

# MT-1600GE-M12

## 16 Port M12 Industrial Managed PoE+ Booster Gigabit Ethernet Switch



- 16x 10/100/1000T(x) M12 connector with IEEE 802.3at PoE+
- 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 802.3x 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

#### Standards

**Processing Type** Store and Forward

#### Switch Properties

**Switch Fabric** 32Gbps  
**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

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

#### Interface

**Network Connector** 16x 10/100/1000T(x) M12 Female X-coded 8-pole with PoE+, auto negotiation

speed duplex mode, auto MDI/MDI-X

**LED Indicators**  
Per unit: PWR1, PWR2  
Ports: Link/Active(Green)  
PoE: Output Power(Amber)

**Serial Console**  
1x RS232 in M12 Male A-coded 5-pole connector with console cable, 115.2Kbps, 8N1

### Power Requirements

**Operation Voltage** 24VDC, 48VDC, HV: 72-110VDC, redundant dual inputs

**Connection** M12 Male K-coded 5-pole

**Power Consumption** 0.63A@24V without PDs' consumption

**PoE Power Budget** Max. 30 W per PoE port. Max. total output power for PD: 165W@24V input; 165W@48V input; 270W@110V input

**Protection** Overload Current Protected, Reverse Polarity Protected

### Mechanical Construction

**Enclosure** SECC/Aluminum

**Protection Class** 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

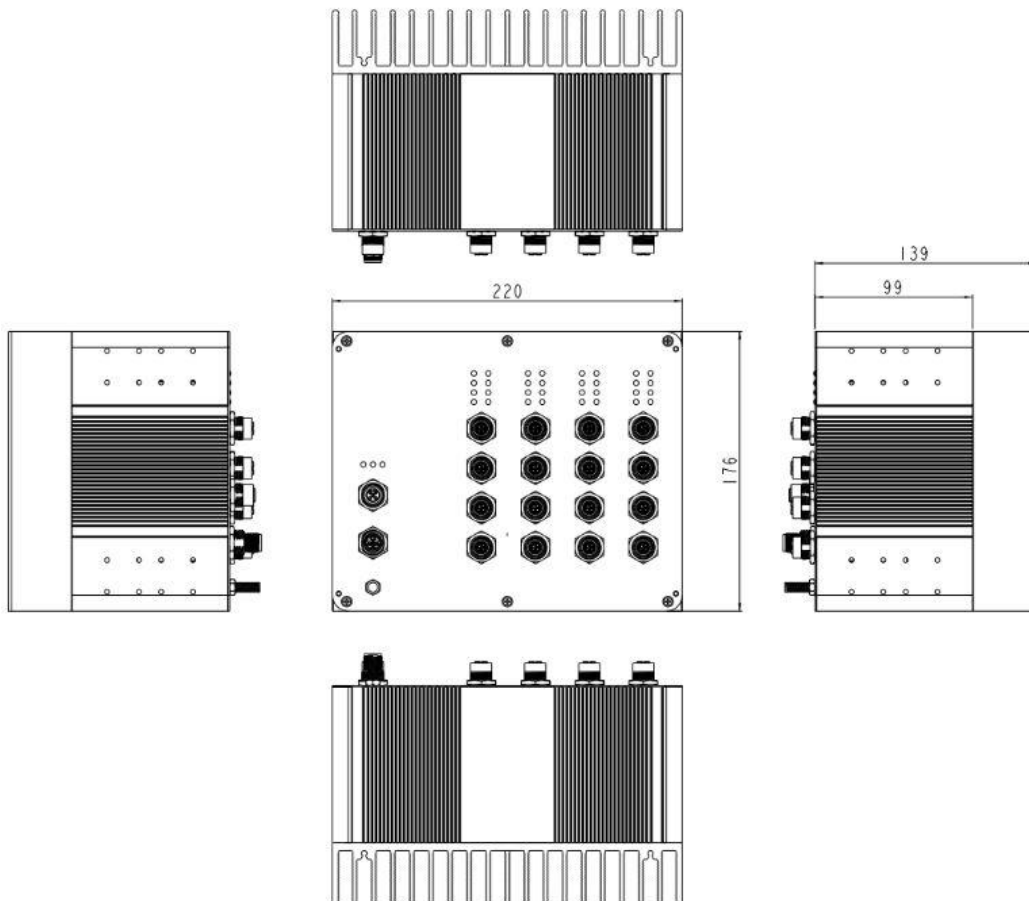
**MTBF** >100,000 hours

**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-1600GE-M12-T</b>	16 Port M12 Industrial Managed PoE+ Booster Gigabit Ethernet Switch - 16x 10/100/1000T(x) with 30W PSE M12 connector - 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)