

MRG338 Military-grade fanless rugged PC



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Compact, High-Performance Rugged Edge Computing Platform
Built for mission-critical operations in extreme environments



Product Overview

The MRG338 is a compact, fanless rugged PC with military-grade interfaces and design. Featuring a small, light weight design for critical mission applications with limited space and load capacity.

High level processor with low consumption in robust protection, it supports long-term operation in harsh environments, ideal for defense, unmanned systems, and industrial edge applications.

Key Features

High Performance & Low Consumption

- Intel® Core™ i3-N305 8-core processor
- Ultra-low power consumption 15W
- Suitable for long-duration computing tasks

Flexible I/O & Expansion

- Supports USB 3.2/COM/2.5GbE LAN/DIO
- M.2 expansion slot
- Equipped with D38999 military connectors

Military-Grade Reliability

- Compliant with MIL-STD-810G (shock, vibration, temperature)
- Compliant with MIL-STD-461G (EMI / EMC)
- IP65-rated dustproof and water-resistant

Fanless Passive Cooling

- Fully sealed aluminum enclosure
- Passive thermal design (fanless)
- Zero noise & zero dust accumulation
- Enhanced long-term reliability

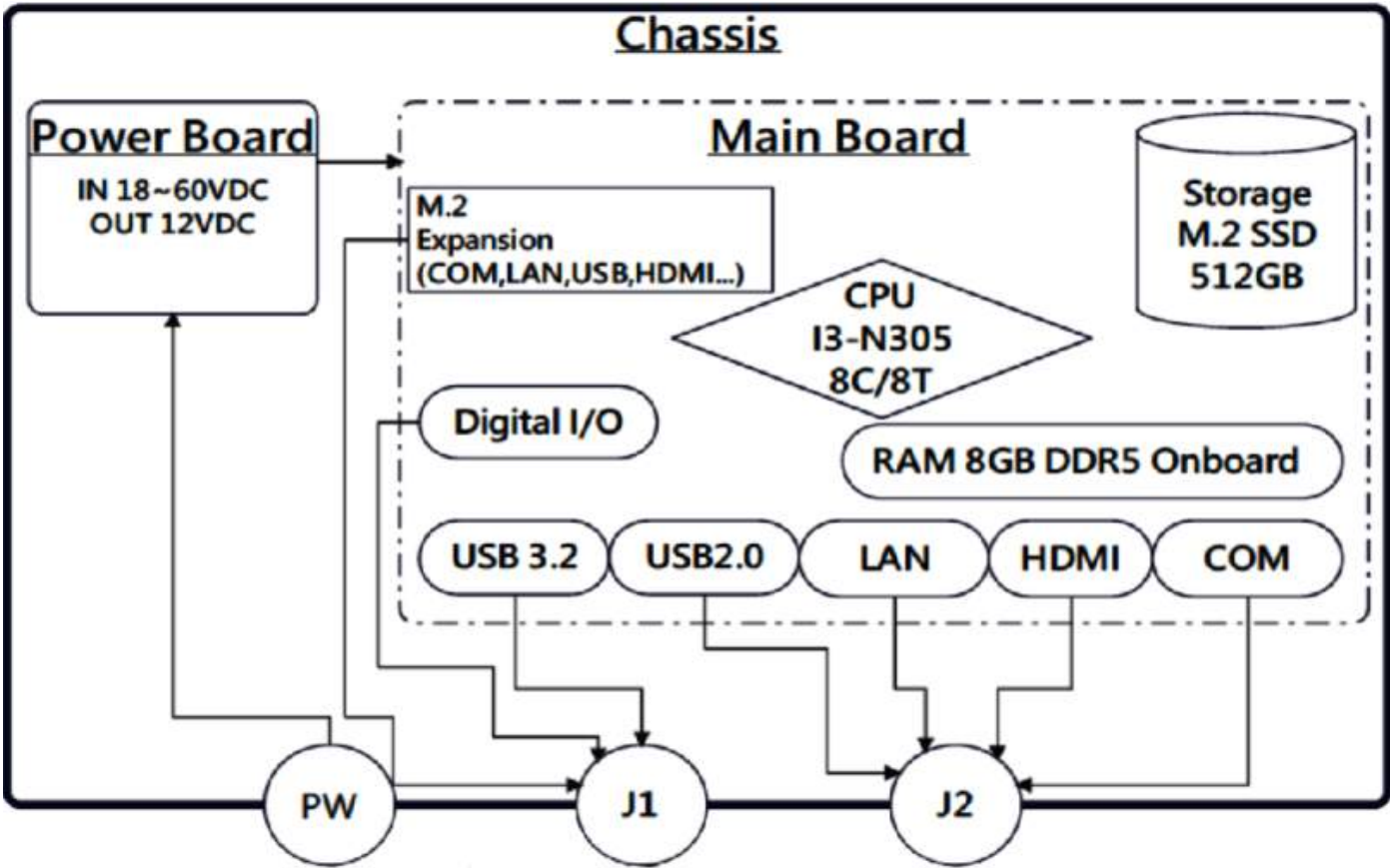
Lightweight & Versatile Design

- Dimensions : 120 × 136 × 67 mm (L x W x H)
- Weight : < 1.5 kg
- Optimized for space-constrained platforms

Wide-temperature Design

- Operating range : -10°C to +65°C
- Suitable for harsh environmental conditions

Block Diagram

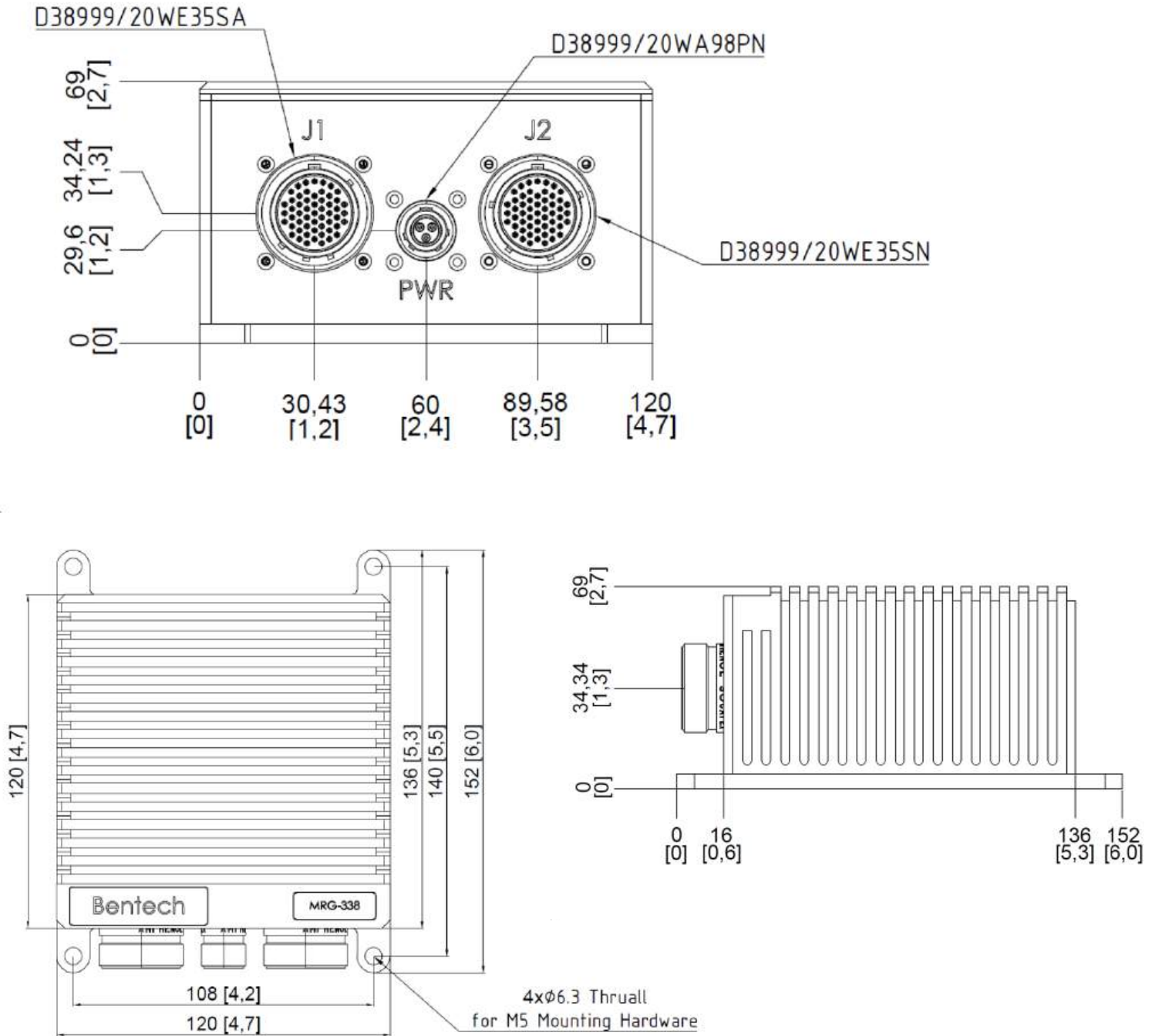


MIL-DTL-38999 Series Connector

Specifications

Processor	Intel® Core™ i3-N305 8-core processor
Memory	LPDDR5 8 GB onboard, up to 16 GB
Storage	M.2 SSD 512 GB
I/O Interfaces	USB 3.2 / COM / 2.5GbE LAN / DIO (D38999 military connectors)
Power Input	18-60 VDC
Operating Temperature	-10°C to +65°C
Chassis Material	AL6061 aluminum chromate surface treatment with anodized black
Compliance	MIL-STD-810G / MIL-STD-461G / IP65
Dimensions / Weight	120 × 136 × 67 mm (L x W x H) / < 1.5 kg

Dimension Drawing



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

Application

- **Defense & Military**
Tactical vehicles
Mobile command centers
- **Unmanned Systems**
UGV (Unmanned Ground Vehicle)
USV (Unmanned Surface Vehicle)
UAV (Unmanned Aerial Vehicle)
- **Communication & Surveillance**
Satellite communication stations
Battlefield monitoring
- **Industrial & Automation**
Smart factories
Edge computing systems

Cable connected view



Angle view



Side view



Front view



Top view



MRG338 Selection

Model	Memory	Storage	Power Input	Color
MRG338	D8	S256	DC	GR
	D16	S512		BL

Example :

MRG338-D8-S512-DC-GR

Product Code Definition :

- D8 : 8 GB Memory
- D16 : 16 GB Memory
- S256 : 256 GB Storage
- S512 : 512 GB Storage
- DC : 18-60 VDC
- GR : Green
- BL : Black

External Cable Selection

Model	Type	Length	Connector Type
MRG338	PWR	1M	B
	J1	5M	O
	J2	10M	T

Example :

MRG338-J1-10M-O

Product Code Definition :

- PWR: Power cable
- J1 : I/O test cable (USB3.2/DIO/Expansion) _26WE35PN
- J2 : I/O test cable (USB2.0/COM/LAN/HDMI/PowerButton) _26WE35PA
- 1M : 1 m
- 5M : 5 m
- 10M : 10 m
- B : Standard connector
- O : Open-end (no connector)
- T : Terminal block (European type)