

ML719U Military-grade rugged switch

Military-Grade Design for Harsh Environments
Ensuring Reliable Communication and Security in Mission-Critical Operations

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Product Overview

This Rugged product is designed for extreme Environments and also complies with MIL-Std & IP67 criteria.

Dual LAN/Fiber integrated design, achieves signal separation and quick maintenance, ensuring uninterrupted.

With high-bandwidth configuration and a rugged design, delivers stable performance in harsh conditions. Widely used in defense, aerospace, naval vessels, in-vehicle systems, and industrial automation, making it an ideal core device for mission-critical network communications.

Key Features

High Performance & Flexible Connectivity

- 8×10/100/1000 BASE-T(X) Gigabit Ethernet ports
- 4×100/1000/2500 BASE SFP fiber uplink ports
- Full wire-speed, non-blocking switching architecture
- Link Aggregation for bandwidth optimization
- With LED indicator showing network and operating status

Advanced Networking & Synchronization

- Supports Layer 2 / Layer 3 managed features
- Static routing, RIP v1/v2, OSPF
- VRRP (Virtual Router Redundancy Protocol)
- VLAN, QoS, STP / RSTP / MSTP

Security & Network Management

- Port-based access control
- SNMP v1/v2c/v3 support

Military-Grade Protection

- Compliant with MIL-STD-810G (shock, vibration, temperature)
- Compliant with MIL-STD-461G (EMI / EMC)
- IP67 rated (dustproof and water-resistant)
- Certified with CE, FCC, and VCCI

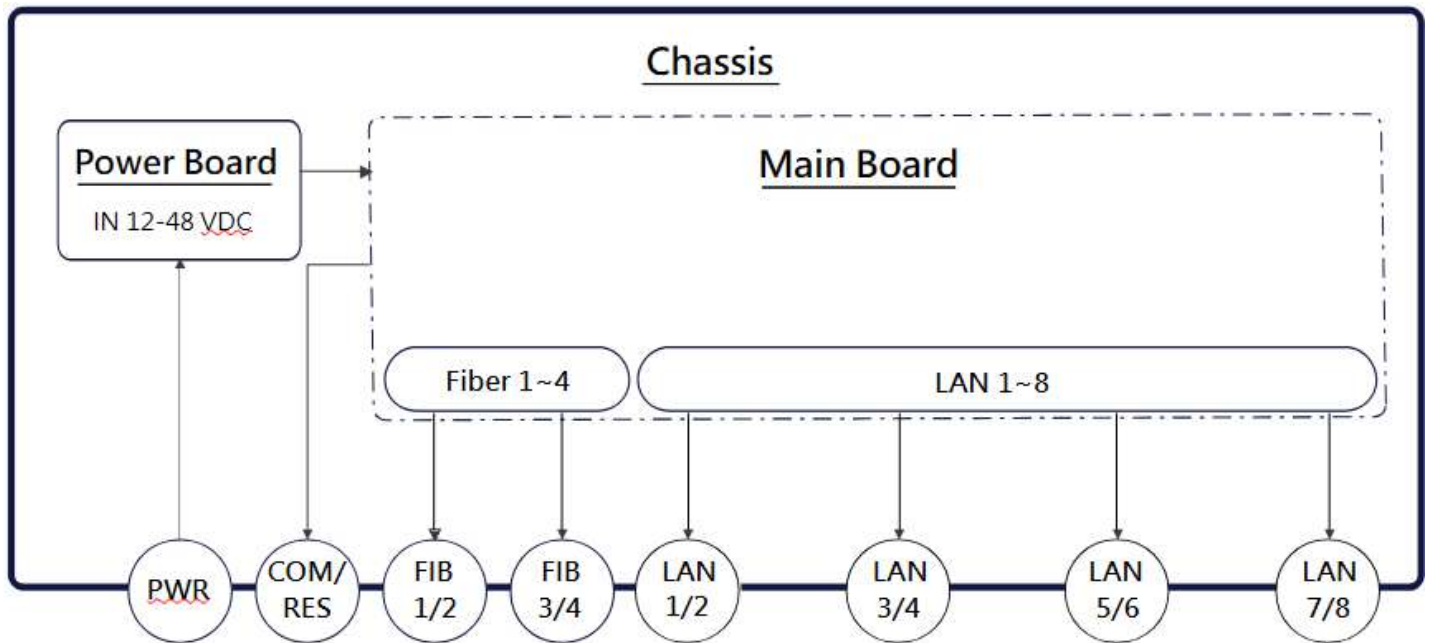
Rugged Design for Harsh Environments

- Wide operating temperature -40°C to +75°C
- Fanless design for enhanced reliability
- High resistance to shock, vibration, heat, and electromagnetic interference

Industrial-Grade Hardware Design

- Equipped with D38999 series military connectors
- Rugged AL6061 aluminum with chromate surface treatment
- Sandblasted black coating, customizable paint finish

Block Diagram



MIL-DTL-D38999 Series Connector

Specifications

Ethernet Ports	8×10/100/1000 BASE-T(X) (D38999 military-grade connector)
Fiber Ports	4×100/1000/2500 BASE SFP (D38999 military-grade connector)
System Memory	1 GB DDR3 SDRAM
Flash Memory	128 MB
Power Input	12-48 VDC (D38999 military-grade connector)
Operating Temperature	-40°C to +75°C
Chassis Material	AL6061 aluminum with chromate surface treatment, sandblasted black paint coating
Compliance	MIL-STD-810G、MIL-STD-461G、IP67、CE、FCC、VCCI
Product Size	160 x 200 x 100.3 mm (L x W x H)

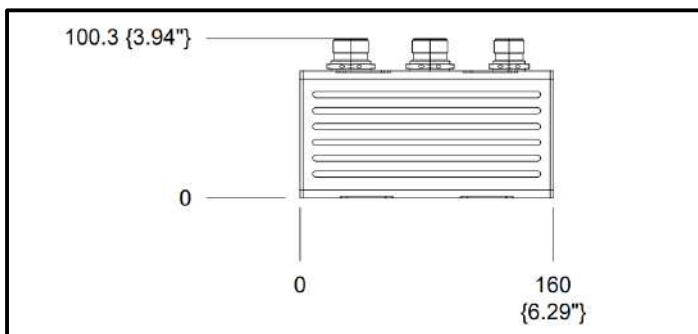
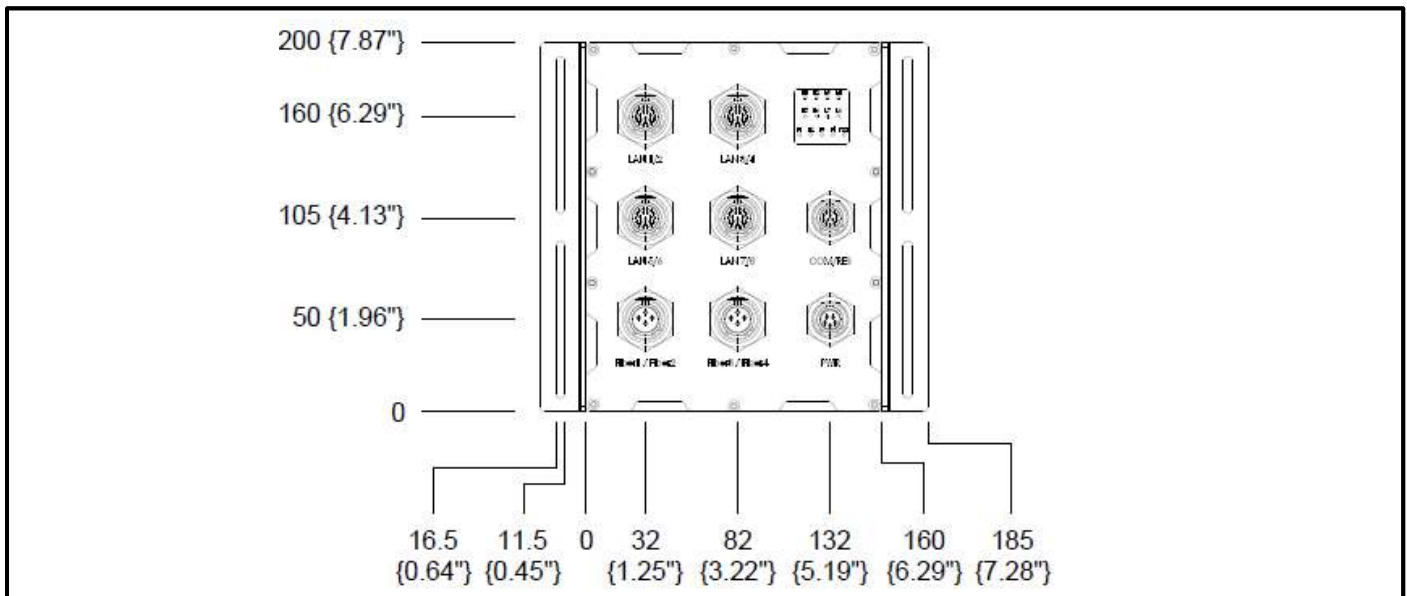
Supported Protocols

- 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 (Tag VLAN)
- IEEE 802.1x (Radius)
- IEEE 802.1ab (LLDP)
- IEEE 802.3az (EEE)

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 (Type A)

Dimension Drawing



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

ML719U Selection

Model	10/100/1000TX	100FX Ports	100FX Option	1000FX Ports	1000FX Option	Power Input	Color	Mounting bracket
ML719U	4P	NE	NM	N	0	DC	GR	M
	8P	2E	MM	2	A		BL	X
		4E	SM	4	B			
					C			
					D			

Example :

ML719U-8P-4E-SM-2A-DC-GR-M

Product Code Definition :

- 4P : 4 Ethernet ports
- 8P : 8 Ethernet ports
- NE : No 100FX fiber ports
- 2E : 2 x 100FX fiber ports
- 4E : 4 x 100FX fiber ports
- NM : No 100FX fiber module
- MM : Multi mode 2 km
- SM : Single mode 20 km
- N : No 1000FX fiber ports
- 2 : 2 x 1000FX fiber ports
- 4 : 4 x 1000FX fiber ports
- 0 : No 1000FX fiber module
- A : MM-SX 550 m
- B : MM-SX 2 km
- C : SM-LX 10 km
- D : SM-LX 20 km
- DC : 12-48 VDC
- GR : Green
- BL : Black
- M : Mounting bracket
- X : Without mounting bracket

External Cable Selection

Module	Type	Length	Connector type	
ML719U	POW	1M	B	
	ETH	5M	O	
	FO	10M	T	
	CRU			LC
				SC
			ST	
			FC	

Example :

ML719U-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 : 1 m
- 5M : 5 m
- 10M : 10 m
- 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