

Mini Computer - Concept 3331



MilDef offers our customers complete realization of any product idea or concept within rugged electronics. Based on our long experience of designing and customizing products, our engineering team is ready to attack any technical problem thrown at them. A MilDef concept enables the possible implementation of customer specific requirements. Realization may involve NRE cost. This featured product is currently at a concept stage, contact us to further discuss your requirements.

Mini Computer

The Mini Computer offers computing power in an extremely compact form factor.

Military-relevant rugged design

MilDef products are designed to operate in extreme environmental conditions and challenging electromagnetic operational scenarios. Operationally proven, MilDef products are actively employed in military operations in over 60 countries.

Customizable

Are you looking for additional features and functions? MilDef specializes in customized solutions, to include change of connectors, chassis modifications, mounting

solutions, etc. Contact your nearest MilDef Sales Office and we will help you tailor a solution to meet your exact requirements.

Guaranteed performance

MilDef products are designed for the long lifecycles of military programs and come with a lifetime support program to ensure your equipment maintains peak performance for many missions to come.

We also guarantee the availability of spare parts for an additional 5 years after product end-of-life.

Features

- Small footprint
- Rugged connectors
- MIL-STD810 and 461 compliant design
- Intel® Atom® x6425RE CPU
- 8 GB RAM
- 32 GB storage

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Connector Interfaces

DC IN (front)	• 1x Power
DP (back)	• 1x DP
ETH (back)	• 1x 1000BASE-T
SERIAL (front)	• 1x Serial Console • 1x USB 2.0 • 1x RS232 Service
USB3 (front)	• 1x USB3.0

Technical Specification

Computer processor	Intel® Atom™ x6425RE CPU (1.5M Cache, 4 core, 1.9 GHz)
Computer storage	32 GB eMMC
RAM memory	8 GB LPDDR4 In-Band ECC
Power consumption	25 W
Chassis material	Aluminum
Coating and color	Dupont AE0305-6603120 (RAL6031)
Cooling	Passively cooled
Dimensions	100 x 100 x 37.5 mm (4 x 4 x 1.5 in) (WxDxH)
Surface treatment chassis	Chromit-Al
Weight	2 kg (4.5 lbs)
CE	Compliant

Environmental Specification

Functional shock - Operating	MIL-STD-810H, Method 516.8, Procedure I - Functional Shock. Table 516.8-IV, Terminal peak sawtooth pulse, Ground Materiel 40 g 11 ms
High temperature - Operating	MIL-STD-810H, Method 501.7, Procedure II - Operation 60 °C (140 °F)
High temperature - Storage	MIL-STD-810H, Method 501.7, Procedure I - Storage 71 °C (160 °F)
Humidity	MIL-STD-810H, Method 507.6, Procedure II - Aggravated 95 ± 4% RH Ten 24-hour cycles
IP Class (Solid Particle Protection)	IP Class 6X
IP Class (Water)	IP Class X7
Low air pressure - Rapid decompression	MIL-STD-810H, Method 500.6, Procedure III - Rapid Decompression 2,438 m (8,000 ft) 12,192 m (40,000 ft)

Low air pressure - Operating	MIL-STD-810H, Method 500.6, Procedure II - Operation/Air Carriage 4,572 m (15,000 ft)
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Low temperature - Operating	MIL-STD-810H, Method 502.7, Procedure II - Operation -40 °C (-40 °F)
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Low temperature - Storage	MIL-STD-810H, Method 502.7, Procedure I - Storage -40 °C (-40 °F)
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Noise level	Maximum noise level of 40 dB SPL A-weighting at 1 m (3.3 ft) distance
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Salt fog	MIL-STD-810H, Method 509.7 5 ± 1% (by weight) Two cycles, 24 h wet + 24h dry / cycle
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Temperature shock - Operating	MIL-STD 810H, Method 503.7, Procedure I-C, - Multi-Cycle Shocks from Constant Extreme Temperature 55 °C (131 °F) -40 °C (-40 °F)
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Vibration - Helicopter	MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter
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Vibration - Loose Cargo	MIL-STD-810H, Method 514.8, Procedure II - Loose cargo transportation, Category 5 - Truck/ trailer - loose cargo
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Vibration - Tracked Vehicles	MIL-STD-810H, Method 514.8, Procedure I - General Vibration, Category 20 - Ground vehicles - ground mobile, Tracked vehicles
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Vibration - Wheeled Vehicle	MIL-STD-810H, Method 514.8, Procedure I - General Vibration, Category 20 - Ground vehicles - ground mobile, Wheeled vehicles
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EMC Specification

EMI conducted CE102	MIL-STD-461F, Method CE102 BASIC CURVE 10 kHz to 10 MHz
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EMI radiated RE102	MIL-STD-461F Navy Mobile & Army 2 MHz - 18 GHz
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EMS conducted CS101	MIL-STD-461F, Method CS101, conducted susceptibility, power leads. CURVE #1 30 Hz to 150 kHz
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EMS conducted CS114	MIL-STD-461F Army, Ground 10 kHz - 200 MHz
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EMS conducted CS115	MIL-STD-461F Conducted susceptibility, bulk cable injection, impulse excitation
EMS conducted CS116	MIL-STD-461F 10 kHz - 100 MHz
EMS radiated RS103	MIL-STD-461F Army 2 MHz - 1 GHz