Product Datasheet

16-port Full Gigabit Managed Ethernet Fiber Switch
(ONV33168FM)

OVERVIEW

The ONV33168FM is a gigabit managed Ethernet fiber switch independently developed by ONV. It has 8*10/100/1000Base-T RJ45 ports and 8*100/1000Base-X SFP fiber slot ports. Each port can support wire-speed forwarding.

The ONV33168FM has L2+ full network management, supports IPV4 management, static route full line rate forwarding, complete security protection mechanism, ACL/QoS policy, and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) to improve link backup and network reliability. When a 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 a high-density network application environment and is suitable for medium, large-scale scenes such as hotels, campuses, parks, shopping malls, scenic spots, hospitals, and banks to form an economical, efficient, and reliable communication network.

FEATURE

■ **Full Gigabit access, 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 port combination to facilitate users' flexible networking and meet the networking 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.

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

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

◇ Support IGMP V1/V2 multicast protocol and IGMP Snooping to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.

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

■ **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**

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◇ CCC,CE, FCC, RoHS.

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

◇ Using self-developed power supply with high 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

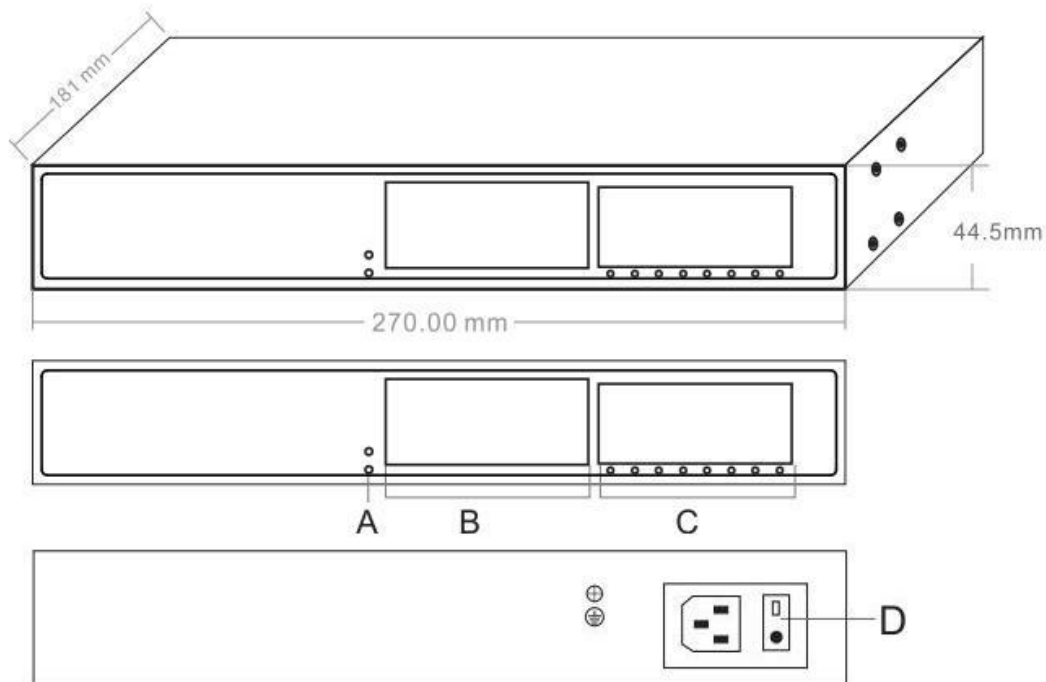| Model	ONV33168FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 8*10/100/1000Base-T RJ45 ports (Data) 8*100/1000Base-X uplink SFP ports (Data)
Ethernet Port	Port 1-8 support 10/100/1000Base-T auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	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 SFP optical fiber interface, default no include optical modules (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
SFP Port Expansion	Turbo overclocking 2.5G optical module and ring
Optical Cable/ Distance	Multi-mode: 850nm /0-550m 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, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	52Gbps
Forwarding Rate@64byte	23.81Mpps
CPU(Hz)	416M
DRAM	1G
Flash	128M
MAC	8K
Buffer Memory	6M
Jumbo Frame	9.6K
LED Indicator	Power: PWR (Yellow), System: SYS(Yellow) Network: Link (Yellow), Fiber port: L/A (Green), Speed: 1000M (Green)
Reset Switch	yes, support one key to restore factory settings
Power Supply	
Total PWR / Input	30W/AC100-240V)

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Voltage	
Power Consumption	Standby<8W, Full Load<18W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 0.65A
Physical Parameter	
Operation TEMP / Humidity	-20~+55°C, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+75°C, 5%~95% RH Non condensing
Dimension (L*W*H)	270*181*44.5mm
Net /Gross Weight	<1.2kg / <1.7kg
Installation	Desktop, wall mount,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) Broadcast storm suppression based on port rate Port real-time traffic management (Flow Interval) Limit the rate of packet traffic on incoming and outgoing ports, with mini granularity is 16Kbps and max is 1Gbps
Layer 3 Features	ARP protocol max 1024 entries Static route/default route max 128 entries Support L2+ network management function, support IPV4/IPV6 management Support Layer 3 routing forwarding and communication between different network segments and different VLAN
VLAN	Port configuration of Access, Trunk, Hybrid

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

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	Link Layer Discovery Protocol (LLDP)
	NTP clock, SNMP V1/V2/V3, System work log
	One click recovery, Ping detection, Cable status check
	ONV NMS platform cluster management (LLDP+SNMP)
	Console/ AUX Modem/ Telnet/ SSH2.0 and CLI configuration
	FTP, TFTP, Xmodem, SFTP file upload and download management
System	Category 5 and above Ethernet cables
	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Microsoft Internet Explorer 10 or higher
	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.

DIMENSION

A. Working Indicator   B. 8* 10/100/1000M RJ45 ports
C. 8*100/1000M SFP ports   D. Power input port AC100- 240V, 50/60Hz

APPLICATION
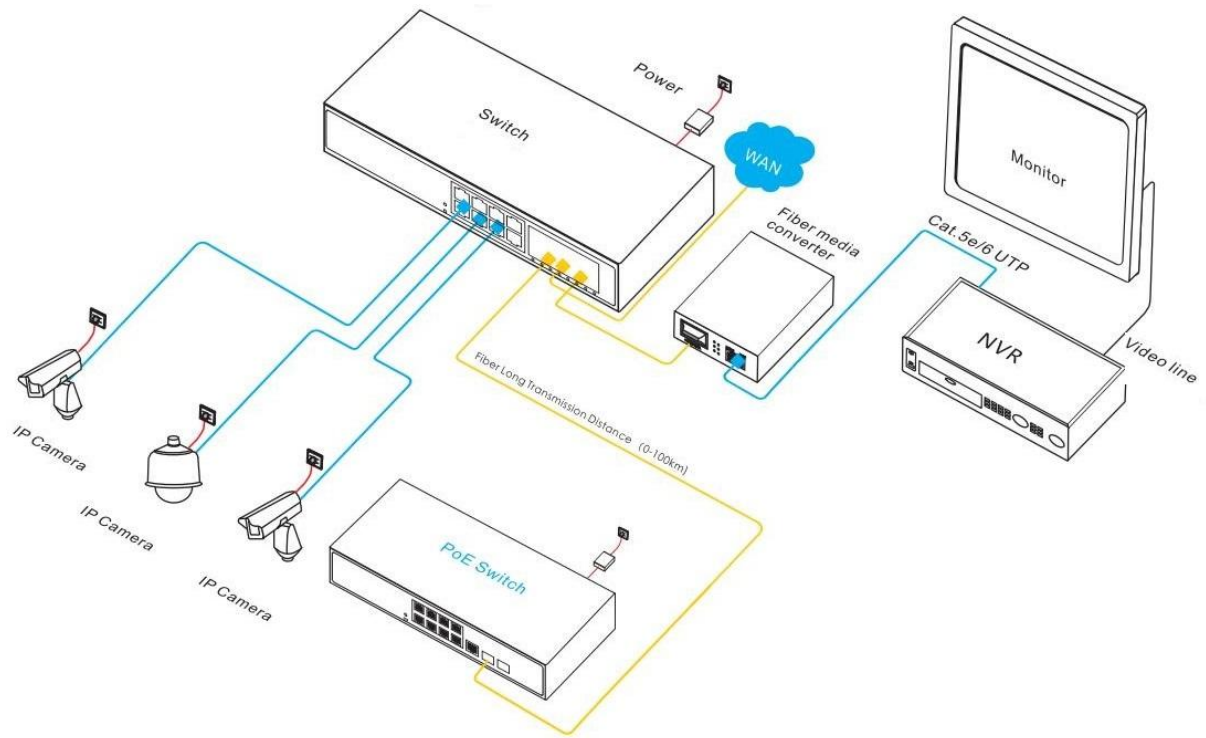
ORDERING INFORMATION

Model	Description
ONV33168FM	L2+ managed Ethernet fiber switch with 8* 10/100/1000M RJ45 ports and 8*100/1000M SFP fiber slot ports. Built-in 30W power supply and support 1U/19 inch rack installation.
Note: Does not include optical module and purchase additionally as needed.	

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PACKING LIST

Packing List	Content	Qty	Unit
	16-port full gigabit 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	PC

10		TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

CONTACT US

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