Product Datasheet

28-port 10G Uplink Managed Ethernet Switch
(ONV36028FM)

OVERVIEW

The ONV36028FM is a 10G uplink managed Ethernet switch independently developed by ONV. It has 24*10/100/1000Base-T adaptive RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Each port can support wire-speed forwarding.

The ONV36028FM has L2+ network management function, supports IPV4/ IPV6 management, static route 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 ensuring 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

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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.

FEATURE

■ **Gigabit 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 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**

◇ Support port isolation and port broadcast storm suppression.

◇ 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

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results.

■ **Stable and reliable**

◇ CCC, CE, FCC, RoHS.

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

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

◇ Low power consumption, with fan, galvanized steel metal housing, and excellent heat dissipation to ensure 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	ONV36028FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 4*1/10G uplink SFP+ fiber ports (Data) 24*10/100/1000Base-T RJ45 ports (Data)

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Ethernet Port	Port 1-24 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)
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/ 0-550m, 0-300m(10G), Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km
Chip Parameter	
Network Management Type	L2+
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	176Gbps (non-blocking)
Forwarding Rate@64byte	95.23Mpps
CPU (Hz)	500M
DRAM	2G
FLASH	128M
MAC	32K
Buffer Memory	32M
Jumbo Frame	9.6K
LED Indicator	Power: PWR (Yellow), System: SYS(Yellow), Network: Link (Yellow), Fiber port: L/A (Green)

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Reset Switch	Yes
Power Supply	
Total PWR/ Input Voltage	60W/ (AC100-240V)
Power Consumption	Standby<25W, full Load<35W
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	3.4kg/ 4.2kg
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, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Feature	
Interface	Port temperature protection setting IEEE 802.3x flow control (Full duplex) Port green Ethernet Energy-saving setting Broadcast storm control based on port speed Limit the speed of the message traffic at the inbound and outbound ports mini granularity is 64Kbps
L3 Feature	ARP protocol, max 1024 entries Static route /default route max 128 entries L2+ network management function, IPV4/ IPV6 management 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

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6	4K VLAN based on port, Port configuration of Access, Trunk, Hybrid.
Port Aggregation	LACP, Static aggregation, Max 14 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
ERPS Ring Network	G.8032 (ERPS), recovery time less than 20ms 255 Ring at most, Max 1024 devices per ring.
Multicast	IGMP Snooping v1/v2/v3, Max 1024 multicast groups MLD Snooping, Multicast VLAN, User quick exit mechanism
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based packet filtering, Priority Mark/ Remark Flow-based redirection, Flow-based rate limiting 8*Output queues of each port, 802.1p/ DSCP priority mapping Diff-Serv QoS, Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	ACL distribution based on port and VLAN L2-L4 packet filtering function, matching the first 80 bytes message, and provides ACL definitions based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN, etc.
Security	IEEE802.1X & MAC address authentication IP-MAC-VLAN-Port binding, MAC learning limit Broadcast storm control, Backup for host datum Mac black holes, IP source protection, Anti-DoS attack SSH 2.0, SSL, Port isolation, ARP message speed limit User hierarchical management and password protection AAA & RADIUS & TACACS+ certification, ARP inspection
DHCP	DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
Management	System work log, Link Layer Discovery Protocol NTP clock, Cable length detection, SNMP V1/V2/V3 Ping detection, Web network management (HTTPS)

7	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

290mm
44.5mm
440mm
A   B   C   D
E
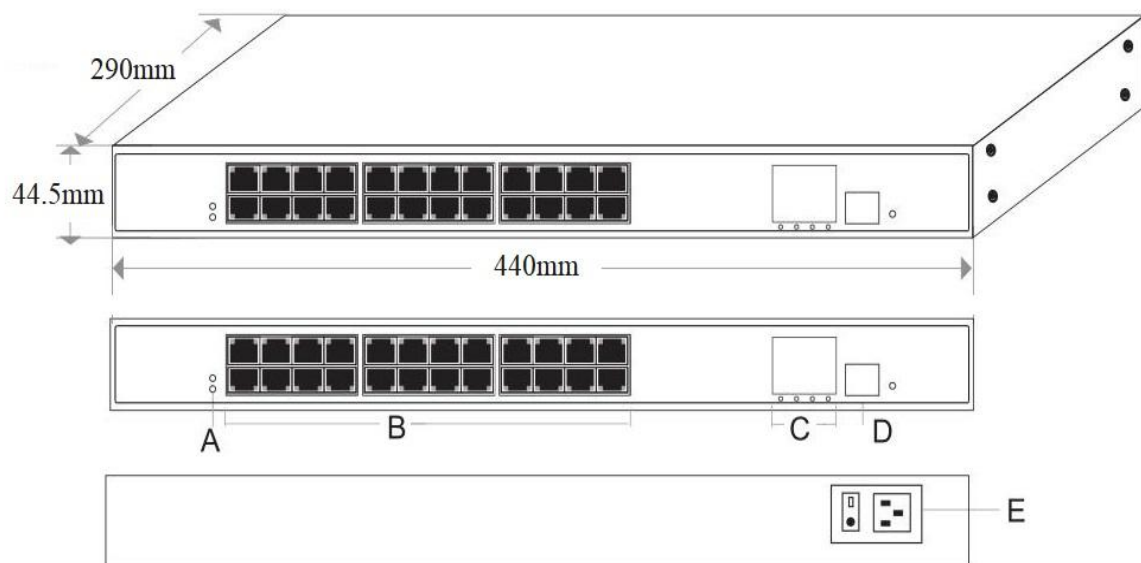
A. Working indicator
B. 24*10/100/1000M RJ45 ports
C. 4*1/10G uplink SFP+ fiber ports
D. Console port
E. Power input port AC100- 240V, 50/60Hz

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APPLICATION
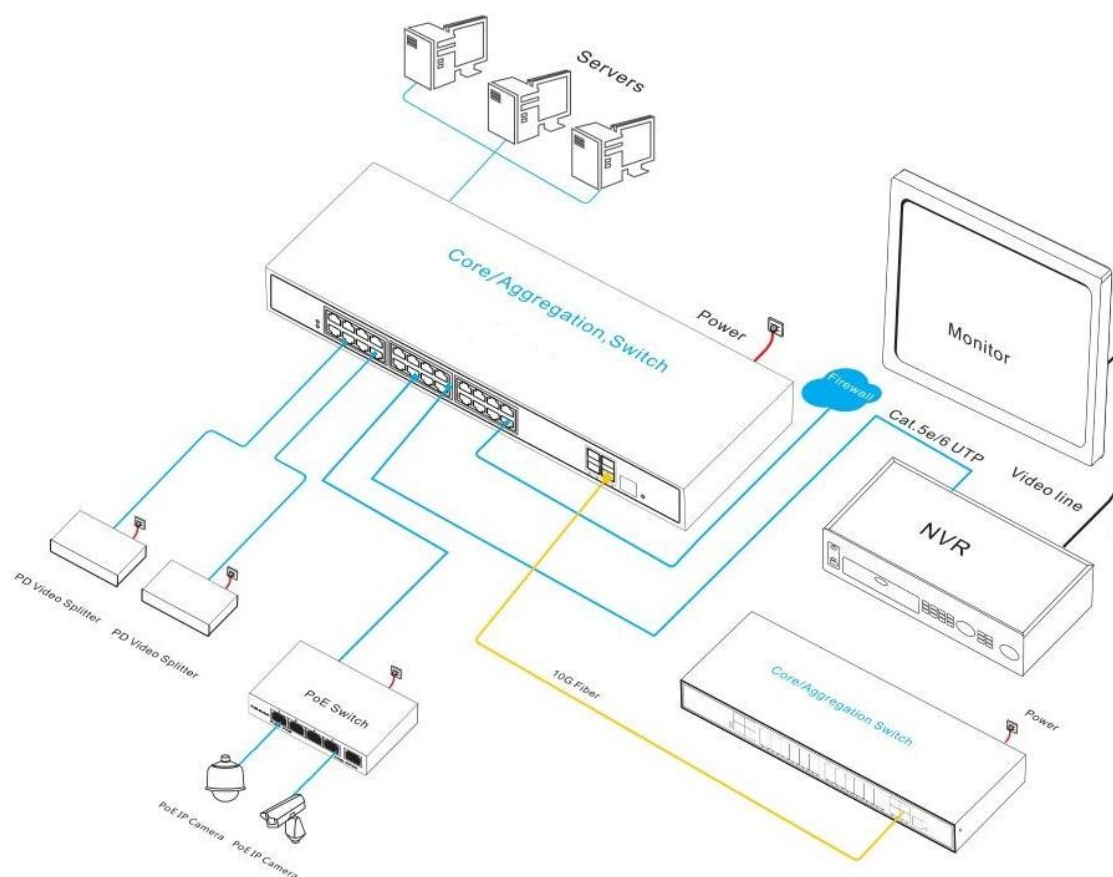
ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV36028FM	L2+ managed Ethernet switch with 24*10/100/1000M RJ45 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.		

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PACKING LIST

Packing List	Content	Qty	Unit
	28-port 10G uplink managed Ethernet 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 and Certificate of Conformity	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/	PC

		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
10G Optical Module	6630	SFP+ optical module,10G multi-mode dual fiber 850nm, transmission distance: 300m, LC interface. supports DDM function and hot plugging.	PC
	7832	SFP+ optical module,10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	7832-33	SFP+ optical module,10G single-mode single fiber TX1330nm/ RX1270nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	7832-27	SFP+ optical module,10G single-mode single fiber TX1270nm/ RX1330nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC

RELATED PRODUCT

Model	Description
ONV36036FM	L2+ managed Ethernet switch with 24*10/100/1000M RJ45 ports and 8*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and 1U/19" cabinet installation.
ONV36368FM	L2+ managed Ethernet switch with 8*10/100/1000M RJ45 ports and 24*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and 1U/19" cabinet installation.
ONV36448FM	L2+ managed Ethernet switch with 12*10/100/1000M RJ45 ports and 28*100/1000M SFP fiber ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and 1U/19" cabinet installation.

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ONV36048FM	L2+ managed Ethernet switch with 48*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and 1U/19" cabinet installation.

CONTACT US

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