Product Datasheet

44-Port 10G Uplink Managed Industrial Ethernet Fiber Switch

ONV-IPS36448FM

OVERVIEW

The ONV-IPS36448FM is a 10G uplink managed industrial Ethernet 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. Each port can support wire-speed forwarding.

The ONV-IPS36448FM has L2+ full network management function, supports 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 port traffic control, VLAN division, and SNMP through the Web network management mode. It meets the

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needs of various industrial Ethernet application environments and is suitable for industrial, intelligent transportation, rail transit, power industry, mining, petroleum, marine, metallurgical and green energy construction to form a cost-effective, stable and reliable communication network.

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.

■ **Security**

◇ 802.1X authentication.

◇ Port isolation,Storm control.

◇ IP-MAC-VLAN-Port binding.

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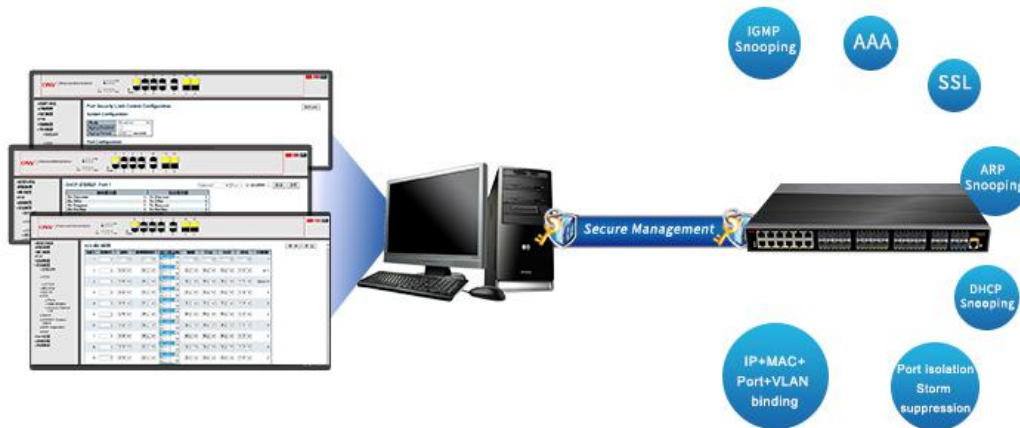
■ **Strong business processing capability**

◇ 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.
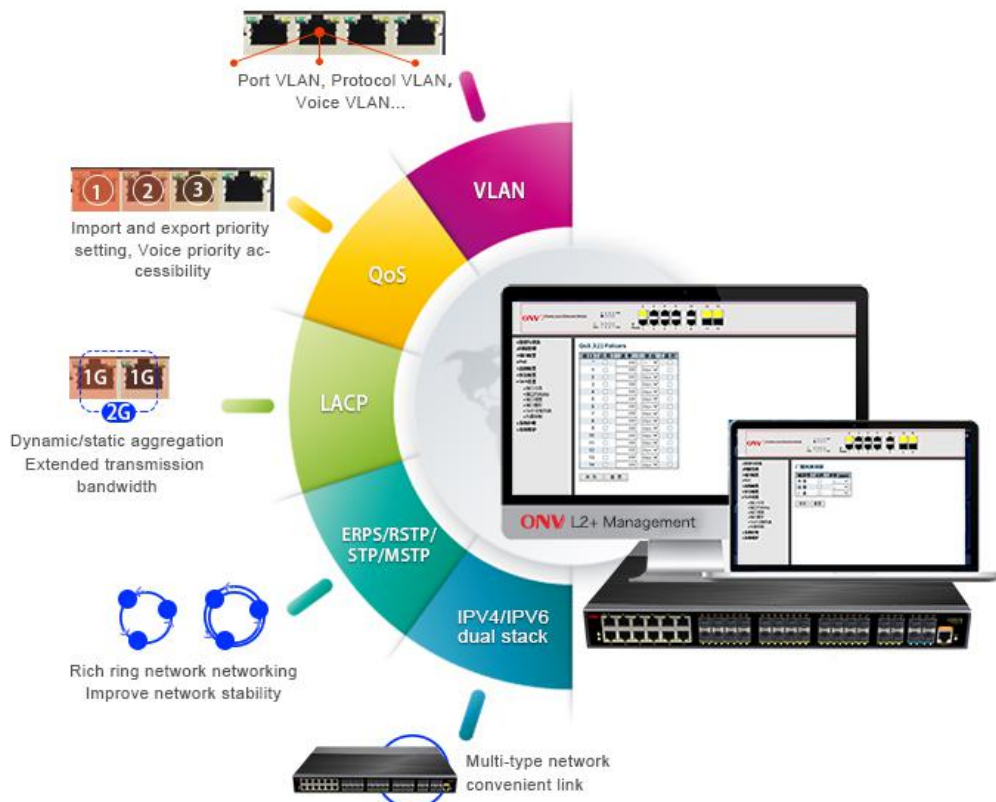
Stable and reliable

◇ Low power consumption, the fan active cooling , galvanized steel casing.

◇ Self-developed power supply, high redundancy design, providing a long term and stable 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.
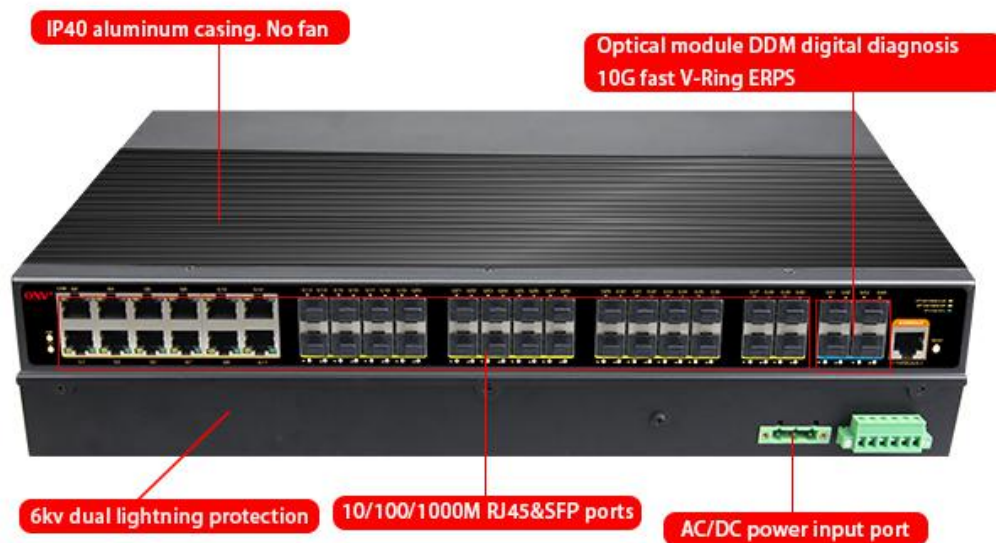
■ **Easy operation and maintenance management**

◇ 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-IPS36448FM
Interface Characteristics	
Fixed Port	12*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) Alarm switch(FAULT) 1 *AC100-240V power input port 2 * DC12V power input ports (support anti-reverse protection)
Ethernet Port	Port 1-12 support 10/100/1000Base-T(X) 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)
SFP Port Expansion	Turbo overclocking 2.5G optical module and ring
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

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	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/Act (yellow), Fiber port : L/A (green)
Reset Switch	Yes, support one key to restore factory settings
Power	
Total PWR / Input Voltage	60W (AC100-240V)
Power Consumption	Standby<35W; Full Load<55W
Power Supply	Built-in power supply, AC100~240V 50-60Hz 0.65A
Power Input Interface	Dual input power port design, AC power supply priority, support anti-reverse protection, power-off automatic switching DC connection; 2*DC12V power input ports; Alarm switch, 1*AC power input port
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*44mm
Net /Gross Weight	<5.3kg / <5.8kg
Installation	Desktop type ,19 inch 1U cabinet installation

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 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 254 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	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

298mm
44mm
440mm
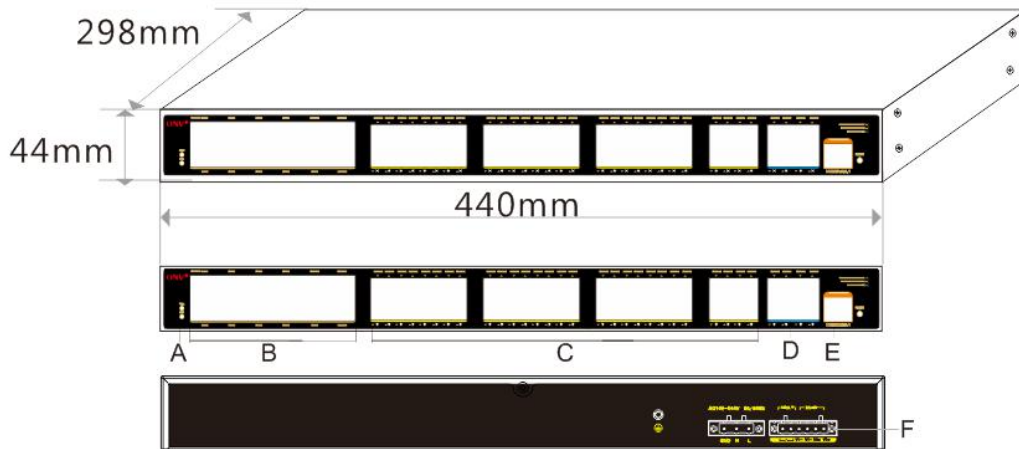
A. Working indicator   B. 12* RJ45 ports
C. 28*Gigabit SFP ports   D. 4*1/10G SFP+ ports
E. Console port   F. Dual AC/DC input port

APPLICATION

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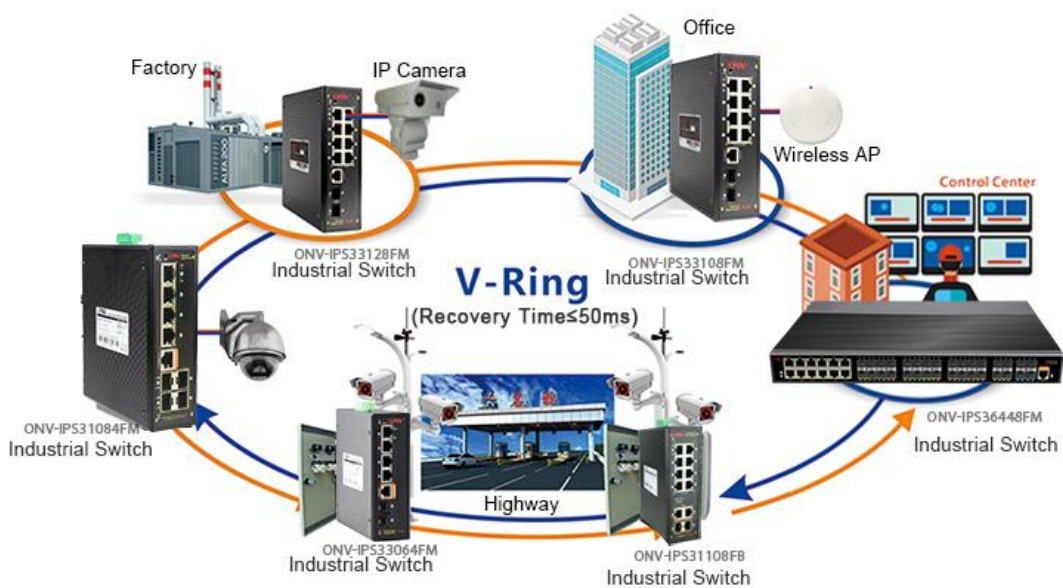
ORDERING INFORMATION

Model	Description
ONV-IPS36448FM	L2+ managed industrial Ethernet 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, built-in 60W power supply. Support dual AC or DC power supply input and 1U/19 inch rack installation.

Note: Industrial Ethernet switch does not match SFP module .

PACKING LIST

	CONTENT	QTY	UNIT
Packing List	44-Port 10G uplink managed industrial Ethernet 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

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

RELATED PRODUCT

Model	Description
ONV-IPS33018FM	L2+ managed industrial Ethernet fiber switch with 16*10/100/1000M RJ45 ports and 2*100/1000M SFP slot ports, built-in 60W power supply. Support dual AC or DC power supply input and 1U/19 inch rack installation.
ONV-IPS33026FM	L2+ managed industrial Ethernet fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP slot ports (including 2 set combo ports), built-in 60W power supply. Support dual AC or DC power supply input and 1U/19 inch rack installation.
ONV-IPS36028FM	L2+ managed industrial Ethernet fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ slot ports, built-in 60W power supply.

14	Support dual AC or DC power supply input and 1U/19 inch rack installation.
ONV-IPS36048FM	L2+ managed industrial Ethernet fiber switch with 48*10/100/1000M RJ45 ports and 4*1/10G SFP+ slot ports, built-in 60W power supply. Support dual AC or DC power supply input and 1U/19 inch rack installation.
ONV-IPS36368FM	L2+ managed industrial Ethernet fiber switch with 8*10/100/1000M RJ45 ports and 24*100/1000M SFP slot ports and 4*1/10G SFP+ slot ports, built-in 60W power supply. Support dual AC or DC power supply input and 1U/19 inch rack installation.
ONV-IPS36036FM	L2+ managed industrial Ethernet fiber switch with 12*10/100/1000M RJ45 ports and 28*100/1000M SFP slot ports and 4*1/10G SFP+ slot ports, built-in 60W power supply. Support dual AC or DC power supply input and 1U/19 inch rack installation.

CONTACT US

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