Product Datasheet

30-port 2.5G Managed Ethernet Switch

(ONV57030FM)

OVERVIEW

The ONV57030FM is a 2.5G managed Ethernet switch independently developed by ONV. It has 24*10/100/1000/2500Base-T adaptive RJ45 ports and 2*1/10G RJ45 ports and 4*1/10G SFP+ fiber ports. Each port can support wire-speed forwarding.

The ONV57030FM has L3 network management functions, supports IPV4/IPV6 management, dynamic routing forwarding, complete security protection mechanism, perfect ACL/QoS strategy and rich VLAN functions, which are 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 unidirectional network fails, communication can be quickly restored to ensure

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uninterrupted communication of important applications. Port management, routing address management, port flow control, VLAN division, IGMP, security policy and other application business configurations can be performed through network management methods such as Web, CLI, SNMP, Telnet, etc. according to application needs. It meets the high-density network application environment and is suitable for hotels, campuses, parks, supermarkets, scenic spots, hospitals, banks and other medium and large scenarios to build economical, efficient and reliable communication networks.

FEATURE

■ **2.5G access, uplink 1/10G RJ45/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 RJ45/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**

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◇ Port isolation and storm control.

◇ 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 and Link.

◇ Low power consumption, with fan, Galvanized steel housing, and excellent heat dissipation to ensure stable operation of the switch.

■ **Easy O&M management**

◇ CPU monitoring, memory monitoring and Ping 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 command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, etc.

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TECHNICAL SPECIFICATION

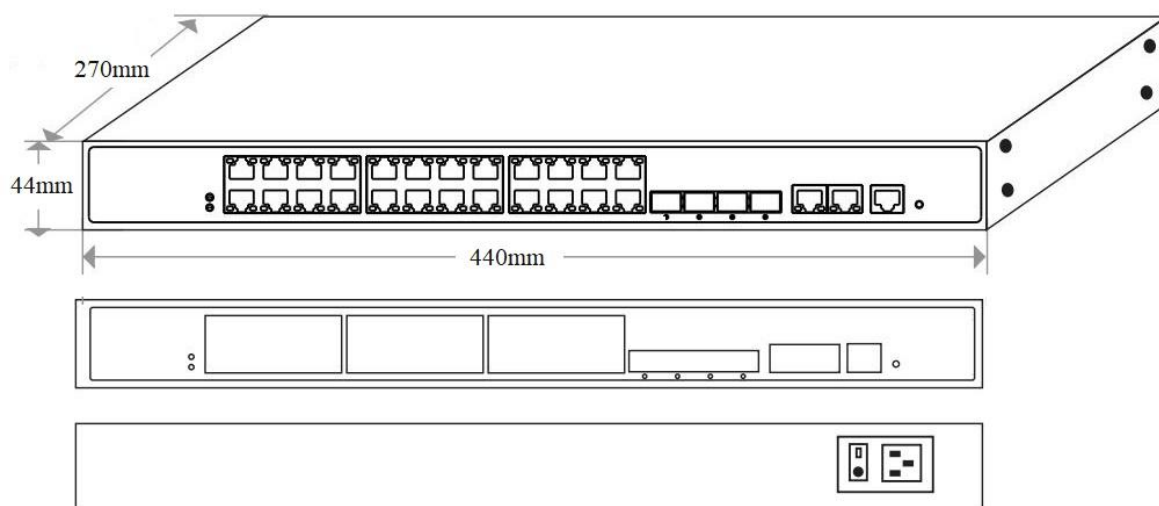| Model	ONV57030FM
Interface Characteristics	
Fixed Port	1*Console RS232 port (115200, N, 8,1) 2*1/10G uplink RJ45 ports (Data) 4*1/10G uplink SFP+ fiber ports (Data) 24*10/100/1000/2500Base-T RJ45 ports (Data)
Ethernet Port	Port 1-24 can support 10/100/1000/2500Base-T(X) auto-sensing, full/ half duplex 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/6 or later UTP (≤100 meters) 2500BASE-T: Cat6a 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	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	240Gbps (non-blocking)
Forwarding Rate@64byte	178.56Mpps

CPU(Hz)	Dual Core 1G
DRAM	2G
FLASH	256M
MAC	32K
Buffer Memory	16M
Jumbo Frame	12K
LED Indicator	Network: Link/ Act (Yellow), Fiber port: L/A (Green), Power: PWR (Yellow), System: SYS (Yellow)
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	65W/ (AC100-240V)
Power Consumption	Standby<20W, full load<45W
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)	440*270*44mm
Net /Gross Weight	3.4kg/ 4.2kg
Installation	Desktop, 1U/19" cabinet
Certification & Warranty	
Lightning Protection	Protection level: IP30, Lightning protection: 4KV 8/20us
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 exception protection mechanism Port real-time flow management (Flow Interval) Broadcast storm suppression based on port rate

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6	SFP optical 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, the mini granularity is 16Kbps and max 1Gbps
L3 Feature	IPV4/ IPV6 VRRP, max is 255 group
	IPV4/ IPV6 VLANIF port, max128 entries
	Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6
	IPV4/ IPV6 static route/ default route, max128 entries
	IPV4 dynamic routing, RIPv1/v2, OSPFv2, routing 4000 entries
	NG protocol, max 1000 entries, ARP protocol, max 1000 entries
	L3 network management function, IPV4/ IPV6 dual-stack management
	IPV6 dynamic routing OSPFv3, RIPng, IPV6 management, routing 1000 entries
	L3 routing and forwarding, support communication between different network segments and different VLAN
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 15 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	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	Bidirectional traffic mirroring for basic ports
	one-to-multiple mirroring, supports up to 4 port sessions
QoS	Flow-based Rate Limiting, Flow-based redirection
	Queue Scheduling Algorithm (SP, WRR, SP+WRR)

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7	Flow-based Packet Filtering, 8*Output queues of each port
	802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/Remark
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	Port broadcast message suppression
	SSL ensures data transmission security
	Limit the number of MAC addresses learned
	Port isolation, Host data backup mechanism
	Anti-DoS attack, ARP intrusion detection function
	Quadruple binding function of IP+MAC+VLAN+port
	IP source address protection, MAC address black hole
	User hierarchical management and password protection
	SSH 2.0 provides a secure encrypted channel for user login
	AAA& RADIUS certification, ARP message rate limiting function
	IEEE802.1X authentication/ centralized MAC address authentication
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	System work log, Link Layer Discovery Protocol
	HTTP, TFTP file upload and download management
	NTP clock, Cable length detection, SNMP V1/V2/V3
	Ping detection, Web network management (HTTPS)
	ONV-NMS platform cluster management (LLDP+SNMP)
	One click recovery, View CPU real-time utilization status
	Console/ AUX Modem/ Telnet/ 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

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	Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable

DIMENSION

APPLICATION

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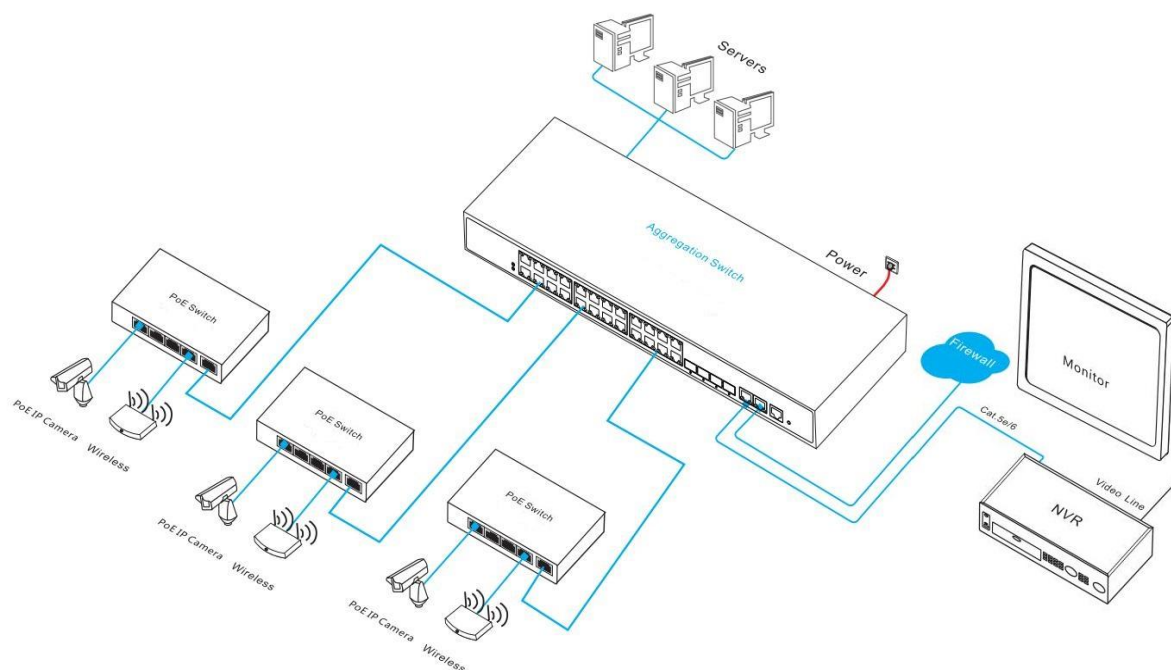
ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV57030FM	L3 managed Ethernet switch with 24*10/100/1000/2500M RJ45 ports and 2*1/10G uplink RJ45 ports and 4*1/10G uplink SFP+ fiber ports. It built-in power supply and 1U/19" cabinet installation.	65W

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

PACKING LIST

	Content	Qty	Unit
Packing List	30-port 2.5G managed Ethernet switch	1	Set
	RJ45-DB9 Adapter Cable	1	PC
	AC Power 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/	PC

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		RX1550nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	
	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
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/ RX13300nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC

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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

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