

Product Datasheet

28-port Full Gigabit Managed Ethernet Switch (ONV33028FM)



OVERVIEW

The ONV33028FM is a full gigabit L2+ managed Ethernet fiber switch independently developed by ONV. It has 24*10/100/1000Base-T RJ45 ports and 4*100/1000Base-X SFP fiber slot ports. Each port can support wire-speed forwarding.

The ONV33028FM 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 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

■ 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.

■ 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.

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

■ 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 a 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	ONV33028FM
Interface Characteristics	
Fixed Port	1*RS232 console port(115200,N,8,1) 24*10/100/1000Base-T RJ45 ports (Data) 4*100/1000Base-X uplink SFP ports (Data)
Ethernet Port	Port 1-24 support 10/100/1000Base-T(X) 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)

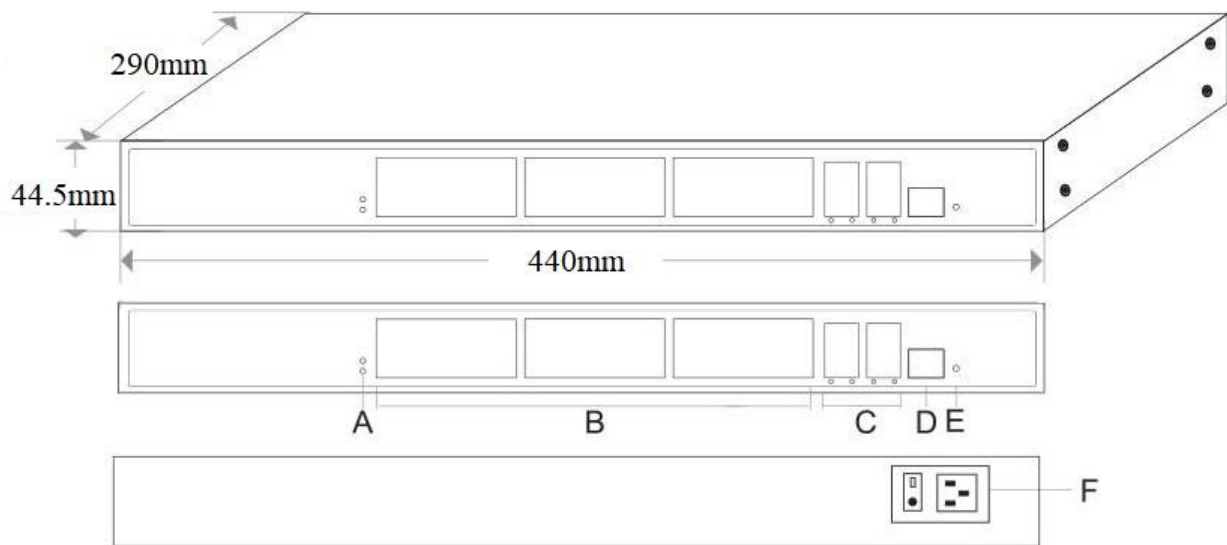
	1000BASE-T: Cat5e or later UTP(≤100 meters)
SFP Slot Port	Gigabit SFP optical fiber interface, default no include optical modules (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm /0-550m Single-mode: 1310nm /0-40km, 1550nm /0-120km.
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	56Gbps
Forwarding Rate@64byte	41.7Mpps
CPU(Hz)	500M
DRAM	1G
Flash	256M
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<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	<3.2kg / <4.0kg
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 14 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
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)

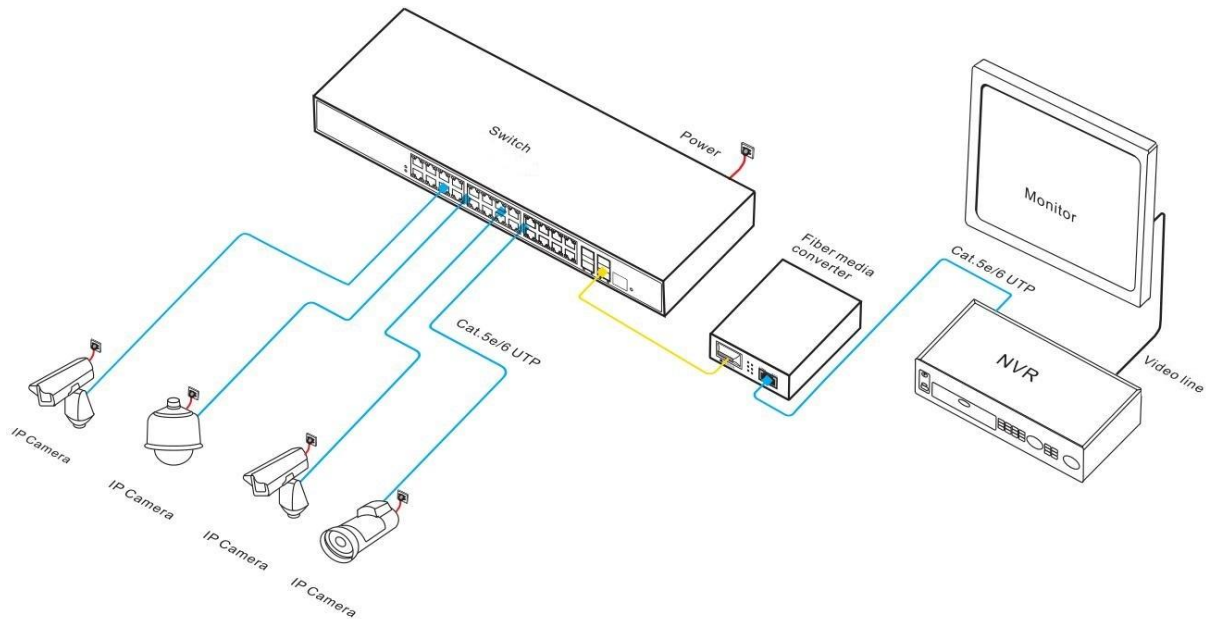
	<p>Console/ AUX Modem/ Telnet/ SSH2.0 and CLI configuration</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</p>
System	<p>Category 5 Ethernet network cable</p> <p>Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later</p> <p>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network</p>

DIMENSION



- A. Working indicator B. 24*10/100/1000M RJ45 ports
- C. 4*10/100/1000M SFP ports D. Console port
- E. Reset switch F. Power input port AC100-240V, 50/60Hz

APPLICATION



ORDERING INFORMATION

Model	Description
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: Does not include optical module and purchase additionally as needed.

PACKING LIST

	Content	Qty	Unit
Packing List	28-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

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

Tel: 0086-755-33376606

Fax: 0086-755-33376608

WeChat: ONV-PoE-IoT

Email: onv@onv.com.cn

Skype: [onv@onv.com.cn](https://www.skype.com/people/onv@onv.com.cn)

Website: www.onvcom.com

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

Factory Address: Floor 4-6, Building A, Senyutai Industrial Park, No. 111, Huaning Road, Xinshi

Community, Dalang Street, Longhua District, Shenzhen, China

