Product Datasheet

12-port 2.5G Managed Industrial Ethernet Fiber Switch
(ONV-IPS57128FM)

OVERVIEW

The ONV-IPS57128FM is a 2.5G L2+ managed industrial Ethernet fiber switch independently developed by ONV. It has 8*10/100/1000/2500Base-T adaptive RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Each ports support wire-speed forwarding.

The ONV-IPS57128FM has L2+ network management function, supports IPV4/ IPV6 management, static route forwarding, complete security protection mechanism, perfect ACL/QoS policy, and rich VLAN functions. Support multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability, and can quickly restore communication when a one-way network fails, to ensure uninterrupted communication of important applications. Port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other application service configurations are performed through Web, CLI, SNMP, Telnet, etc. according to actual application needs. The ONV-IPS57128FM follows industrial product design and materials. The shell is made of aluminum alloy, which has excellent adaptability to industrial site environments (including mechanical stability, climate

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environment adaptability, electromagnetic environment adaptability, etc.). The protection level reaches IP40. It supports dual power supply, low power consumption, no fas, and 5-year warranty. It is suitable for industrial scenarios such as intelligent transportation, rail transit, the electric power industry, mining, petroleum, shipping, metallurgy, and green energy construction to establish a cost-effective, stable, and reliable communication network.

FEATURE

■ **2.5G access, 10G optical port uplink**

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE 802.3x and half-duplex based on Backpressure.

◇ Support 2.5G Ethernet port and 10G SFP+ port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ **Strong business processing capability**

◇ 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 IGMP Snooping V1/V2/V3 multicast protocol to meet the high-definition video surveillance and video conference access requirements.

◇ 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.

■ **Security**

◇ Support port isolation.

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◇ 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.

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

◇ Low power consumption, no fan, aluminum shell, excellent heat dissipation to ensure the stable operation of the switch.

■ **Easy O&M management**

◇ 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.

◇ LLDP is convenient for the network management system to query and judge the communication status of the link.

◇ Various management and maintenance methods such as Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, etc.

TECHNICAL SPECIFICATION

Model	ONV-IPS57128FM
Interface Characteristics	
Fixed Port	Power off alarm switch port (FAULT) 1*RS232 Console port (115200, N, 8,1) 4*1/10G uplink SFP+ fiber ports (Data) 8*10/100/1000/2500Base-T RJ45 ports (Data)

|	
	2 set of V+, V- redundant DC power ports (6 Pin Phoenix terminal)
Ethernet Port	Port 1-8 support 10/100/1000/2500Base-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) 2500BASE-T: Cat6A or later UTP (≤100 meters)
Optical Fiber Port	1/10G SFP+ optical fiber port, default no include optical module (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
Chip Parameter	
Network Management	L2+
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X, IEEE802.3be 2.5GBase-T IEEE802.3ae 10GBase-SR/LR, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	96Gbps
Forwarding Rate@64byte	89.28Mpps
CPU	Dual Core 1GHz
DRAM	2G
FLASH	256Mbit
MAC	32K
Buffer Memory	16Mbit
Jumbo Frame	12Kbytes
LED Indicator	Fiber port: L/A (Green), Rate: 100/1000(Green)

	Power/ System: SYS (Green), Network: Link (Yellow)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings
Power Supply	
Power Consumption	Standby<16W, Full load<25W
Working Voltage	DC12-48V, 6 Pin industrial Phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 24V/36W industrial power supply
Physical Parameter	
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)	166*150*75mm
Net /Gross Weight	1.8kg / 2.1kg
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)

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	IEC61000-4-8 (Power frequency magnetic field):100A/m, 1000A/m, 1s-3s
	IEC61000-4-5 (Surge): Power cable:CM±4kV/ DM±2kV, Data cable: ±4kV
Mechanical Properties	IEC60068-2-6 (Anti Vibration), IEC60068-2-32 (Free Fall), IEC60068-2-27 (Anti Shock)
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 flow control (Full duplex)
	Port exception protection mechanism
	Port real-time flow management (Flow Interval)
	Broadcast storm suppression based on port rate
	Jumbo frame configuration, the largest 12000byte
	Optical port SFP module DDMI real-time digital diagnosis
	Port EEE Green Ethernet Energy-Saving configuration and status view
	Limit the rate of incoming and outgoing packet traffic, with a mini granularity of 16Kbps and a max of 1Gbps
Layer 3 Features	RIPv1/v2, RIPng, OSPFv1/v2, OSPFv3
	Static routing, ARP protocol, max 1024 entries
	L2+ network management function, dual-stack IPv4/IPv6 management
VLAN	(4K) VLAN based on port, IEEE802.1q
	VLAN based on MAC, VLAN based on the protocol
	Port configuration of Access, Trunk, Hybrid. GVRP VLAN protocol
Port Aggregation	LACP dynamic aggregation, Static aggregation
	Max 6 aggregation groups and maximum 8 ports per group.
Spanning Tree	STP BPDU Guard, BPDU filtering and BPDU forwarding
	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
ERPS Ring Network	Support ERPS ring network, ring network self-healing time is less than 20ms, ITU-T G.8032

| Multicast | MLD Snooping, Multicast VLAN |
	User quick log out, MVR (Multicast VLAN Registration)
	IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	Bidirectional traffic mirroring for basic ports
	One-to-multiple mirroring, supports up to 4 port sessions
QoS	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
	Flow-based Rate Limiting, Stream based redirection
	Flow-based Packet Filtering, 8*Output queues of each port
	802.1p/ DSCP priority mapping, Diff-Serv QoS, Priority Mark/ Remark
ACL	ACL distribution based on port and VLAN
	L2-L4 packet filtering function, matching the first 80 bytes message, and provides ACL definitions based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN, etc.
Security	Port based IEEE802.1X authentication
	SSL guarantees data transmission security
	Quad binding function of IP+MAC+VLAN+ports
	MAC address learning limit, MAC address black hole
	Anti DoS attack, Port broadcast message suppression
	IP Source Guard function, AAA&RADIUS certification
	Hierarchical user management and password protection
	SSH 2.0 provides a secure encrypted channel for user login
	Host data backup mechanism, ARP intrusion detection function
	Port isolation, IP Source Guard, ARP message speed limit function
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	Web network management (https)
	Link Layer Discovery Protocol(LLDP)
	Viewing CPU Instant Utilization Status
	NTP clock, One click restore, SNMP V1/V2/V3

8	Cable status check, Ping detection, System work log ONV NMS platform cluster management (LLDP+SNMP) Console/AUX Modem/Telnet/CLI command line configuration FTP, TFTP, Xmodem, SFTP 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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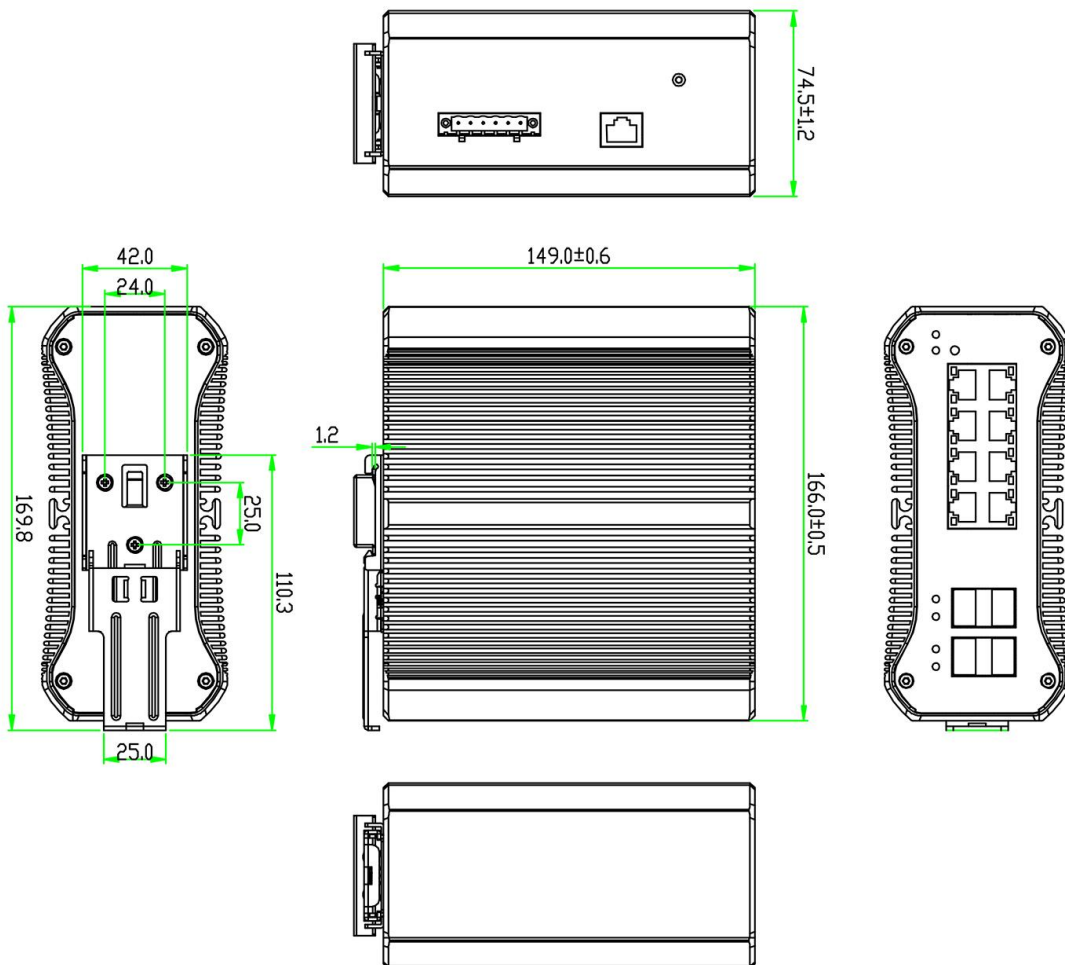
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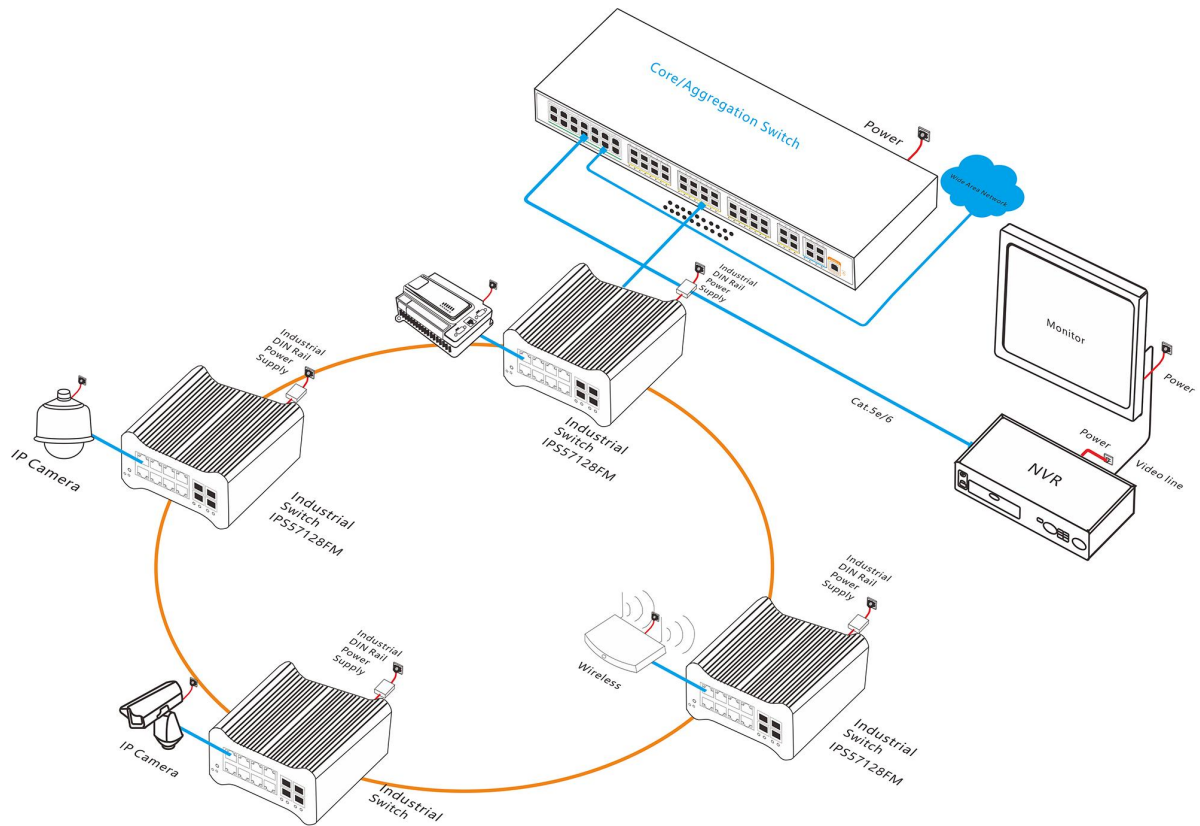
ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS57128FM	L2+ managed industrial Ethernet fiber switch with 8*10/100/1000/2500M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It support dual DC power supply input and DIN rail mounting.	24V/36W
Note: The optical module and power supply are not included and need to be purchased.		

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PACKING LIST

	Content	Qty	Unit
Packing List	12-port 2.5G managed industrial Ethernet Fiber 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, 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-SC-G	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-SC-G	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

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10G Optical Module	6630-G	Industrial SFP+ optical module, 10G multi-mode dual fiber 850nm, transmission distance: 300m, LC interface, support DDM function, support hot plug and pull.	PC
	7832-G	Industrial SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	7832-33-G	Industrial SFP+ optical module, 10G single-mode single fiber TX1330nm/ RX1270nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	7832-27-G	Industrial SFP+ optical module, 10G single-mode single fiber TX1270nm/ RX13300nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

POWER SUPPLY

Product	Model	Description	Unit
36W DIN Rail Industrial Power Supply	GWS-DP36-24	DIN Rail 36W single set of output power supply Input Voltage: AC100V-240V 50-60Hz, 0.56A Output Voltage: DC24V 1.5A Operation Temperature: -40℃ to +70℃	PC

CONTACT US

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