

## Product Datasheet

# 6-port Gigabit Uplink Managed Industrial PoE Switch (ONV-IPS31064PFM)



## OVERVIEW

The ONV-IPS31064PFM is a gigabit uplink L2 managed industrial PoE fiber switch independently developed by ONV. It has 4\*10/100Base-TX adaptive RJ45 ports and 2\*100/1000Base-T(X) combo ports. Port 1-4 can support IEEE802.3af/at PoE standard, and single port PoE power reaches 30W. Each port can realize line-speed forwarding.

The ONV-IPS31064PFM 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 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, 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

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on backpressure.
- ◇ Support 10/100M RJ45 port and Gigabit combo port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

### ■ Intelligent PoE power supply

- ◇ IEEE802.3af/at PoE standard, without damaging non-PoE devices.
- ◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
- ◇ 4\*10/100Base-TX RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.
- ◇ 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.

### ■ Strong business processing capability

- ◇ Support IEEE 802.1Q VLAN, Users can flexibly VLAN division and QinQ configuration.
- ◇ Support STP/RSTP/MSTP production tree protocol to eliminate layer 2 loops and realize link backup.
- ◇ 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

- ◇ 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 casing.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, Link, PoE.

## ■ Easy operation and maintenance management

- ◇ Support CPU monitoring, memory monitoring.
- ◇ Support HTTPS, SSLV3, SSHV1/V2 and other encryption methods, making management more secure.
- ◇ Support Web network management, SNMP (V1/V2/V3) and other diversified management and maintenance.
- ◇ 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.

## TECHNICAL SPECIFICATION

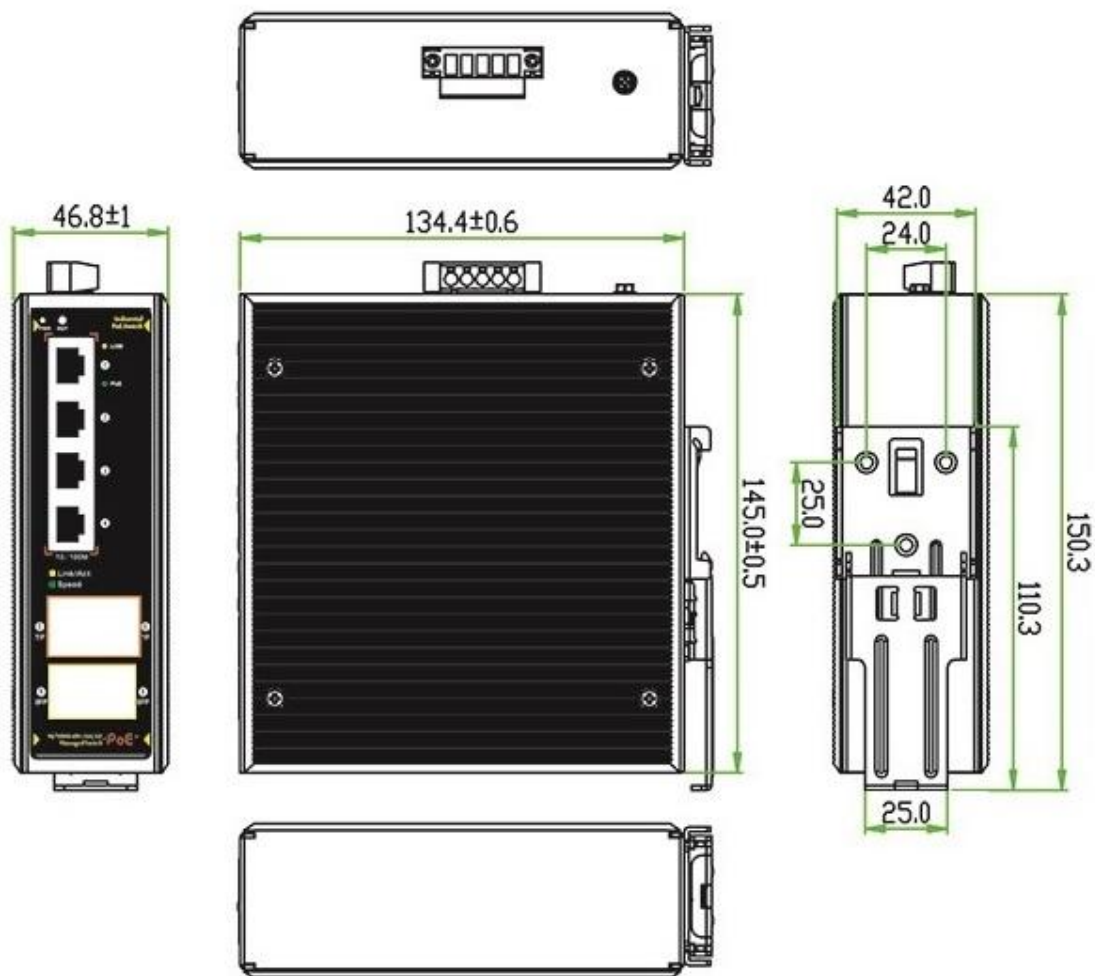
Model	ONV-IPS31064PFM
<b>Interface Characteristics</b>	
Fixed Port	4*10/100Base-TX PoE ports (Data/Power) 2*10/100/1000Base-T uplink RJ45 ports (Data) 2*100/1000Base-X uplink SFP ports (Combo port)(Data) 2 group of V+, V- redundant DC power interface (5P Phoenix terminal)
Ethernet Port	Port 1-4 support 10/100Base-TX, and port 5-6 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 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.
<b>Chip Parameter</b>	
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	14.8Gbps
Forwarding Rate@64byte	3.57Mpps
CPU(Hz)	150M
DRAM	256M
FLASH	128M
MAC	16K

Buffer Memory	4M
Jumbo Frame	10K
LED Indicator	Power: PWR(Green), Network: Link, link/Act(Yellow), POE: PoE (Green), Speed: Speed (Green)
<b>PoE &amp; Power Supply</b>	
PoE Port	Port 1 to 4 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	1/2(+)3/6 (-)
Max Power Per Port	30W, IEEE802.3af/at
Power Consumption	Standby:<8W, Full load: af<60W at<120W
Power Supply	No, optional 48V/60W or 48V/120W industrial power supply
Working Voltage	DC48-57V, 5P industrial Phoenix terminal, support anti-reverse protection.
<b>Physical Parameter</b>	
Operation TEMP / Humidity	-40~+75°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	<0.8kg / <1.0kg
Installation	Desktop, 35mm DIN rail
<b>Certification &amp; Warranty</b>	
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:±4kV IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz)

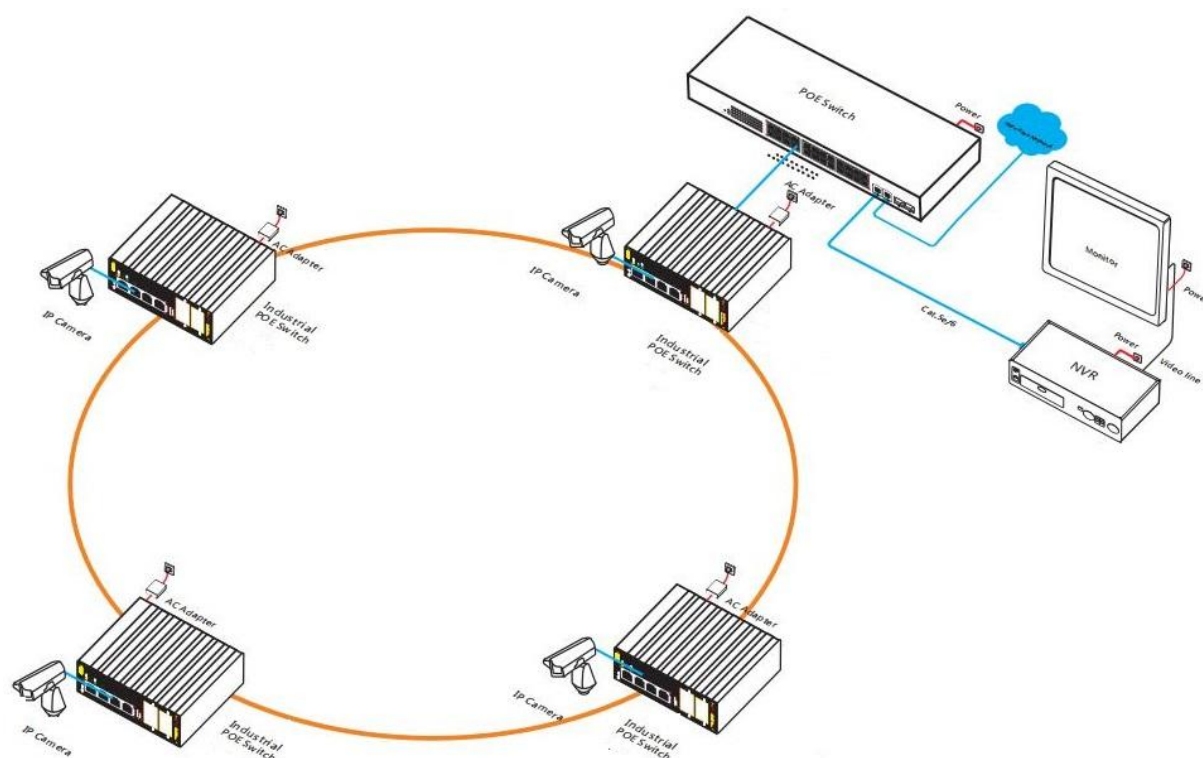
	IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m, 1s to 3s IEC61000-4-9(pulsed magnet field): 1000A/m IEC61000-4-10(damped oscillation): 30A/m 1MHz IEC61000-4-12/18(shockwave):CM 2.5kV, DM 1kV IEC61000-4-16(common-mode transmission): 30V, 300V, 1s FCC Part 15/CISPR22(EN55022): Class B IEC61000-6-2(Common Industrial Standard)
Mechanical Properties	IEC60068-2-32 (free fall) IEC60068-2-27 (anti shock) 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.
<b>Network Management Features</b>	
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	4K VLAN based on port, IEEE802.1q VLAN based on protocol
Port Aggregation	LACP, Manual aggregation Max 3 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	IGMP Snooping v1/v2/v3, Max 64 multicast groups MLD Snooping v1/v2, Multicast VLAN, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS, 8*Output queues of each port Queue Scheduling Algorithm (SP, WRR, SP+WRR) 802.1p/DSCP priority mapping, Priority Mark/Remark

ACL	L2-L4 packet filtering function can match the first 80 bytes of the packet, and provide ACL based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port range, VLAN, etc.
Security	Port isolation, IP+MAC+port binding, Broadcast storm control
DHCP	DHCP Client, DHCP Snooping, DHCP Relay
System& Management	One-key recovery, NTP, Login Record SNMP V1/V2/V3, Web Management (HTTPS)

## DIMENSION



## APPLICATION



## ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS31064PFM	L2 managed industrial PoE fiber switch with 4*10/100M RJ45 ports and 2*10/100/1000M uplink RJ45 ports and 2*100/1000M uplink SFP ports (combo port). Port 1-4 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.	60W/120W

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



## PACKING LIST

Packing List	Content	Qty	Unit
	6-port gigabit uplink managed industrial PoE switch	1	SET
	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 plug and pull.	PC
	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
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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 2.15A Operation Temperature: -20℃ to +65℃	PC
60W DIN Rail Industrial Power Supply	GWS-DP60-48	Din Rai 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-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 ports (combo port). Port 1-8 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.
ONV-IPS33064PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP ports. Port 1-4 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.
ONV-IPS33084PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP ports. Port 1-4 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.
ONV-IPS33108PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP ports. Port 1-8 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.
ONV-IPS33148PFM	L2+ managed industrial PoE fiber switch with 10*10/100/1000M RJ45 ports and 4*100/1000M SFP ports. Port 1-8 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.
ONV-IPS33168PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 8*100/1000M SFP ports. Port 1-8 can support IEEE802.3af/at PoE standard. It can support dual DC power 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 SFP ports. Port 1-8 can support IEEE802.3af/at PoE standard. It can support dual DC power input and DIN rail mounting.

## CONTACT US



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