

ML73900E

Military-Grade Design for Harsh Environments

Ensuring Reliable Communication and System Security in Mission-Critical Operations



BENTECH-TAIWAN.COM



Product Overview

Designed for **mission-critical operations in extreme environments**, this rugged managed Ethernet switch complies with military standards and delivers **high reliability, low latency, and secure data transmission**.

With robust hardware design and flexible network configuration, it is ideally suited for applications in **defense, aerospace, naval systems, vehicle platforms, and industrial automation**.

Key Features

High Performance & Flexible Connectivity

- 12×10/100/1000BASE-T(X) Gigabit Ethernet ports
- 4×100/1000BASE SFP fiber uplink ports
- Full wire-speed, non-blocking switching architecture
- Link Aggregation for bandwidth optimization
- LED indicators for real-time system monitoring

Rugged Design for Harsh Environments

- Wide operating temperature: -52°C to +85°C
- Fanless design for enhanced reliability
- High resistance to shock, vibration, heat, and electromagnetic interference

Advanced Networking & Synchronization

- Supports Layer 2 / Layer 3 managed features
- Static routing, RIP v1/v2, OSPF
- VRRP (Virtual Router Redundancy Protocol)
- IEEE 1588v2 PTP for precise time synchronization
- VLAN, QoS, STP / RSTP / MSTP

Military-Grade Protection

- Compliant with MIL-STD-810G
- Compliant with MIL-STD-461G
- IP67 rated (dustproof and water-resistant)
- Certified with CE, FCC, and VCCI

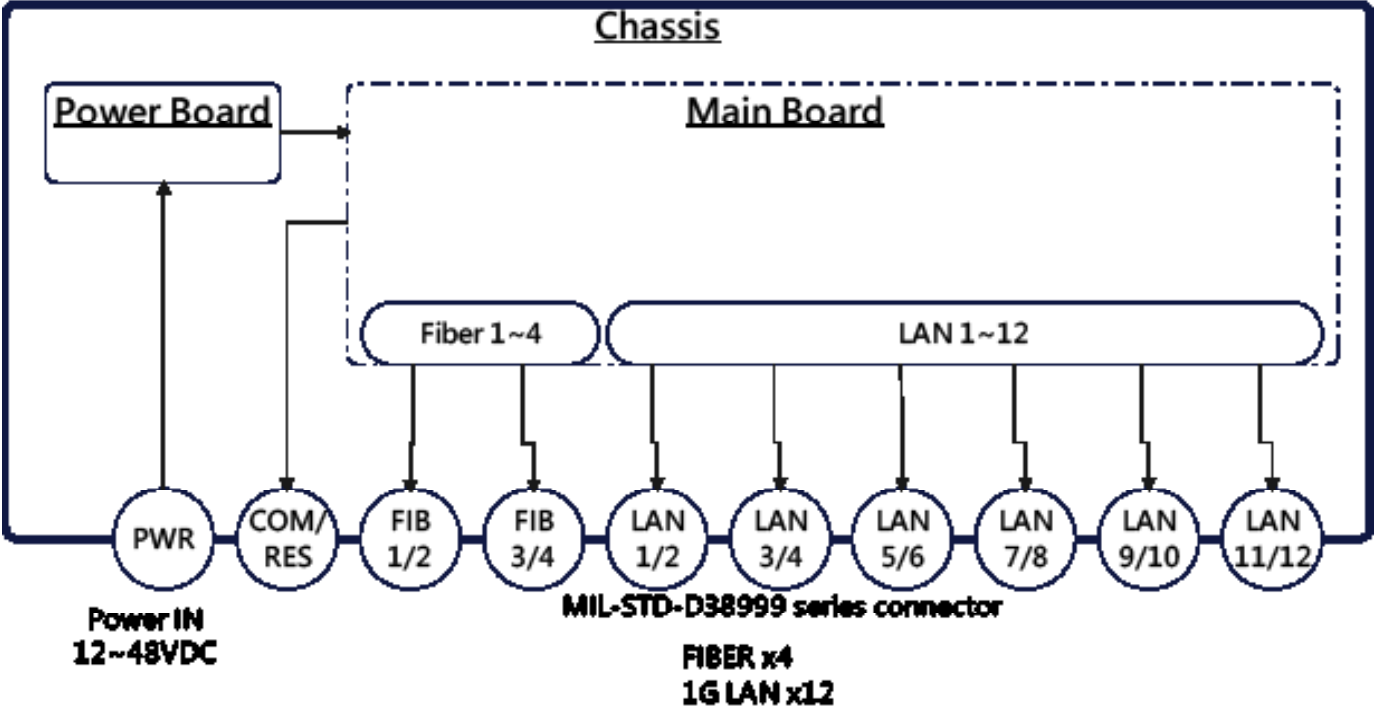
Security & Network Management

- Port-based access control
- SFTP secure file transfer
- Dying Gasp for power failure SNMP alerts
- Supports eVue™ and eLite™ management platforms

Industrial-Grade Hardware Design

- Equipped with D38999 series military connectors
- Rugged AL6061 aluminum enclosure with black anodized finish
- Optional custom coating available

Block Diagram



Specifications

Interface	D38999 military-grade connector
Ethernet Ports	12×10/100/1000BASE-T(X)
Fiber Ports	4×100/1000BASE SFP
System Memory	2GB DDR3 SDRAM
Flash Memory	1Gb
Power Input	12 ~ 48 VDC
Operating Temperature	-40°C ~ +75°C
Enclosure	AL6061 aluminum, black anodized (customizable)
Compliance	MIL-STD-810G、MIL-STD-461G、IP65、CE、FCC、VCCI
Size	204mm x 200mm x 81mm(LxWxH)

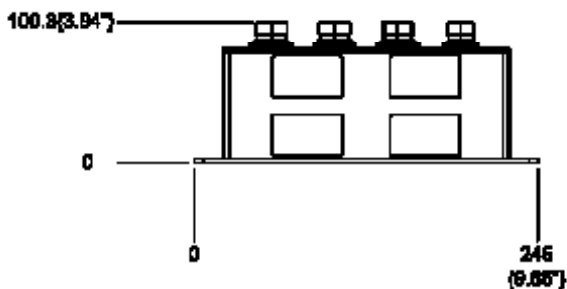
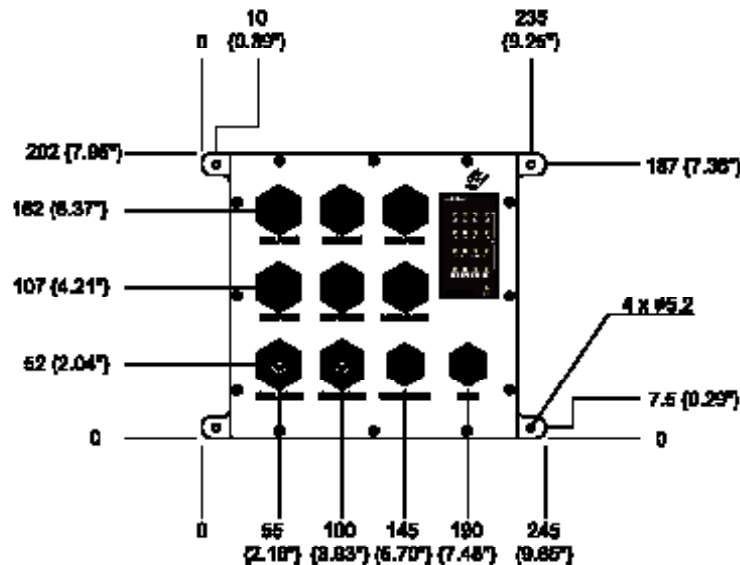
Supported Protocols

- IEEE 802.3 / 802.3u / 802.3ab / 802.3z
- IEEE 802.3ad (Link Aggregation)
- IEEE 802.3x (Flow Control)
- IEEE 802.1D / 802.1w / 802.1s (STP / RSTP / MSTP)
- IEEE 802.1p (QoS)
- IEEE 802.1Q (VLAN)
- IEEE 802.1x (Port-based authentication)
- IEEE 802.1ab (LLDP)
- IEEE 1588v2 (PTP)

System & Hardware Features

- Store-and-Forward switching architecture
- Auto Negotiation
- Half / Full duplex flow control
- Auto MDI/MDIX
- RJ-45 console port
- USB configuration backup interface

Dimension Drawing



Note:

All dimensions are in millimeters (mm).
Dimensions are subject to change without prior notice.

ML73900E Selection

Model	10/100/1000 TX	100FX Ports	100FX Option	1000FX Ports	1000FX Option	Power Input	Colour
ML739	8P	NE	NM	N	0	DC	GR
	12P	2E	MM	2	A	AC	BL
		4E	SM	4	B		
					C		
					D		

Example:

ML739-12P-4E-SM-2A-DC-GR-M

Product Code Definition:

- 8P: 8 ethernet ports
- 12P: 12 ethernet ports
- NE: No 100FX fiber ports
- 2E: 2 × 100FX fiber ports
- 4E: 4 × 100FX fiber ports
- NM: No 100FX fiber module
- MM: Multi Mode 2km
- SM: Single Mode 20km
- N: No 1000FX fiber ports
- 2: 2 × 1000FX fiber ports
- 4: 4 × 1000FX fiber ports
- 0: No 1000FX fiber module
- A: MM-SX 550m
- B: MM-SX 2km
- C: SM-LX 10km
- D: SM-LX 20km
- DC: 12–48v DC
- AC: 110–220v AC
- GR: Green
- BL: Black

External Cable Selection

Model	Type	Length	Connector Type
ML739	POW	1M	B
	ETH	5M	O
	FO	10M	T
	CRU		LC
			SC
			ST
			FC

Example:

ML739-ETH-10M-O

Product Code Definition:

- POW: Power test cable
- ETH: Ethernet test cable
- FO: Fiber optic test cable
- CRU: Console / Reset / USB test cable
- 1M: 1m
- 5M: 5m
- 10M: 10m
- B: Standard connector
- O: Open-end (no connector)
- T: Terminal block (European type)
- LC: LC fiber connector
- SC: SC fiber connector
- ST: ST fiber connector
- FC: FC fiber connector