

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 L2+ network management function. It supports IPV4/IPV6 management, static route 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 IEEE 802.3x and half-duplex based on Backpressure.
- ◇ Support 2.5G 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 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 Snooping V1/V2/V3 multicast protocol to meet the 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.
- ◇ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, and L/A.
- ◇ Self-developed power supply, high redundancy design, providing a long-term and stable power output.
- ◇ Low power consumption, no fan, aluminum 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 | 10BASE-T: Cat3,4,5 UTP (≤100 meters) |

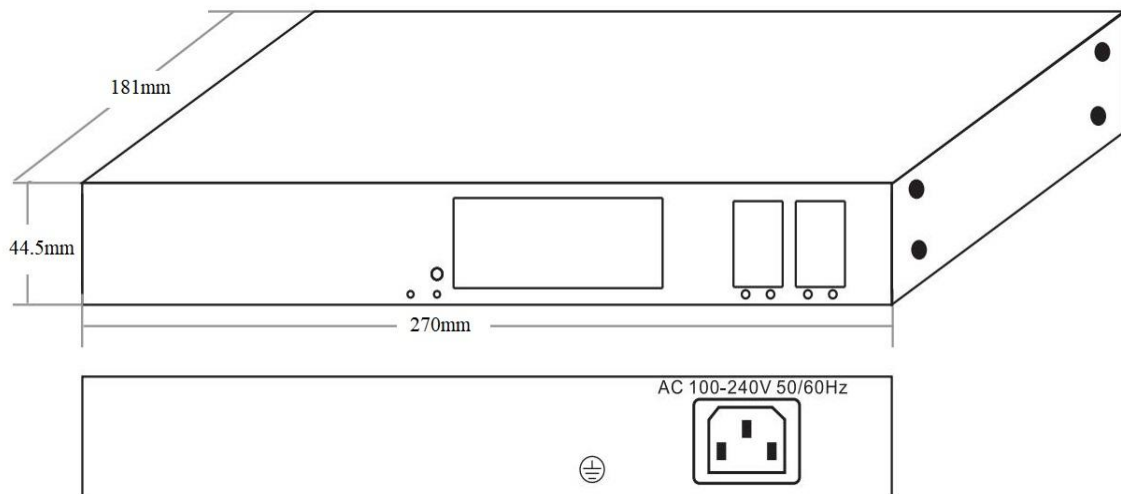
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| Transmission | 100BASE-TX: Cat5 or later UTP (≤ 100 meters) 1000BASE-T: Cat5e or later UTP (≤ 100 meters) 2500BASE-T: Cat6a or later UTP (≤ 100 meters) |
| Optical Fiber Port | 1/10G optical fiber port, default no include optical module (optional 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 | 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 802.3bz 2.5GBase-T, IEEE 802.3ae 10GBase-SR/LR, IEEE 802.3x |
| 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 | |

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| 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 Class B, RoHS |
| Warranty | 3 years, lifelong maintenance. |
| Network Management Feature | |
| Interface | IEEE 802.3x flow control (Full duplex) Port exception protection mechanism Port real-time flow management (Flow Interval) Broadcast storm suppression based on port rate Optical port SFP module DDMI real-time digital diagnosis Port EEE Green Ethernet Energy-Saving configuration and status view Limit the rate of packet traffic on incoming and outgoing ports, mini granularity is 16Kbps and max 1Gbps |
| L3 Feature | RIPv1/v2, RIPng, OSPFv1/v2, OSPFv3 Static routing, , ARP protocol max 1024 entries L2+ network management function, IPv4/IPv6 dual-stack management |
| VLAN | Port configuration of Access, Trunk, Hybrid. |

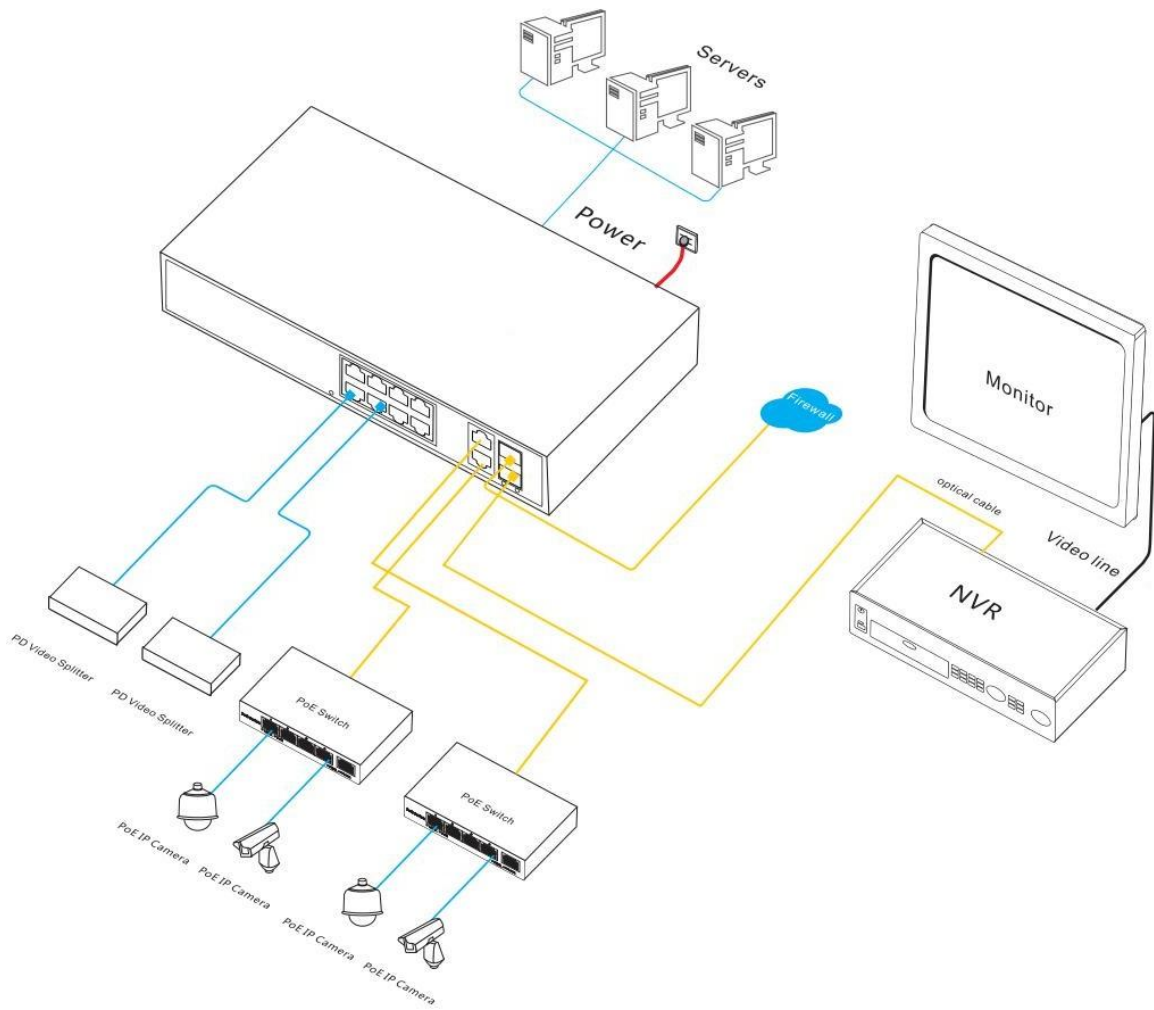
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|-------------------|--|
| | VLAN based on MAC, VLAN based on the protocol, QinQ configuration GVRP VLAN protocol, (4K) VLAN based on port, IEEE802.1q, Voice VLAN |
| Port Aggregation | LACP dynamic aggregation, Static aggregation, Max 6 aggregation groups and 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 | ERPS ring network recovery time less than 20ms, ITU-T G.8032 |
| Multicast | Multicast VLAN, User quick log out, MVR (Multicast VLAN Registration) MLD Snooping, IGMP Snooping v1/v2/v3 and 1024 multicast groups at most |
| Mirroring | Bidirectional traffic mirroring for basic ports one-to-multiple mirroring, supports up to 4 port sessions |
| QoS | Flow-based Rate Limiting, Flow-based redirection Priority Mark/Remark, 8*Output queues of each port Flow-based Packet Filtering, 802.1p/DSCP priority mapping Diff-Serv QoS, Queue Scheduling Algorithm (SP, WRR, SP+WRR) |
| ACL | ACL is issued based on port and VLAN 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. |
| Security | MAC address learning limit, ARP message speed limit function Host data backup mechanism, ARP intrusion detection function Anti DoS attack, Quad binding function of IP+MAC+VLAN+ports Port broadcast message suppression, AAA&RADIUS certification IP source address protection, Port-based IEEE802.1X authentication MAC address black hole, SSL guarantees data transmission security Port isolation, SSH 2.0 provides a secure encrypted channel for user |

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| | <p>login</p> <p>IP Source Guard, Hierarchical user management and password protection</p> |
| DHCP | DHCP Client, DHCP Snooping, DHCP Server |
| Management | <p>FTP, TFTP file upload and download management</p> <p>ONV-NMS platform cluster management (LLDP+SNMP)</p> <p>System work log, Check the real-time CPU utilization status</p> <p>NTP clock, Cable status check, Web network management (https)</p> <p>SNMP V1/V2/V3, Console/Telnet/CLI/SSH command line configuration</p> <p>One click restore, Ping detection, Link Layer Discovery Protocol (LLDP)</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 | L2+ managed Ethernet switch with 4*1/10G uplink SFP+ fiber ports and 8*10/100/1000/2500M RJ45 ports. Built-in power supply and supports 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 |

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|--------------------|---------|---|----|
| 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 |

CONTACT US

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