

# MT-1604XE-M12

## 16+4 Port M12 Industrial Managed PoE+ Booster Ethernet Switch with 10G Uplink



- 16x 10/100/1000T(x) M12 connector with IEEE 802.3at PoE+
- 4x 1G/10GBASE-T Ethernet
- 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 4096 groups
- DHCP Relay Option 82 for policies IP address assignment
- SNMP v1/v2c/v3 for network management
- Supports Storm Protection
- Supports industrial automation protocols Ethernet/IP and Modbus TCP
- Supports PoE PD Alive Check Function for PoE Device Power Recycle
- Power Boost for PoE+

## Specifications

### Technology

IEEE 802.3 10BaseT  
 IEEE 802.3u 100BaseTX  
 IEEE 802.3ab 1000BaseT  
 IEEE 802.3ae 10GBase over Fiber  
 IEEE 802.3x Flow Control  
 IEEE 802.3af Power over Ethernet  
 IEEE 802.3at PoE+  
 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  
 IEEE 1588 PTP

**Processing Type** Store and Forward

### Switch Properties

**Switch Fabric** 112Gbps  
**Priority Queues** 8 Queues  
**Jumbo Frame** 12288byte

**MAC Table Size** 32K  
**Packet Buffer** 32Mbits  
**VLAN Table Size** 4094  
**IGMP Group** 4096  
**ACL Group** 4096

### 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, RSPAN  
**Configuration** DHCP Server/Client, Relay Option 82, TFTP  
**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, PoE Priority

<b>Industrial Profiles</b>	Ethernet/IP, Modbus TCP, Profinet
<b>Interface</b>	
<b>Network Connector</b>	16x 10/100/1000T(x) M12 Female X-coded 8-pole with PoE+, auto negotiation speed duplex mode, auto MDI/MDI-X
<b>Fiber Port</b>	4x 1G/10GBASE-T Ethernet
<b>LED Indicators</b>	<b>Per unit:</b> PWR1, PWR2 <b>Ports:</b> Link/Active with highest speed(Green), low speed(Amber) <b>PoE:</b> Output Power
<b>Serial Console</b>	1x RS232 in M12 Male A-coded 5-pole connector with console cable, 115.2Kbps, 8N1
<b>Power Requirements</b>	
<b>Operation Voltage</b>	24VDC, 48VDC, HV: 72-110VDC, redundant dual inputs
<b>Connection</b>	M12 Male K-coded 5-pole
<b>Power Consumption</b>	0.63A@24V without PDs' consumption
<b>PoE Power Budget</b>	Max. 30 W per PoE port. Max. total output power for PD: 165W@24V input; 165W@48V input; 270W@110V input
<b>Protection</b>	Overload Current Protected, Reverse Polarity Protected
<b>Mechanical Construction</b>	
<b>Enclosure</b>	SECC/Aluminum
<b>Protection Class</b>	IP40/IP54(Optional)

**Dimensions** 220x176x139 mm (WxHxD)

**Weight** 3.0 kg

**Mounting** Wall Mounting Kits

### Environmental Limits

**Operating Temperature** Extended: -40°C ~ 75°C (-40°F ~ 167°F)

**Storage Temperature** -40°C ~ 85°C (-40°F ~ 185°F)

**Ambient Relative Humidity** 5 to 95%, (Non-Condensing)

### Regulatory Approvals

**EMI** FCC Part 15 Subpart B Class A  
CE EN 55032 Class A

**EMS** 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)

**Free Fall** IEC60068-2-32

**Shock** IEC61373

**Vibration** IEC61373

**Green** RoHS Compliant

**Certifications** EN 50155 (Pending)  
EN 45545-2

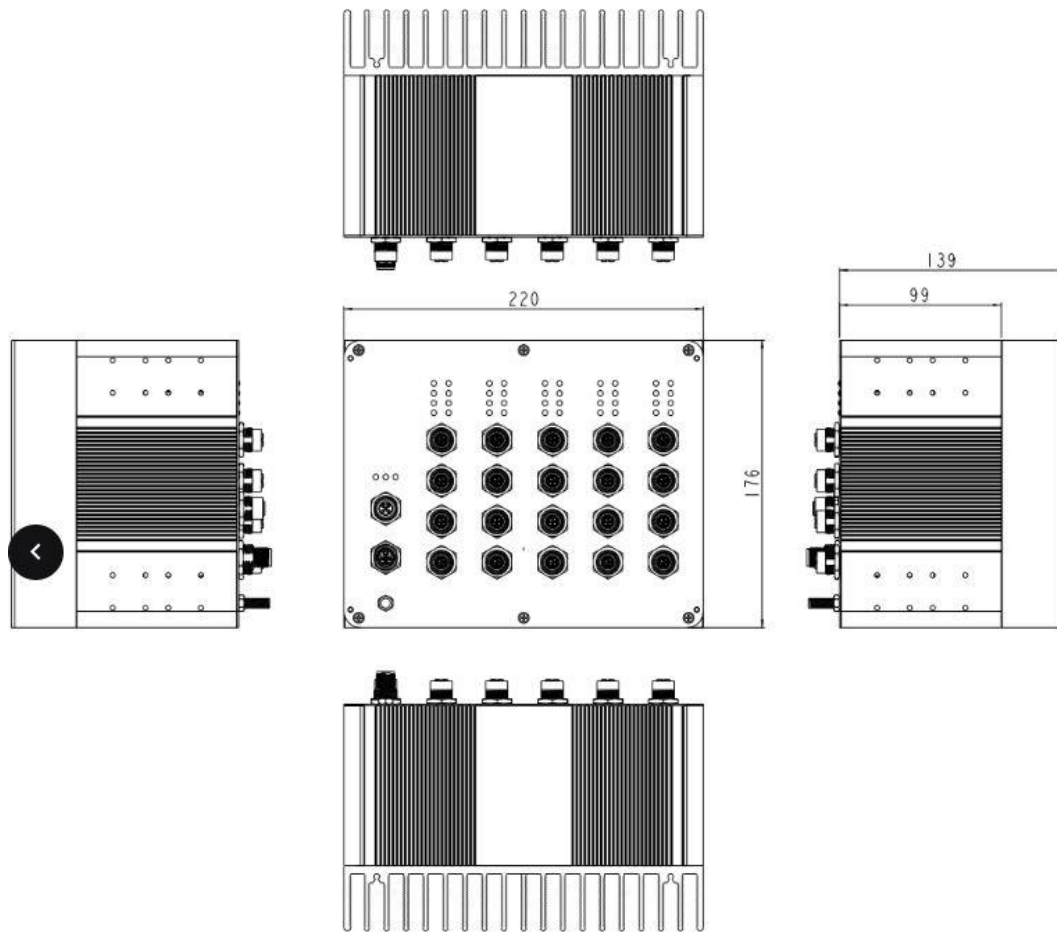
**MTBF** >100,000 hours

**Warranty** 5 Years

Features with star(\*) implies those are under development.

In a continuing effort of improvement and updated technology, product specifications are subject to change without notice.

## Dimensions (unit = mm)



## Ordering Information

<b>MT-1604XE-M12-T</b>	16+4 Port M12 Industrial Managed PoE+ Booster Ethernet Switch with 10G Uplink - 16x 10/100/1000T(x) with 30W PSE M12 connector + 4x 1G/10GBASE-T Ethernet - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F)
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## Optional Accessories

<b>NDR-240-24</b>	240W Industrial DIN-Rail Power Supply, 24VDC (metal case)
<b>NDR-480-24</b>	480W Industrial DIN-Rail Power Supply, 24VDC (metal case)