buffer Memory	4M
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 hold the reset switch for 10s and release it to restore the factory settings
Power Supply	
Working Voltage	DC12-48V, 5 Pin industrial Phoenix terminal, support anti-reverse protection.
Power Consumption	Standby<8W, Full load<12W
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*47.5mm
Net /Gross Weight	<0.7kg / <0.9kg
Installation	Desktop, 35mm DIN rail
Certification & Warranty	
Lightning protection	Lightning protection: 6KV 8/20us, Protection level: IP40 IEC61000-4-2(ESD): ±8kV contact discharge, ±15kV air discharge IEC61000-4-3(RS): 10V/m(80~1000MHz) IEC61000-4-4(EFT): power cable: ±4kV; data cable: ±2kV IEC61000-4-5(Surge): power cable: CM±4kV/DM±2kV; data cable:

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±4kV

IEC61000-4-6(radio frequency transmission): 10V(150kHz~80MHz)

IEC61000-4-8(power frequency magnetic field): 100A/m, 1000A/m ,1s

to 3s

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

IEC61000-4-16(common-mode transmission): 30V; 300V,1s

FCC Part 15/CISPR22(EN55022): Class B

IEC61000-6-2(Common Industrial Standard)

| Mechanical Properties	IEC60068-2-27 (anti shock) IEC60068-2-32 (free fall), IEC60068-2-6 (anti vibration)
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	5 years, lifelong maintenance.

Network Management Features

| Interface	IEEE802.3X (Full-duplex) Port temperature protection setting Port green Ethernet Energy-saving setting Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.
Layer 3 Features	Support L2+ network management function, IPV4/IPV6 dual stack management Support L3 routing and forwarding, and support communication between different network segments and different VLAN Support static routing/default routing with a maximum of 128 entries Support ARP protocol maximum entries 1024
VLAN	Port configuration of Access, Trunk, Hybrid

	VLAN based on MAC, Voice VLAN, QinQ configuration
	VLAN based on the protocol, 4K VLAN based on port, IEEE802.1q
Port Aggregation	LACP, Static aggregation
	Max 4 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 1024 devices per ring.
Multicast	MLD Snooping v1/v2, Multicast VLAN
	IGMP Snooping v1/v2/v3, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS, Priority Mark/Remark
	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
	Flow-based Rate Limiting, Flow-based Packet Filtering
	8*Output queues of each port, 802.1p/DSCP priority mapping
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	IEEE802.1X & MAC address authentication
	Broadcast storm control, Backup for host datum
	SSH 2.0, SSL, Port isolation, ARP message speed limit
	User hierarchical management and password protection
	IP-MAC-VLAN-Port binding, ARP inspection, Anti-DoS attack
	AAA & RADIUS, MAC learning limit, Mac black holes, IP source protection
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	Console/AUX Modem/Telnet/SSH2.0 CLI
	ONV NMS- Network Management System Platform(LLDP+SNMP)
	NTP, System work log, Ping Test, CPU instant utilization status view

	One-key recovery, Cable Diagnose, LLDP, Web Management (HTTPS) Download & Management on FTP, TFTP, Xmodem, SFTP, SNMP V1/V2/V3
System	Category 5 Ethernet network cable Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

DIMENSION

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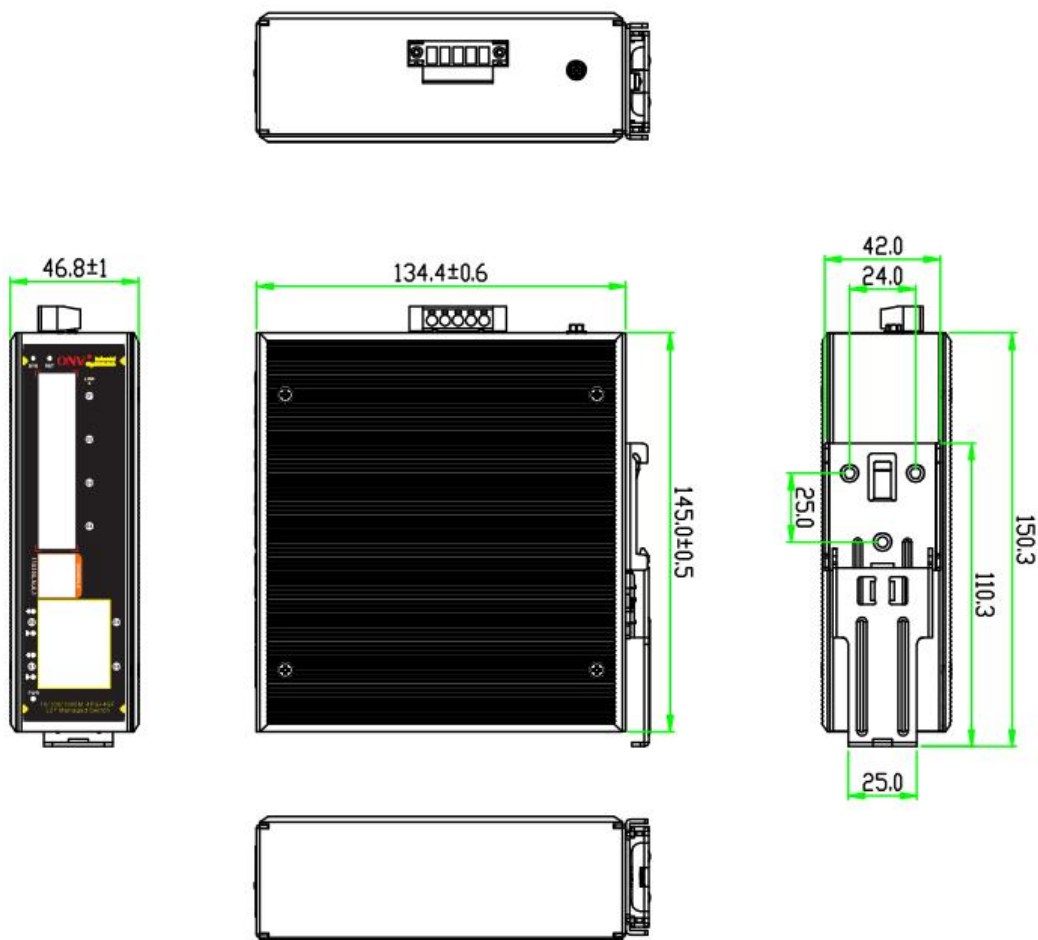
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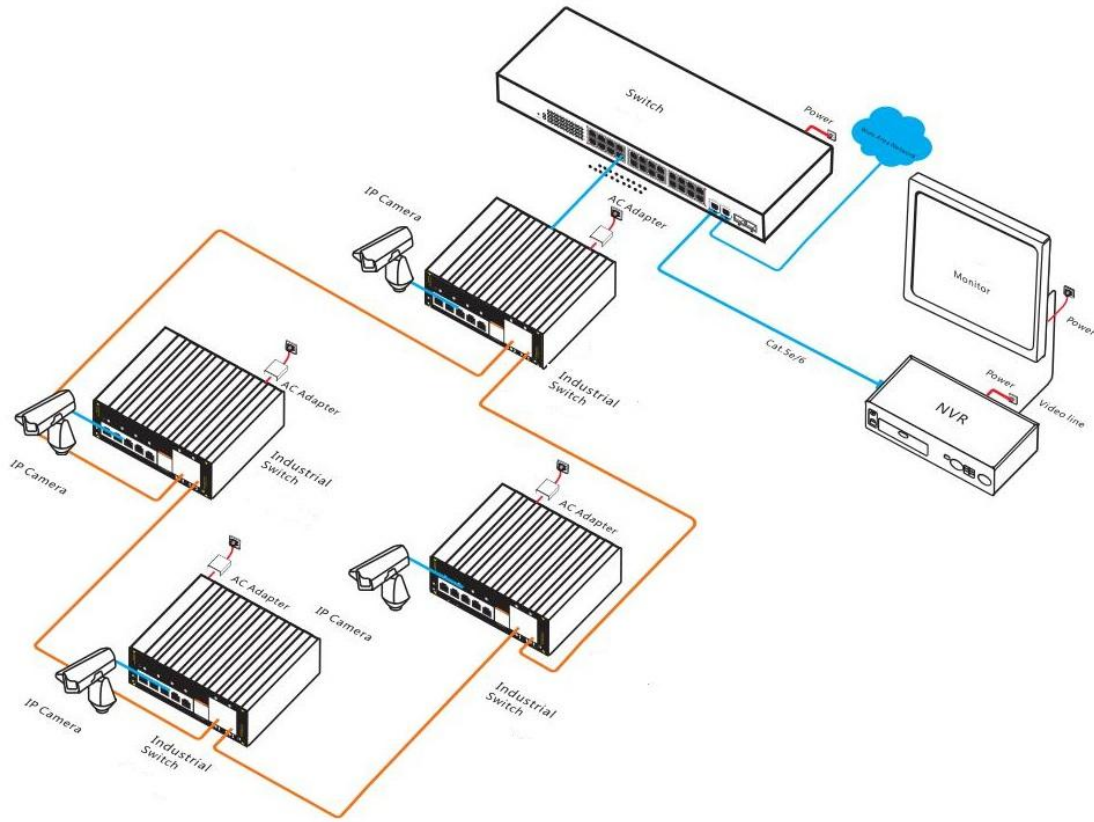
ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33084FM	L2+ managed industrial fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. It can support dual DC power input and DIN rail mounting.	24V/24W

Note: Industrial Ethernet fiber switch does not include the SFP optical module and power supply.

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PACKING LIST

	Content	Qty	Unit
Packing List	8-port full gigabit managed industrial Ethernet 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	PC

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Product	Model	Description	Unit
		plug and pull.	
	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
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: DC 24V1.0A Operation Temperature:-40℃ to +70℃	PC

RELATED PRODUCT

Model	Description
ONV-IPS33064FM	L2+ managed industrial fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP ports. It can support dual DC power input and DIN rail mounting.
ONV-IPS33108FM	L2+ managed industrial fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP ports. It can support dual DC power input and DIN rail mounting.
ONV-IPS33148FM	L2+ managed industrial fiber switch with 10*10/100/1000M RJ45

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	ports and 4*100/1000M SFP ports. It can support dual DC power input and DIN rail mounting.
ONV-IPS33168FM	L2+ managed industrial fiber switch with 8*10/100/1000M RJ45 ports and 8*100/1000M SFP ports. It can support dual DC power input and DIN rail mounting.
ONV-IPS33168FM-4GF	L2+ managed industrial fiber switch with 12*10/100/1000M RJ45 ports and 4*100/1000M SFP ports. It can support dual DC power input and DIN rail mounting.

CONTACT US

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