OPTICAL NETWORK VIDEO TECHNOLOGIES (SHENZHEN) CO., LTD.

Product Datasheet

44-Port 10G Uplink L3 Managed Industrial PoE Fiber Switch

ONV-IPS38448PFM

OVERVIEW

The ONV-IPS38448PFM is a 10G uplink L3 managed industrial PoE fiber switch independently developed by ONV. It has 12*10/100/1000Base-T RJ45 ports and 28*100/1000Base-X SFP fiber slot ports and 4*1/10G SFP+ fiber slot ports. Port 1-8 can support IEEE 802.3af/at standard PoE. single port PoE power up to 30W, and the maximum PoE output power is 130W(at-250W). As a PoE power supply device, it can automatically detect and recognize power-compliant devices that meet the standard and supply power through the network cable. It can supply power to POE terminal equipment such as wireless AP, webcam, VoIP, 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, Industrial scenes such as shipping, metallurgy, and green energy construction form a cost-effective, stable and reliable communication network.

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The ONV-IPS38448PFM has the layer three full network management function, support IPV4/IPV6 management, static route full line-rate forwarding, security protection mechanism, ACL/QoS policy and rich VLAN functions, and is easy to manage and maintain. Support multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS(<20ms) to improve link backup and network reliability. When the one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as PoE power management, port traffic control, VLAN division, and SNMP through the Web network management mode.

FEATURE

Gigabit multi fiber port access, 10G uplink

- ◇ A combination of Gigabit Ethernet port and Gigabit SFP port and 10G uplink SFP+ port to meet the networking requirements 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*10/100/1000Base-T 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.

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◇ 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, fan active cooling , galvanized steel casing.

◇ Self-developed power supply, high redundancy design, providing a long term and stable PoE power output.

◇ CCC,CE, FCC, RoHS.

◇ The user-friendly panel, it can show the device status through the LED indicator of PWR,SYS, Link,L/A ,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-IPS38448PFM	ONV-IPS38448PFM-at
Interface	12*10/100/1000Base-T RJ45 ports (Data/Power) 28*100/1000Base-X uplink SFP fiber slot ports (Data) 4*1/10G uplink SFP+ fiber slot ports (Data) 1*Console RS232 port (115200,N,8,1)	
POE Port	Port 1 to port 8	
Network Protocol	IEEE802.3 10BASE-T; IEEE802.3i 10Base-T; IEEE802.3u 100Base-TX; IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X IEEE802.3ae 10GBase-SR/LR	

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	IEEE802.3x	
PoE Standard	IEEE802.3af/at	
Ethernet Port Feature	10/100/1000Base-T,Auto-sensing,Full/half duplex MDI/MDI-X self-adaption	
Fiber Port Feature	Gigabit SFP /10G SFP+ fiber interface, default matching optical modules(optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	598Gbps (non-blocking)	
Forwarding Rate@64byte	119.04Mpps	
MAC	32K	
Buffer Memory	32M	
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)	
Optical Fiber Cable	Multi-mode:850nm 0~300M(10G) ,850nm 0~500M (1.25G); Single-mode:1310nm 0~40KM,1550nm 0~120KM.	
Power Supply Pin	Default: 1/2(+),3/6(-)	
Max / Average Power Per Port	30W/15.4W	30W/30W
Total PWR / Input Voltage	130W (AC100-240V)	250W (AC100-240V)
Power Consumption	Standby<20W; Full Load<130W	Standby<25W;Full Load<250W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 2.3A	Built-in power supply, AC 100~240V 50-60Hz 4.1A
Power Input Interface	Dual input power interface, AC power supply priority, support anti-reverse protection, power-off automatic switching DC connection; 2 sets of DC48-57V input interface; alarm switch interface; 1 set of AC power input interface	
LED Indicator	Power:PWR(yellow); system:SYS(yellow); network ;Link(yellow); PoE: PoE (green); Fiber port : L/A(green)	
Reset Button	Support one key to restore factory settings	
Heat Dissipation	Low noise; fan active cooling	
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)	440*290*44.5mm	
Net /Gross Weight	<4.0kg / <4.8kg	<4.5kg / <5.2kg

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Installation	desktop ,19 inch 1U cabinet
Lightning protection / protection level	Lightning protection: 6KV 8/20us;Protection level: IP30 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.
Managed Series Feature	
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. Port temperature protection setting Port green Ethernet Energy-saving setting
PoE Management	Total power limit of PoE power supply PoE output power allocation, off& af &at PoE output priority configuration PoE working status Delay start of power supply Scheduling of PoE operation and time
Layer3 Function	Support L3 managed function IPV4/IPV6 management L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs
VLAN	4K VLAN based on port, IEEE802.1q VLAN based on the protocol VLAN based on MAC Voice VLAN, QinQ configuration Port configuration of Access, Trunk, Hybrid

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Port Aggregation	LACP, Static aggregation Max 22 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Industrial Ring Network Protocol	G.8032 (ERPS),Recovery time less than 20ms 255 Ring at most, Max 254 devices per ring.
Multicast	IGMP Snooping v1/v2/v3, Max 1024 multicast groups, Fast log out MLD Snooping v1/v2,Multicast VLAN
Image	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) Flow-based Packet Filtering Flow-based Redirection Flow-based Rate Limiting
ACL	L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc. Port-based Issuing ACL. ACL based on port and VLAN
Safety	User hierarchical management and password protection SSH 2.0,SSL,Port isolation,ARP message speed limit Broadcast storm control,Backup for host datum IEEE802.1X & MAC address authentication Mac black holes,IP source protection AAA & RADIUS,MAC learning limit ARP inspection,Anti-DoS attack IP-MAC-VLAN-Port binding
DHCP	DHCP Client,DHCP Snooping DHCP Server,DHCP Relay
Management And Maintenance	Console/AUX Modem/Telnet/SSH2.0 CLI Web Management (HTTPS) Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3 One-key recovery NTP,System work log,Ping Test Cable Diagnose,LLDP CPU instant utilization status view ONV NMS - Smart Network Management System Platform (LLDP+SNMP)
System	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; Category 5 Ethernet network cable

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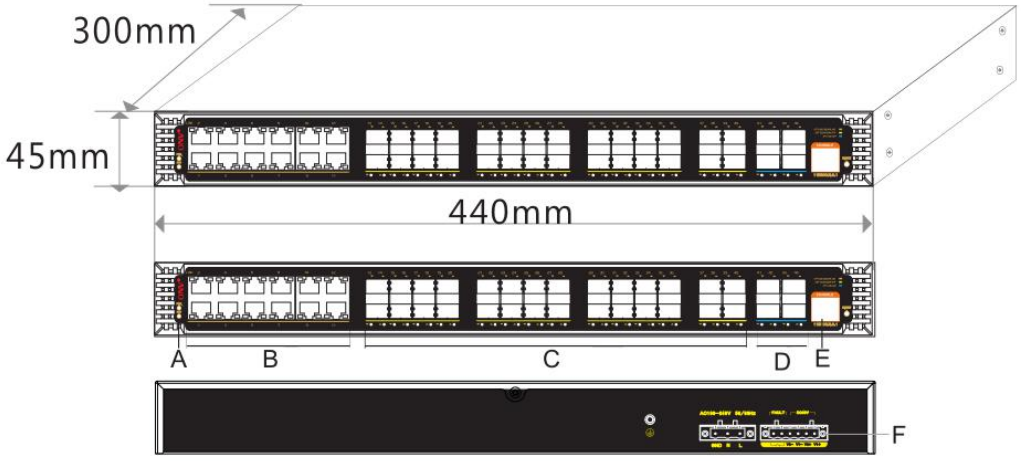
	TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

DIMENSION



A.Power indicator
B. 12* RJ45 Ports
C.28*Gigabit SFP ports
D.4*1/10G SFP Ports
E.Console port
F.AC/DC dual input port

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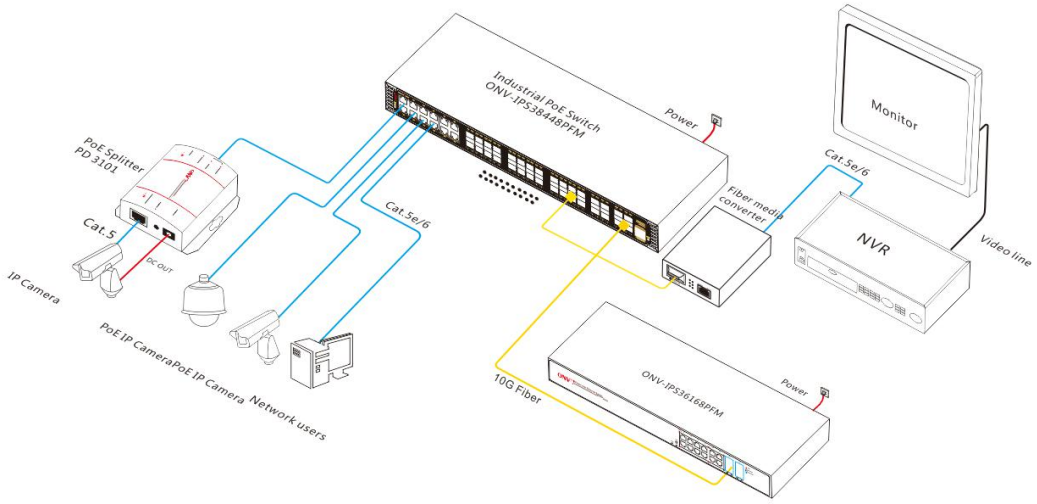
APPLICATION



PACKING LIST

	CONTENT	QTY	UNIT
Packing List	44-Port 10G uplink L3 managed industrial PoE fiber switch	1	SET
	AC Power Cable	1	PC
	RJ45-DB9 Line	1	PC
	Mounting Kits(Hanging Ear)	1	SET
	User Guide	1	PC
	Warranty Card	1	PC

Note: Industrial PoE switch does not match SFP module by default.

ORDERING INFORMATION

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Model	Description
ONV-IPS38448PFM	L3 managed industrial PoE fiber switch with 12* 10/100/1000M RJ45 ports and 28*100/1000M SFP fiber slot ports and 4*1/10G SFP+ fiber slot ports , Port 1-8 can support IEEE 802.3af/at PoE standard, Built-in 130W power supply.
ONV-IPS38448PFM -at	L3 managed industrial PoE fiber switch with 12* 10/100/1000M RJ45 ports and 28*100/1000M SFP fiber slot ports and 4*1/10G SFP+ fiber slot ports , Port 1-8 can support IEEE 802.3af/at PoE standard, Built-in 250W power supply.

SELECTION OF INFORMATION

Fiber Module Selection Table

Product	Model	Description	Unit
1.25G Fiber 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.	
	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.	

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	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
Electric Module	ONV-2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 net port.	PC
10G Fiber Module	ONV-6630	SFP+ optical module,10G Multi-mode dual fiber 850nm, transmission distance: 300m, LC interface, support DDM function,support hot plug and pull.	PC
	ONV-7832	SFP+ optical module,10G Single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	ONV-7832-33	SFP+ optical module,10G Single-mode single fiber TX1330nm/RX1270nm , transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	ONV-7832-27	SFP+ optical module,10G Single-mode single fiber TX1270nm/RX13300nm , transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

CONTACT US

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