Product Datasheet

20-port Full Gigabit Managed Ethernet Switch

ONV33020FM

OVERVIEW

The ONV33020FM is a full gigabit L2+ managed Ethernet fiber switch independently developed by ONV. It has 16*10/100/1000Base-T RJ45 ports and 4*100/1000Base-X SFP fiber slot ports. Each port can support wire-speed forwarding.

The ONV33020FM 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 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 access, Gigabit SFP fiber port uplink**

◇ All series support "Gigabit Ethernet port and Gigabit SFP port"combination, which enables users to flexibly build networking to meet the needs of various scenarios.

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE802.3x and half-duplex based on backpressure.

■ **Security**

◇ 802.1X authentication.

◇ Port isolation,Storm control.

◇ IP-MAC-VLAN-Port binding.

■ **Strong business processing capability**

◇ IEEE802.1Q VLAN, flexible VLAN division.

◇ QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including Equ, SP, WRR & SP+WRR.

◇ ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.

◇ IGMP V1/V2 and IGMP Snooping.

◇ ERPS/STP/RSTP/MSTP.

◇ Static and dynamic aggregation.

■ **Stable and reliable**

◇ CCC,CE, FCC, RoHS.

◇ Low power consumption, galvanized steel casing, The fan active cooling.

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

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

■ **Easy operation and maintenance management**

◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

◇ HTTPS, SSLV3, and SSHV1/V2.

◇ RMON, system log, LLDP, and port traffic statistics.

◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

TECHNICAL SPECIFICATION

Model	ONV33020FM	ONV33028FM
Interface Characteristics		
Fixed Port	16*10/100/1000Base-T RJ45 ports (Data) 4*100/1000Base-X uplink SFP slot ports (Data) 1* RS232 console port(115200,N,8,1)	24*10/100/1000Base-T RJ45 ports (Data) 4*100/1000Base-X uplink SFP slot ports (Data) 1*RS232 console port(115200,N,8,1)
Ethernet Port	Port 1-16/24 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 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)	
SFP Slot Port	Gigabit SFP optical fiber interface, default matching optical modules (optional order 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	192Gbps	
Forwarding Rate@64byte	29.76Mpps	41.7Mpps
MAC	8K	
Buffer Memory	4.1M	
Jumbo Frame	10K	
LED Indicator	Power: PWR(yellow), System: SYS(yellow), Network: Link/Act(yellow), Fiber port: L/A(green)	
Reset Switch	Yes, One-button factory reset	
Power Supply		
Total PWR / Input Voltage	60W (AC100-240V)	
Power Consumption	Standby<16W, Full load<30W	Standby<18W, Full load<35W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 1.0A	
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)	440*290*44.5mm	
Net /Gross Weight	<3.0kg / <3.8kg	<3.2kg / <4.0kg
Installation	Desktop, 19 inch 1U cabinet	

| Certification & Warranty	
Lightning protection / protection level	Lightning protection: 4KV 8/20us; Protection level: IP30
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS
Warranty	3 years, lifelong maintenance.
Network Management Features	
Interface	IEEE802.3X (Full-duplex) Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps. Port temperature protection setting Port green Ethernet Energy-saving setting
Layer 3 Features	L2+ Network management IPV4/IPV6 management L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs
VLAN	4K VLAN based on port, IEEE802.1q VLAN based on the protocol VLAN based on MAC QinQ configuration Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP, Static aggregation Max 10/14 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Multicast	IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out MLD Snooping v1/v2,Multicast VLAN
Port Mirroring	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS,Priority Mark/Remark

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	8*Output queues of each port
	802.1p/DSCP priority mapping
	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
	Flow-based Packet Filtering
	Flow-based Redirection
	Flow-based Rate Limiting
ACL	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. Port-based Issuing ACL. ACL based on port and VLAN
Security	User hierarchical management and password protection
	SSH 2.0,SSL,Port isolation,ARP message speed limit
	Broadcast storm control,Backup for host datum
	IEEE802.1X & MAC address authentication
	Mac black holes,IP source protection
	AAA & RADIUS,MAC learning limit
	ARP inspection,Anti-DoS attack
	IP-MAC-VLAN-Port binding
DHCP	DHCP Client,DHCP Snooping,DHCP Server,DHCP Relay
Management	Console/AUX Modem/Telnet/SSH2.0 CLI
	Web Management (HTTPS)
	Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3
	One-key recovery
	NTP,System work log,Ping Test
	Cable Diagnose,LLDP
	CPU instant utilization status view
	ONV NMS - Smart Network Management System Platform

	(LLDP+SNMP)
System	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; Category 5 Ethernet network cable 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
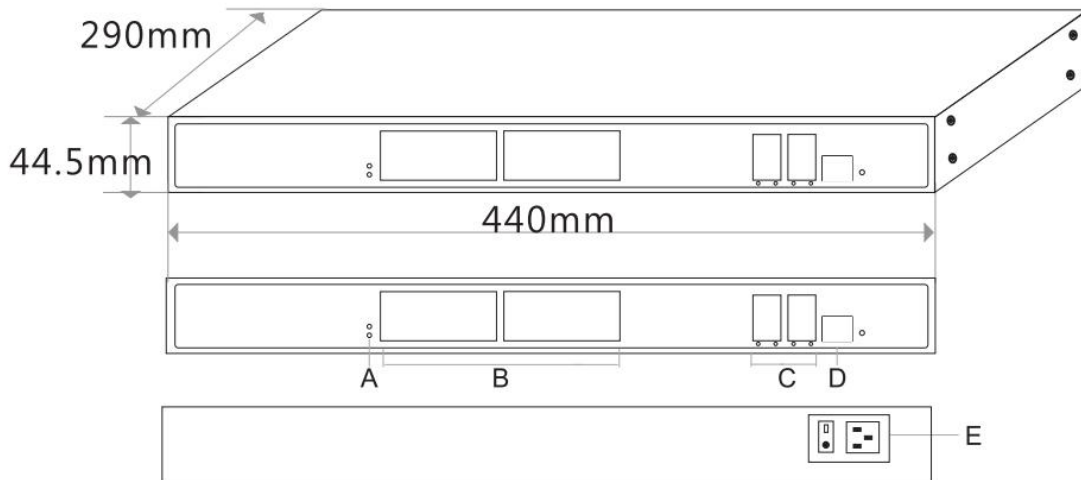
A.Working Indicator
B. 16*10/100/1000M Ethernet Ports
C.4*100/1000M SFP Ports
D.Console Port
E.Power Input Port 100-240V AC,50/60Hz

APPLICATION
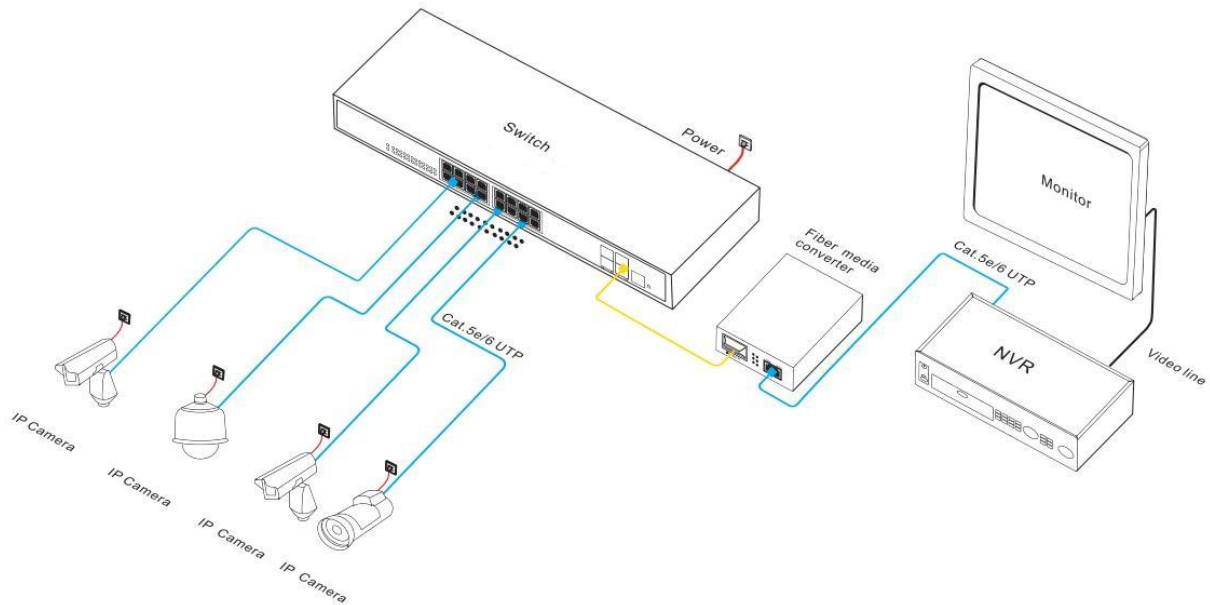
ORDERING INFORMATION

Model	Description
ONV33020FM	L2+ managed Ethernet fiber switch with 16* 10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports, Built-in 60W power supply. Support 1U/19 inch rack installation.
ONV33028FM	L2+ managed Ethernet fiber switch with 24* 10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports, Built-in 60W power supply. Support 1U/19 inch rack installation.
Note: The SFP optical module is not included by default and needs to be purchased separately.	

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PACKING LIST

PACKING LIST	CONTENT	QTY	UNIT
	20-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 INFORMATION

Product	Model	Description	Unit
1.25G Optical Module	ONV-2630	SFP optical module, 1.25G, multi mode dual fiber 850nm, transmission distance: 550m, LC interface, support DDM, hot plug and pull.	PC
	ONV-2632	SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM, hot plug and pull.	PC
	ONV-2612-T	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface,support DDM, hot plug and pull.	PC
	ONV-2613-R	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface,support DDM, hot plug and pull.	PC
	ONV-2612-T-SC	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance:	PC

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		20km, SC interface,support DDM, hot plug and pull.	
	ONV-2613-R-SC	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface,support DDM, hot plug and pull.	PC
Power Module	ONV-2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

RELATED PRODUCT

Model	Description
ONV33064FM	L2+ managed Ethernet fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP fiber slot ports, Built-in 30W power supply. support 1U/19 inch rack installation.
ONV33084FM	L2+ managed Ethernet fiber switch with 4*10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports, Built-in 30W power supply. support 1U/19 inch rack installation.
ONV33128FM	L2+ managed Ethernet fiber switch with 10*10/100/1000M RJ45 ports and 2*100/1000M SFP fiber slot ports, Built-in 30W power supply. support 1U/19 inch rack installation.
ONV33148FM	L2+ managed Ethernet fiber switch with 10*10/100/1000M RJ45 ports and 4*100/1000M SFP fiber slot ports, Built-in 30W power supply. support 1U/19 inch rack installation.

CONTACT US

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