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 ports or 8*100/1000Base-X SFP fiber combo ports and 16*100/1000Base-X SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. Each port can support wire-speed forwarding.

The ONV58368FM has L3 full network management function, supports IPV4/ IPV6 management, dynamic routing and forwarding, complete security protection mechanism, complete ACL/QoS policy, and rich VLAN functions for easy management and maintenance. It 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 recover when a one-way network failure occurs Communication ensures 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 economical, efficient, and reliable communication networks in medium and large-scale scenarios such as hotels, campuses, parks, supermarkets, scenic spots, hospitals, and banks.

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd. ONV

FEATURE

■ **Gigabit multi-fiber port access, uplink 1/10G SFP+ fiber 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 1/10G uplink SFP+ fiber port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ **Strong business processing ability**

◇ 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**

◇ 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.

■ **Stable and reliable**

◇ CCC, CE, FCC, RoHS.

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd. ONV

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

◇ Self-developed power supply, high redundancy, providing a long-term and stable power output.

◇ 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**

◇ 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.

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

TECHNICAL SPECIFICATION

| Model	ONV58368FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 4*1/10G uplink SFP+ fiber ports (Data) 16*100/1000Base-X SFP fiber ports (Data) 8*10/100/1000Base-T RJ45 ports or 8*100/1000Base-X SFP fiber combo ports (Data)
Ethernet Port	Port 1-8 support 10/100/1000Base-T 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 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/ 0-500m (1G), 0-300m(10G)
	Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km
Chip Parameter	
Network Management Type	L3
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)	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	3.45kg /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 Class B, RoHS
Warranty	3 years, lifelong maintenance.

Network Management Feature

Interface	IEEE802.3x flow control (Full duplex)
	Port exception protection mechanism
	Jumbo frame configuration, max 12000byte
	Port real-time flow management (Flow Interval)
	Optical module DDMI real-time digital diagnosis
	Broadcast storm suppression based on port rate
	Port EEE Green Ethernet Energy-Saving configuration and status view
	Limit the rate of packet traffic on incoming and outgoing ports, the mini granularity 16Kbps and max 1Gbps
L3 Routing	ARP protocol, max 1000 entries

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd. ONV

|	
6	IPV4/IPV6 VRRP, the max group is 255 Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6 IPV4/IPV6 VLANIF interface supports up to 128 IPV4 Equal Cost Routing, NG protocol, max1000 entries IPV4/IPV6 static route/default route supports up to 128 entries L3 network management function, IPV4/IPV6 dual-stack management IPV4 dynamic routing, RIPv1/v2, OSPFv2, BGP4+, 4000 routing entries IPV6 dynamic routing OSPFv3, BGP+, RIPng, IPV6 management, 1000 routing entries L3 routing and forwarding, support communication between different network segments and different VLAN
VLAN	Voice VLAN, QinQ configuration, IEEE802.1q VLAN based on MAC, VLAN based on the protocol 4K VLAN based on port, Port configuration of Access, Trunk, Hybrid.
Port Aggregation	LACP dynamic aggregation, static aggregation Max 18 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, 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 Rate Limiting, Flow-based redirection Flow-based Packet Filtering, Priority Mark/ Remark 802.1p/DSCP priority mapping, 8*Output queues of each port Diff-Serv QoS, Queue Scheduling Algorithm (SP, WRR, SP+WRR)

ACL	Port-based Issuing ACL, ACL based on port and VLAN L2 to L4 packet filtering, matching the first 80-byte 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	Port broadcast message suppression SSL ensures data transmission security Port isolation, Host data backup mechanism Limit the number of MAC addresses learned Anti-DoS attack, ARP intrusion detection function Quadruple binding function of IP+MAC+VLAN+port IP source address protection, MAC address black hole User hierarchical management and password protection SSH 2.0 provides a secure encrypted channel for user login AAA & RADIUS certification, ARP message rate limiting function IEEE802.1X authentication/ centralized MAC address authentication
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
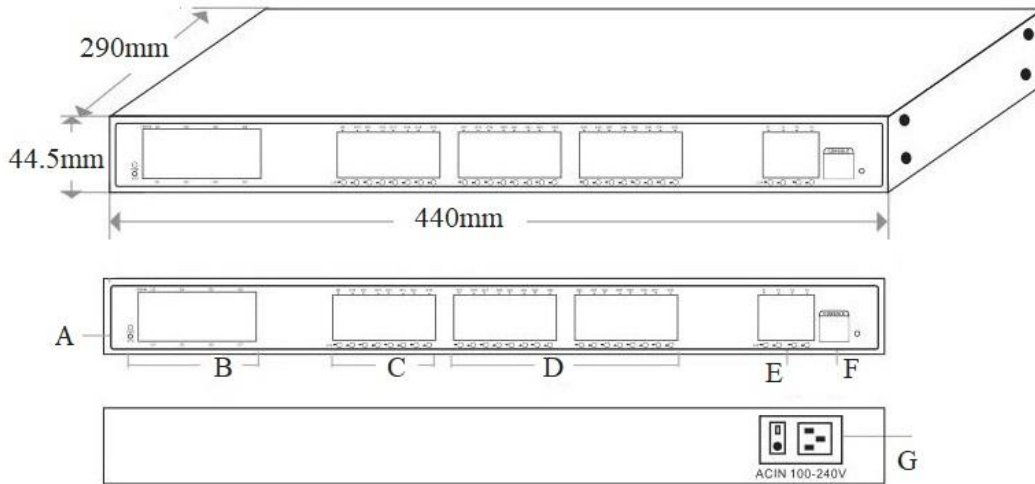
A. Working indicator   B. 8*10/100/1000M RJ45 ports

C. 8*10/100/1000M RJ45 ports or 8*100/1000M SFP fiber combo ports

D. 16*100/1000M SFP fiber ports E. 4*1/10G uplink SFP+ fiber ports

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

APPLICATION
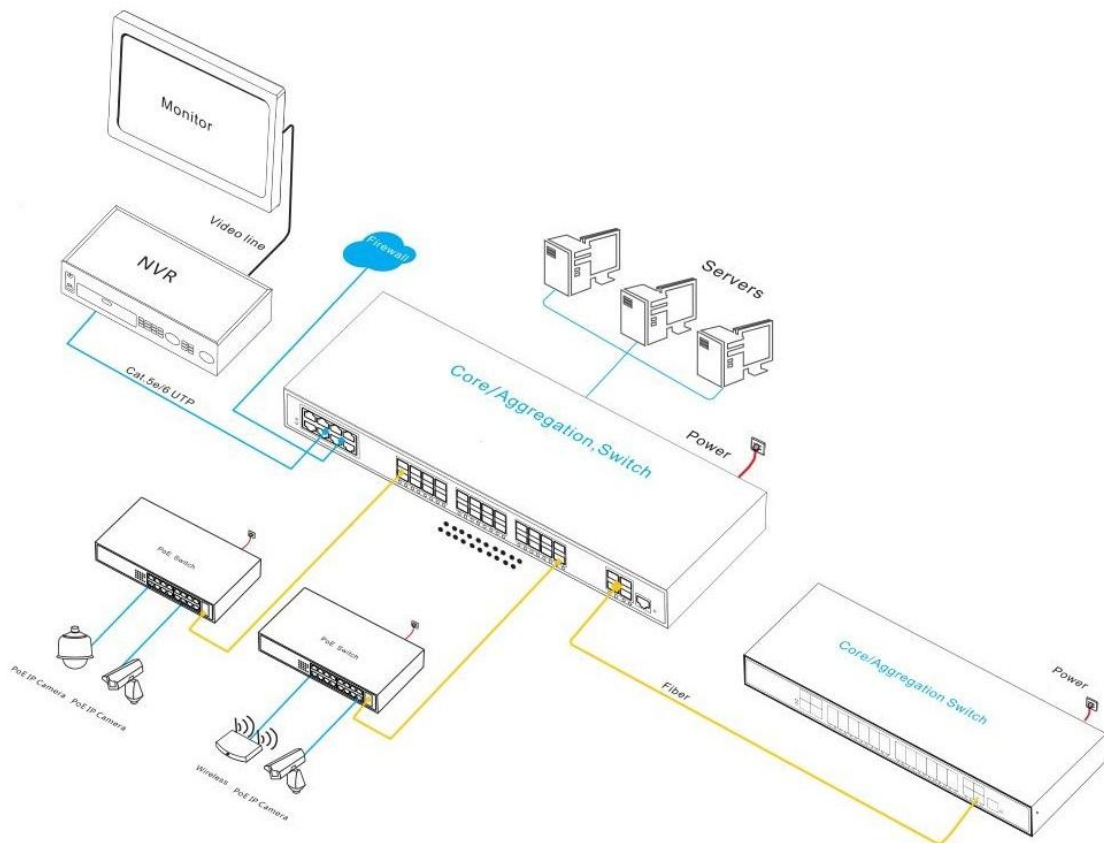
ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV58368FM	L3 managed Ethernet fiber switch with 8*10/100/1000Base-T RJ45 ports or 8*100/1000Base-X SFP fiber combo ports and 16*100/1000Base-X SFP fiber ports and 4*1/10G uplink 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 L3 managed Ethernet fiber switch	1	SET
	AC Power Cable	1	PC
	RJ45-DB9 Line	1	PC
	Mounting Kit (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

+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd. ONV

	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/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 uplink SFP+ fiber ports. It built-in 60W power supply and 1U/19" cabinet installation.
ONV58036FM	L3 managed Ethernet fiber switch with 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP fiber combo ports and 16*10/100/1000Base-T RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It built-in 60W power supply and 1U/19" cabinet installation.
ONV58052FM	L3 managed Ethernet fiber 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.

CONTACT US

ONV **Optical Network Video Technologies (Shenzhen) Co., Ltd.**

Tel: 0086-755-33376606

Fax: 0086-755-33376608

Email:onv@onv.com.cn

Skype: onv@onv.com.cn

WeChat ID: ONV-PoE-IoT

Website: www.onvcom.com

Headquarter Address: Room 1003, Block D, Terra Building, Futian District, Shenzhen

Factory Address: Building B3, Galaxy Artificial Intelligence Industrial Park, No. 333,

Zhongkai 6th Road, Chenjiang Street, Zhongkai High-tech Zone, Huizhou