

19"/2"® CS2221



High-performance Xeon computer

The 19"/2 CS2221 computer offers a rugged Military-Off-the-Shelf (MOTS) high-performance computer in a rugged half rack form factor. It comes with a powerful Xeon processor, removable M2 SSD disk and of course passively cooled.

Small form factor

The MilDef 19"/2 form factor is optimized for reduced size, weight, and power (SWaP) to meet industry and military requirements without sacrificing reliability, ruggedness or performance.

Flexible mounting

The 19"/2 standard enables flexible mounting options for a wide array of integration scenarios. The unit can be mounted in a standard 19" rack, half racks, or directly on to a surface and at any angle.

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

- Intel® HD Graphics P630
- Up to 64 GB RAM ECC
- Replaceable CMOS battery
- Passively cooled

Connector Interfaces

COM1 (front)	• 1x Serial RS232/422
COM2 (back)	• 1x Serial RS232/422
DVI (back)	• 1x DVI-D
X1 DC IN (front)	• 1x Power
ETH1-4 (front)	4 connectors which each has: <ul style="list-style-type: none"> • 1x ETH 1000BASE-T
HDMI (front)	• 1x HDMI
SERVICE (back)	• 1x RS232 Service
USB1/2 (front)	• 2x USB 3.0
USB3/4 (back)	• 2x USB 3.0
VGA (back)	• 1x VGA

Other Interfaces

- 1x Battery cover (bottom)
- 1x MilDef M.2 Disk Slot (front)
- 1x System button (front)

Technical Specification

Blanking	Double-pressing the System button
Computer graphics	Intel [®] HD Graphics P630
Computer memory	Up to 64 GB RAM ECC
Computer processor	Intel [®] Xeon [®] E-2276ML
Graphics resolution	1920 x 1200 resolution @ 60 Hz
CMOS battery	Replaceable CMOS battery, located behind a cover for easy access
Storage	Disk caddy support M2 SSD NvMe 2280. Different sizes are available, please get in contact with your local sales office for more info
MIL-STD-1275D	5.3.2.2 5.3.2.3 5.3.2.4
Polarity protection	Protected against polarization failure on the power input in the voltage range of normal operation
Power consumption	Idle 13 W (OS only) Typical 60 W (50% load, no USB load) Max 100 W (active disk heater, 100% load, max USB load)
Power input	12-32 VDC
Chassis material	Aluminum
Coating and color	Dupont AE0305-6603120 (RAL6031)
Cooling	Passively cooled
Dimensions width and height	220 x 43.4 mm (8.66 x 1.71 in) (WxH)

Earth point	M6 12 mm
Rack mounting depth	400 mm (15.8 in)
Surface treatment chassis	Chromit-Al
Unit depth	342 mm (13.5 in)
Weight	3.7 kg (8.2 lbs)
MTBF	112,335 h
CE	Compliant

Environmental Specification

Functional shock - Operating	MIL-STD-810G, Method 516.6, Procedure I - Functional Shock. Table 516.6-II, Terminal peak sawtooth pulse, Ground equipment 40 g 11 ms
High temperature - Operating	MIL-STD-810G, method 501.5, Procedure II - Operation 60 °C (140 °F)
High temperature - Storage	MIL-STD-810G, Method 501.5, Procedure I - Storage 71 °C (160 °F)
Humidity	MIL-STD-810G, Method 507.5, Procedure II - Aggravated 95 ± 4 % RH Ten 24 h cycles
IP Class (Solid Particle Protection)	IP Class 6X
IP Class (Water)	IP Class X5
Low air pressure - Rapid decompression	MIL-STD-810G, Method 500.5, Procedure III - Rapid decompression 75.2 kPa, corresponding to 2,438 m (8,000 ft) 17 kPa, corresponding to 12,192 m (40,000 ft)
Low air pressure - Operating	MIL-STD-810G, method 500.5, Procedure II - Operation/Air Carriage 4,572 m (15,000 ft)
Low temperature - Operating	MIL-STD-810G, method 502.5, Procedure II - Operation -40 °C (-40 °F)
Low temperature - Storage	MIL-STD-810G, method 502.5, 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-810G Method: 509.5 5 % ± 1 % (by weight) Two cycles, 24 h wet + 24 h dry / cycle

Temperature shock - Operating MIL-STD 810G, method 503.5 procedures I - C, - Multi-cycle shocks from constant extreme temperature 55 °C (131 °F) -40 °C (-40 °F)

Vibration - Helicopter MIL-STD-810G, Method 514.6, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter

Vibration - Loose cargo MIL-STD-810G, Method 514.6, Procedure II - Loose cargo transportation, Category 5 - Truck/trailer - loose cargo

Vibration - Tracked vehicles MIL-STD-810G, Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, tracked vehicles

Vibration - Wheeled vehicles MIL-STD-810G, Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, wheeled vehicles

EMC Specification

EMI conducted CE102 MIL-STD-461F, Method CE102, Conducted emissions, power leads BASIC CURVE 10 kHz - 10 MHz

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

EMS conducted CS101 MIL-STD-461F, Method CS101, Conducted susceptibility, power leads CURVE #1 30 Hz - 150 kHz

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

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