

# 19"/2"® CS2201



## High-performance Xeon computer

The 19"/2" CS2201 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.

## 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
- Intel® Xeon® E-2276ML
- Replaceable CMOS battery
- Passively cooled

## Connector Interfaces

<b>SERVICE</b> (back)	<ul style="list-style-type: none"> <li>1x RS232 Service</li> </ul>
<b>X1</b> (front)	<ul style="list-style-type: none"> <li>3x USB2.0</li> <li>3x RS232</li> </ul>
<b>X2</b> (front)	<ul style="list-style-type: none"> <li>4x ETH 1000BASE-T</li> </ul>
<b>X3 DC IN</b> (front)	<ul style="list-style-type: none"> <li>1x Power</li> </ul>
<b>X4</b> (back)	<ul style="list-style-type: none"> <li>1x DVI</li> </ul>
<b>X5</b> (back)	<ul style="list-style-type: none"> <li>1x VGA</li> <li>1x Remote Power On</li> <li>1x AUDIO</li> </ul>
<b>X7</b> (front)	<ul style="list-style-type: none"> <li>1x USB3</li> </ul>
<b>X8</b> (front)	<ul style="list-style-type: none"> <li>1x USB3</li> </ul>

## Other Interfaces

1x Battery cover (bottom)
1x Disk Status Indicator (front)
1x System button (front)

## Technical Specification

<b>Blanking</b>	Double-pressing the System button
<b>Computer graphics</b>	Intel® HD Graphics P630
<b>Computer memory</b>	Up to 64 GB RAM ECC
<b>Computer processor</b>	Intel® Xeon® E-2276ML
<b>Graphics resolution</b>	Max 1920 x 1200 @ 60Hz on all video interfaces
<b>Internal SSD</b>	Optional internal SSD
<b>CMOS battery</b>	Replaceable CMOS battery, located behind a cover for easy access
<b>Electronics ground to chassis</b>	Isolated
<b>MIL-STD-1275D</b>	5.3.2.2 5.3.2.3 5.3.2.4
<b>Polarity protection</b>	Protected against incorrect polarity connection on the power input within the normal operating voltage range
<b>Power consumption</b>	Idle 13 W (OS only) Typical 60 W (50% load, no USB load) Max 100 W (active disk heater, 100% load, max USB load)
<b>Power input</b>	12-32 VDC
<b>Power to chassis</b>	Isolated
<b>Power to electronics ground</b>	Isolated
<b>Chassis material</b>	Aluminum
<b>Coating and color</b>	Dupont AE0305-6603120 (RAL6031)
<b>Cooling</b>	Passively cooled

<b>Dimensions width and height</b>	220 x 43.4 mm (8.66 x 1.71 in) (WxH)
<b>Earth point</b>	M6 12 mm
<b>Rack mounting depth</b>	400 mm (15.8 in)
<b>Surface treatment chassis</b>	Chromit-Al
<b>Unit depth</b>	342 mm (13.5 in)
<b>Weight</b>	3.6 kg (8 lbs)
<b>MTBF</b>	118,176 h
<b>CE</b>	Compliant

## Environmental Specification

<b>Functional shock - Operating</b>	MIL-STD-810G, Method 516.6, Procedure I - Functional Shock. Table 516.6-II, Terminal peak sawtooth pulse, Ground equipment 40 g 11 ms
<b>High temperature - Operating</b>	MIL-STD-810G, method 501.5, Procedure II - Operation 60 °C (140 °F)
<b>High temperature - Storage</b>	MIL-STD-810G, Method 501.5, Procedure I - Storage 71 °C (160 °F)
<b>Humidity</b>	MIL-STD-810G, Method 507.5, Procedure II - Aggravated 95 ± 4 % RH Ten 24 h cycles
<b>IP Class (Solid Particle Protection)</b>	IP Class 6X
<b>IP Class (Water)</b>	IP Class X5
<b>Low air pressure - Rapid decompression</b>	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)
<b>Low air pressure - Operating</b>	MIL-STD-810G, method 500.5, Procedure II - Operation/Air Carriage 4,572 m (15,000 ft)
<b>Low temperature - Operating</b>	MIL-STD-810G, method 502.5, Procedure II - Operation -40 °C (-40 °F)
<b>Low temperature - Storage</b>	MIL-STD-810G, method 502.5, Procedure I - Storage -40 °C (-40 °F)
<b>Noise level</b>	Maximum noise level of 40 dB SPL A-weighting at 1 m (3.3 ft) distance
<b>Salt fog</b>	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