

# JSH2403FM/M



## 3-Slot 24-Port 10/100 + 2 Gigabit L2 Managed Switch

### Product Description

JSH2403FM/M L2 managed switch supports 3 slots for removable, hot-swap 8-port fast ethernet FX/TP + 2 gigabit dual media ports with TP/SFP, is a standard switch that meets all IEEE 802.3/u/x/z Gigabit, Fast Ethernet and Ethernet specifications. The switch can be managed through Ethernet port using Web-based management unit, associated with web-based management, the network administrator can logon the switch to monitor, configure and control each port's activity. In addition, the switch implements the QoS (Quality of Service), VLAN, Trunk. It is suitable for WAN application.

### Benefits

#### QoS with Four Priority Queues

The QoS(Quality Of Service) feature provides four internal queues to support four different classifications of traffic. High priority packet streams experience less delay inside the switch, which supports lower latency for certain delay-sensitive traffic. The JSH2403FM/M can classify the packet as one of the four priorities according to 802.1p priority tag, DiffServ and/or IP TOS. The QoS operate at full wire speed. The actual scheduling at each egress port can be based upon a strict priority, weighted round robin or a mix of both.

#### Port Mirroring

This mechanism helps track network errors or abnormal packet transmission without interrupting the flow of data. Allow ingress traffic to be monitored by a single port that is defined as mirror capture port. The mirror capture port can be any 10/100 port, 10/100/1000 port. Mirroring multiple ports is possible but can create congestion at the mirror capture port.

#### Q-in-Q VLAN for performance & security

The VLAN feature in the switch offers the benefits of both security and performance. VLAN is used to isolate traffic between different users and thus provides better security. Limiting the broadcast traffic to within the same VLAN broadcast domain also enhances performance. VLAN support enabling advanced techniques such as "802.1Q-in-1Q" to be deployed.

#### Isolated Group, Provide Secure for Certain Ports

The isolated group feature allows certain ports to be designated as protected. All other ports are non-isolated. Traffic between isolated group members are blocked. Traffic can only be sent from isolated group to non-isolated group

### Mac-based 802.ad LACP with Automatic Link Fail-over

Dynamic fail-over means packets will not get assigned to any trunk member port that has failed. If one of the ports were to fail, traffic will automatically get distributed to the remaining active ports.

### 802.1x Access Control Improve Network Security

802.1x features enable user authentication for each network access attempt. Port security features allow you to limit the number of MAC addresses per port in order to control the number of stations for each port. Static MAC addresses can be defined for each port to ensure only registered machines are allowed to access. By enabling both of these features, you can establish an access mechanism based on user and machine identities, as well as control the number of access stations.

### 802.1d Compatible & 802.1w Rapid Spanning Tree

For mission critical environments with multiple switches supporting STP, you can configure the switches with a redundant backup bridge path, so transmission and reception of packets can be guaranteed in event of any fail-over switch on the network.

### 2 Dual Media for Flexible Fiber Connection

Dual media port 25 and 26 are provided for flexible fiber connection. You can select to install optional transceiver modules in these slots for short, medium or long distance fiber backbone attachment. Use of the SFP will disable their corresponding built-in 10/100/1000Base-T connections.

### Broadcast/Multicast/Unknown-Unicast Storm Control

To limit too many broadcast/multicast/unknown-unicast flooding in the network, broadcast/multicast storm control is used to restrict excess traffic. Threshold values are available to control the rate limit for each port. Packets are discarded if the count exceeds the configured upper threshold.

## Features

- Standard compliance
  - (1) IEEE 802.3 10Base-T Ethernet (twisted-pair copper)
  - (2) IEEE 802.3u 100Base-TX Ethernet (twisted-pair copper)
  - (3) IEEE 802.3ab 1000Base-TX Ethernet (twisted-pair copper)
  - (4) IEEE 802.3z 1000Base-TX/FX Ethernet
  - (5) IEEE 802.3x flow control capability
  - (6) ANSI/IEEE 802.3 auto-negotiation
  - (7) IEEE 802.1q VLAN
- Subscriber Interface
  - (1) 3-slot for 8 ports 10/100TP, 8 ports 100FX
  - (2) IEEE 802.3u 100Base-TX Ethernet (twisted-pair copper)
  - (3) IEEE 802.3ab 1000Base-TX Ethernet (twisted-pair copper)
  - (4) IEEE 802.3z 1000Base-TX/FX Ethernet
  - (5) IEEE 802.3x flow control capability
  - (6) ANSI/IEEE 802.3 auto-negotiation
  - (7) IEEE 802.1q VLAN

- Subscriber Interface
  - (1) 3-slot for 8 ports 10/100TP, 8 ports 100FX
  - (2) Port 25,26 are Gigabit TP/SFP Fiber auto sense
  - (3) Auto-Negotiation and Auto-MDIX
  - (4) Backpressure flow control for half duplex
  - (5) 802.3x flow control for full duplex

### Performance

#### Switching capacity:

- Non-blocking switch fabric supports up to 24FE+2GbE, ports
- 8 K MAC addresses
- 256k packet buffer and 128k control memory
- The maximum throughput is 8.8Gbps
- With 64 bytes packets throughput is 6.547Mpps

#### VSM(Virtual Stacking Management)

- Support 16 devices stacking
- Multiple switches can be managed via one IP address, just like software stacking
- Low cost and easily to establish network environment, not extra hardware require.
- Not center on the physical location of wiring closets

#### VLAN

- Supports SVL/IVL configuration to meet your VLAN requirement
- Port-base VLAN
- IEEE802.1q tag-base VLAN, 4094 max, up to 256 active VLANs included static plus dynamic entry
- IEEE802.1q tag-base VLAN
- Flooding unknown vlan frame setting, can flood packet with some vlan tag associated to a invalid/inactive vlan
- In tag-base VLAN, supports egress/ingress packet filter
- Q-in-Q is an efficient method for enabling Subscriber Aggregation

#### Qos

- Port Based (VIP Port), 802.1p , TOS and Diffserv(IPv4/IPv6) based QoS packet classification
- Supports four level priority queues to prioritize in-bound and out-bound traffic
- Supports two scheduling, WRR and Strict
- Supports priority in a Q-in-Q tag

#### Broadcast Storm

- Multicast/Broadcast/Unknown-unicast Storm suppression

#### Port Mirroring

- Support 1: N RX port mirroring
- Supports port sniffed function with 3 modes:(TX Monitor Mode, RX Monitor Mode and TX-RX pair Monitor Mode)

### Isolated Group

- Provide one group allows certain ports to be designated as protected

### Restricted Group

- Can decide the direction of transmitting packets for the specific port

### Rate Limit

- Ingress rate limit:

Port 1~24: 1K up to 100Mbps

Gigabit port: 1K up to 1000Mbps

- Egress rate limit:

Port 1~24: 1K up to 100Mbps

Gigabit port: 1K up to 1000Mbps

### Protocol

#### LACP

- 2 Fast Ethernet + 1 Gigabit Ethernet groups
- Per-group max 4 member
- Provides DA, SA and DA+SA Mac-based trunking with automatic link fail-over

#### GVRP/GARP

- 802.1q with GVRP/ GARP

#### Multicasting

- Supports IGMP snooping including active and passive mode

#### STP/RSTP

- 802.1d/1w

### Network Security

- 802.1x access control
- Isolated group
- Restricted group
- Management Access Policy Control
- Static mac, to limit which mac addresses can pass through or not
- Static mac, to limit which mac addresses can pass through or not
- Mac addresses learning limit, to set up the maximum amount of mac that Each port can learn

### Snmpv1,v2c Network Management

- |                           |                         |
|---------------------------|-------------------------|
| ■ RFC 1213 MIB (MIB-II)   | ■ RFC 1757 RMON MIB     |
| ■ Interface MIB           | ■ Statistics Group 1    |
| ■ Address Translation MIB | ■ History Group 2       |
| ■ IP MIB                  | ■ Alarm Group 3         |
| ■ ICMP MIB                | ■ Event Group 9         |
| ■ TCP MIB                 | ■ RFC 1493 Bridge MIB   |
| ■ UDP MIB                 | ■ RFC 1643 Ethernet MIB |
| ■ SNMP MIB                | ■ Enterprise MIB        |



Diagnostic LED

LED	Color	Function
<b>System LED</b>		
CPURUN	Green	Blinks when CPU is on and good
POWER A/B	Green	Lit when power is on and good Blinks when power is off or fail.
ACT	Green	Lit when LEDSET set on active mode
FDX	Green	Lit when LEDSET set on full-duplex mode
SPD	Green	Lit when LEDSET set on speed mode
<b>10/100Mbps Ethernet TP/Fiber Port 1 to 8 LED</b>		
LNK	Green	Lit when connection with remote device is good Off when cable connection is not good
ACT/FDX/SPD	Amber (TP/Fiber Port 1 to 8 LED)	a. LEDSET set on ACT (active) mode: Blinks when any traffic is present b. LEDSET set on FDX (full-duplex) mode: Lit when full-duplex mode is active Blinks when any collision is present c. LEDSET set on SPD (speed) mode: Lit when 100Mbps speed is active Off when 10Mbps speed is active
<b>10/100/1000Mbps Gigabit TP/Fiber Port LED</b>		
LNK	Green	Lit when connection with remote device is good Off when cable connection is not good
FX	Green	Lit when Fiber port is active Off when TP port is active
ACT/FDX/SPD	Amber	a. LEDSET set on ACT (active) mode: Blinks when any traffic is present b. LEDSET set on FDX (full-duplex) mode: Lit when full-duplex mode is active Blinks when any collision is present c. LEDSET set on SPD (speed) mode: Lit when 1000Mbps speed is active Off when 10/100Mbps speed is active



**Power Requirement : AC/DC Line**

Voltage	100~240 VAC or -48VDC
Frequency	50~60 Hz for AC power
Consumption	40W
Ambient Temperature	0° to 50°C
Humidity	5% to 90%
Dimensions with Single Power	45(H) × 442(W) × 336(D) mm
Dimensions without Redundant Power	45(H) × 442(W) × 280(D) mm
Safety	Comply with FCC Part 15 Class A & CE Mark Approval

**Ordering Information**

Model Name	Product Description
<b>JSH2403FM/S</b>	3-Slot Fast Ethernet L2 Managed Modular Switch Chassis( with Single Power Module)
<b>JSH2403FM/R</b>	3-Slot Fast Ethernet L2 Managed Modular Switch Chassis (with Redundant Power Module)
<b>JMT-800</b>	8-Port 10/100M TP Module
<b>JMF800</b>	8-Port 100M FX Module



JMF800 8-Port 100M FX Module



JMT-800 8-Port 10/100M TP Module

