

# MS-2404X

24+4 Port Industrial Managed Ethernet Switch with 10G Uplink



- 24x Gigabit Ethernet ports
- 4x 1/10 Gigabit Ethernet SFP+ Slot
- Built for harsh environments and wide temperature range application
- RSTP, MSTP, ERPS, LACP for Network Redundancy
- QoS CoS/DSCP to increase determinism
- Supports IGMP Snooping v1/v2/v3, up to 512 groups
- DHCP Relay Option 82 for policies IP address assignment
- SNMP v1/v2c/v3 for network management
- Supports Storm Protection
- USB storage for configuration-free replacement
- Supports industrial automation protocols Ethernet/IP and Modbus TCP

## Specifications

### Technology

#### Standard

IEEE 802.3 10BaseT  
IEEE 802.3u 100BaseTX  
IEEE 802.3ab 1000BaseT  
IEEE 802.3z 1000BaseX  
IEEE 802.3x Flow Control

IEEE 802.3az Energy-Efficient Ethernet  
IEEE 802.3ad/802.1AX LACP  
IEEE 802.1D Spanning Tree Protocol  
IEEE 802.1w Rapid STP  
IEEE 802.1s Multiple STP

ITU-T G.8032 / Y.1344 ERPS  
IEEE 802.1Q VLAN Tagging  
IEEE 802.1ad Stacked VLANs  
IEEE 802.1p Class of Service  
IEEE 802.1X Network Authentication

IEEE 802.1AB LLDP

#### Processing Type

Store and Forward

### Switch properties

Priority Queues 8 Queues

Jumbo Frame 9216bytes

MAC Table Size 16K

Switch Fabric 128Gbps

Packet Buffer 12Mbits

VLAN Table Size 4094

IGMP Group 512

ACL Group 512

### Software Feature

**Network Redundancy** RSTP, MSTP, G.8032 ERPSv2, Port Trunking with LACP

**Security** 802.1X, RADIUS, TACACS+, SSL, SSH

**Management** IPv4, IPv6, Web, Telnet, Serial Console, CLI, SNMP v1/v2c/v3, uPnP

**Diagnostics** RMON, SNMP Inform/Trap, Syslog, SMTP, Port Mirroring, LLDP

**Configuration** DHCP Server/Client, Relay Option 82, TFTP, USB

**Filter** 802.1Q VLAN, Q-in-Q, IGMP Snooping v1/v2/v3, IGMP Querier, Independent Vlan Learning

**Time Sync.** NTP, IEEE1588v2 OC (Software Timestamp), TC (Hardware Timestamp)

**QoS** CoS, DSCP, WRR/SPQ Queuing, Storm Protection

**PoE** Powering Status, PoE Monitoring, Scheduling, PD Alive Check

**Industrial Profiles** Ethernet/IP, Modbus TCP, Profinet

## Interface

<b>RJ45 Ports</b>	24x 10/100/1000T(x) with PoE+, auto negotiation speed duplex mode, auto MDI/MDI-X	<b>Digital Inputs</b>	1x isolated input from the electronics. +13 to +30V for state "1" -30 to +3V for state "0" Max. input current: 8mA
<b>Fiber Port</b>	4x 1/10 Gigabit Ethernet SFP+ Slot	<b>Button</b>	Multiple functions reset button
<b>LED Indicators</b>	Per unit: PWR1, PWR2, Fault, Ring Master, Ring State Ports: Link/Active with highest speed(Green), low speed(Amber) PoE: Output Power	<b>Serial Console</b>	1x RS232 in RJ45 connector with console cable, 115.2Kbps, 8N1
<b>Alarm Contact</b>	1x relay output with current carrying capacity of 1A @ 24 VDC	<b>Storage</b>	1x USB 2.0 storage for firmware update, configuration backup, restore, boot up and syslog
<b>PoE Pin Out</b>	V+, V+, V-, V-, for pin 1, 2, 3, 6, Endspan, MDI Mode A V+, V+, V-, V-, for pin 4, 5, 7, 8, Endspan, MDI Mode B 4-pair mode for 802.3bt		

## Power Requirements

<b>Operation Voltage</b>	90~264VAC, 48~57VDC, redundant dual inputs, >50VDC for PoE+ output recommended	<b>Protection</b>	Overload Current Protected, Reverse Polarity Protected
<b>Connection</b>	AC socket	<b>PoE Power Budget</b>	Max. 348W@AC with derating (50°C to 70°C, 2.5%/°C) or 720W@DC, for total PD consumption, Max. 30 W per PoE port
<b>Power Consumption</b>	0.38A@110VAC; 0.45A@48VDC		

## Mechanical Construction

<b>Enclosure</b>	Aluminum / Steel met	<b>Weight</b>	6.00 kg
<b>Protection Class</b>	IP30	<b>Mounting</b>	Rack Mounting
<b>Dimensions</b>	440x44x331 mm (WxHxD)		

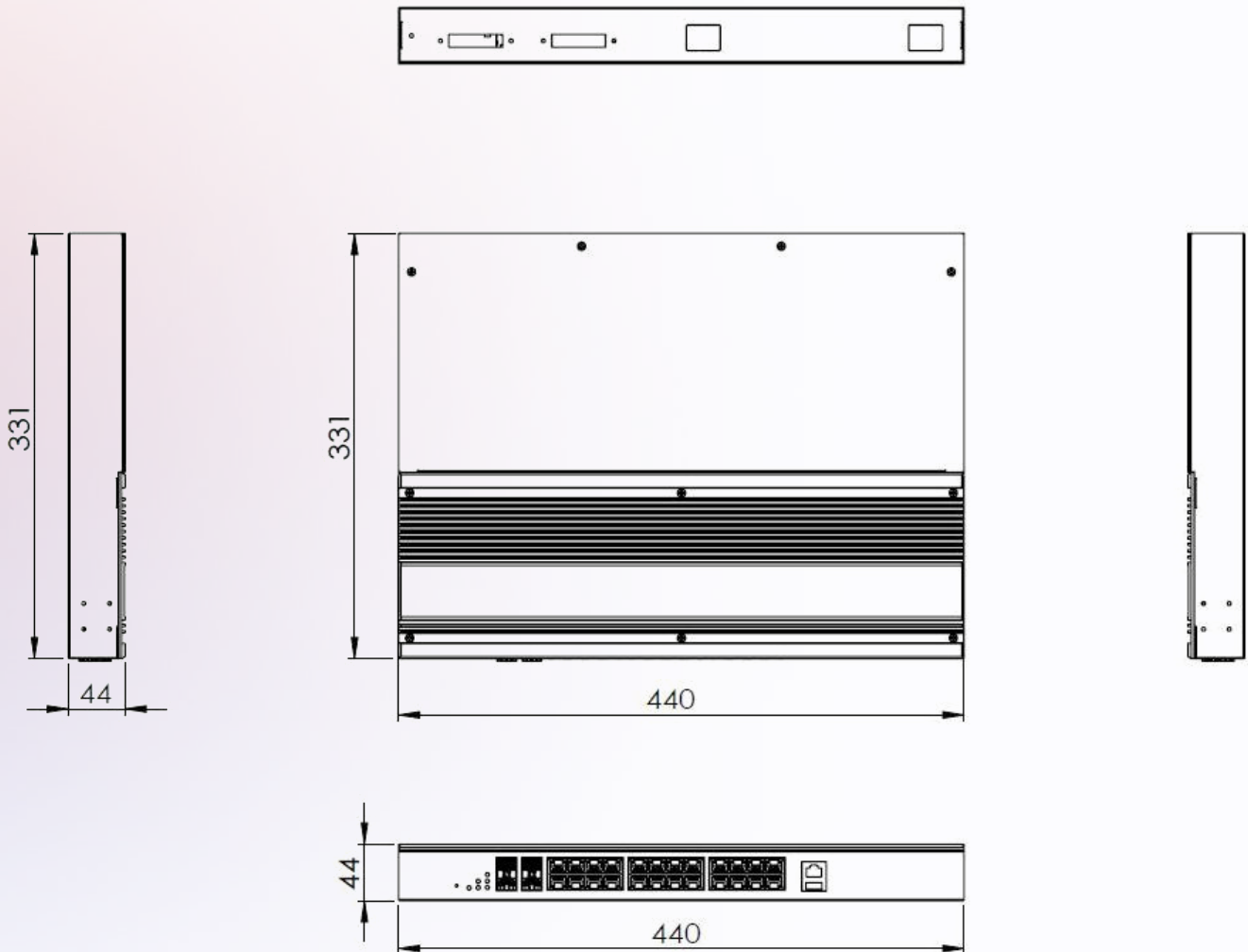
## Environmental Limits

<b>Operating Temperature</b>	Extended: -40°C ~ 75°C (-40°F ~ 167°F) For 10G SFP+: -40 ~ 60°C (32°F ~ 140°F)	<b>Ambient Relative Humidity</b>	5 to 95%, (Non-Condensing)
<b>Storage Temperature</b>	-40°C ~ 85°C (-40°F ~ 185°F)		

## Regulatory Approvals

<b>EMI</b>	FCC Part 15 Subpart B Class A CE EN 55032 Class A	<b>Vibration</b>	IEC60068-2-6
<b>EMS</b>	IEC61000-4-2 (ESD) IEC61000-4-3 (RS) IEC61000-4-4 (EFT) IEC61000-4-5 (Surge) IEC61000-4-6 (CS) IEC61000-4-8 (Magnetic Field)	<b>Green</b>	RoHS Compliant
<b>Free Fall</b>	IEC60068-2-32	<b>Shock</b>	IEC60068-2-27
		<b>MTBF</b>	>100,000 hours
		<b>Warranty</b>	5 Years

## Dimensions (unit = mm)



## Ordering Information

### Available Models

<p><b>MS-2404X-1AC</b></p> <p>24+4 Port Industrial Managed PoE+ Ethernet Switch with 10G Uplink                      - 24x 10/100/1000T(x) with 30W PSE + 4x 1/10 Gigabit Ethernet SFP+ Slot                      - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F)                      For 10G SFP+: -40 ~ 60°C (-40°F ~ 140°F)                      - 1x 90~264VAC Power Input</p>	<p><b>MS-2404X-AD</b></p> <p>24+4 Port Industrial Managed PoE+ Ethernet Switch with 10G Uplink                      - 24x 10/100/1000T(x) with 30W PSE + 4x 1/10 Gigabit Ethernet SFP+ Slot                      - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F)                      For 10G SFP+: -40 ~ 60°C (-40°F ~ 140°F)                      - 1x 90~264VAC Power and 1x 48~57VDC Power Input</p>
<p><b>MS-2404X-DC</b></p> <p>24+4 Port Industrial Managed PoE+ Ethernet Switch with 10G Uplink                      - 24x 10/100/1000T(x) with 30W PSE + 4x 1/10 Gigabit Ethernet SFP+ Slot                      - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F)                      For 10G SFP+: -40 ~ 60°C (-40°F ~ 140°F)                      - 2x 48~57VDC Robust Isolation Power Input</p>	

### Optional Accessories

<p><b>NDR-75-24</b></p> <p>75W Industrial DIN-Rail Power Supply, 24VDC (metal case)</p>	<p><b>NDR-75-48</b></p> <p>75W Industrial DIN-Rail Power Supply, 48VDC (metal case)</p>
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