10-port Gigabit Uplink Managed Industrial Data Switch

- 7*10/100M RJ45 ports and 3*100/1000M uplink SFP slot ports and 1*RS485 data port and 1*RS232 data port

- Support RSTP/STP and MSTP for Ethernet ring network redundancy.

- Support gateways and proxy servers can transfer data over the Internet, and can immediately connect to a TCP/IP network.

- Support dynamic IP (DHCP), static IP, web management, and maintenance.

- Provide data bidirectional transparent transmission, can realize serial port to TCP/IP, the users do not need to make any modifications to the original system.

- Internal integration of ARP, IP/TCP, HTTP, ICMP, SOCKET, UDP, DNS, and other protocols

OVERVIEW

The ONV-IPS31107FM-2D is a gigabit uplink L2 managed industrial data switch independently developed by ONV. It has 7*10/100Base-TX RJ45 ports and 3*100/1000Base-X uplink SFP slot ports. Each port can support full line-rate forwarding.

ONV-IPS31107FM-2D has L2 network management function and provides a serial port to network function, which can convert RS-232 / 485 serial port to TCP / IP port, and realize bidirectional transparency of data between RS-232 / 485 serial port and TCP / IP network interface transmission. The serial device can immediately have the TCP / IP port function, connect the network for data communication, and greatly extend the communication distance of the serial device.

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ONV-IPS31107FM-2D industrial data switch has excellent industrial field environment adaptability (including mechanical stability, climate adaptability, electromagnetic environment adaptability, etc.), protection level up to IP40, It can support dual redundant power supply, low power consumption and no fan cooling technology, MTBF average trouble-free working time up to 35 years, 5-year warranty. It is suitable for industrial scenes such as intelligent transportation, rail transit, electric power, mining, metallurgy and green energy construction to form a cost-effective and stable communication network.

FEATURE

■ **10/100M Ethernet port access, Gigabit SFP uplink**

◇ Gigabit uplink SFP fiber port, easy to achieve high switching capacity and high rate transmission.

■ **Provide data bidirectional transparent transmission**

◇ Support 1 channel RS485 serial port data to TCP/IP transparent transmission

◇ Support 1 channel RS232 serial port data to TCP/IP transparent transmission

■ **Port lightning protection, wide voltage input**

◇ Contact discharge 8KV, air discharge 15KV; port lightning protection common-mode 4KV, differential mode 2KV;

◇ Industrial dual power input.

◇ Non-PoE DC INPUT: 12-48V.

■ **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

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permission, and provide flexible and safe access control.

◇ IGMP V1/V2 and IGMP Snooping.

◇ STP/RSTP/MSTP.

◇ Static and dynamic aggregation.

■ **Stable and reliable**

◇ CE, FCC, RoHS.

◇ Low power consumption, No fan, aluminum shell.

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

■ **Easy operation and maintenance management**

◇ Support web management and maintenance.

TECHNICAL SPECIFICATION

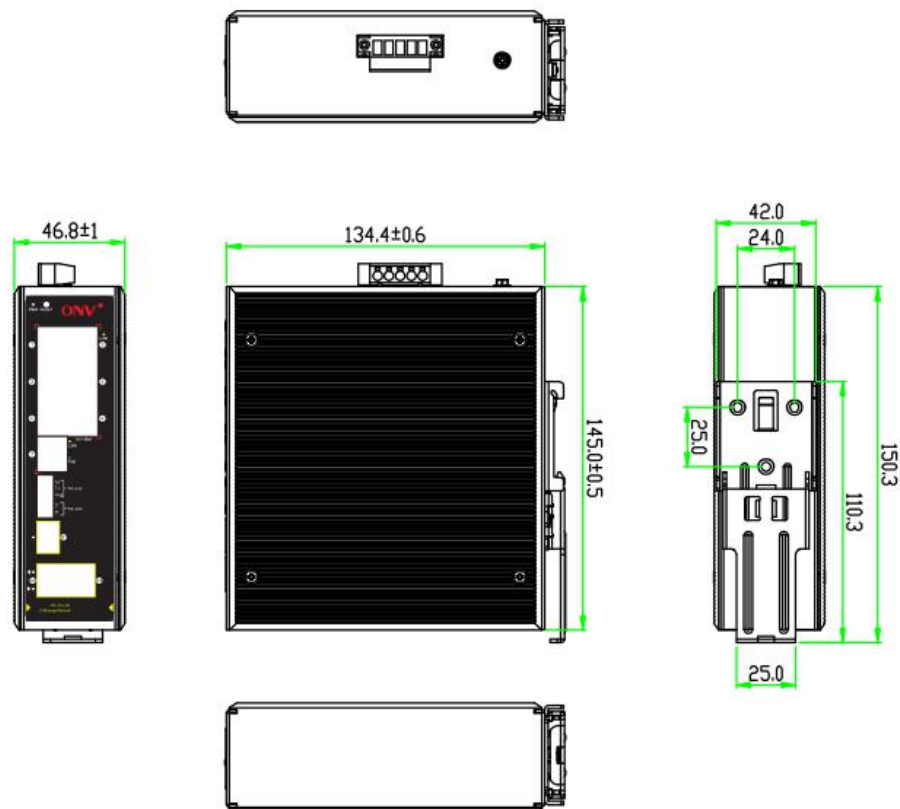| Model	ONV- IPS31107FM-2D
Interface Characteristics	
Fixed Port	7*10/100Base-TX RJ45 ports　(Data) 3 *100/1000Base-X uplink SFP slot ports (Data) 1*RS485 data port (115200,N,8,1) 1*RS232 data port 2 sets of V+, V- redundant DC power interface (5P phoenix terminal)
Ethernet Port	Port 1-7 support 10/100Base-TX automatic detection, full / half duplex MDI/MDI-X adaptive
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 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/ Dinstance	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, IEEE802.3z 1000Base-X IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	64Gbps
Forwarding Rate@64byte	5.51Mpps
MAC	8K
Buffer Memory	1M
Jumbo Frame	1632bytes
LED Indicator	Power /System : SYS (green), Network: Link (yellow), SFP port : L/A (green)
Reset Switch	Yes, Press and hold the reset switch for 10s and release it to restore the factory settings
Power	
Working Voltage	12-48VDC; 5P industrial Phoenix terminal, support anti-reverse protection.
Power Consumption	Standby<10W, Full load<20W
Power Supply	No, optional 24V/24W industrial power supply
Physical Parameter	
Operation TEMP /	-40~+80°C;5%~90% RH Non condensing

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Humidity	
Storage TEMP / Humidity	-40~+85°C;5%~95% RH Non condensing
Dimension (L*W*H)	165*148*54mm
Net /Gross Weight	<1.0kg / <1.3kg
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)

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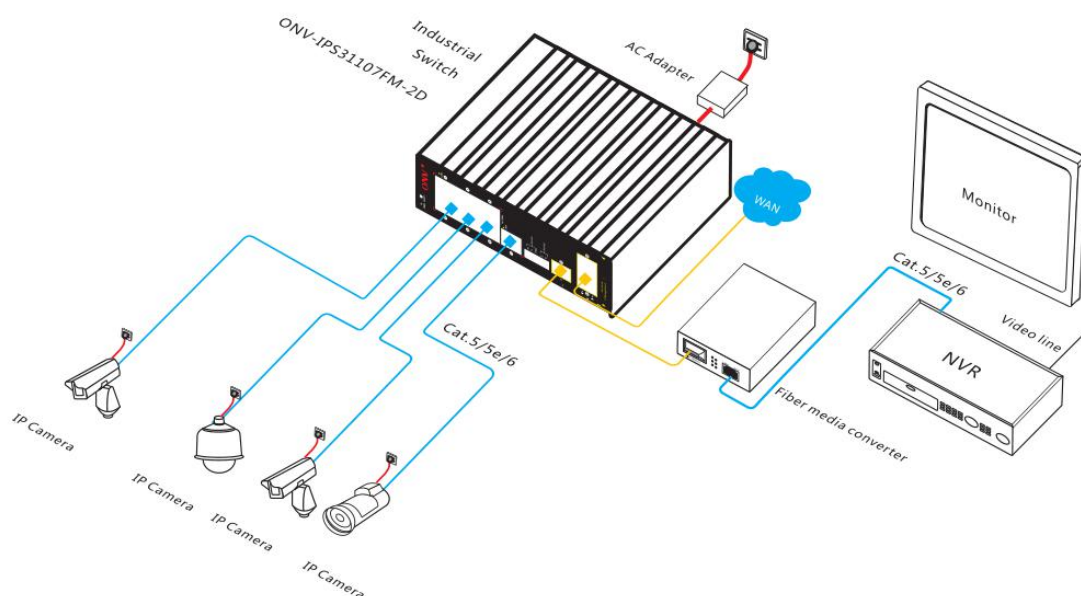
	Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.
Serial Port	Serial port number selection and configuration Serial port basic parameter setting (baud rate, data bit, parity, stop bit, minimum forwarding frame, maximum forwarding delay) Default (115200, 8, N, 1) Serial session setting (connection ID, working mode TCP Server/Client, local port number, remote port information configuration)
VLAN	QinQ configuration VLAN based on protocol 4K VLAN based on port, IEEE802.1q
Port Aggregation	LACP,Manual aggregation Max 5 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Multicast	MAC port-based static multicast group
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS,Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)
Security	Port isolation Broadcast storm control Port+MAC binding, IP+MAC+port binding
DHCP	DHCP Client, DHCP Server
Management	Login Record One-key recovery

	Web Management (HTTPS) TFTP file upload management
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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APPLICATION

ORDERING INFORMATION

Model	Description
ONV-IPS31107FM-2D	L2 managed industrial data switch with 7*10/100M RJ45 ports and 3*100/1000M SFP ports and 1*RS485 data port and1*RS232 data port. It can support dual DC power supply and DIN rail mounting.

Note: Industrial data switch does not match the SFP module and power supply by default.

PACKING LIST

	CONTENT	QTY	UNIT
Packing List	10-Port gigabit uplink managed industrial data switch	1	SET
	User Guide	1	PC
	Warranty Card	1	PC

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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 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	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
	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
	ONV-2612-T-SC	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface, support DDM function, support	PC

		hot plug and pull.	
	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

POWER SUPPLY SELECTION TABLE

Product	Model	Description	Unit
24W DIN Rail Industrial Power Supply	GWS-DP24-24	Din Rail type 24W single set of output power supply; Input Voltage:AC 100V~240V 50-60H,0.35A Output Voltage:DC 24V 1.0A Operation Temperature：-40℃—+70℃	PC

RELATED PRODUCT

Model	Description
ONV-IPS33084FM	L2+ managed industrial Ethernet fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. It can support dual DC power supply and DIN rail mounting.
ONV-IPS33108FM	L2+ managed industrial Ethernet fiber switch with 8*10/100/1000M

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	RJ45 ports and 2*100/1000M SFP slot ports. It can support dual DC power supply and DIN rail mounting.
ONV-IPS33168FM	L2+ managed industrial Ethernet fiber switch with 8*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports. It can support dual DC power supply and DIN rail mounting.
ONV-IPS33168FM-4GF	L2+ managed industrial Ethernet fiber switch with 12*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. It can support dual DC power supply and DIN rail mounting.
ONV-IPS33248FM-4GF	L2+ managed industrial Ethernet fiber switch with 20*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. It can support dual DC power supply and DIN rail mounting.

CONTACT US

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