Product Datasheet

18-port Gigabit Uplink L2 Managed Ethernet Switch

(ONV31016FM)

OVERVIEW

The ONV31016FM is a Gigabit uplink Ethernet fiber switch independently developed by ONV. It has 16*10/100M RJ45 ports and 2*10/100/1000M RJ45 ports and 2*100/1000M SFP fiber combo ports. Each port can achieve line-speed forwarding.

The ONV31016FM adopts a new generation of high-performance hardware and software platforms. It provides flexible and cost-effective 100M access and uplink ports. It supports complete security protection mechanisms, perfect ACL/QoS strategies, and flexible VLAN functions, and is easy to manage and maintain to meet users' needs for easy management, high security and low-cost networking of network equipment, and can meet the application environment of multi-channel video intercom, monitoring, and wireless coverage network. It is suitable for hotels, campuses, parks, supermarkets, scenic spots, factory dormitories, and small and medium-sized enterprises to build economical and efficient networks.

FEATURE

■ **100M access, uplink RJ45/SFP fiber combo ports**

◇ Support non-blocking wire-speed forwarding.

◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.

◇ Support RJ45 port and Gigabit uplink RJ45/SFP fiber combo port, which enables users to flexibly build networking to meet the needs of various scenarios.

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■ **Security**

◇ Port isolation and storm control.

◇ 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 STP/RSTP/MSTP production tree protocols to eliminate L2 loops and achieve link backup.

◇ IEEE 802.1Q VLAN, users can flexibly divide VLAN according to their needs, and support QinQ configuration.

◇ 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.

◇ 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, Link, and Act.

◇ Low power consumption, no fan, galvanized steel metal shell, and excellent heat dissipation to ensure the stable operation of the switch.

■ **Easy O&M management**

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◇ Support CPU monitoring and memory monitoring.

◇ Support HTTPS, SSLV3, SSHV1/V2, and other encryption methods, making management more secure.

◇ Support Web network management, SNMP (v1/v2/v3), and other diversified management and maintenance.

◇ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.

◇ Support LLDP to facilitate the network management system to query and judge the communication status of the link.

TECHNICAL SPECIFICATION

Model	ONV31016FM
Interface Characteristics	
Fixed Port	1*RS232 console port(115200,N,8,1) 16*10/100Base-TX RJ45 ports (Data) 2*10/100/1000Base-T uplink RJ45 ports(Data) 2*100/1000Base-X uplink SFP fiber combo ports (Data)
Ethernet Port	Port 1-16 can support 10/100Base-TX and Port 17-18 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	Gigabit optical fiber interface, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm/ 0-500m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km.
Chip Parameter	

| Network Protocol	IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-TX/FX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	14.8Gbps (non-blocking)
Forwarding Rate@64byte	5.36Mpps
CPU(Hz)	500M
DRAM	1G
Flash	256M
Buffer Memory	4.1M
MAC	8K
Jumbo Frame	10K
LED Indicator	Power: PWR (Green), Network: Link, Link/Act (Yellow), Speed: SPD (Green)
Reset Switch	Yes, One-button factory reset
Power Supply	
Total PWR / Input Voltage	30W/ (AC100-240V)
Power Consumption	Standby<16W, Full load<20W
Power Supply	Built-in power supply, AC100~240V,50-60Hz, 0.56A
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*290*44.5mm
Net /Gross Weight	3.0kg/ 3.8kg
Installation	Desktop, wall-mount, 1U/19" rack-mount
Certification & Warranty	
Lightning Protection	Lightning protection: 4KV 8/20us, Protection level: IP30

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Warranty	3 years, lifelong maintenance.
Network Management Feature	
Interface	IEEE 802.3x flow control (Full duplex) Broadcast storm control based on port speed Limit the speed of the message traffic at the inbound and outbound ports mini granularity is 64Kbps
VLAN	4K VLAN based on port, IEEE802.1q QinQ configuration, VLAN based on protocol
Port Aggregation	LACP, Manual aggregation Max 8 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	MLD Snooping, Multicast VLAN IGMP Snooping v1/v2/v3, Max 64 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS Priority Mark/Remark 8*Output queues of each port 802.1p/DSCP priority mapping Queue Scheduling Algorithm (SP,WRR,SP+WRR)
ACL	Support L2-L4 packet filtering function, can match the first 80 bytes of the message to provide ACL definition 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	IP+MAC+port binding function Port isolation, Port broadcast storm suppression
DHCP	DHCP Client, DHCP Snooping, DHCP Relay
Management	NTP clock, One-click restore, SNMP V1/V2/V3 System work log, Web network management (https)

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DIMENSION
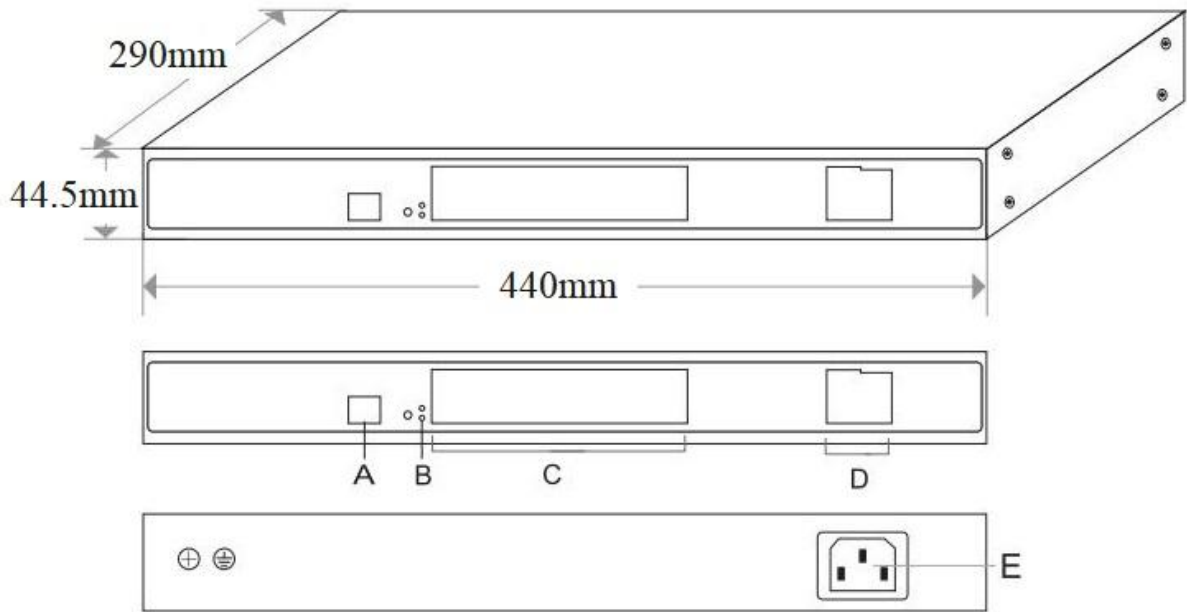
A. Console port   B. Working indicator   C. 16*10/100M RJ45 ports

D. 2*10/100/1000M uplink RJ45/SFP fiber combo ports

E. Power input port AC100-240V, 50/60Hz

APPLICATION
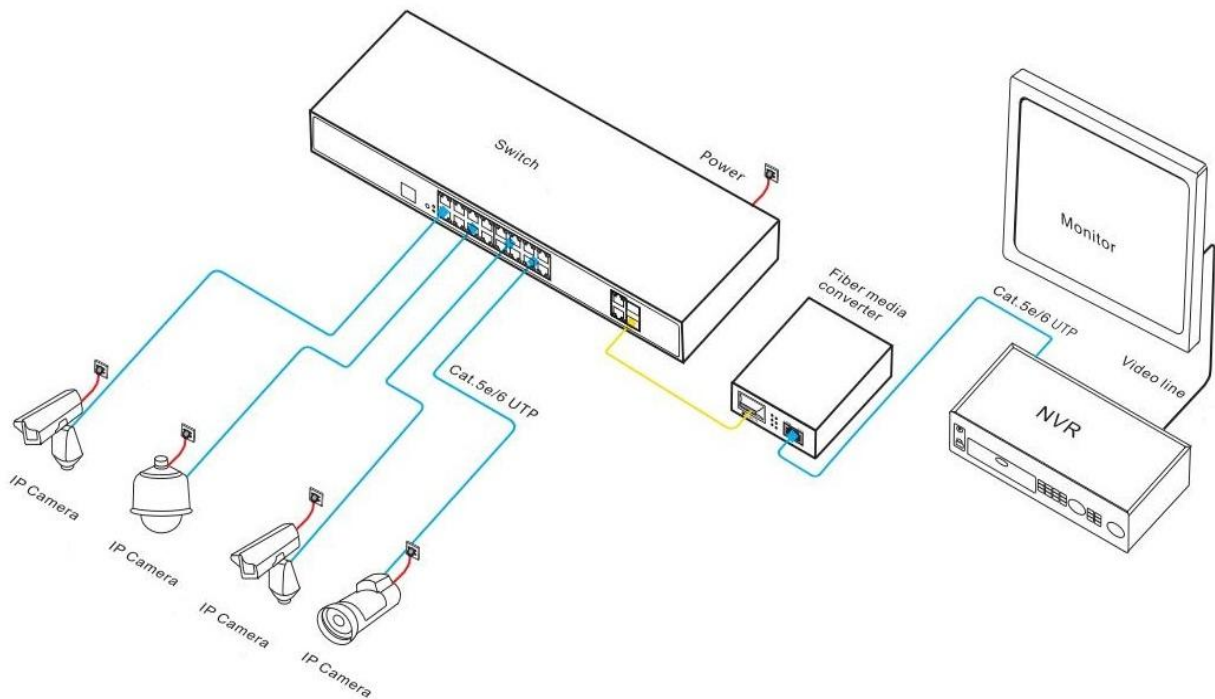
ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV31016FM	L2 managed Ethernet fiber switch with 16*10/100M RJ45 ports and 2*10/100/1000M uplink RJ45 ports and 2*100/1000M uplink SFP fiber combo 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

	Content	Qty	Unit
Packing List	18-port gigabit uplink managed Ethernet switch	1	SET
	AC Power Cable	1	PC
	Mounting Kits	1	SET
	User Guide	1	PC
	Warranty Card	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	PC

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		TX1310nm/ 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

CONTACT US

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