

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-STD-810 and 461 compliant design
- Intel® Atom® x6425RE CPU
- 8 GB RAM
- 32 GB storage

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Connector Interfaces

X1 (front)	• 1x Power
X2 (front)	• 1x Serial Console • 1x USB 2.0 • 1x RS232 Service
X3 (front)	• 1x USB3.0
X4 (back)	• 1x DP
X5 (back)	• 1x 1000BASE-T

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
Electronics ground to chassis	Isolated
Power consumption	10 W
Power input	5-36 VDC
Power to chassis	Isolated
Power to electronics ground	Non-isolated
Chassis material	Aluminum
Coating and color	Dupont AE0305-6603120 (RAL6031)
Cooling	Passively cooled
Dimensions	120 x 120 x 50 mm (4.8 x 4.8 x 2 in) (WxDxH)
Mounting	4x M4
Surface treatment chassis	Chromit-Al
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)

Low temperature - Operating

MIL-STD-810H, Method 502.7, Procedure II - Operation
-40 °C (-40 °F)

Low temperature - Storage

MIL-STD-810H, Method 502.7, Procedure I - Storage
-40 °C (-40 °F)

Noise level

Maximum noise level of 40 dB SPL
A-weighting at 1 m (3.3 ft) distance

Salt fog

MIL-STD-810H, Method 509.7
5 ± 1% (by weight)
Two cycles, 24 h wet + 24 h dry / cycle

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)

Vibration - Helicopter

MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter

Vibration - Loose cargo

MIL-STD-810H, Method 514.8, Procedure II - Loose cargo transportation, Category 5 - Truck/trailer - loose cargo

Vibration - Tracked vehicle

MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 20 - Ground vehicle - ground mobile, Tracked vehicle

Vibration - Wheeled vehicle

MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 20 - Ground vehicle - ground mobile, Wheeled vehicle

EMC Specification

EMI radiated RE102

MIL-STD-461F, Method RE102, Radiated emissions, electric field
Navy Mobile & Army
2 MHz - 18 GHz

EMS conducted CS114

MIL-STD-461F, Method CS114, Conducted bulk susceptibility
Army, Ground
10 kHz - 200 MHz

EMS conducted CS115

MIL-STD-461F, Method CS115, Conducted susceptibility, bulk cable injection, impulse excitation

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EMS conducted CS116

MIL-STD-461F, Method CS116,
Conducted susceptibility, damped
sinusoidal transients, cables and
power leads
10 kHz - 100 MHz

EMS radiated RS103

MIL-STD-461F, Method RS103,
Radiated susceptibility, electric field
Army
2 MHz - 1 GHz