

MS-1600GE-M12

16 Port M12 Industrial Managed Gigabit Ethernet Switch



- 16x 10/100/1000T(x) M12 connector
- 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



Specifications

Technology

- IEEE 802.3 10BaseT
- IEEE 802.3u 100BaseTX
- IEEE 802.3ab 1000BaseT
- 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
- 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, auto negotiation speed duplex mode, auto MDI/MDI-X

LED Indicators	Per unit: PWR1, PWR2 Ports: Link/Active with highest speed(Green), low speed(Amber)
Serial Console	1x RS232 in M12 Male A-coded 5-pole connector with console cable, 115.2Kbps, 8N1

Power Requirements

Operation Voltage	LV: 24-48VDC, HV: 72-110VDC, redundant dual inputs
Connection	M12 Male K-coded 5-pole
Power Consumption	0.63A@24V
Protection	Overload Current Protected, Reverse Polarity Protected

Mechanical Construction

Enclosure	SECC/Aluminum
Protection Class	IP40/IP54(Optional)
Dimensions	220x176x100 mm (WxHxD)
Weight	3.0 kg
Mounting	Wall Mounting Kits

Environmental Limits

Operating	Extended: -40°C ~ 75°C (-40°F ~ 167°F)
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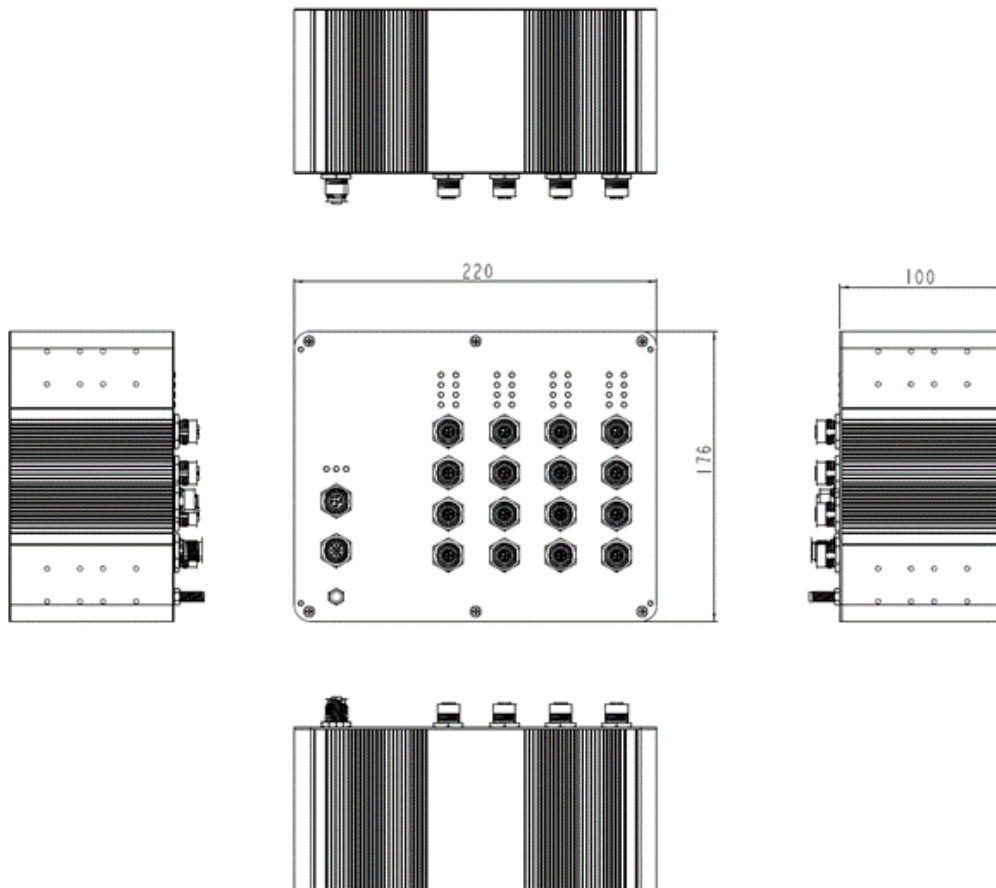
Temperature	
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Ambient Relative Humidity	5 to 95%, (Non-Condensing)

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

MS-1600GE-M12-T	16 Port M12 Industrial Managed Gigabit Ethernet Switch
	- 16x 10/100/1000T(x) M12 connector
	- Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F)

Optional Accessories

NDR-75-24	75W Industrial DIN-Rail Power Supply, 24VDC (metal case)
NDR-75-48	75W Industrial DIN-Rail Power Supply, 48VDC (metal case)