

Product Datasheet

36-port 10G Uplink Managed Ethernet Switch (ONV56036FM)



OVERVIEW

The ONV56036FM is a 10G uplink managed Ethernet switch independently developed by ONV. It has 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP fiber combo ports and 16*10/100/1000Base-T adaptive RJ45 ports and 4*1/10G SFP+ fiber ports. Each port can support wire-speed forwarding.

The ONV56036FM has L2+ network management function, supports IPV4/ IPV6 management, static route forwarding, complete security protection mechanism, complete ACL/QoS policy, and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS(<20ms) 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- to 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, 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 uplink 1/10G SFP+ fiber port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ 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 results.

■ Strong business processing capability

- ◇ 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.

■ Stable and reliable

- ◇ CCC, CE, FCC, RoHS.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR and Link.
- ◇ Self-developed power supply high redundancy, providing a long term and stable power output.
- ◇ 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.
- ◇ Various management and maintenance methods such as Web network management, CLI (Console, Telnet), SNMP (V1/V2/V3), Telnet, etc.

TECHNICAL SPECIFICATION

Model	ONV56036FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200,N,8,1) 4*1/10G uplink SFP+ fiber ports (Data) 16*10/100/1000Base-T RJ45 ports (Data) 8*10/100/1000Base-T RJ45 or 8*100/1000Base-X SFP combo ports (Data)
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	128Gbps (non-blocking)
Forwarding Rate@64byte	95.23Mpps
CPU (Hz)	800M
DRAM	1G
FLASH	128M
MAC	16K
Buffer Memory	12M
Jumbo Frame	12000byte
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow), Network: Link/ Act (Yellow), Fiber port: L/A (Green)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings

Power Supply

Total PWR/ Input Voltage	60W/ (AC100-240V)
Power Consumption	Standby<20W, full Load<45W
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~+80°C, 5%~95% RH non condensing
Dimension (L*W*H)	440*290*44.5mm
Net /Gross Weight	3.45kg/ 4.3kg
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

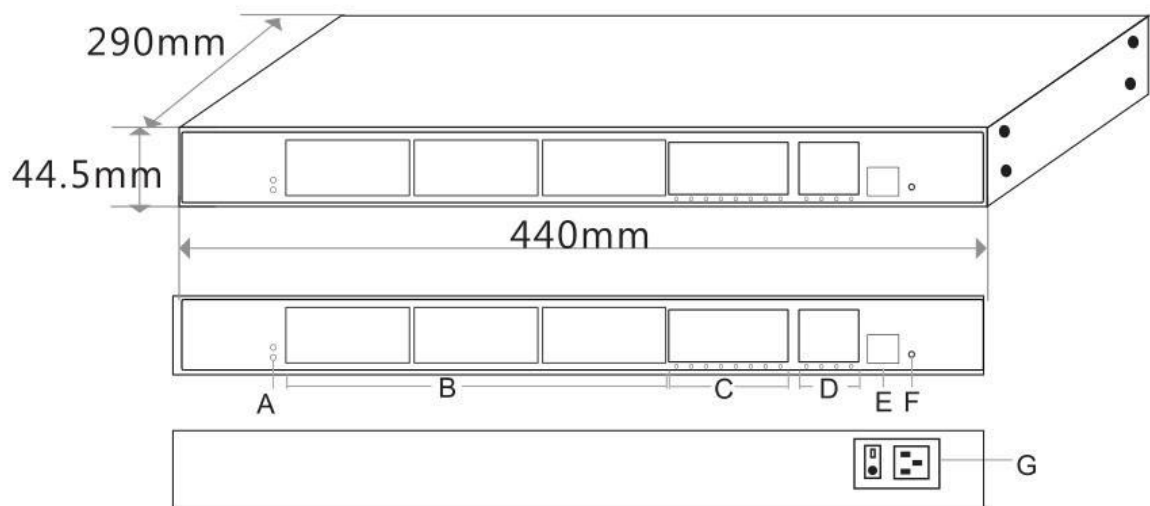
Network Management Feature

Interface	IEEE802.3x flow control (Full duplex) Port real-time flow management (Flow Interval) Broadcast storm suppression based on port rate Optical port SFP module DDMI real-time digital diagnosis Port IEEE Green Ethernet Energy-Saving configuration and status view Limit the rate of incoming and outgoing packet traffic, with mini granularity is 16Kbps and max 1Gbps
L3 Feature	RIPv1/v2, RIPv6, OSPFv1/v2, OSPFv3 L2+ network management function, IPv4/IPv6 static routing, max 128 entries, dual-stack management, ARP protocol max 1024 entries
VLAN	VLAN based on MAC, VLAN based on the protocol Port configuration of Access, Trunk, Hybrid, GVRP VLAN protocol (4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration
Port Aggregation	LACP dynamic aggregation, static aggregation

	Max 14 aggregation groups and max 8 ports per group.
Spanning Tree	STP BPDU Guard, BPDU filtering and BPDU forwarding STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
ERPS Ring Network	Support ERPS ring network, Recovery time less than 20ms, ITU-T G.8032
Multicast	MLD Snooping, Multicast VLAN User quick log out, MVR (Multicast VLAN Registration) IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	Bidirectional traffic mirroring for basic ports Support 1-to-multiple mirroring, support up to 4 port sessions
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	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	SSL guarantees data transmission security Quad binding function of IP+MAC+VLAN+ports MAC address learning limit, MAC address black hole Port isolation, Port based IEEE802.1X authentication IP Source Guard function, AAA& RADIUS certification Anti DoS attack, Port broadcast message suppression Hierarchical user management and password protection SSH 2.0 provides a secure encrypted channel for user login Host data backup mechanism, ARP intrusion detection function IP source address protection, ARP message speed limit function
DHCP	DHCP Client, DHCP Snooping, DHCP Server

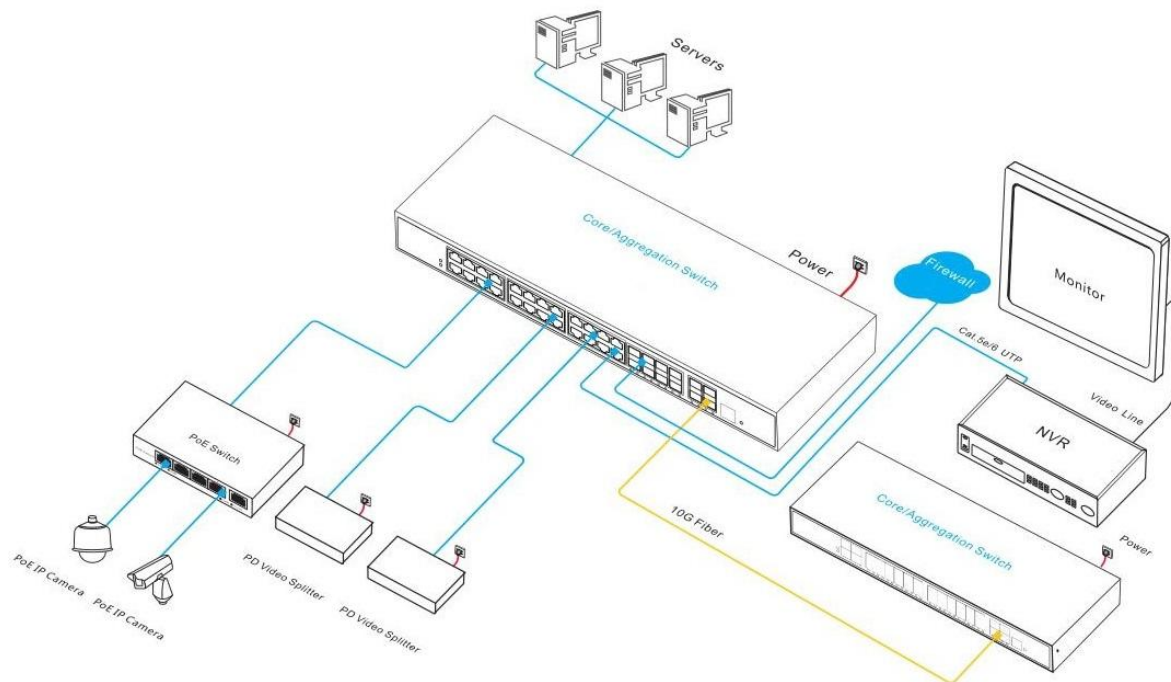
Management	<p>NTP clock, Link Layer Discovery Protocol (LLDP)</p> <p>System work log, Web network management (https)</p> <p>SNMP V1/V2/V3, View CPU real-time utilization status</p> <p>One click recovery, Ping detection, Cable status check</p> <p>ONV NMS platform cluster management (LLDP+SNMP)</p> <p>Console/ AUX Modem/ Telnet/ CLI command line configuration</p> <p>FTP, TFTP, Xmodem, SFTP file upload and download management</p>
System	<p>Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable</p> <p>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</p>

DIMENSION



- A. Working indicator
- B. 24*10/100/1000M RJ45 ports
- C. 8*100/1000M SFP ports
- D. 4*1/10G SFP+ ports
- E. Console port
- F. Reset switch
- G. Power input port AC100-240V,50/ 60Hz

APPLICATION



ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV56036FM	L2+ managed Ethernet switch with 8*10/100/1000M RJ45 or 8*100/1000M SFP combo ports and 16*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber slot ports. It built-in power supply and 1U/19" cabinet installation.	60W

Note: The optical module is not included and needs to be purchased.

PACKING LIST

Packing List	Content	Qty	Unit
	36-port 10G uplink managed Ethernet switch	1	Set
	RJ45-DB9 Adapter Cable	1	PC
	AC Power Cable	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. support DDM function and hot plugging.	PC
	2632	SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	2612-T	SFP optical module, 1.25G single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	2613-R	SFP optical module, 1.25G single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface. support 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. support 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. support DDM function and hot plugging.	PC

		RX1310nm, transmission distance: 20km, SC interface. support 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. support DDM function and hot plugging.	PC
	7832	SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	7832-33	SFP+ optical module, 10G single-mode single fiber TX1330nm/RX1270nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	7832-27	SFP+ optical module, 10G single-mode single fiber TX1270nm/RX1330nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC

RELATED PRODUCT

Model	Description
ONV56028FM	L2+ managed Ethernet switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber ports. It built-in 60W power supply and 1U/19" cabinet installation.
ONV56052FM	L2+ managed Ethernet switch with 48*10/100/1000M RJ45 ports and 4*1/10G SFP+ fiber ports. It built-in 60W power supply and 1U/19" cabinet installation.

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