Product Datasheet

52-port Full Gigabit L2+ Managed Industrial Ethernet Switch
(ONV-IPS33052FM)

OVERVIEW

The ONV-IPS33052FM is a L2+ full gigabit managed industrial Ethernet fiber switch independently developed by ONV. It has 48*10/100/1000Base-T adaptive RJ45 ports and 4*100/1000Base-X uplink SFP fiber ports. Each port can support wire-speed forwarding.

The ONV-IPS33052FM has L2+ full network management function, supports IPV4 management, static route forwarding, complete security protection mechanism, complete ACL/QoS policy, and rich VLAN functions for easy management and maintenance. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability, and can quickly restore communications when a one-way network fails. Ensure uninterrupted communication for important applications. According to the application needs, various application services configurations such as port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other network management methods are carried out through Web, CLI, SNMP, Telnet, and other network management methods. It meets the needs of various industrial Ethernet application environments and is suitable for establishing economical, efficient, stable, and reliable communication networks in industrial scenarios such as intelligent transportation, rail transportation, power industry, mining, petroleum, shipping, metallurgy, and green energy construction.

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FEATURE

■ **Gigabit access, uplink SFP port**

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.

◇ Support Gigabit RJ45 port and Gigabit uplink SFP fiber port to meet the networking requirements of various scenarios.

■ **Security**

◇ Port isolation and storm control.

◇ IP+MAC+port+VLAN quadruple flexible combination binding function.

◇ 802.1X authentication provides authentication functions for LAN computers and controls the authorization status of controlled ports according to the authentication results.

■ **Strong business processing capability**

◇ Support STP/RSTP/MSTP production tree protocols to eliminate Layer 2 loops and achieve link backup.

◇ Support IEEE 802.1Q VLAN, users can flexibly divide VLAN, Access, Trunk, and Hybrid port configurations according to needs.

◇ Support QoS, port-based, 802.1P-based, and DSCP-based priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.

◇ Support IGMP V1/V2/V3 multicast protocols, and IGMP Snooping meets the needs of multi-terminal high-definition video surveillance and video conferencing access.

◇ Support static aggregation and dynamic aggregation, effectively increase link bandwidth to achieve load balancing, and link backup, and improve link reliability.

◇ Support ACL to filter data packets by configuring matching rules, processing operations, and time permissions, and provide flexible security access control policies.

■ **Stable and reliable**

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◇ CCC, CE, FCC, RoHS.

◇ Adopt self-developed power supply and redundant to provide long-term stable power output.

◇ The user-friendly panel can show the device status through the LED indicator of PWR and Link.

◇ Low power consumption, no fan, galvanized steel metal shell, and excellent heat dissipation to ensure the stable operation of the switch.

■ **Easy O&M management**

◇ Supports CPU monitoring, memory monitoring, Ping detection, and cable length detection.

◇ Supports HTTPS, SSLV3, SSHV1/V2 and other encryption methods for safer management.

◇ Supports RMON, system logs, and port traffic statistics for easy network optimization and transformation.

◇ Supports LLDP to facilitate network management system query and judgment of link communication status.

◇ Supports Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, and other management and maintenance methods.

TECHNICAL SPECIFICATION

Model	ONV-IPS33052FM
Interface Characteristics	
Fixed Port	1*Console port (115200,N,8,1) Power-off alarm switch (FAULT) 2*AC100-240V power input ports 48*10/100/1000Base-T RJ45 ports (Data) 4*100/1000Base-X uplink SFP fiber ports (Data) 2*DC12-48V power input ports (support anti-reverse protection)

|	
Ethernet Port	Port 1-48 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 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)
SFP Slot Port	Gigabit optical fiber interface, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm/ 0-500m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km.
Chip Parameter	
Network Management Type	L2+
Network Protocol	IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T,IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	176Gbps (non-blocking)
Forwarding Rate@64byte	77.38Mpps
CPU	750MHz
DRAM	1G
FLASH	256M
MAC	16K
Buffer Memory	12M
Jumbo Frame	10K
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow), Network: Link/Act (Yellow), Fiber port: L/A (Green)
Reset Switch	Yes, Press and hold the reset switch for 10s and release it to restore the factory settings

Power Supply	
Total PWR / Input Voltage	60W/ (AC100-240V)
Power Consumption	Standby<35W, Full load<60W
Power Supply	Built-in power supply, AC100~240V 50-60Hz, 0.65A
Power Supply	Alarm switch port, 2*AC power input ports, 2*DC12-48V input ports Dual input power port design: AC power supply priority to support anti-reverse connection protection, and automatically switches to DC connection when power fails.
Physical Parameter	
Operation TEMP / Humidity	-40~+75°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	4.3kg / 5.1kg
Installation	Desktop, 1U/19'' cabinet
Certification & Warranty	
Lightning Protection	Protection level: IP40 Lightning protection: 6KV 8/20us IEC61000-4-3(RS):10V/m (80~1000MHz) FCC Part 15/CISPR22(EN55022): Class B IEC61000-6-2(Common Industrial Standard) 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 IEC61000-4-4(EFT): Power cable:±4kV, Data cable: ±2kV IEC61000-4-16(Common-mode transmission): 30V, 300V, 1s IEC61000-4-2(ESD): ±8kV contact discharge, ±15kV air discharge

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	IEC61000-4-6(Radio frequency transmission): 10V(150kHz~80MHz)
	IEC61000-4-8(Power frequency magnetic field):100A/m,1000A/m,1-3s
	IEC61000-4-5(Surge): Power cable: CM±4kV/DM±2kV, Data cable: ±4kV
Mechanical Properties	IEC60068-2-6 (Anti Vibration), IEC60068-2-32 (Free Fall), IEC60068-2-27 (Anti Shock)
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	5 years, lifelong maintenance.
Network Management Feature	
Interface	IEEE 802.3x flow control (Full duplex) Broadcast storm control based on port speed Port real-time flow management (Flow Interval) Limit the speed of the message traffic at the inbound and outbound ports, with a mini granularity of 16Kbps and max 1Gbps
L3 Feature	ARP protocol, max 1024 entries L2+ network management function IPV4 static route/default routing max 128 entries
VLAN	Port configuration of Access, Trunk, Hybrid VLAN based on the protocol, 4K VLAN based on port, IEEE802.1q
Port Aggregation	Static aggregation, LACP dynamic aggregation Max 26 aggregation groups, per group support up to 8 ports
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	Multicast VLAN, Fast log out, IGMP Snooping v1/v2/v3, Max 1024 multicast groups
Port Mirroring	Bidirectional data mirroring based on port
QoS	Queue Scheduling Algorithm (SP, WRR, SP+WRR) Flow-based rate limiting, Flow-based packet filtering Flow-based redirection, Diff-Serv QoS, Priority Mark/ Remark 8*Output queues of each port, 802.1p/DSCP priority mapping

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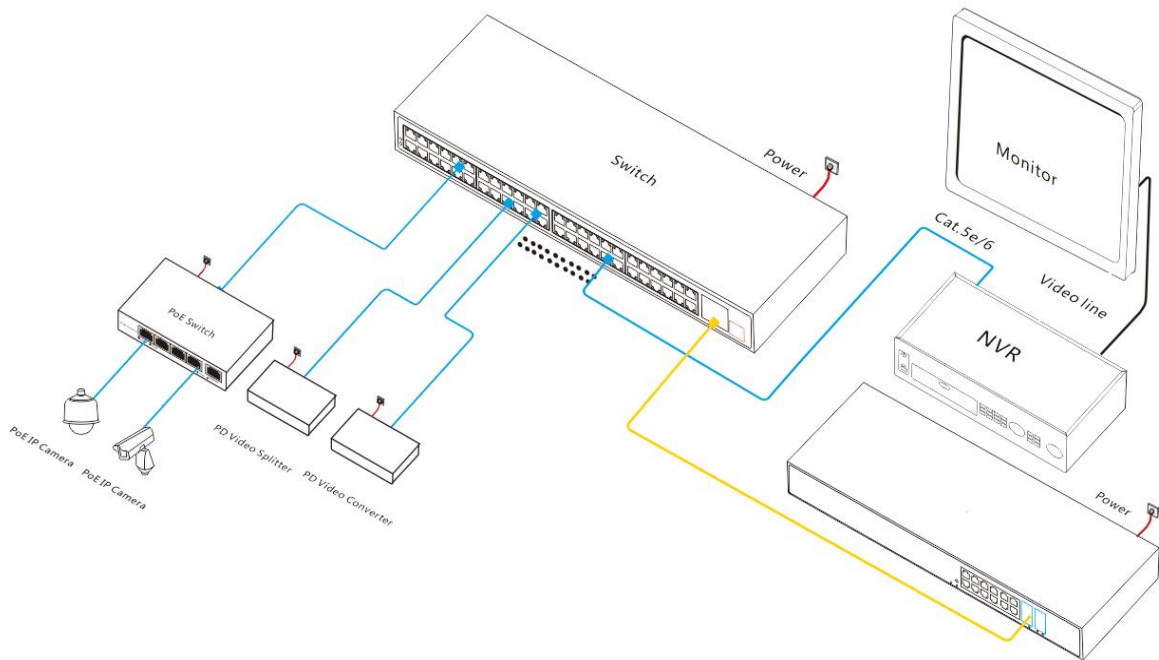|	
ACL	ACL issued based on port and VLAN L2-L4 packet filtering function can match the first 80 bytes of the message and provide ACL definition based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN, etc.
Security	MAC address the black hole Port broadcast message suppression Port-based IEEE802.1X authentication MAC address the learning number limit SSL ensures data transmission security AAA & RADIUS certification, ARP inspection IP+MAC+VLAN+port four-way binding function Port isolation, ARP message rate limit function DoS attack prevention, ARP intrusion detection function User hierarchical management and password protection IP source address protection, Host data backup mechanism SSH 2.0 provides a secure encrypted channel for user login
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	System work log, Link Layer Discovery Protocol NTP clock, Cable length detection, SNMP V1/V2/V3 Ping detection, Web network management (HTTPS) ONV-NMS platform cluster management (LLDP+SNMP) One click recovery, View CPU real-time utilization status FTP, TFTP, Xmodem, SFTP file upload and download management Console/ AUX Modem/ Telnet/ SSH2.0 CLI command line configuration
System	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, Mac OS X) installed on each computer in the

network Cat5 and above Ethernet cable

DIMENSION
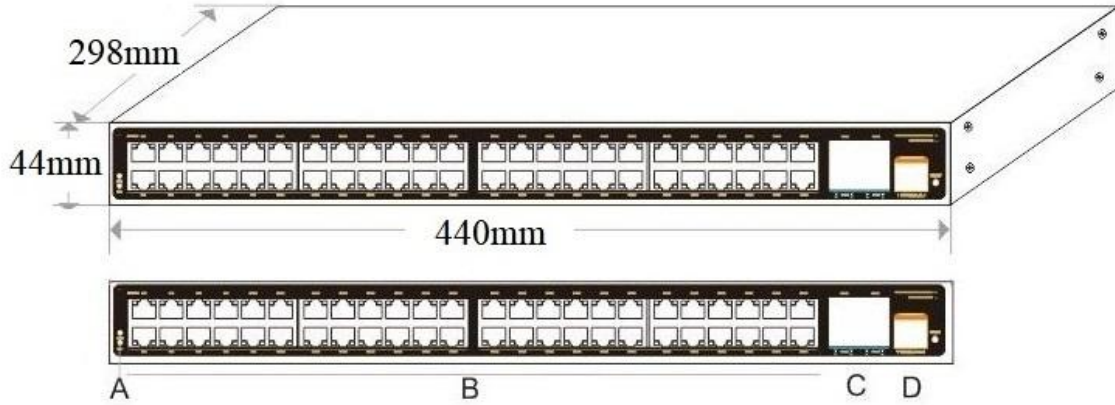
A. Working indicator　　　　　B. 48*10/100/1000M RJ45 ports

C. 4*100/1000M uplink SFP fiber ports　　D. Console port

APPLICATION

ORDERING INFORMATION

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Model	Description	Built-in Power Supply
ONV-IPS33052FM	L2+ managed industrial Ethernet switch with 48*10/100/1000M RJ45 ports and 4*100/1000M uplink SFP fiber ports. It built-in power supply and supports 2AC+DC power input and 1U/19-inch cabinet installation.	2*60W

Note: The optical module is not included and needs to be purchased separately.

PACKING LIST

	Content	Qty	Unit
Packing List	52-port full gigabit L2+ managed industrial Ethernet 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

Product	Model	Description	Unit
1.25G Optical Module	2630-G	Industrial SFP optical module, 1.25G multi-mode dual fiber 850nm, transmission distance: 550m, LC interface. supports DDM function and hot plugging.	PC
	2632-G	Industrial SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2612-T-G	Industrial SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC	PC

		interface. supports DDM function and hot plugging.	
10	2613-R-G	Industrial SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2612-T-SC-G	Industrial SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC
	2613-R-SC-G	Industrial SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	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 fiber ports. It built-in 30W power supply and supports 2AC+DC power input and 1U/19-inch cabinet installation.
ONV-IPS33026FM	L2+ managed industrial Ethernet fiber switch with 24*10/100/1000M RJ45 ports and 4*100/1000M SFP fiber combo ports. It built-in 30W power supply and supports 2AC+DC power input and 1U/19-inch cabinet installation.
ONV-IPS36028FM	L2+ managed industrial Ethernet fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It built-in 60W power supply and supports 2AC+DC power input and 1U/19-inch cabinet installation.
ONV-IPS36036FM	L2+ managed industrial Ethernet fiber switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in 60W power supply and supports 2AC+DC power input and

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	1U/19-inch cabinet installation.
ONV-IPS36368FM	L2+ managed industrial Ethernet fiber switch with 8*10/100/1000M RJ45 ports and 24*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in 60W power supply and supports 2AC+DC power input and 1U/19-inch cabinet installation.
ONV-IPS36448FM	L2+ managed industrial Ethernet fiber switch with 12*10/100/1000M RJ45 ports and 28*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in 60W power supply and supports 2AC+DC power input and 1U/19-inch cabinet installation.

CONTACT US

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