Product Datasheet

10-port Full Gigabit Managed Ethernet Switch
(ONV33010FM)

OVERVIEW

The ONV33010FM is a full gigabit L2+ managed Ethernet fiber switch independently developed by ONV. It has 8*10/100/1000Base-T RJ45 ports and 2*100/1000Base-X SFP fiber slot ports. Each port can support wire-speed forwarding.

The ONV33010FM has the 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, Gigabit SFP port uplink**

◇ Support non-blocking line-speed forwarding, making transmission smoother.

◇ Support IEEE 802.3x full-duplex flow control and Backpressure half-duplex flow control.

◇ Support Gigabit Ethernet port and Gigabit SFP port uplink combination to facilitate users' flexible networking and meet the networking needs of various scenarios.

■ **Strong business processing capability**

◇ Support IEEE 802.1Q VLAN and protocol VLAN, users can flexibly divide VLAN according to needs.

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

◇ 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,and Link.

◇ 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, 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

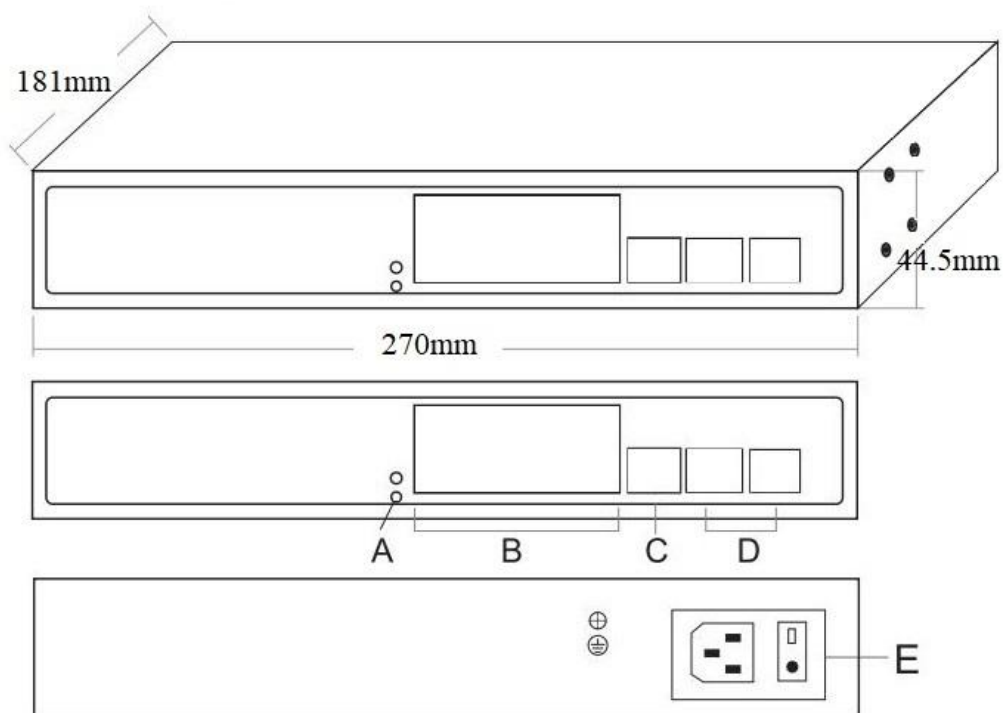| Model	ONV33010FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 8*10/100/1000Base-T RJ45 ports (Data) 2*100/1000Base-X uplink SFP ports (Data)
Ethernet Port	Port 1-8 can support 10/100/1000Base-T(X) auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meters) 100BASE-TX: Cat5 or later UTP(≤100 meters)

	1000BASE-T: Cat5e or later UTP(≤100 meters)
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)
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	20Gbps (Non-blocking)
Forwarding Rate@64byte	14.88Mpps
CPU(Hz)	500M
DRAM	1G
Flash	128M
MAC	8K
Buffer Memory	4.1M
Jumbo Frame	10K
LED Indicator	Power: PWR (Yellow), System: SYS (Green) Network: Link (Yellow), Fiber port: L/A(Green)
Reset Switch	Yes, One-button factory reset
Power Supply	
Total PWR / Input Voltage	30W/ (AC100-240V)
Power Consumption	Standby<6W, Full load<12W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 0.56A

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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, 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	IPV4 static route/default route, max entries 128 L2+ network management function, ARP protocol, max 1024 entries
VLAN	Port-based VLAN (4K), VLAN based on the protocol IEEE802.1q, Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP dynamic aggregation, static aggregation Max 5 aggregation groups and 8 ports per group
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	Multicast VLAN, User quick exit mechanism IGMP Snooping v1/v2, Max 1024 multicast groups
Port Mirroring	Bidirectional data mirroring based on port

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| QoS | Queue scheduling algorithm (SP, WRR, SP+WRR) |
	Flow-based rate limiting, Flow-based packet filtering
	Flow-based based redirection, 8*Output queues of each port
	802.1p/ DSCP priority mapping, Diff-Serv QoS, Priority Mark/ Remark
ACL	Port-based and VLAN-delivered ACL
	The L2-L4 packet filtering function can match the first 80 bytes of the packet and provide information based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, and VLAN Wait to define the ACL.
Security	ARP intrusion detection function
	ARP message rate limiting function
	Port-based IEEE802.1X certification
	Port broadcast message suppression
	SSL ensures data transmission security
	Port isolation, IP source address protection
	Host data backup mechanism, Anti-DoS attack
	Limit on the number of MAC addresses learned
	AAA&RADIUS certification, MAC address black hole
	User hierarchical management and password protection
	SSH 2.0 provides a secure encrypted channel for user login
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	Web network management (https)
	View CPU real-time utilization status
	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

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	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. Console port   D. 2*100/1000M uplink SFP ports

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

APPLICATION

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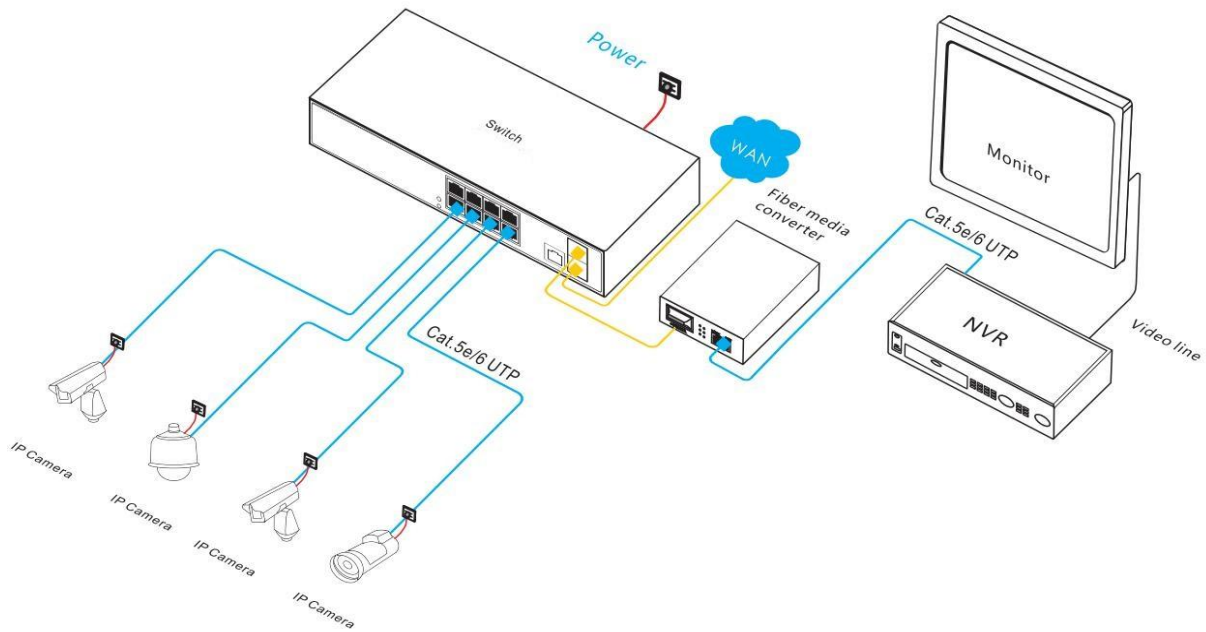
ORDERING INFORMATION

Model	Description
ONV33010FM	L2+ managed Ethernet fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP fiber slot ports. Built-in 30W power supply. Support 1U/19 inch rack installation.
Note: Does not include optical module and purchase additionally as needed.	

PACKING LIST

	Content	Qty	Unit
Packing List	10-port full gigabit managed Ethernet switch	1	SET
	RJ45-DB9 Line	1	PC
	AC Power Cable	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 interface. supports DDM function and hot plugging.	PC
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

CONTACT US

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