Product Datasheet

36-port 10G Uplink L3 Managed Ethernet Fiber Switch
(ONV58368FM)

OVERVIEW

The ONV58368FM is a 10G uplink L3 managed Ethernet fiber switch independently developed by ONV. It has 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP (combo ports) and 16*100/1000Base-X SFP ports and 4*1/10G SFP+ fiber slot ports. Each port can support wire-speed forwarding.

The ONV58368FM has L3 network management function, support IPV4/ IPV6 management, dynamic routing and forwarding, 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 satisfies high-density network application environment and is suitable for medium, large-scale scenes such as hotel, campus, park, shopping mall, scenic spot, hospital, bank to form an economical, efficient and reliable communication network.

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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, and QinQ configuration.

◇ ERPS/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.

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■ **Stable and reliable**

◇ CCC, CE, FCC, RoHS.

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

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

◇ Low power consumption, with fan, 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 length detection.

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

◇ RMON, system log, and port traffic statistics to facilitate network optimization and transformation.

◇ LLDP to facilitate the network management system to query and judge 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	ONV58368FM
Interface Characteristics	
Fixed Port	1*AC100-240V input port 1*Console RS232 port (115200,N,8,1) 4*1/10G SFP+ fiber slot ports (Data) 16*100/1000Base-X SFP ports (Data) 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP combo port

	(Data)
Ethernet Port	Port 1-8 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/6 or later UTP(≤100 meters)
Optical Fiber Port	Gigabit SFP optical fiber port and 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(1G), 850nm/0-300m (10G) Single-mode:1310nm/ 0-40km, 1550nm/ 0-120km.
Chip Parameter	
Network Management Type	L3
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, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	128Gbps (non-blocking)
Forwarding Rate@64byte	95.23Mpps
CPU(Hz)	800MHz
DRAM	1G
Flash	128M
MAC	16K
Buffer Memory	12M
Jumbo Frame	12K

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, 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	<3.5kg / <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 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 Limit the rate of incoming and outgoing packet traffic, with mini

	granularity of 16Kbps and max of 1Gbps
	Port EEE Green Ethernet Energy-Saving configuration and status view
	Jumbo frame configuration, the largest 12000byte
Layer 3 Features	IPV4 Equal Cost Routing
	NG protocol, max1000 entries
	ARP protocol, max 1000 entries
	Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6
	IPV4/IPV6 VRRP, the maximum group is 255
	IPV4/IPV6 VLANIF interface supports up to 128
	IPV4/IPV6 static route/default route supports up to 128 entries
	IPV4 dynamic routing, RIPv1/v2, OSPFv2, BGP4+, 4000 routing entries
	IPV6 dynamic routing OSPFv3, BGP+, RIPng, IPV6 management, 1000 routing entries
	L3 network management function, IPV4/IPV6 dual-stack management
	L3 routing and forwarding, support communication between different network segments and different VLAN
VLAN	Access, Trunk, and Hybrid port configurations
	Protocol-based VLAN, MAC address-based VLAN
	Port-based VLAN (4K), IEEE802.1q, 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	ERPS ring network, Recovery time less than 20ms, ITU-T G.8032
Multicast	MLD Snooping, IGMP Snooping, Multicast VLAN
	User quick log out, MVR (Multicast LAN 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	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
	Flow-based Rate Limiting, Stream based redirection
	Flow-based Packet Filtering, 8*Output queues of each port
	802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/Remark
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
	Anti DoS attack, Port broadcast message suppression
	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
	Port isolation, IP Source Guard, ARP message speed limit function
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	Web network management (https)
	Link Layer Discovery Protocol(LLDP)
	Viewing CPU Instant Utilization Status
	NTP clock, One click restore, SNMP V1/V2/V3
	Cable status check, Ping detection, System work log
	ONV NMS platform cluster management (LLDP+SNMP)
	Console/AUX Modem/Telnet/CLI command line configuration
	FTP, TFTP, Xmodem, SFTP file upload and download management
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
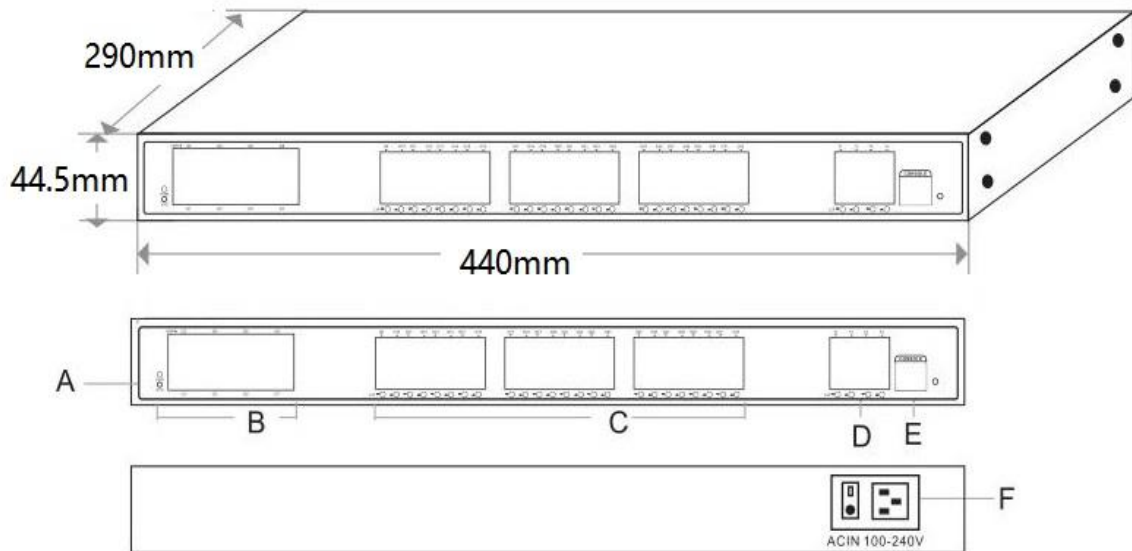
A. Working indicate   B. 8*10/100/1000M RJ45 ports

C. 24*100/1000M SFP ports   D. 4*10G SFP+ ports

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

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APPLICATION
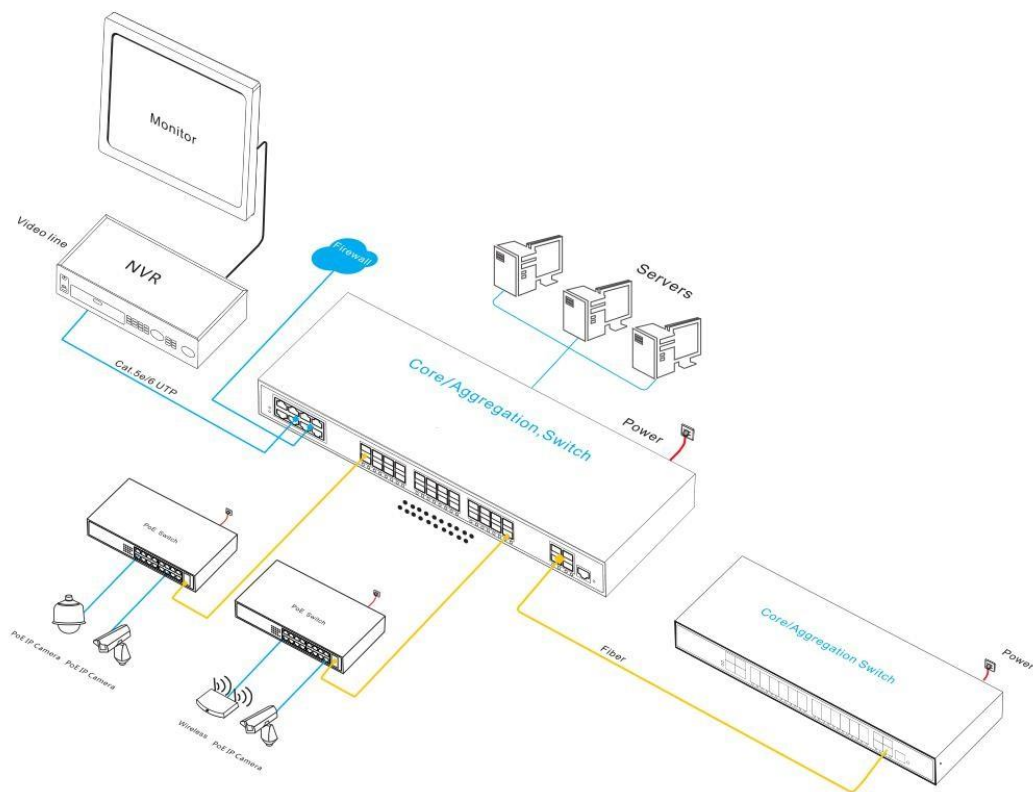
ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV58368FM	L3 managed Ethernet fiber switch with 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP (combo ports) and 16*100/1000Base-X SFP ports and 4*1/10G SFP+ fiber slot 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.

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PACKING LIST

Content		Qty	Unit
Packing List	36-port 10G uplink L3 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. 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	PC

		TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. support 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. 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/RX13300nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC

RELATED PRODUCT

Model	Description
ONV58028FM	L3 managed Ethernet fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber slot ports. Built-in 60W power supply and support 1U/19 inch rack installation.
ONV58036FM	L3 managed Ethernet fiber switch with 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP (combo ports) and 16*10/100/1000Base-T RJ45 ports and 4*1/10G SFP+ fiber slot ports. Built-in 60W power supply and support 1U/19 inch rack installation.
ONV58052FM	L3 managed Ethernet 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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