Product Datasheet

52-Port 10G Uplink L3 Managed Industrial PoE Switch

ONV-IPS38048PFM

OVERVIEW

The ONV-IPS38048PFM series is a 10G uplink L3 managed industrial PoE switch independently developed by ONV. It has 48*10/100/1000Base-T RJ45 ports and 4*1/10G SFP+ fiber slot ports. Port 1-48 can support IEEE 802.3af/at standard PoE. single port PoE power up to 30W, and the maximum PoE output power is 600W. 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-IPS38048PFM has L3 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

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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 wire speed access, 10G uplink**

◇ A combination of Gigabit Ethernet 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**

◇ 48*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.

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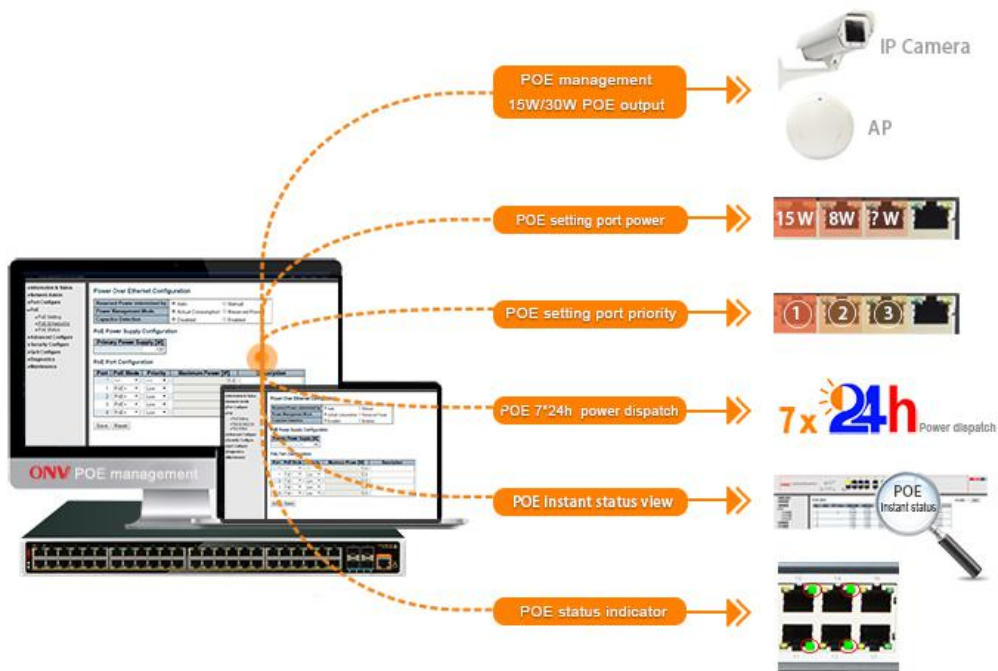
■ **Security**

◇ 802.1X authentication.

◇ Port isolation,Storm control.

◇ IP-MAC-VLAN-Port binding.
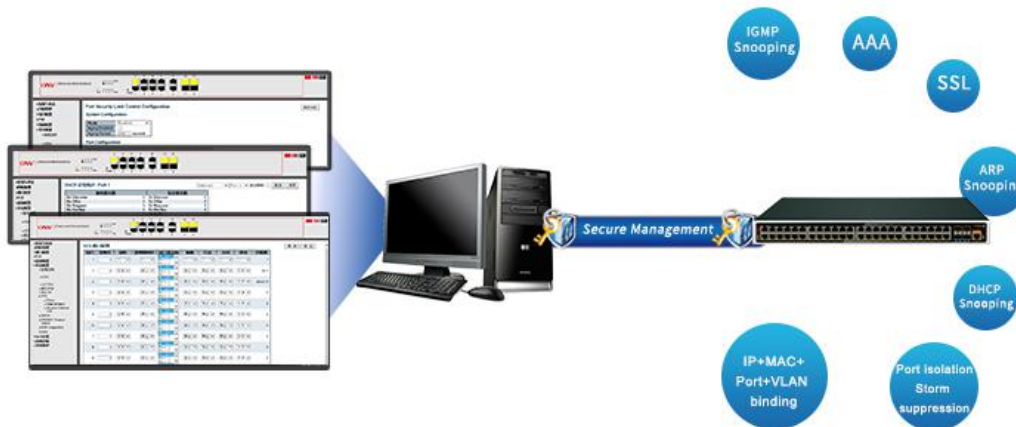
■ **Strong business processing capability**

◇ 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.
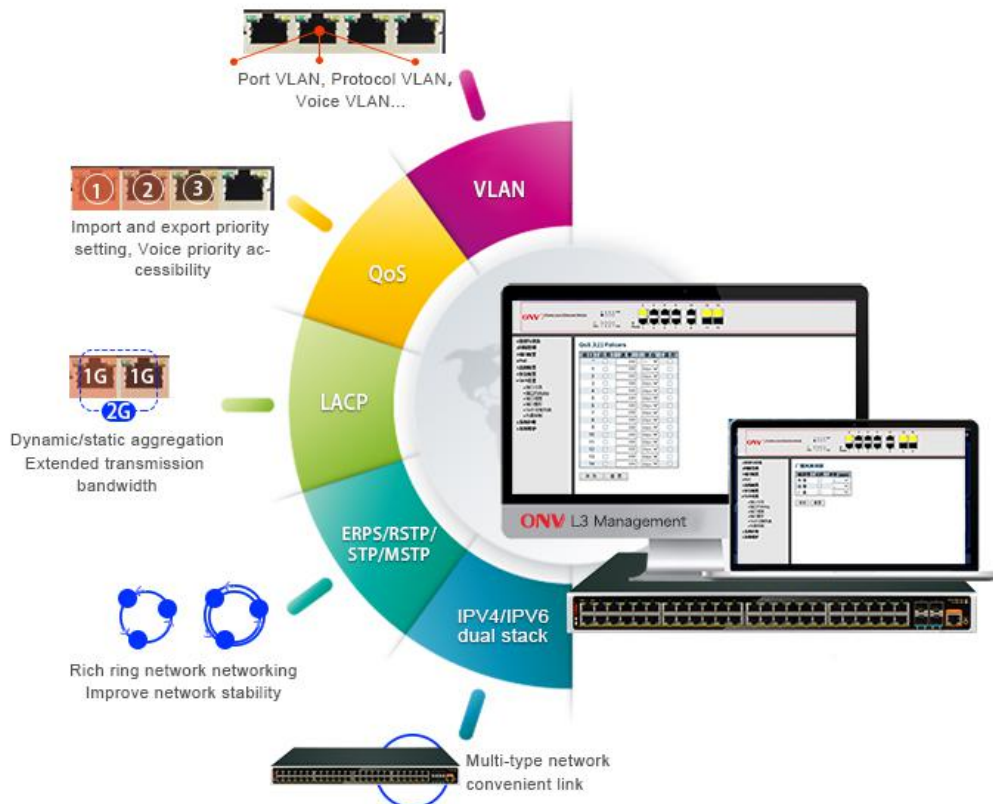
■ **Stable and reliable**

◇ 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, Link,PoE.
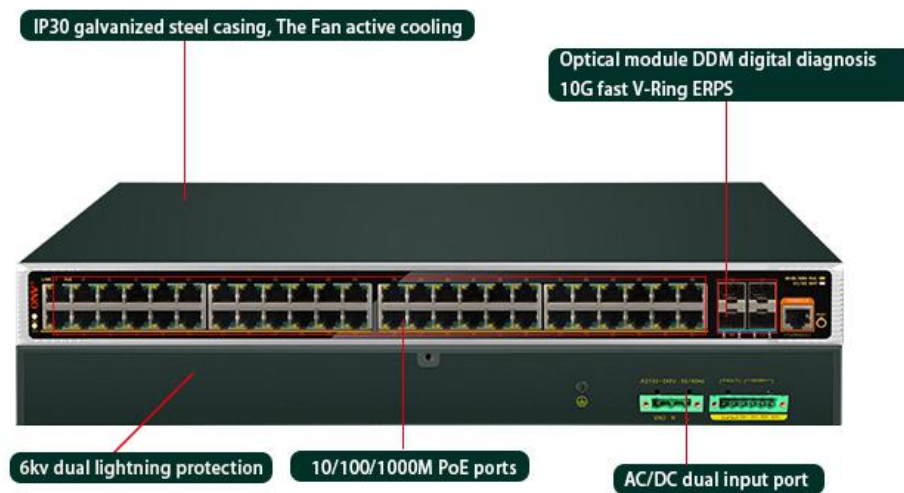
- **Easy operation and maintenance management**

◇ 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-IPS38048PFM
Interface Characteristics	
Fixed Port	48*10/100/1000Base-T PoE ports (Data/Power) 4*1/10G uplink SFP+ slot ports (Data) 1 * console port(115200,N,8,1)
Ethernet Port	10/100/1000Base-T,Auto-sensing,Full/half duplex MDI/MDI-X self-adaption
SFP Slot Port	1/10G SFP+ optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Twisted Pair	10BASE-T: Cat3,4,5 UTP(≤100 meter)

| Transmission	100BASE-TX: Cat5 or later UTP(≤100 meter)
	1000BASE-T: Cat5e or later UTP(≤100 meter)
Optical Cable/ Distance	Multi mode: 850nm /0 ~ 500M,
	Single mode: 1310nm/ 0 ~ 40KM, 1550nm /0 ~ 120KM.
Chip Parameter	
Network Management Type	L3
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
	IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	598Gbps
Forwarding Rate@64byte	131Mpps
MAC	32K
Buffer Memory	32M
Jumbo Frame	9.6K
LED Indicator	Power:PWR (yellow), Systerm : SYS (yellow), Network: Link/Act (yellow); SFP: L/A (green),PoE: PoE (green)
Reset Switch	Yes, One-button factory reset
PoE & Power	
PoE Port	Port 1 to port 48
PoE Management	Total power limit of PoE power supply
	PoE output power allocation, off& af &at
	PoE output priority configuration
	PoE working status

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	Delay start of power supply Scheduling of PoE operation and time
Power Supply Pin	Default: 1/2 (+), 3/6 (-)
Max Power Per Port	30W; IEEE802.3af/at
Total PWR / Input Voltage	600W (AC100-240V)
Power Consumption	Standby:<35W;Full load:<600W
Power Supply	Built-in power supply, AC100~240V 50-60Hz 6.6A
Power Input Interface	Dual input power interface, AC power supply priority, support anti-reverse protection, power-off automatic switching DC connection; 2 set DC12-48V input interfaces; way alarm switch interface; 1 set of AC power input interface
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*298*44.5mm
Net /Gross Weight	<5.0kg / <5.8kg
Installation	Desktop, 19 inch 1U cabinet
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

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	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)
	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
Layer 3 Features	L3 Network management
	IPV4/IPV6 management
	L3 full-line speed 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

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	Max 26 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, Max 1024 multicast groups, Fast log out
	MLD Snooping v1/v2,Multicast VLAN
Port Mirroring	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
Security	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	Console/AUX Modem/Telnet/SSH2.0 CLI

	Web Management (HTTPS),Cable Diagnose,LLDP
	Download & Management on FTP, TFTP, Xmodem, SFTP
	SNMP V1/V2C/V3,One-key recovery
	NTP,System work log,Ping Test
	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 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

298mm

44.5mm

440mm

A   B   C   D

E
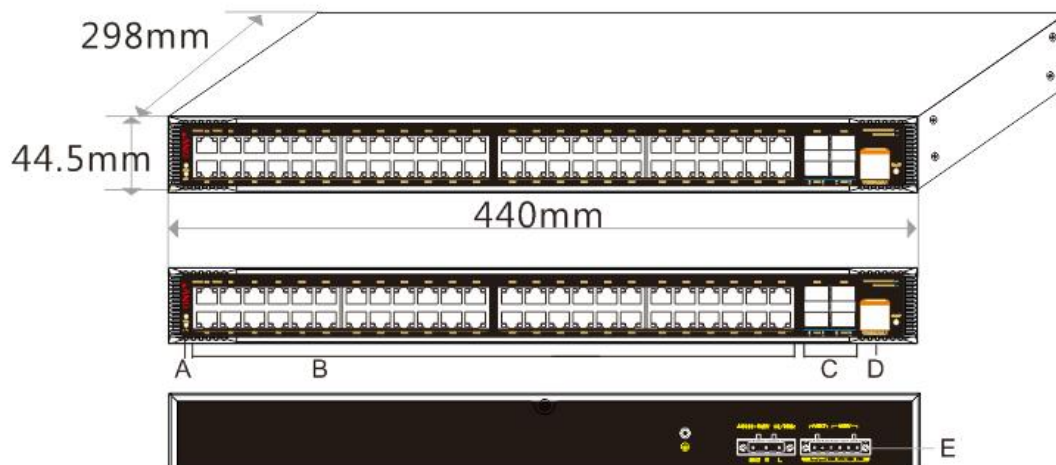
A. Working indicator   B.48* PoE ports
C. 4*1/10G SFP+ ports   D. Console port
E. AC/DC input ports

APPLICATION

ORDERING INFORMATION

Model	Description
ONV-IPS38048PFM	L3 managed industrial PoE switch with 48* 10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber slot ports , Port 1-48 can support IEEE 802.3af/at PoE standard, Built-in 600W power supply. Support 1U/19 inch rack installation.
Note: Industrial PoE switch does not match SFP module .	

PACKING LIST

	CONTENT	QTY	UNIT
Packing List	52-port 10G uplink L3 managed industrial PoE switch	1	SET
	AC Power Cable	1	PC
	RJ45-DB9 Line	1	PC
	Mounting Kits	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	PC

13		hot plug and pull.	
	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

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| 14 | 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 |

RELATED PRODUCT

Model	Description
ONV-IPS33026PFM	L2+ managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports(2 set combo ports), Port 1-24 can support IEEE802.3af/at PoE. Support DC+AC power supply input. Support 1U/19 inch rack installation.
ONV-IPS36028PFM	L2+ managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ slot ports, Port 1-24 can support IEEE802.3af/at PoE. Support DC+AC power supply input. Support 1U/19 inch rack installation.
ONV-IPS36036PFM	L2+ managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports and 4*1/10G SFP+ slot ports, Port 1-24 can support IEEE802.3af/at PoE. Support DC+AC power supply input. Support 1U/19 inch rack installation.
ONV-IPS36368PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 24*100/1000M SFP slot ports and 4*1/10G SFP+ slot ports, Port 1-8 can support IEEE802.3af/at PoE. Support DC+AC power supply input. Support 1U/19 inch rack installation.
ONV-IPS36448PFM	L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 28*100/1000M SFP slot ports and 4*1/10G SFP+ slot

ports, Port 1-8 can support IEEE802.3af/at PoE. Support DC+AC power supply input. Support 1U/19 inch rack installation.

CONTACT US

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

Tel: 0086-755-33376606

Fax: 0086-755-33376608

Email: onv@onv.com.cn

Website: www.onvcom.com

Zip: 518000

Headquarter Address: Room 1003, Block D, Terra Building, Futian district, Shenzhen, China

Factory Address: The 4-6th Floor, No. 59, Huaning Road, Xinwei Community, Dalang Street, Longhua District, Shenzhen, China