Product Datasheet

10-port Gigabit Managed Industrial PoE Switch

(ONV-IPS33010PFM)

OVERVIEW

The ONV-IPS33010PFM is a Gigabit managed industrial PoE switch independently developed by ONV. It has 8*10/100/1000M adaptive RJ45 ports and 2*100/1000M uplink SFP fiber ports. Port 1-8 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-IPS33010PFM has L2+ network management functions. It can support IPV4

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management and static routing forwarding, complete security protection mechanisms, complete ACL/ QoS policies, and rich VLAN functions, making it easy to manage and maintain. Supports multiple network redundancy protocols RSTP (<50ms) to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure uninterrupted communication of important transmissions. According to application needs, PoE power supply management, port flow control, VLAN division, QoS, and other application service configurations can be performed through network management methods such as Web, CLI, SNMP, and Telnet.

FEATURE

■ **Gigabit access**

◇ 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 port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ **Smart PoE power supply**

◇ Comply with IEEE 802.3 af/at PoE power supply standard, automatically identify PoE equipment for power supply.

◇ Support PoE network management function, port power status viewing, etc. through network management configuration.

◇ 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 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

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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.

■ 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 pane can show the device status through the LED indicator of PWR, SYS, Link, L/A, and PoE.

◇ Low power consumption, aluminum alloy 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.

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TECHNICAL SPECIFICATION

Model	ONV-IPS33010PFM
Interface Characteristics	
Fixed Port	1*RS232 Console port (115200,N,8,1) 8*10/100/1000Base-T PoE ports (Data/ Power) 2*100/1000Base-X uplink SFP fiber ports (Data) 2 sets V+, V- redundant DC power port (5P industrial Phoenix terminal)
Ethernet Port	Port 1-8 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	Default no include optical modules (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	20Gbps (non-blocking)
Forwarding Rate@64byte	14.88Mpps
CPU(Hz)	500M
DRAM	1G
Flash	128M
MAC	8K

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| Buffer Memory	4.1M
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow), Network: Link (Yellow), Fiber port: L/A (Green), PoE: PoE (Green)
PoE& Power Supply	
PoE Port	Port 1-8
PoE Management	Port PoE working status display, 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<6W, Full load af<120W, at<240W
Input Voltage/ Interface	DC48-57V, 5P industrial phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 48V/120W or 48V/240W industrial power supply
Physical Parameter	
Operation Temp/ Humidity	-40°C~+75°C, 5%~90% RH Non condensing
Storage Temp/ Humidity	-40°C~+85°C, 5%~95% RH Non condensing
Dimension (L*W*H)	145*134.5*47mm
Net /Gross Weight	0.85kg/ 1.1kg
Installation	Desktop, 35mm DIN Rail
Certification & Warranty	
Lightning Protection	IEC61000-4-3 (RS):10V/m (80~1000MHz) FCC Part 15/CISPR22 (EN55022): Class A 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): CM2.5kV, DM 1kV Protection level: IP40, Lightning protection: 6KV 8/20us 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

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| 6 | IEC61000-4-6 (Radio frequency transmission): 10V(150kHz~80MHz) |
	IEC61000-4-5(Surge): Power cable: CM±4kV/ DM±2kV, data cable: ±4kV
	IEC61000-4-8 (Power frequency magnetic field): 100A/m, 1000A/m, 1s-3s
Mechanical Properties	IEC60068-2-6 (Anti Vibration), IEC60068-2-27 (Anti Shock), IEC60068-2-32 (Free Fall)
Certification	CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class A, RoHS
Warranty	5 years, lifelong maintenance.

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 5 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

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	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
Management	Web network management, 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

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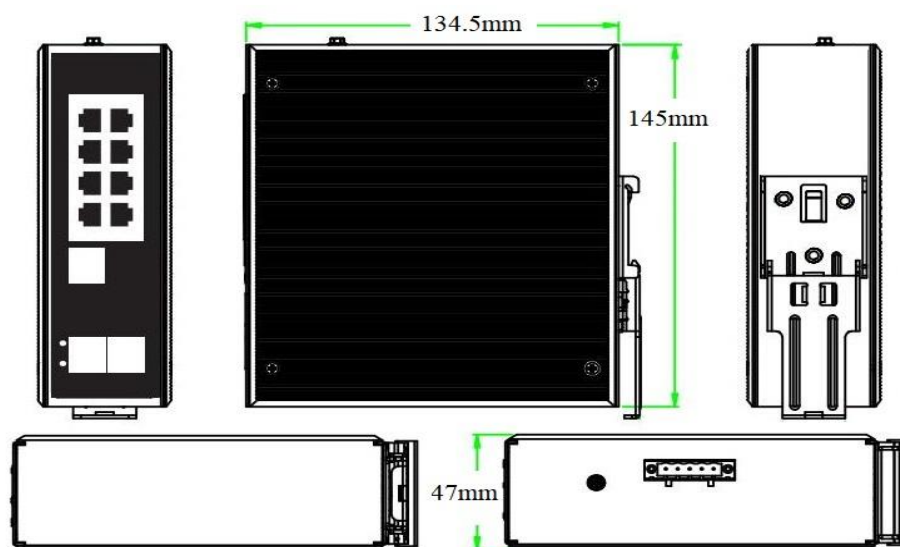
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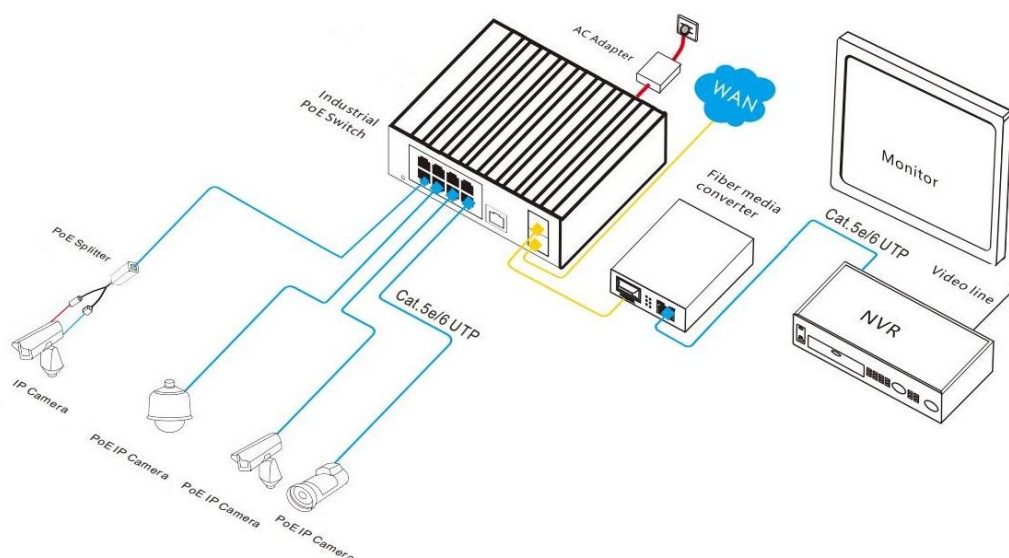
ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33010PFM	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 IEEE 802.3 af/at PoE standard. It can support dual DC redundant power input and DIN rail mounting.	120W/240W

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

PACKING LIST

	Content	Qty	Unit
Packing List	10-port Gigabit managed industrial PoE switch	1	Set
	RJ45-DB9 Adapter Cable	1	PC
	User Guide	1	PC
	Warranty Card and Certificate of Conformity	1	PC

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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

POWER SUPPLY

Product	Model	Description	Unit
120W DIN Rail Industrial Power Supply	GWS-DP120-48	DIN Rail 120W single set of output power supply Input Voltage: AC100V~240V 50-60Hz, 2.3A Output Voltage: DC48V, 2.5A Operation Temperature: -40℃ to +70℃	PC

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240W DIN Rail Industrial Power Supply	GWS-DP240-48	DIN Rail 240W single set of output power supply Input Voltage: AC100V~240V 50-60Hz, 3.0A Output Voltage:DC48V, 5.0A Operation Temperature: -40℃ to +70℃	PC

CONTACT US

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