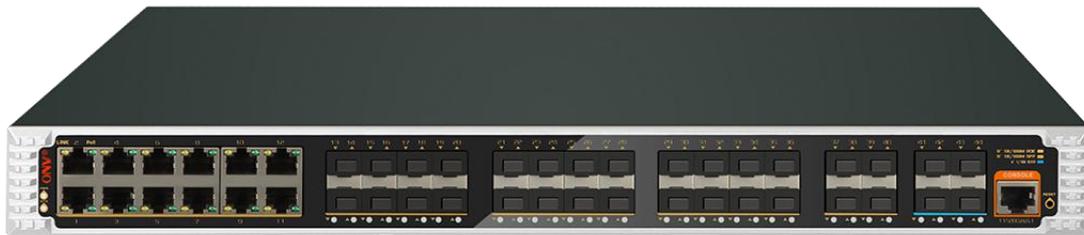


Product Datasheet

44-Port 10G Uplink Managed Industrial PoE Fiber Switch

ONV-IPS36448PFM



OVERVIEW

The ONV-IPS36448PFM is a 10G uplink L2+ 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 IEEE802.3af/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.

The ONV-IPS36448PFM has L2+ 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.

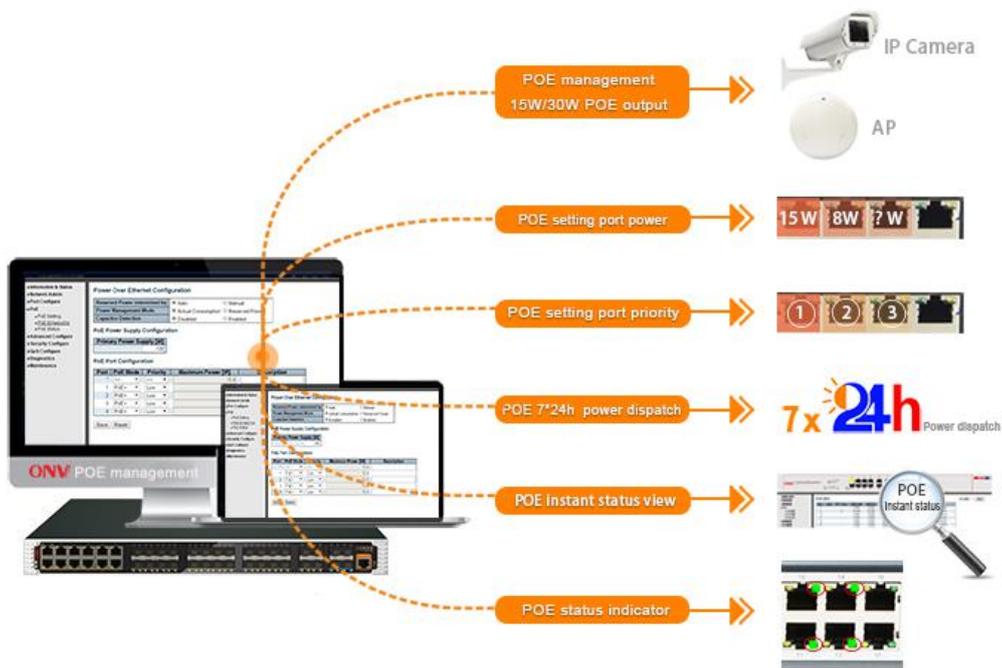
FEATURE

■ 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.

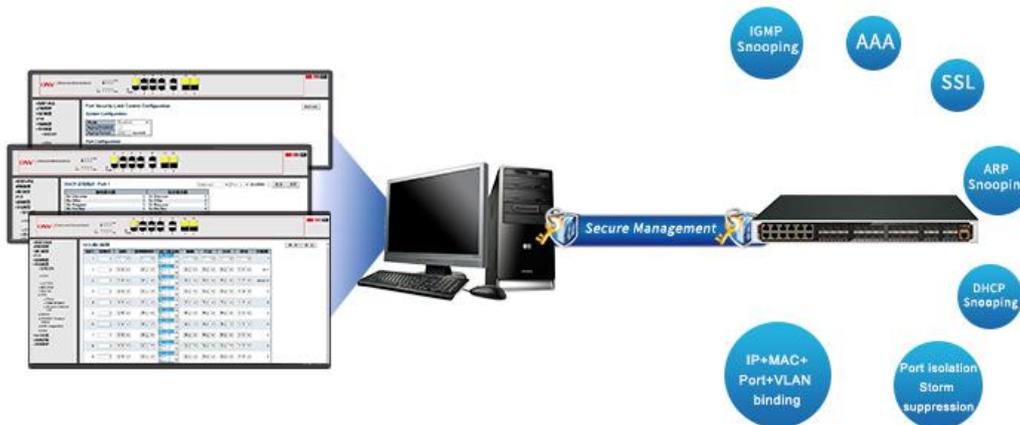
■ Intelligent PoE power supply

- ◇ 8*10/100/1000Base-T RJ45 ports can support POE power supply to meet 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.



■ Security

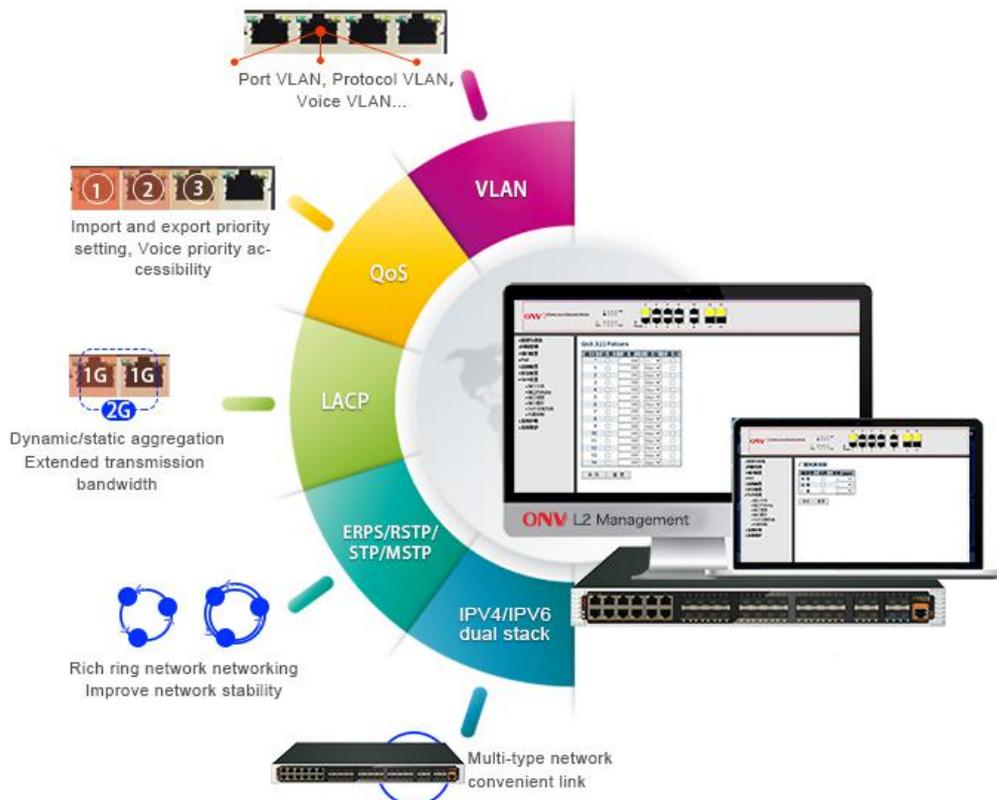
- ◇ 802.1X authentication.
- ◇ Port isolation, Storm control.
- ◇ IP-MAC-VLAN-Port binding.



■ 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.



■ 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-IPS36448PFM	ONV-IPS36448PFM-at
Interface Characteristics		
Fixed Port	8*10/100/1000Base-T PoE ports (Data/Power) 4*10/100/1000Base-T RJ45 ports(Data) 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)	
Ethernet Port	10/100/1000Base-T, 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)	
Optical Fiber Port	Gigabit SFP /10G SFP+ optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
Optical Cable/ Distance	Multi mode: 850nm / 0 ~ 500M(1.25G), 850nm / 0 ~ 300M (10G); 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 , IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X IEEE802.3ae 10GBase-LR/SR IEEE802.3x	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	598Gbps (non-blocking)	
Forwarding Rate@64byte	119.04Mpps	
MAC	32K	
Buffer Memory	32M	
Jumbo Frame	9.6K	
LED Indicator	Power: PWR (yellow), system:SYS (yellow), network:Link (yellow), PoE: PoE (green), Fiber port : L/A (green)	
Reset Switch	Yes, support one key to restore factory settings	
PoE & Power		
PoE Port	Port 1 to 8	
PoE Management	PoE working status Delay start of power supply PoE output priority configuration Scheduling of PoE operation and time Total power limit of PoE power supply PoE output power allocation, off& af &at	
Power Supply Pin	Default: 1/2 (+), 3/6 (-)	
Max Power Per Port	30W, IEEE802.3af/at	
Total PWR / Input Voltage	130W (AC100-240V)	250W (AC100-240V)
Power Consumption	Standby<20W; Full Load<130W	Standby<25W;Full Load<250W
Power Input Interface	Dual input power interface design, AC power supply priority,	

	support anti-reverse protection, power-off automatic switching DC connection; 2 sets of DC12-48V input interface; 1-way alarm switch interface; 1 set of AC power input interface	
Heat Dissipation	Low noise, the fan active cooling	
Power Supply	Built-in power supply, AC100~240V 50-60Hz 2.3A	Built-in power supply, AC100~240V 50-60Hz 4.1A
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)	440*290*44.5mm	
Net /Gross Weight	<4.0kg / <4.8kg	<4.5kg / <5.2kg
Installation	Desktop type ,19 inch 1U cabinet installation	
Certification & Warranty		
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)	

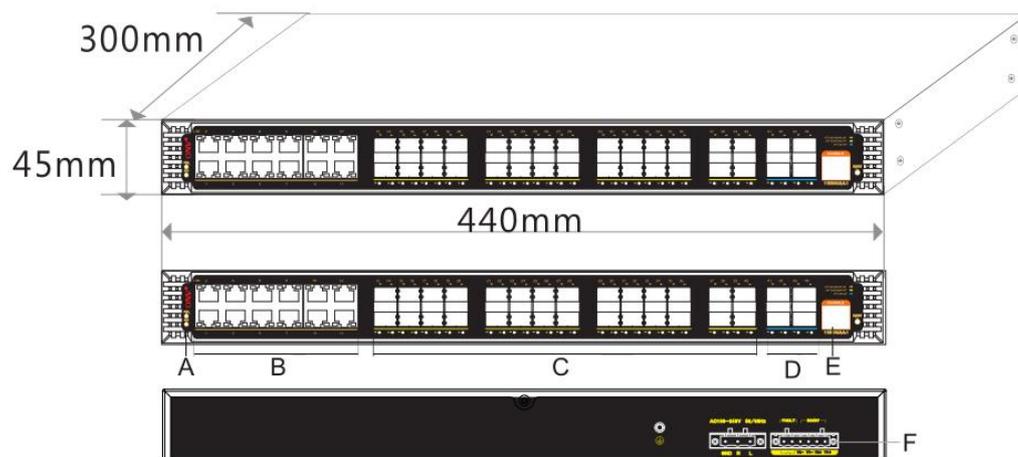
Mechanical Properties	IEC60068-2-6 (anti vibration) IEC60068-2-27 (anti shock) IEC60068-2-32 (free fall)
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS
Warranty	5 years, lifelong maintenance.
Network Management Features	
Interface	IEEE802.3X (Full-duplex) Port temperature protection setting Port green Ethernet Energy-saving setting Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.
Layer 3 Features	L2+ network management ,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
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 250 Ring at most, Max 250 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2, Max 250 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port

QoS	<p>Flow-based Rate Limiting</p> <p>Flow-based Packet Filtering</p> <p>8*Output queues of each port</p> <p>802.1p/DSCP priority mapping</p> <p>Diff-Serv QoS, Priority Mark/Remark</p> <p>Queue Scheduling Algorithm (SP, WRR, SP+WRR)</p>
ACL	<p>Port-based Issuing ACL, ACL based on port and VLAN</p> <p>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.</p>
Security	<p>IP-MAC-VLAN-Port binding</p> <p>ARP inspection, Anti-DoS attack</p> <p>AAA & RADIUS, MAC learning limit</p> <p>Mac black holes, IP source protection</p> <p>IEEE802.1X & MAC address authentication</p> <p>Broadcast storm control, Backup for host datum</p> <p>SSH 2.0, SSL, Port isolation, ARP message speed limit</p> <p>User hierarchical management and password protection</p>
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	<p>One-key recovery</p> <p>Cable Diagnose, LLDP</p> <p>Web Management (HTTPS)</p> <p>NTP, System work log, Ping Test</p> <p>CPU instant utilization status view</p> <p>Console/AUX Modem/Telnet/SSH2.0 CLI</p> <p>Download & Management on FTP, TFTP, Xmodem, SFTP, SNMP</p> <p>V1/V2C/V3</p> <p>ONV NMS - smart network management system platform (LLDP+SNMP)</p>
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



- | | |
|--------------------------|--------------------------|
| 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 |

APPLICATION



ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV-IPS36448PFM	L2+ 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.	130W
ONV-IPS36448PFM-at		250W

Note: Industrial PoE switch does not match SFP module .

PACKING LIST

Packing List	CONTENT	QTY	UNIT
	44-port 10G uplink 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

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 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
10G Optical 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	PC

TX1270nm/RX13300nm , transmission distance: 20km,
LC interface, support DDM function, support hot plug and
pull.

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