Product Datasheet

36-port 10G Uplink Managed Ethernet Switch

(ONV56368FM)

OVERVIEW

The ONV56368FM is a 10G uplink managed Ethernet switch independently developed by ONV. It has 24*100/1000Base-X SFP ports and 8*10/100/1000Base-T RJ45 ports (combo port) and 4*1/10G uplink SFP+ fiber ports. Each port can support wire-speed forwarding. The ONV56368FM has L2+ network management functions, supports IPv4/ IPv6 management, static routing forwarding, security protection mechanisms, perfect ACL/QoS strategy, and rich VLAN functions for easy management and maintenance. Support multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability. When a unidirectional network fails, communication can be quickly restored to ensure uninterrupted communication of important applications. Port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other application business configurations can be performed through network management methods such as Web, CLI, SNMP, Telnet, etc., according to application needs. It meets the high-density network application environment and is suitable for hotels, campuses, parks, supermarkets, scenic spots, hospitals, banks, and other medium and large scenarios to build economical, efficient, and reliable communication networks.

FEATURE

Gigabit access, uplink 1/10G SFP+ fiber port

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE 802.3x and half-duplex based on Backpressure.

◇ Supports Gigabit RJ45 port an 1/10G uplink SFP+ fiber port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

Strong business processing capability

◇ Support ERPS ring network and STP/RSTP/MSTP to eliminate layer 2 loops and realize link backup.

◇ Support IEEE802.1Q VLAN, Users can flexibly divide VLAN, Voice VLAN, and QinQ configuration according to their needs.

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

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

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

◇ Support IGMP V1/V2/V3 multicast protocol, IGMP Snooping meets multi-terminal high-definition video surveillance and video conference access requirements.

Security

◇ Support port isolation and port broadcast storm suppression.

◇ Support port+MAC binding and IP+MAC+port binding functions.

◇ Support 802.1X authentication, provide authentication function 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 and Link.

◇ Using self-developed power supply with high redundancy provides long-term and stable power output.

◇ Low power consumption, with fan, galvanized steel metal housing, and excellent heat dissipation to ensure stable operation of the switch.

■ Easy O&M management

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

◇ HTTPS, SSLV3, SSHV1/V2, and other encryption methods are more secure in management.

◇ RMON, system log, and port traffic statistics are convenient for network optimization and transformation.

◇ LLDP is convenient for the network management system to query and judge the communication status of the link.

◇ Various management and maintenance methods such as Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, etc.

TECHNICAL SPECIFICATION

Model	ONV56368FM
Interface Characteristics	
Fixed Port	1*AC100-240V input port 1*Console port (115200,N,8,1) 4*1/10G SFP+ fiber ports (Data) 8*10/100/1000Base-T RJ45 ports (Data) 16*100/1000Base-X SFP fiber ports (Data) 8*100/1000Base-X SFP fiber ports (combo port) (Data)
Ethernet Port	Port 1-8 can support 10/100/1000Base-T(X) auto-sensing, full/ half duplex

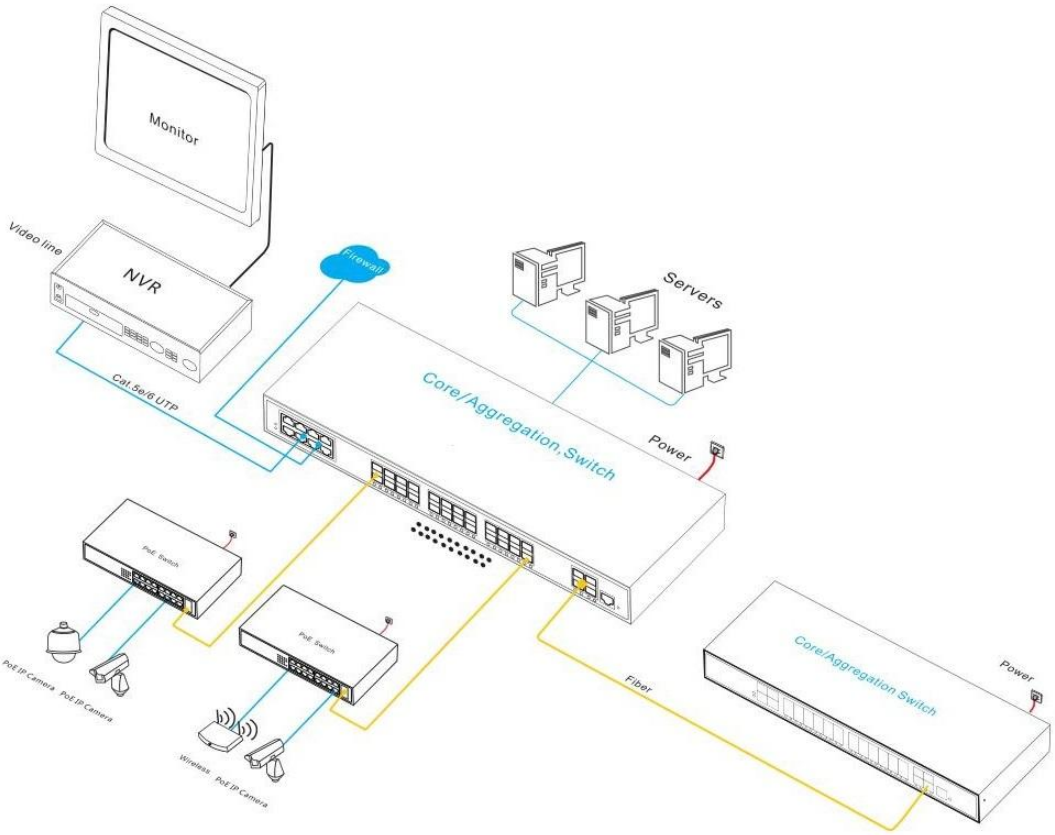
	MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)
Optical Fiber Port	Default no include optical module (optional single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Fiber Port Expansion	Turbo overclocking 2.5G optical module expansion and ring network
Optical Cable/ Distance	Multi-mode: 850nm//0-550m(1G), 850nm/0-300m (10G), 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 802.3ae 10GBase-LR/SR, IEEE 802.3x
Forwarding Mode	Store and forward (Full wire speed)
Switching Capacity	128Gbps (non-blocking)
Forwarding Rate@64byte	95.23Mpps
CPU(Hz)	800M
DRAM	1G
Flash	128M
MAC	16K
Buffer Memory	12M
Jumbo Frame	12000byte
LED Indicator	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, AC100~240V 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	3.45kg/ 4.3kg
Installation	Desktop, 1U/19” 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, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Feature	
Interface	IEEE802.3x flow control (Full duplex) Port exception protection mechanism Port real-time flow management (Flow Interval) Broadcast storm suppression based on port rate Optical port SFP module DDMI real-time digital diagnosis Port EEE Green Ethernet Energy-Saving configuration and status view Limit the rate of packet traffic on incoming and outgoing ports, the mini granularity is 16Kbps and max 1Gbps
L3 Feature	OSPFv1/v2, OSPFv3, RIPv1/v2, RIPng, ARP protocol max 1024 entries, L2+ network management function, IPv4/ IPv6 static route max 64 entries, Dual stack management
VLAN	VLAN based on MAC, VLAN based on the protocol Port configuration of Access, Trunk, Hybrid, GVRP VLAN protocol (4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration
Port Aggregation	LACP, Static aggregation, Max 14 aggregation groups and 8 ports per

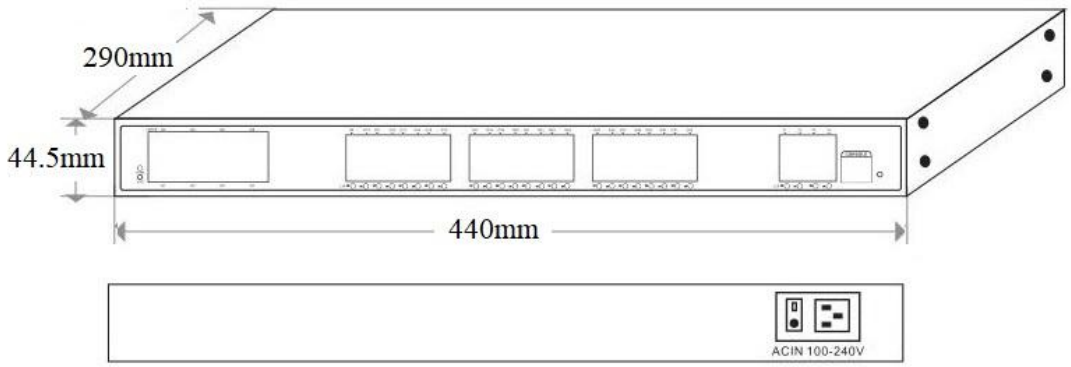
	group.
Spanning Tree	STP BPDU Guard, BPDU filtering and BPDU forwarding STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
ERPS Ring Network	Support ERPS, recovery time less than 20ms, ITU-T G.8032
Multicast	MLD Snooping, Multicast VLAN User quick log out, MVR (Multicast VLAN Registration) IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	Bidirectional traffic mirroring for basic ports Supports 1-to-multiple mirroring, supports up to 4 port sessions
QoS	Flow-based redirection, Flow-based rate limiting Queue Scheduling Algorithm (SP, WRR, SP+WRR) 8*Output queues of each port, 802.1p/DSCP priority mapping Flow-based packet filtering, Priority Mark/ Remark, Diff-Serv QoS
ACL	ACL distribution based on port and VLAN L2-L4 packet filtering function, matching the first 80 bytes message, and provides ACL definitions 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	Port based IEEE802.1X authentication SSL guarantees data transmission security Quad binding function of IP+MAC+VLAN+ports MAC address learning limit, MAC address black hole IP Source Guard function, AAA& RADIUS certification Hierarchical user management and password protection SSH 2.0 provides a secure encrypted channel for user login Host data backup mechanism, ARP intrusion detection function IP source address protection, ARP message speed limit function Port isolation, Anti DoS attack, Port broadcast message suppression
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 Console/ AUX Modem/ Telnet/ CLI command line configuration FTP, TFTP, Xmodem, SFTP file upload and download management
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

APPLICATION



DIMENSION



ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV56368FM	L2+ managed Ethernet switch with 16*100/1000Base-X SFP fiber ports and 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP fiber ports (combo port) and 4*1/10G SFP+ fiber ports. It built-in power supply and 1U/19” cabinet installation.	60W
Note: The optical module is not included and needs to be purchased.		

PACKING LIST

	Content	Qty	Unit
Packing List	36-port 10G uplink managed Ethernet switch	1	Set
	RJ45-DB9 Adapter Cable	1	PC
	AC Power Cable	1	PC
	Mounting Kit	1	Set
	User Guide	1	PC
	Warranty Card and Certificate of Conformity	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. support DDM function and hot plugging.	PC
	2632	SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	2612-T	SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	2613-R	SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, LC interface. support 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. support DDM function and hot plugging.	PC
	2613-R-SC	SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. support DDM function and hot plugging.	PC
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. support DDM function and hot plugging.	PC
	7832	SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support 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 and hot plugging.	PC
	7832-27	SFP+ optical module, 10G single-mode single fiber TX1270nm/ RX1330nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC

RELATED PRODUCT

Model	Description
ONV56028FM	L2+ managed Ethernet switch with 24*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It built-in 60W power supply and 1U/19” cabinet installation.
ONV56036FM	L2+ managed Ethernet switch with 16*10/100/1000Base-T RJ45 ports and 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP fiber ports (combo port) and 4*1/10G SFP+ fiber ports. It built-in 60W power supply and 1U/19” cabinet installation.
ONV56052FM	L2+ managed Ethernet switch with 48*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It built-in 60W power supply and 1U/19” cabinet installation.

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