Product Datasheet

24-Port Full Gigabit Managed Industrial PoE Switch

(ONV-IPS33024PFM-8F)

OVERVIEW

The ONV-IPS33024PFM-8F is a full gigabit L2+ managed industrial PoE fiber switch independently developed by ONV. it has 16*10/100/1000Base-T RJ45 ports and 8*100/1000Base-X SFP fiber slot ports. Port 1-16 can support IEEE802.3af/at standard POE, single port POE power up to 30W. As a PoE power supply device, it can automatically detect and recognize the power receiving equipment that meets the standard and supply power through the network cable. It can supply power to POE terminal equipment such as wireless AP, web camera, VoIP phone, industrial sensor through network cable, and meet the network environment that needs high-density PoE power supply. It is suitable for intelligent transportation, rail transit, electric power, mining, metallurgy and green energy. Industrial scenes such as construction set up a cost-effective and stable communication network.

The ONV-IPS33024PFM-8F has L2+ full network management function, supports

+86 755 33376606 ONV
Optical Network Video Technologies (Shenzhen) Co., Ltd.

IPV4/IPV6 management, supports static route full line rate forwarding, supports complete security protection mechanism, complete ACL/QoS policy and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability. When 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 access , SFP port uplink**

◇ All series supports Ethernet port and SFP port combination, which enables users to flexibly build networking to meet the needs 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**

◇ 16*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.

+86 755 33376606 ONV
Optical Network Video Technologies (Shenzhen) Co., Ltd.

◇ 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.

■ **Security**

◇ 802.1X authentication.

◇ Port isolation,Storm control.

◇ IP-MAC-VLAN-Port binding.

■ **Stable and reliable**

◇ CCC,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, SYS, Link, L/A, PoE.

◇ The DIN rail industrial switch series products do not have a power supply by default and need to be purchased. Users can purchase a power supply independently developed by ONV.

■ **Easy operation and maintenance management**

◇ HTTPS, SSLV3, and SSHV1/V2.

◇ RMON, system log, LLDP, and port traffic statistics.

◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

TECHNICAL SPECIFICATION

Model	ONV-IPS33024PFM-8F	ONV-IPS33024PFM-8F-at
Interface Characteristics		
Fixed Port	16*10/100/1000Base-T PoE ports (Data/Power) 8*100/1000Base-X uplink SFP slot ports (Data) 1 * RS232 console port(115200,N,8,1) Power-off alarm switch (FAULT) 2 set of V+, V- redundant DC power interface (6 Pin Phoenix terminal)	
Ethernet Port	Port 1-16 support 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 optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)	
SFP Port Expansion	Turbo overclocking 2.5G optical module and ring	
Optical Cable/ Distance	Multi mode: 850nm / 0 ~ 500M, 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 IEEE802.3x	
Forwarding Mode	Store and Forward(Full Wire Speed)	
Switching Capacity	256Gbps	

Forwarding Rate@64byte	35.71Mpps	
MAC	8K	
Buffer Memory	8M	
Jumbo Frame	9.6K	
LED Indicator	Power: PWR (green), System: SYS (green), Network: Link (yellow), Fiber Port : L/A (green), PoE: PoE (green)	
Reset Switch	Yes. press and hold for 10 seconds and then release to restore factory settings	
PoE & Power		
PoE Port	Port 1 to 16	
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	240W /(48VDC)	400W /(48VDC)
Power Consumption	Standby<15W, Full load<240W	Standby<20W, Full load<400W
Working Voltage	48-57VDC, 6 Pin industrial Phoenix terminal, support anti-reverse protection.	
Power Supply	No, optional 48V/240W or 48V/400W industrial power supply	
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)	166*149*89mm
Net /Gross Weight	<2.2kg / <2.8kg
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) Port temperature protection setting

|	
7	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 12 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 1024 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
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)
ACL	Port-based Issuing ACL,ACL based on port and VLAN 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.
Security	IP-MAC-VLAN-Port binding ARP inspection,Anti-DoS attack AAA & RADIUS,MAC learning limit Mac black holes,IP source protection IEEE802.1X & MAC address authentication Broadcast storm control,Backup for host datum SSH 2.0,SSL,Port isolation,ARP message speed limit User hierarchical management and password protection
DHCP	DHCP Client,DHCP Snooping, DHCP Server,DHCP Relay
Management	One-key recovery Cable Diagnose,LLDP Web Management (HTTPS) NTP,System work log,Ping Test CPU instant utilization status view Console/AUX Modem/Telnet/SSH2.0 CLI Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3 ONV NMS - smart network management system platform(LLDP+SNMP)
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
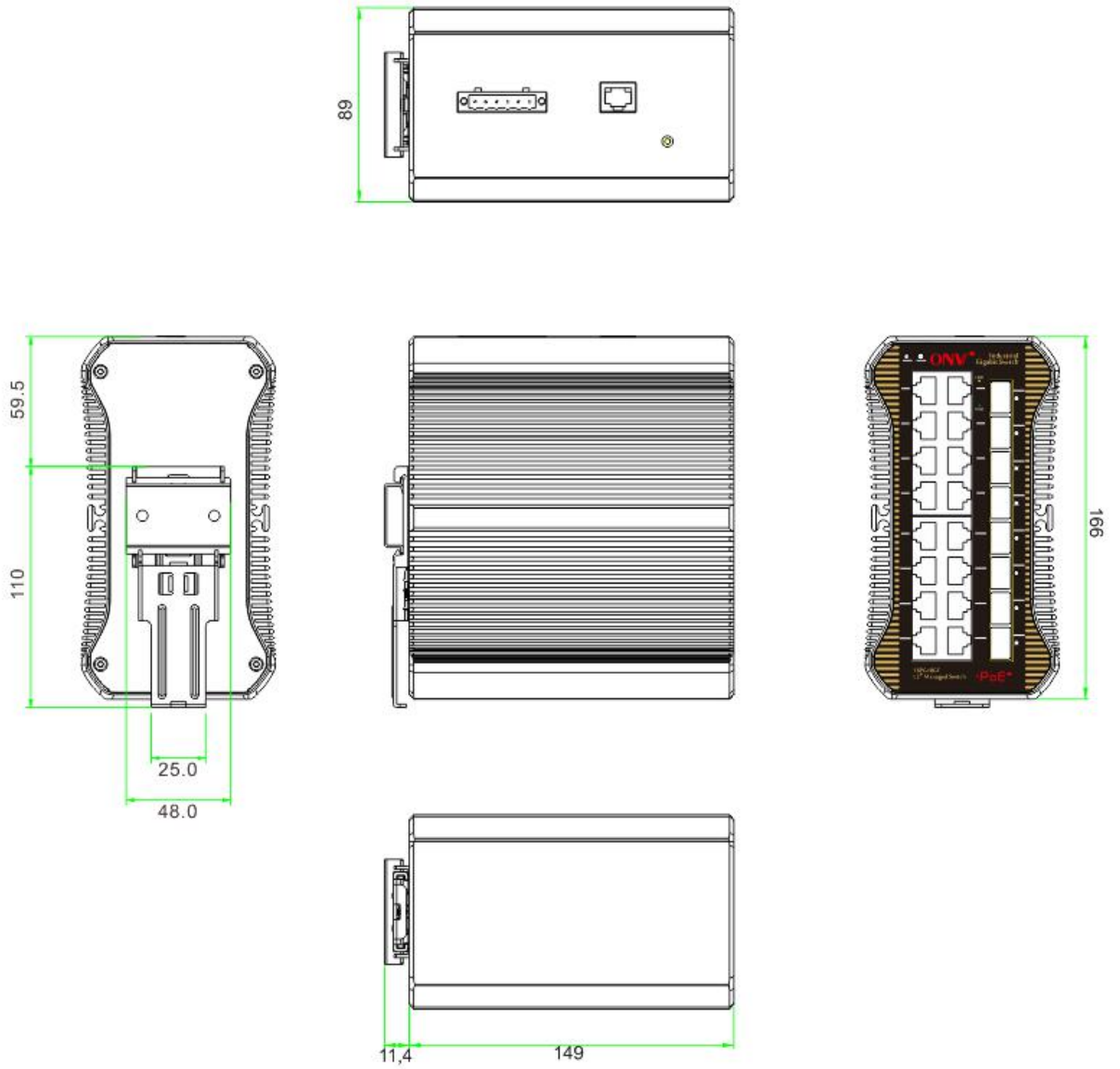
APPLICATION
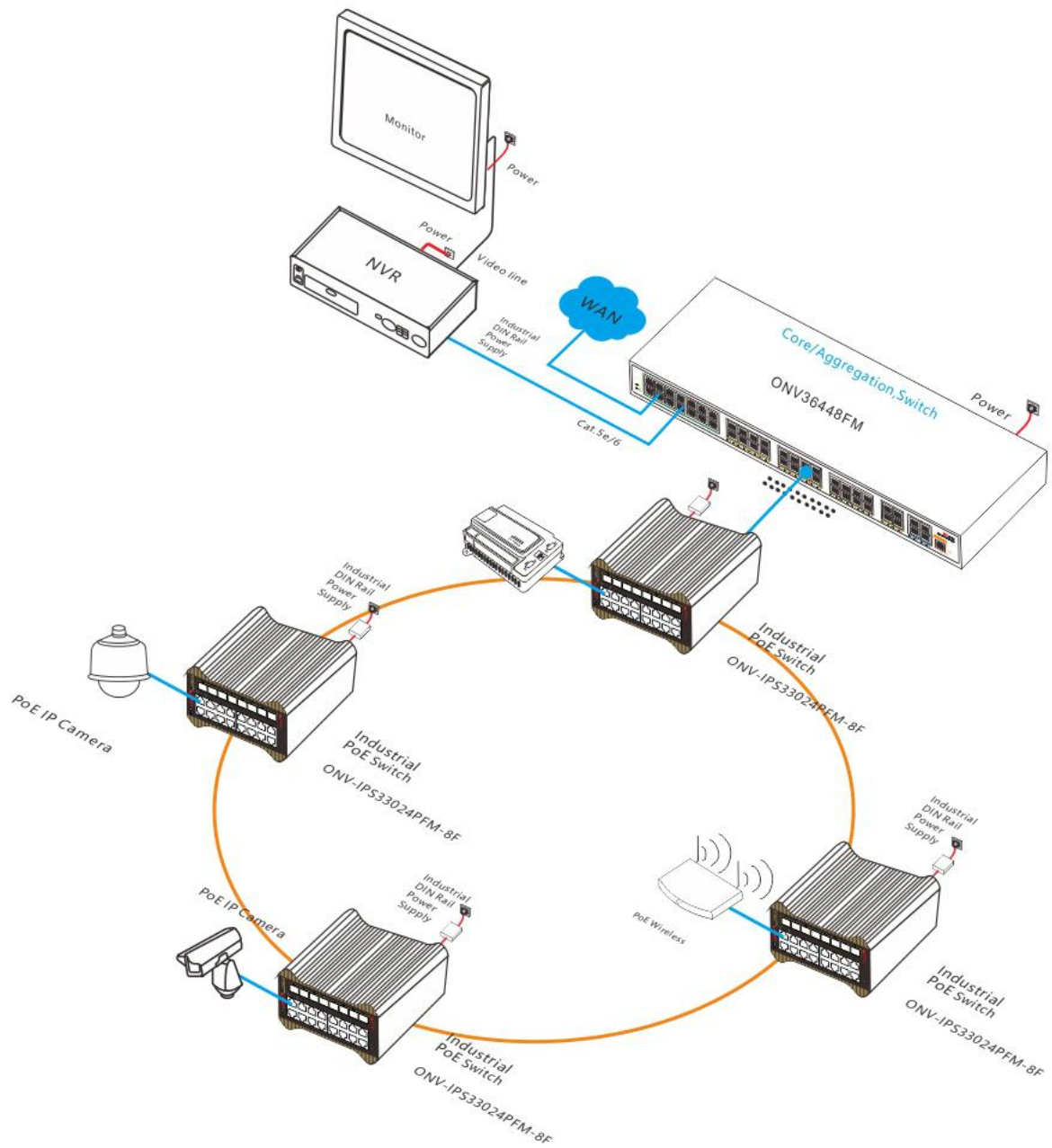
ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33024PFM-8F	L2+ managed industrial PoE fiber switch with 16*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports, Port 1-16 can support IEEE802.3af/at PoE standard. It can support DC dual power supply input and DIN rail mounting.	240W
ONV-IPS33024PFM-8F -at		400W
Note: The DIN rail industrial PoE switch series products are not equipped with power supply by default and need to be purchased. Please refer to the accessory product information.		

PACKING LIST

	CONTENT	QTY	UNIT
PACKING LIST	24-port full gigabit managed industrial PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	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	PC

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd.

	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

(Note: the first partial row shows "hot plug and pull." continuing from previous page.)

POWER SUPPLY SELECTION TABLE

Product	Model	Description	Unit
250W Desktop Power Adaptor	GWS-AP250-52	Desktop tape 250W single set of output power adapter; Input Voltage:AC 100V~240V 50-60Hz,4.1A Output Voltage:DC 52V 4.8A Operation Temperature:-20℃—+65℃	PC
240W DIN Rail Industrial Power Supply	GWS-DP240-48	Din Rail type 240W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz,3A Output Voltage:DC 48V 5A Operation Temperature:-40℃—+70℃	PC
480W DIN Rail Industrial Power Supply	GWS-DP480-48	Din Rail type 480W single set of output power supply; Input Voltage:AC 100V~240V 50-60Hz,5A Output Voltage:DC 48V 10A Operation Temperature:-40℃—+70℃	PC

RELATED PRODUCT

Model	Description
ONV-IPS33084PFM	L2+ managed industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-4 can support IEEE802.3af/at PoE. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33108PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33148PFM	L2+ managed industrial PoE fiber switch with 10*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33168PFM	L2+ managed industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 8*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. It can support DC dual power supply input and DIN rail mounting.
ONV-IPS33168PFM -4GF	L2+ managed industrial PoE fiber switch with 12*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports. Port 1-8 can support IEEE802.3af/at PoE. It can support DC dual power supply input and DIN rail mounting.

CONTACT US

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

+86 755 33376606 ONV
Optical Network Video Technologies (Shenzhen) Co., Ltd.