

Product Datasheet

36-port 10G Uplink Managed Ethernet Fiber Switch (ONV36368FM)



OVERVIEW

The ONV36368FM is a 10G L2+ managed Ethernet fiber switch independently developed by ONV. It has 8*10/100/1000Base-T adaptive RJ45 ports and 24*100/1000Base-X SFP ports and 4*1/10G SFP+ ports. All ports support full-line-speed forwarding.

The ONV36368FM has L2+ full network management function. Supports IPV4/IPV6 management, dynamic routing forwarding, complete security protection mechanism, complete ACL/QoS policy, and rich VLAN functions. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure uninterrupted communication for important applications. Port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other application business configurations are performed according to application needs through network management methods such as Web, CLI, SNMP, and Telnet. It meets high-density network application environments and is suitable for establishing cost-effective and reliable communication networks in medium and large-scale scenarios such as hotels, campuses, parks, supermarkets, scenic spots, hospitals, and banks.

FEATURE

■ Gigabit multi-fiber port access, 10G SFP+ fiber port uplink

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.
- ◇ Support Gigabit Ethernet port and gigabit SFP fiber slot port and 1/10G SFP+ fiber slot port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ Strong business processing capability

- ◇ IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN, and QinQ configuration.
- ◇ Ring network STP/RSTP/MSTP spanning tree protocol eliminates layer 2 loops and realizes link backup.
- ◇ QoS, port-based, 802.1P-based and DSCP-based three priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.
- ◇ ACL to filter data packets by configuring matching rule processing operations and time permissions, and provide flexible security access control policies.
- ◇ Static aggregation and dynamic aggregation effectively increase link bandwidth, achieve load balancing, and link backup, and improve link reliability.
- ◇ Support IGMP V1/V2 multicast protocol and IGMP Snooping to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.

■ Security

- ◇ Support port isolation.
- ◇ Support port broadcast storm suppression.
- ◇ Support IP+MAC+port+VLAN quadruple flexible combination binding function.
- ◇ Support 802.1X authentication to provide authentication functions for LAN computers, and control the authorization status of controlled ports according to the authentication results.

■ Stable and reliable

- ◇ CCC, CE, FCC, RoHS.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, L/A.
- ◇ Using self-developed power supply with redundancy design provides long-term and stable power output.
- ◇ Low power consumption, with fan, galvanized steel metal casing, and excellent heat dissipation to ensure the stable operation of the switch.

■ Easy O&M management

- ◇ CPU monitoring, memory monitoring, Ping detection, cable detection.
- ◇ HTTPS, SSLV3, SSH V1/V2 and other encryption methods make management more secure.
- ◇ RMON, system logs, and port traffic statistics facilitate network optimization and transformation.
- ◇ LLDP facilitates the network management system to query and determine the communication status of the link.
- ◇ Web network management, CLI (Console, Telnet), SNMP (V1/V2/V3), Telnet and other diversified management and maintenance methods.

TECHNICAL SPECIFICATION

Model	ONV36368FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 4*1/10G uplink SFP+ fiber ports (Data) 8*10/100/1000Base-T RJ45 ports (Data) 24*100/1000Base-X SFP fiber ports (Data)
Ethernet Port	Port 1-8 support 10/100/1000Base-T(X) auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair	10BASE-T: Cat3,4,5 UTP(≤100 meters)
Transmission	100BASE-TX: Cat5 or later UTP(≤100 meters)

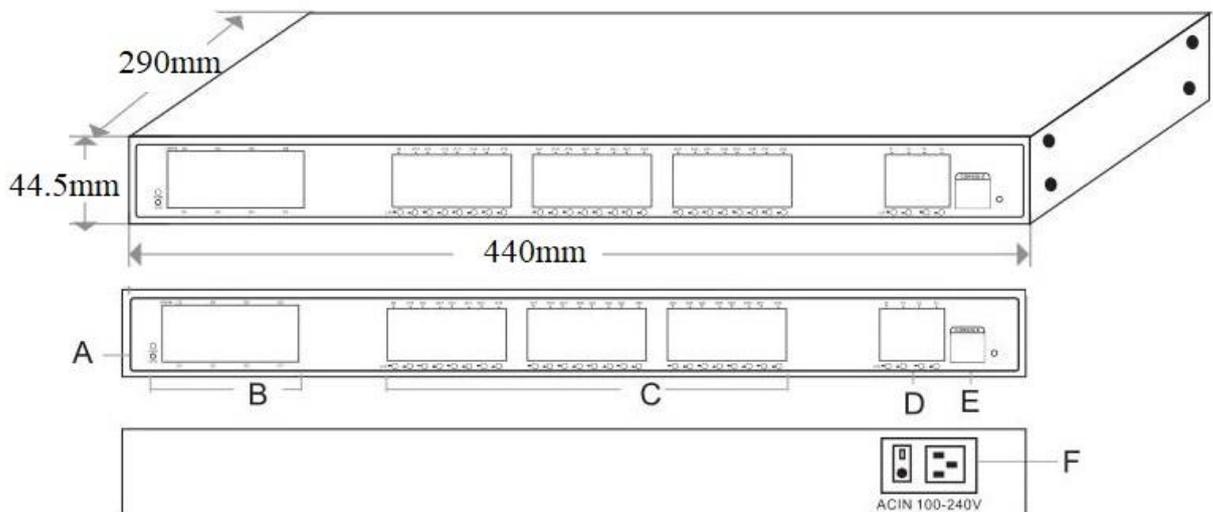
	1000BASE-T: Cat5e or later UTP(≤100 meters)
Optical Fiber Port	1/10G SFP+ optical fiber port, default no include optical modules (optional order single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Fiber Port Expansion	Support Turbo overclocking 2.5G optical module expansion and ring network
Optical Cable/ Distance	Multi-mode: 850nm/ 0-500m(1.25G), 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-SR/LR, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	176Gbps
Forwarding Rate@64byte	107.14Mpps
CPU(Hz)	500M
DRAM	2G
Flash	128M
MAC	32K
Buffer Memory	32M
Jumbo Frame	9.6K
LED Indicator	Power: PWR (Yellow), System: SYS(Yellow) Network: Link (Yellow), Fiber port: L/A (Green)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings
Power Supply	

Total PWR / Input Voltage	60W/(AC100-240V)
Power Consumption	Standby<20W, Full Load<45W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 1.0A
Physical Parameter	
Operation TEMP / Humidity	-20~+55°C, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+80°C, 5%~95% RH Non condensing
Dimension (L*W*H)	440*290*44.5mm
Net /Gross Weight	<3.5kg/<4.3kg
Installation	Desktop, 19 inch 1U cabinet
Certification & Warranty	
Lightning Protection	Lightning protection: 4KV 8/20us, Protection level: IP30
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Features	
Interface	IEEE802.3X (Full-duplex) Port temperature protection setting No connection port automatic sleep Port green Ethernet Energy-saving setting Broadcast storm control based on port speed SFP+ optical port DDMI real-time digital diagnosis The speed limit of the message flow in the access port, mini particle size is 64Kbps.
Layer 3 Features	L2+ network management ARP protocol max 1024 entries Static route/ default route max 128 entries

	L3 routing and forwarding, support communication between different network segments and different VLAN
VLAN	Access, Trunk, and Hybrid port configurations Port-based VLAN (4K), IEEE802.1q, QinQ configuration Voice VLAN, Protocol-based VLAN, MAC address-based VLAN
Port Aggregation	LACP dynamic aggregation, Static aggregation Max 18 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Industrial Ring	Recovery time less than 20ms
Network Protocol	G.8032 (ERPS), 250 Ring at most, Max 250 devices per ring.
Multicast	IGMP Snooping v1/v2, Max 1024 multicast groups MLD Snooping v1/v2, Multicast VLAN, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based redirection, Flow-based rate limiting Flow-based packet filtering, Priority Mark/Remark 8*Output queues of each port, 802.1p/ DSCP priority mapping Queue Scheduling Algorithm (SP, WRR, SP+WRR), Diff-Serv QoS
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	SSH 2.0, SSL, Port isolation, ARP message speed limit User hierarchical management and password protection AAA & RADIUS & TACACS+ certification, MAC learning limit IEEE802.1X & MAC address authentication, ARP inspection IP-MAC-VLAN-Port binding, Anti-DoS attack, IP source protection Broadcast storm control, Backup for host datum, Mac black holes
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	Web network management (https)

	<p>View CPU real-time utilization status</p> <p>Link Layer Discovery Protocol (LLDP)</p> <p>NTP clock, SNMP V1/V2/V3, System work log</p> <p>One click recovery, Ping detection, Cable status check</p> <p>ONV NMS platform cluster management (LLDP+SNMP)</p> <p>Console/ AUX Modem/ Telnet/ SSH2.0 and CLI configuration</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</p>
System	<p>Category 5 and above Ethernet cables</p> <p>Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Microsoft Internet Explorer 10 or higher</p> <p>TCP/IP, network adapters, and network operating systems (such as Microsoft Windows, Linux, or Mac OS X) are installed on each computer in the network over Category 5 and above Ethernet cables.</p>

DIMENSION



A. Working indicate

B. 8*10/100/1000M RJ45 ports

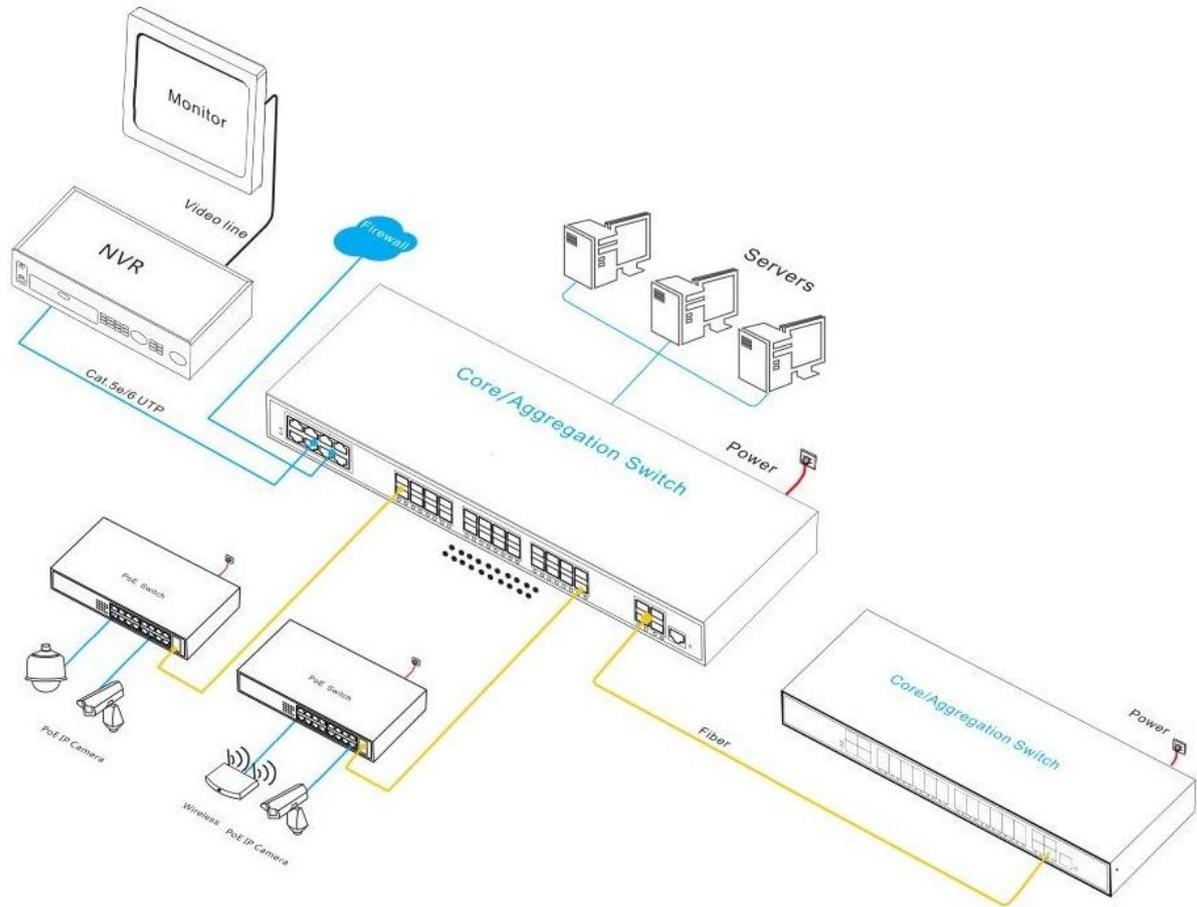
C. 24*100/1000M SFP ports

D. 4*10G SFP+ ports

E. Console port

F. Power input port AC100-240V, 50/60Hz

APPLICATION



ORDERING INFORMATION

Model	Description	Power Supply
ONV36368FM	L2+ managed Ethernet fiber switch with 8*10/100/1000M RJ45 ports and 24*100/1000M SFP ports and 4*1/10G SFP+ fiber ports. Built-in power supply and support 1U/19 inch rack installation.	60W

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

PACKING LIST

	Content	Qty	Unit
Packing List	36-port 10G uplink managed 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

Product	Model	Description	Unit
1.25G Optical Module	2630	SFP optical module, 1.25G multi-mode dual fiber 850nm, transmission distance: 550m, LC interface. supports DDM function and hot plugging.	PC
	2632	SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2612-T	SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2613-R	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	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	SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, SC	PC

		interface. supports DDM function and hot plugging.	
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC
10G Optical Module	6630	SFP+ optical module, 10G multi-mode dual fiber 850nm, transmission distance: 300m, LC interface. supports DDM function and hot plugging.	PC
	7832	SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	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
	7832-27	SFP+ optical module, 10G Single-mode single fiber TX1270nm/ RX1330nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

RELATED PRODUCT

Model	Description
ONV36028FM	L2+ managed Ethernet aggregation fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber ports. Built-in 60W power supply and support 1U/19 inch rack installation.
ONV36036FM	L2+ managed Ethernet aggregation fiber switch with 24*10/100/1000M RJ45 ports and 8* 100/1000M SFP fiber ports and 4*1/10G SFP+ fiber ports. Built-in 60W power supply and support 1U/19 inch rack installation.
ONV36448FM	L2+ managed Ethernet aggregation fiber switch with 12*10/100/1000M RJ45 ports and 28* 100/1000M SFP fiber ports and 4*1/10G SFP+ fiber ports. Built-in 60W power supply and support 1U/19 inch rack installation.

ONV36048FM	L2+ managed Ethernet aggregation fiber switch with 48*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber ports. Built-in 60W power supply and support 1U/19 inch rack installation.
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