Product Datasheet

8-port Full Gigabit Managed Industrial PoE Switch
(ONV-IPS33084PFM)

OVERVIEW

The ONV-IPS33084PFM is a full Gigabit managed industrial PoE fiber switch independently developed by ONV. It has 4*10/100/1000Base-T adaptive RJ45 ports and 4*100/1000Base-X SFP fiber ports. Port 1-4 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 power-compliant devices that meet the standard and supply power through the network cable. It can supply power to PoE terminal equipment such as wireless AP, IP camera, VoIP, 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, power industry, mining, petroleum, and industrial scenes such as shipping, metallurgy, and green energy construction forming a cost-effective, stable, and reliable communication network.

The ONV-IPS33084PFM has L2+ network management function to support 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. Communication can be quickly restored when a one-way network fails Ensure uninterrupted communication for important applications. According to application needs, PoE power supply management can be performed through Web, CLI, SNMP, Telnet, etc., and application configurations such as port management, routing address management, port flow control, VLAN division, IGMP, and security policies can be performed.

FEATURE

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

◇ Support non-blocking wire-speed forwarding.

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

◇ Support Gigabit RJ45 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.

◇ 8*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.

■ **Strong business processing ability**

◇ 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.

■ 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.

■ Stable and reliable

◇ CCC, CE, FCC, RoHS.

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

◇ Low power consumption, no fan, aluminum 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.

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◇ 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

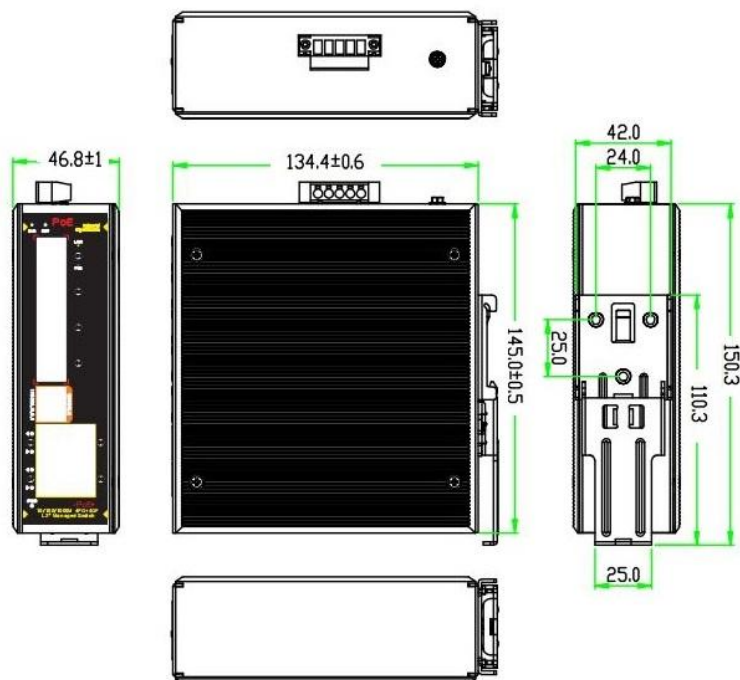| Model	ONV-IPS33084PFM
Interface Characteristics	
Fixed Port	1*RS23 Console port (115200,N,8,1) 4*10/100/1000Base-T PoE ports (Data/Power) 4*100/1000Base-X uplink SFP fiber ports (Data) 2 set of V+, V- redundant DC power interface (5 Pin Phoenix terminal)
Ethernet Port	Port 1-4 support 10/100/1000Base-T 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 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	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

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Forwarding Rate@64byte	11.9Mpps
CPU	416MHz
DRAM	1G
FLASH	128M
MAC	8K
Buffer Memory	4M
Jumbo Frame	9.6K
LED Indicator	Fiber port: L/A (Green), PoE: PoE (Green) Power/ System: SYS (Green), Network: Link (Yellow)
Reset Switch	Yes (Press and release for 10 seconds, the PoE switch will restore to factory settings)
PoE & Power Supply	
PoE Port	Port 1-4
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
Power Consumption	Standby<7W, Full load af<60W, at<120W
Input Voltage/ Interface	DC48-57V, 5Pin industrial phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 48V/60W or 48V/120W industrial power supply
Physical Parameter	
Operation TEMP / Humidity	-40°C~+80°C, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40°C~+85°C, 5%~95% RH Non condensing

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Dimension (L*W*H)	145*134.5*47mm
Net /Gross Weight	0.75kg / 1.0kg
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 to 3s
	IEC61000-4-5 (Surge): Power cable: CM±4kV/ DM±2kV, data cable: ±4kV
Mechanical Properties	IEC60068-2-6 (anti vibration), IEC60068-2-27 (anti shock)
	IEC60068-2-32 (free fall)
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	5 years, lifelong maintenance.

Network Management Feature

|	
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, mini particle size is 64Kbps.
L3 Features	ARP protocol max 1024 entries Static routing/ default routing max 128 entries L2+ network management, IPV4/IPV6 dual stack management L3 routing and forwarding, support communication between different network segments and different VLAN
VLAN	Port configuration of Access, Trunk, Hybrid VLAN based on MAC, Voice VLAN, QinQ configuration 4K VLAN based on port, IEEE802.1q, VLAN based on the protocol
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	250 Ring at most, Max 250 devices per ring. G.8032 (ERPS), Recovery time less than 20ms
Multicast	MLD Snooping , Multicast VLAN IGMP Snooping v1/v2, 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	Mac black holes, IP source protection IEEE802.1X & MAC address authentication Broadcast storm control, Backup for host datum

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	SSH 2.0, SSL, Port isolation, ARP message speed limit
	User hierarchical management and password protection
	Anti-DoS attack, AAA& RADIUS &TACACS+ certification
	IP-MAC-VLAN-Port binding, ARP inspection, MAC learning limit
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	CPU real-time utilization status view, SNMP V1/V2/V3
	ONV-NMS platform cluster management (LLDP+SNMP)
	Console/ AUX Modem/ Telnet/ SSH2.0, CLI configuration
	Cable length status detection, NTP clock, One-key recovery, LLDP
	FTP, TFTP, Xmodem, SFTP file upload and download management
	Ping detection, System work log, Web network management (HTTPS)
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

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APPLICATION
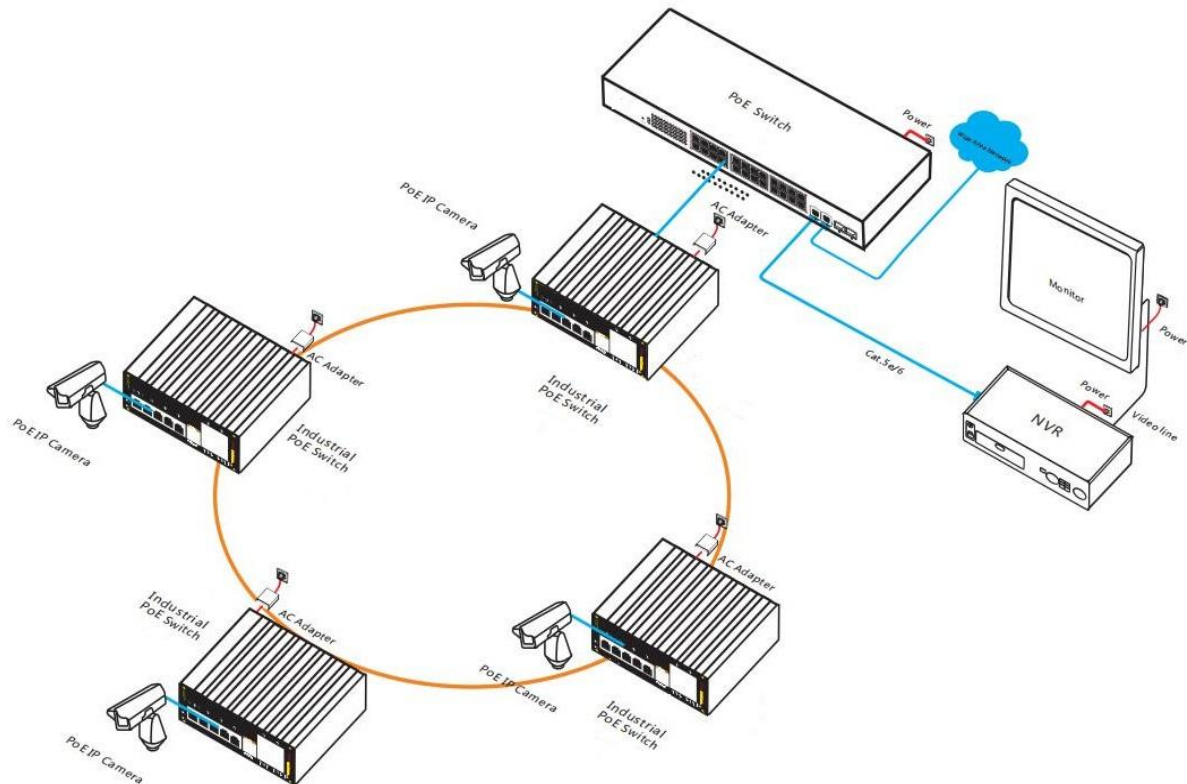
ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33084PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP fiber ports. Port 1-4 can support IEEE 802.3 af/at PoE standard. It support DC dual power supply input and DIN rail mounting.	60W/120W
Note: The optical module and power supply are not included and need to be purchased.		

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PACKING LIST

Packing List	Content	Qty	Unit
	8-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, 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

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POWER SUPPLY

Product	Model	Description	Unit
65W Desktop Power Adapter	GWS-AP65-52	Desktop 65W single set of output power adapter Input Voltage: AC100V-240V 50-60Hz, 1.1A Output Voltage: DC52V, 1.25A Operation Temperature: -20℃ to +65℃	PC
110W Desktop Power Adapter	GWS-AP110-52	Desktop 110W single set of output power adapter Input Voltage: AC100V-240V 50-60Hz, 2.0A Output Voltage: DC52V, 2.0A Operation Temperature: -20℃ to +65℃	PC
60W DIN Rail Industrial Power Supply	GWS-DP60-48	DIN Rail 60W single set of output power supply Input Voltage: AC100V-240V 50-60Hz, 1.0A Output Voltage: DC48V, 1.25A Operation Temperature: -40℃ to +70℃	PC
120W DIN Rail Industrial Power Supply	GWS-DP120-48	DIN Rail 120W single set of output power supply Input Voltage: AC100V~240V 50-60Hz, 1.5A Output Voltage: DC48V, 2.5A Operation Temperature: -40℃ to +70℃	PC

RELATED PRODUCT

Model	Description
ONV-IPS33064PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. Port 1-4 can support IEEE 802.3 af/at PoE standard. It 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 uplink SFP fiber ports. Port 1-8 can support

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	IEEE 802.3 af/at PoE standard. It 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 uplink SFP fiber ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It 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 uplink SFP fiber ports. Port 1-8 can support IEEE 802.3 af/at PoE standard. It support DC dual power supply input and DIN rail mounting.
ONV-IPS36168PFM	L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. . Port 1-8 can support IEEE 802.3 af/at PoE standard. It support DC dual power supply input and DIN rail mounting.

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