

Product Datasheet

12-port 2.5G Managed Ethernet Switch

(ONV57128FM)



OVERVIEW

The ONV57128FM is a 2.5G managed Ethernet fiber switch independently developed by ONV. It has 8*10/100/1000/2500Base-T adaptive RJ45 ports and 4*1/10G uplink SFP+ fiber ports. Each port can support wire-speed forwarding.

The ONV57128FM has L3 network management functions, supports IPV4/ IPV6 management, dynamic routing and forwarding, complete security protection mechanism, complete ACL/QoS policy, and rich VLAN functions for easy management and maintenance. 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 restore communications when a one-way network fails. Ensure uninterrupted transmission of important applications. According to application needs, carry out port management, routing address management, port flow control, VLAN division, IGMP, security policy, and other application service configurations through network management methods such as Web, CLI, SNMP, and Telnet. It meets high-density network application environments and is suitable for wireless AP (WIFI6/WIFI7), live broadcast studios, hotels, campuses, parks, supermarkets, scenic spots, hospitals, banks, and other medium and

large-scale scenarios to establish cost-effective and reliable communication networks.

FEATURE

■ 2.5G 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 2.5G RJ45 port and 1/10G uplink SFP+ fiber port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

■ 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.

■ Security

- ◇ Support port isolation and 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.
- ◇ 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, galvanized steel housing, and excellent heat dissipation to ensure the 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	ONV57128FM
Interface Characteristics	
Fixed Port	1*RS232 Console port (115200, N, 8,1) 4*1/10G uplink SFP+ fiber ports (Data) 8*10/100/1000/2500Base-T RJ45 ports (Data)
Ethernet Port	Port 1-8 can support 10/100/1000/2500Base-T auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meters)

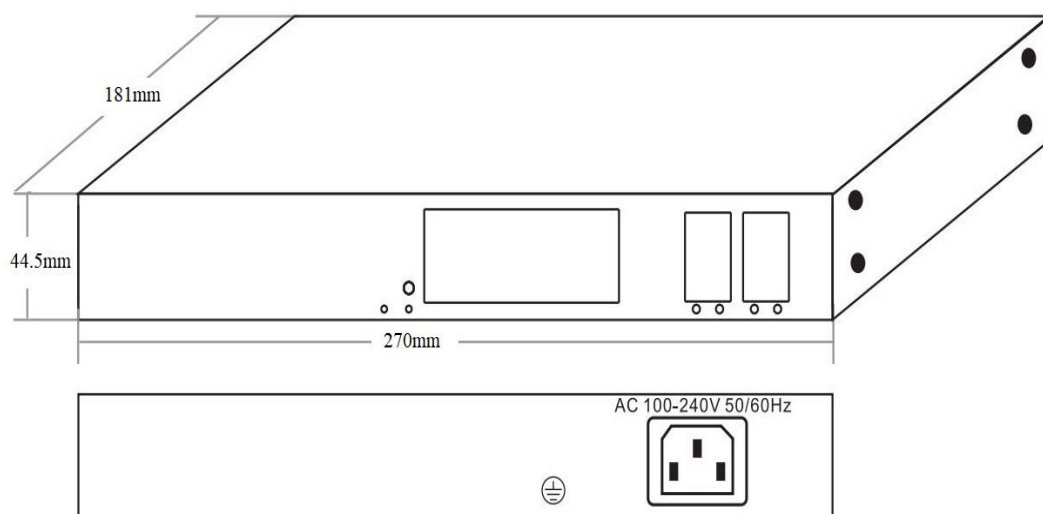
	100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters) 2500BASE-T: Cat6a or later UTP (≤100 meters)
Optical Fiber Port	Default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km
Chip Parameter	
Network Management Type	L3
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3bz 2.5GBase-T, IEEE802.3ae 10GBase-SR/LR, IEEE802.3x
Forwarding Mode	Store and forward (Full wire speed)
Switching Capacity	96Gbps (non-blocking)
Forwarding Rate@64byte	89.28Mpps
CPU(Hz)	Dual Core 1G
DRAM	2G
FLASH	256M
MAC	32K
Buffer Memory	16M
Jumbo Frame	12K
LED Indicator	Power/ System: SYS (Green), Network: Link (Yellow), Fiber port: L/A (Green), Rate: 100/1000(Green)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings
Power Supply	
Total Power/ Input Voltage	30W/ (AC100-240V)
Power Consumption	Standby<15W, full load<25W

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	-40~75°C, 5%~95% RH non condensing
Dimension (L*W*H)	270*181*44.5mm
Net /Gross Weight	1.25kg/ 1.75kg
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	<p>IEEE802.3x flow control (Full duplex)</p> <p>Port exception protection mechanism</p> <p>Port real-time flow management (Flow Interval)</p> <p>Broadcast storm suppression based on port rate</p> <p>SFP optical module DDMI real-time digital diagnosis</p> <p>Port EEE Green Ethernet Energy-Saving configuration and status view</p> <p>Limit the rate of packet traffic on incoming and outgoing ports, the mini granularity is 16Kbps and max 1Gbps</p>
L3 Feature	<p>Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6</p> <p>VLANIF interfaces for IPV4/IPV6, up to 64 entries</p> <p>IPV4/IPV6 static routing/default routing, up to 64 entries</p> <p>NG protocol max 1000 entries, ARP protocol max 1000 entries</p> <p>IPV4 equal cost routing, VRRP for IPV4/IPV6, up to 255 entries</p> <p>IPV4 dynamic routing, RIPv1/v2, OSPFv2, routing 2000 entries</p> <p>L3 network management function, IPV4/ IPV6 dual-stack management</p> <p>L3 routing and forwarding, support communication between different network segments and different VLAN</p>

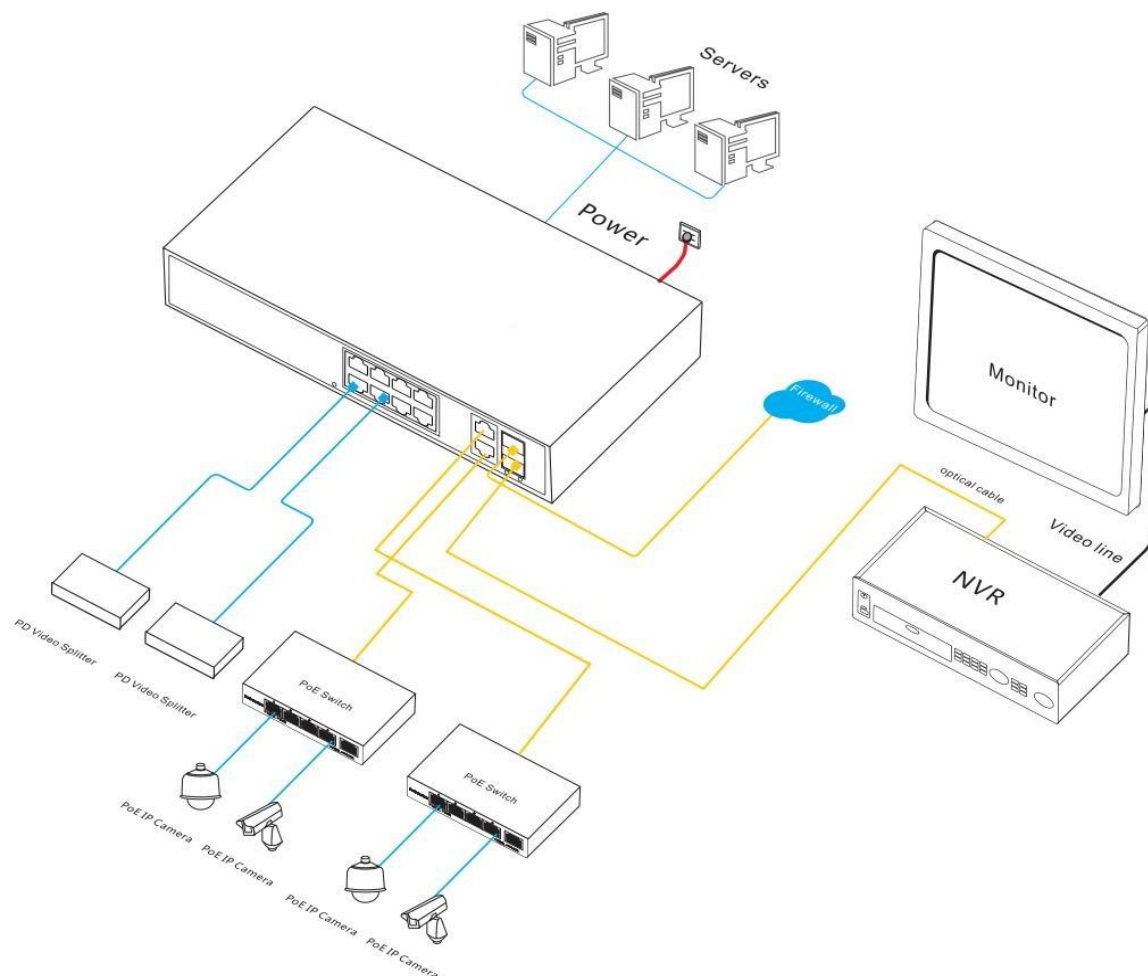
VLAN	<p>Port configuration of Access, Trunk, Hybrid, IEEE 802.1q</p> <p>Voice VLAN, GVRP VLAN protocol, Port-based VLAN (4K)</p> <p>Protocol-based VLAN, MAC address-based VLAN, QinQ configuration</p>
Port Aggregation	LACP dynamic aggregation, Static aggregation, Max 6 aggregation groups and max 8 ports per group.
Spanning Tree	<p>STP BPDU Guard, BPDU filtering and BPDU forwarding</p> <p>STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)</p>
ERPS Ring Network	ERPS ring network, Recovery time less than 20ms, ITU-T G.8032
Multicast	Multicast VLAN, User quick log out, MLD Snooping, MVR (Multicast VLAN Registration), IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	<p>Bidirectional traffic mirroring for basic ports</p> <p>one-to-multiple mirroring, supports up to 4 port sessions</p>
QoS	<p>Flow-based Rate Limiting, Flow-based redirection</p> <p>Queue Scheduling Algorithm (SP, WRR, SP+WRR)</p> <p>Flow-based Packet Filtering, 8*Output queues of each port</p> <p>802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/Remark</p>
ACL	<p>ACL is issued based on port and VLAN</p> <p>L2-L4 packet filtering function can match the first 80 bytes of the message and provide ACL definition based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port range, VLAN, etc.</p>
Security	<p>Port based IEEE802.1X authentication</p> <p>Port isolation, IP Source Guard function</p> <p>SSL guarantees data transmission security</p> <p>Quad binding function of IP+MAC+VLAN+ports</p> <p>MAC address learning limit, MAC address black hole</p> <p>Anti DoS attack, Port broadcast message suppression</p> <p>Hierarchical user management and password protection</p> <p>SSH 2.0 provides a secure encrypted channel for user login</p>

	<p>Host data backup mechanism, ARP intrusion detection function</p> <p>IP source address protection, ARP message speed limit function</p> <p>Support AAA, RADIUS, TACACS+ authentication (only supports authentication, not authorization and accounting)</p>
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	<p>System work log, Link Layer Discovery Protocol</p> <p>NTP clock, Cable length detection, SNMP V1/V2/V3</p> <p>Ping detection, Web network management (HTTPS)</p> <p>HTTP, TFTP file upload and download management</p> <p>Console/ SSH/ Telnet/ CLI command line configuration</p> <p>ONV-NMS platform cluster management (LLDP+SNMP)</p> <p>One click recovery, View CPU real-time utilization status</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



APPLICATION



ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV57128FM	L3 managed Ethernet switch with 4*1/10G uplink SFP+ fiber ports and 8*10/100/1000/2500M RJ45 ports. It built-in power supply and 1U/19" cabinet installation.	30W

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

PACKING LIST

Packing List	Content	Qty	Unit
	12-port 2.5G managed Ethernet switch	1	Set
	AC Power Cable	1	PC
	RJ45-DB9 Adapter Cable	1	PC
	Mounting Kit	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/RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC

		RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	
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

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