Product Datasheet

10-port Gigabit Uplink Managed Industrial PoE Switch

ONV-IPS31108PFM

OVERVIEW

The ONV-IPS31108PFM series is a gigabit uplink L2 managed industrial PoE fiber switch independently developed by ONV. It has 8*10/100Base-TX RJ45 ports and 2*100/1000Base-T(X) combo ports. Port 1-8 can support IEEE 802.3af/at standard PoE power supply, and single port PoE power reaches 30W. The maximum PoE output power is 120W(at-240W). and each port can realize line-speed forwarding.

The ONV-IPS31108PFM series adopts a new generation of high-performance hardware and software platforms to provide flexible and cost-effective 100Mbps access and uplink ports. It can support security protection mechanisms, ACL/QoS policies, and VLAN functions, and is easy to manage and maintain. As a PoE power supply device, it can automatically detect and recognize

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the power receiving equipment that meets the standard and supply power through the network cable. It can supply power to PoE terminal device such as wireless AP, IP camera,industrial sensor through the network cable, and meet the network environment that needs high-density PoE power supply. It is suitable for intelligent transportation, rail transit, power industry, mining, petroleum, sea transportation. Industrial scenes such as metallurgy and green energy construction form a cost-effective, stable and reliable communication network.

FEATURE

■ 100M access, Gigabit combo port uplink

◇ All series support "10/100M Ethernet port and Gigabit combo port"combination, which enables users to flexibly build networking to meet the needs of various scenarios.

◇ Support non-blocking wire-speed forwarding.

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

■ Intelligent PoE power supply

◇ 8*10/100Base-TX RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.

◇ IEEE 802.3af/at PoE standard, without damaging non-PoE devices.

◇ Priority system for PoE port, it will supply power to the high priority level port first when the power budget is insufficient and avoid overwork of the device.

◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.

■ Strong business processing capability

◇ IEEE802.1Q VLAN, flexible VLAN division,Voice VLAN and QinQ configuration.

◇ QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including Equ, SP, WRR & SP+WRR.

◇ ALC, filter data packet through configuring matching rules, processing operation & time

permission, and provide flexible and safe access control.

◇ IGMP V1/V2 and IGMP Snooping.

◇ ERPS/STP/RSTP/MSTP.

◇ Static and dynamic aggregation.

■ **Security**

◇ 802.1X authentication.

◇ Port isolation,Storm control.

◇ IP-MAC-VLAN-Port binding.

■ **Stable and reliable**

◇ Low power consumption, no fan , aluminum casing.

◇ CCC,CE, FCC, RoHS.

◇ The user-friendly panel, it can show the device status through the LED indicator of PWR,

Link ,PoE.

■ **Easy operation and maintenance management**

◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

◇ HTTPS, SSLV3, and SSHV1/V2.

◇ RMON, system log, LLDP, and port traffic statistics.

◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

TECHNICAL SPECIFICATION

Model	ONV-IPS31108PFM	ONV-IPS31108PFM-at
Interface Characteristics		
Fixed Port	8*10/100Base-TX PoE ports (Data/Power) 2*10/100/1000Base-T uplink RJ45 ports(Data) 2*100/1000Base-X uplink SFP slot ports (combo ports)(Data) 2 set of V+, V- redundant DC power interface (5P Phoenix terminal)	
Ethernet Port	Port 1-8 support 10/100Base-TX, Port 9-10 support 10/100/1000Base-T(X) auto-sensing, Full/half duplex MDI/MDI-X self-adaption	
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)	
SFP Slot Port	Gigabit SFP optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
Optical Cable	Multi mode: 850nm 0 ~ 550M,single mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.	
Chip Parameter		
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X IEEE802.3x	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	64Gbps	
Forwarding Rate@64byte	4.17Mpps	

| MAC	16K
Buffer Memory	4M
Jumbo Frame	10K
LED Indicator	Power:PWR(green), network ;Link,link/Act(yellow), POE: PoE (green), Speed:Speed(green)
PoE & Power	
PoE Port	Port 1 to 8 IEEE802.3af/at @ POE
PoE Management	Distribution for PoE output power of each port PoE working status Delay start of power supply Scheduling of PoE operation and time
Power Supply Pin	Default :1/2 (+), 3/6 (-),optional:4/5 (+), 7/8 (-)
Max Power Per Port	30W; IEEE802.3af/at
Total PWR / Input Voltage	120W/48VDC	240W/48VDC
Power Consumption	Standby:<6W;Full load:<120W	Standby:<8W;Full load:<240W
Power Supply	No, optional 48V/120W or 48V/240W industrial power supply
Working Voltage	48-57VDC; 5P industrial Phoenix terminal, support anti-reverse protection.
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)	165*148*54mm
Net /Gross Weight	<1.3kg / <1.8kg
Installation	Desktop, DIN rail
Certification & Warranty	

Lightning protection / protection level	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:±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 A
	IEC61000-6-2(Common Industrial Standard)
Mechanical Properties	IEC60068-2-6 (anti vibration)
	IEC60068-2-27 (anti shock)
	IEC60068-2-32 (free fall)
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS;
Warranty	5 years, lifelong maintenance.

Network Management Features

Interface	IEEE802.3X (Full-duplex)
	Broadcast storm control based on port speed
	The speed limit of the message flow in the access port.
	The minimum particle size is 64Kbps.
VLAN	QinQ configuration
	VLAN based on protocol
	4K VLAN based on port, IEEE802.1q
Port Aggregation	LACP, Manual aggregation

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	Max 5 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2/v3, Max 64 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS Priority Mark/Remark 8*Output queues of each port 802.1p/DSCP priority mapping Queue Scheduling Algorithm (SP,WRR,SP+WRR)
ACL	L2-L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range and VLAN etc. Port-based Issuing ACL.
Security	Port isolation Broadcast storm control Port+MAC binding, IP+MAC+port binding
DHCP	DHCP Client,DHCP Snooping,DHCP Relay
System & Management	NTP Login Record SNMP V1/V2C/V3 One-key recovery Web Management (HTTPS)

DIMENSION

APPLICATION

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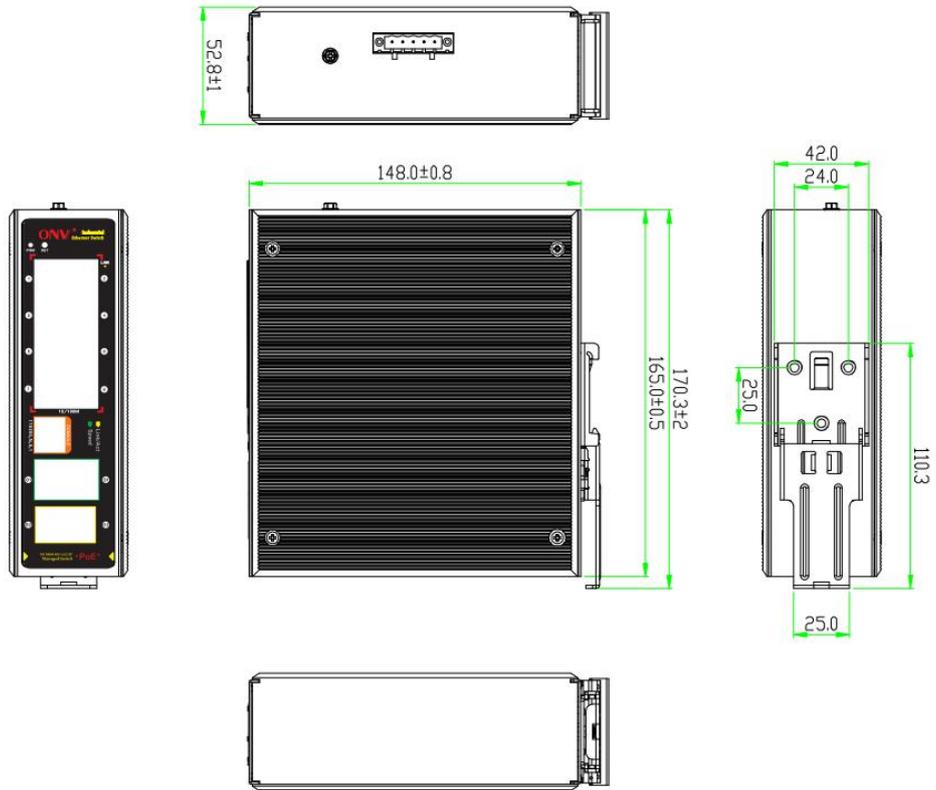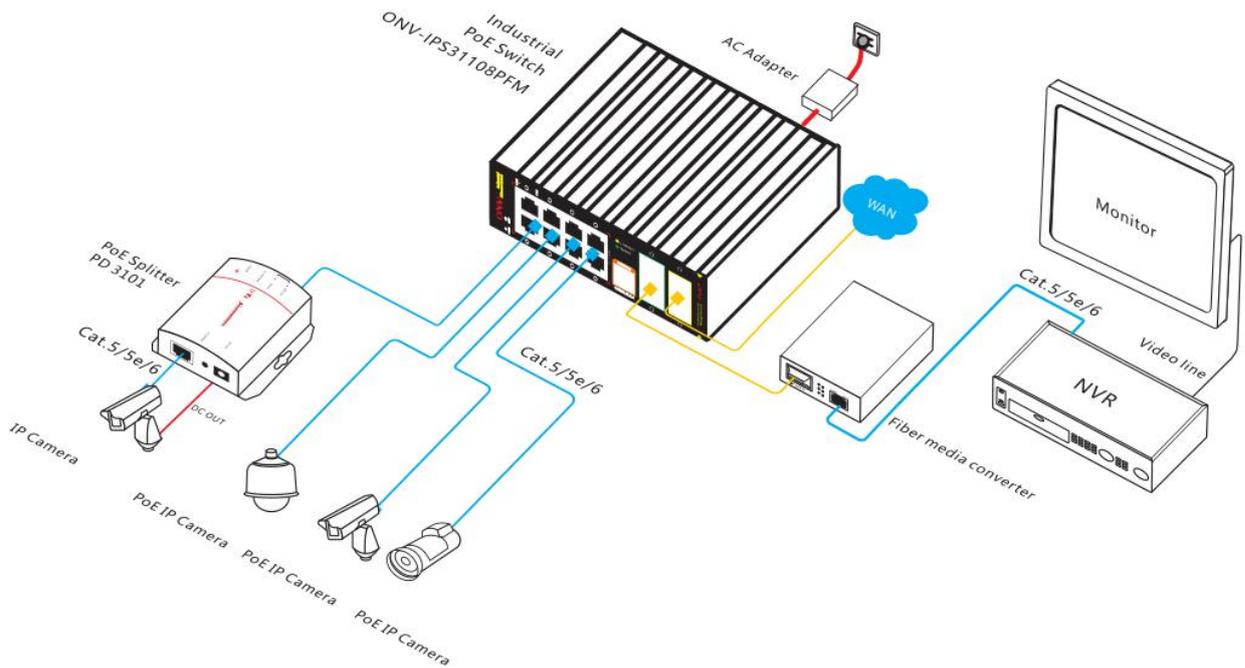
ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS31108PFM	L2 managed industrial PoE fiber switch with 8*10/100M RJ45 ports and 2*10/100/1000M uplink RJ45 ports and 2*100/1000M uplink SFP slot ports (combo port), Port 1-8 can support IEEE802.3af/at PoE. Support DC dual power supply input and DIN rail mounting.	120W
ONV-IPS31108PFM-at		240W

Note: Industrial PoE switch does not match the SFP optical module and power supply.

PACKING LIST

	CONTENT	QTY	UNIT
PACKING LIST	10-port gigabit uplink managed industrial PoE switch	1	SET
	User Guide	1	PC
	Warranty Card	1	PC

OPTICAL MODULE INFORMATION

Product	Model	Description	Unit
1.25G Optical Module	ONV-2630	SFP optical module, 1.25G, multi mode dual fiber 850nm, transmission distance: 550m, LC interface, support DDM function, support hot plug and pull.	PC
	ONV-2632	SFP optical module, 1.25G, single-mode dual fiber	PC

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		1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	
	ONV-2612-T	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
	ONV-2613-R	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
	ONV-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
	ONV-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
	ONV-2612-T-SC	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
	ONV-2613-R-SC	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	ONV-2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

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POWER SUPPLY SELECTION TABLE

Product	Model	Description	Unit
130W Desktop Power Adaptor	GWS-AP130-52	Desktop tape 130W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,2.3A Output Voltage:DC 52V 2.5A Operation Temperature:-20℃—+65℃	PC
250W Desktop Power Adaptor	GWS-AP250-52	Desktop tape 250W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,5A Output Voltage:DC 52V 5.0A Operation Temperature:-20℃—+65℃	PC
120W DIN Rail Industrial Power Supply	GWS-DP120-48	Din Rail type 120W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz,1.5A Output Voltage:DC 48V 2.5A Operation Temperature:-40℃—+70℃	PC
240W DIN Rail Industrial Power Supply	GWS-DP240-48	Din Rail type 240W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz,3A Output Voltage:DC 48V 5A Operation Temperature:-40℃—+70℃	PC

CONTACT US

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