

## Product Datasheet

# 26-port Gigabit Uplink L2 Managed Ethernet Switch (ONV31024FM)



## OVERVIEW

The ONV31024FM is a gigabit uplink L2 managed Ethernet fiber switch independently developed by ONV. It has 24\*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 ONV31024FM 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.

## ■ 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

- ◇ 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.

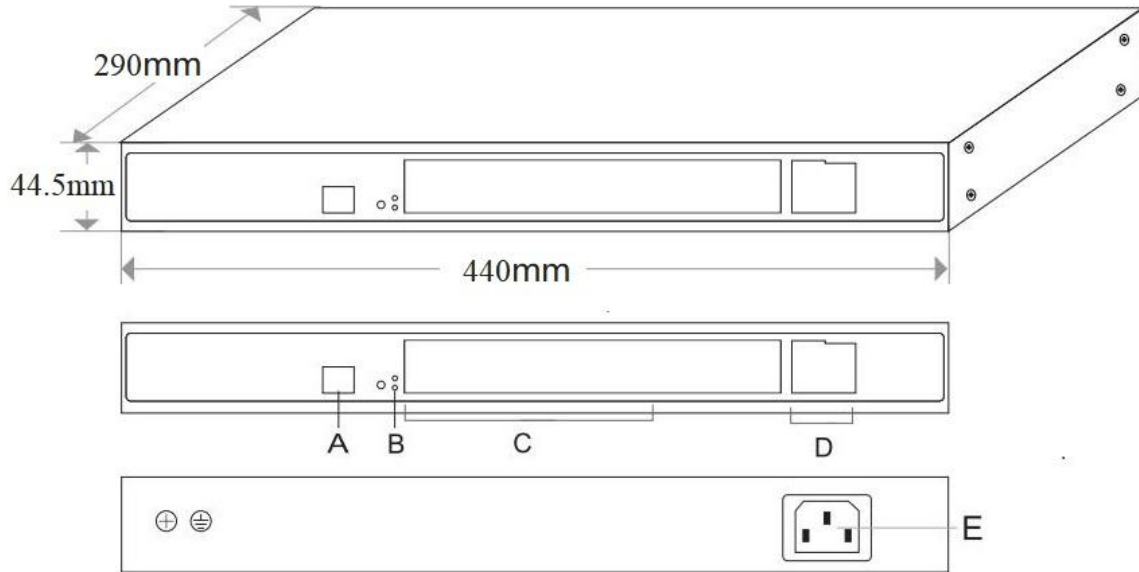
## TECHNICAL SPECIFICATION

| Model                            | ONV31024FM  |
|----------------------------------|---|
| <b>Interface Characteristics</b> |   |
| Fixed Port                       | 1*RS232 console port(115200,N,8,1)<br>24*10/100Base-TX RJ45 ports (Data)<br>2*10/100/1000Base-T uplink RJ45 ports(Data)<br>2*100/1000Base-X uplink SFP fiber combo ports (Data) |
| Ethernet Port                    | Port 1-24 can support 10/100Base-TX and Port 25-26 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)<br>100BASE-TX: Cat5 or later UTP (≤100 meters)<br>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.  |
| <b>Chip Parameter</b>            |   |

|                                     |  |
|-------------------------------------|--|
| 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              | 6.55Mpps   |
| 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  |
| <b>Power Supply</b>                 |  |
| Total PWR / Input Voltage           | 30W/ (AC100-240V)  |
| Power Consumption                   | Standby<18W, Full load<25W   |
| Power Supply                        | Built-in power supply, AC100~240V,50-60Hz, 0.56A   |
| <b>Physical Parameter</b>           |  |
| 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                   | 3.1kg/ 3.9kg   |
| Installation                        | Desktop, wall-mount, 1U/19" rack-mount   |
| <b>Certification &amp; Warranty</b> |  |
| Lightning Protection                | Lightning protection: 4KV 8/20us, Protection level: IP30   |

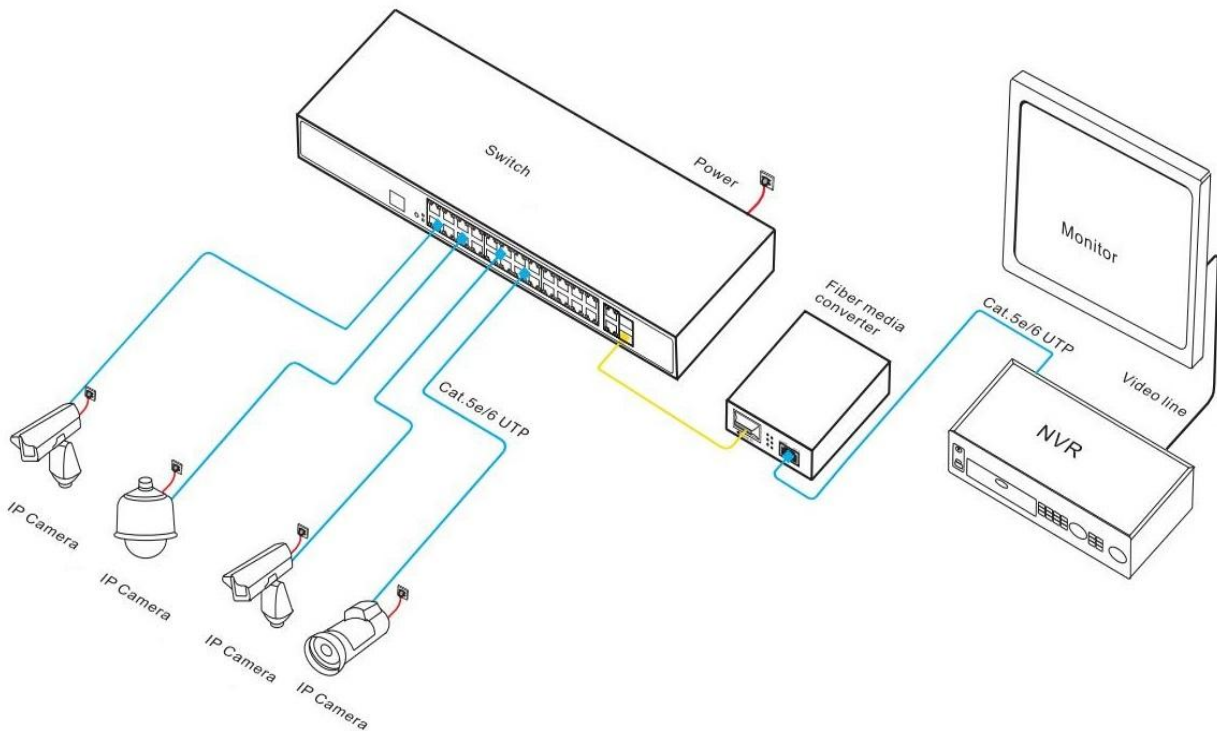
|                                   |  |
|-----------------------------------|--|
| Warranty                          | 3 years, lifelong maintenance.   |
| <b>Network Management Feature</b> |  |
| Interface                         | IEEE 802.3x flow control (Full duplex)<br>Broadcast storm control based on port speed<br>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<br>QinQ configuration, VLAN based on protocol  |
| Port Aggregation                  | LACP, Manual aggregation<br>Max 12 aggregation groups and 8 ports per group.   |
| Spanning Tree                     | STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)   |
| Multicast                         | MLD Snooping, Multicast VLAN<br>IGMP Snooping v1/v2/v3, Max 64 multicast groups, Fast log out  |
| Port Mirroring                    | Bidirectional data mirroring based on port   |
| QoS                               | Diff-Serv QoS<br>Priority Mark/Remark<br>8*Output queues of each port<br>802.1p/DSCP priority mapping<br>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<br>Port isolation, Port broadcast storm suppression   |
| DHCP                              | DHCP Client, DHCP Snooping, DHCP Relay   |
| Management                        | NTP clock, One-click restore, SNMP V1/V2/V3<br>System work log, Web network management (https)   |

## DIMENSION



- A. Console port
- B. Working indicator
- C. 24\*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 |
|------------|--|-----------------------|
| ONV31024FM | L2 managed Ethernet fiber switch with 24*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 | 26-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 TX1310nm/  | PC   |

|                 |           |   |    |
|-----------------|-----------|---|----|
|                 |           | RX1550nm, transmission distance: 20km, LC interface.<br>supports DDM function and hot plugging.   |    |
|                 | 2613-R    | SFP optical module, 1.25G single-mode single fiber TX1550nm/<br>RX1310nm, transmission distance: 20km, LC interface.<br>supports DDM function and hot plugging. | PC |
|                 | 2612-T-SC | SFP optical module, 1.25G single-mode single fiber TX1310nm/<br>RX1550nm, transmission distance: 20km, SC interface.<br>supports DDM function and hot plugging. | PC |
|                 | 2613-R-SC | SFP optical module, 1.25G single-mode single fiber TX1550nm/<br>RX1310nm, transmission distance: 20km, SC interface.<br>supports DDM function and hot plugging. | PC |
| Power<br>Module | 2633      | 1.25G SFP optical module transfers to 10/100/1000M RJ45<br>port.  | PC |

## CONTACT US

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