# 19"/2 ® CS1201

## High Performance Server

The 3U 19"/2 ® CS1201 is a high-performance server with Intel® Xeon® D processor and removable capability bays for storage, GPU etc.

### Small form factor

The MilDef 19"/2 ® (half-rack) 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 rack, or directly on to a surface and in any direction.

### 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

- Powerful Intel CPU with 20 cores
- Up to 512 GB RAM
- 2x MilDef Capability Bay
- Up to 12x M.2 NVME SSD
- 2x 10G Fiber Ethernet
- Option for NVIDIA Ampere GPU
- iKVM and IPMI support for remote management and monitoring system health

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## Connector Interfaces

| | |
|---|---|
| **FAN1-3** (back) | 3 connectors which each has:<br>• 1x FAN |
| **SERVICE** (back) | • 1x RS232 Service |
| **X1 DC IN** (front) | • 1x Power<br>• 1x Remote |
| **X2** (front) | • 2x 10GBASE-SR |
| **X3** (front) | • 1x 1000BASE-T IPMI |
| **X4-X7** (front) | 4 connectors which each has:<br>• 1x USB3.0 |
| **X8** (front) | • 1x DVI-D |
| **X9** (front) | • 1x RS-232 |

## Other Interfaces

1x Battery cover (left side)

2x MilDef capability bay, MDB300 Series (front)

1x System button (front)

## Technical Specification

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|---|---|
| **Blanking** | Enable/disable all externally visible indicators from emitting light via the "blanking command" |
| **Built in test (BIT)** | Displayed by status LED |
| **Computer TPM** | TPM v2.0 chip |
| **Computer processor** | Intel Xeon D-2796TE CPU |
| **IPMI SSIF access** | IPMI 2.0 |
| **MilDef remote management bus** | Enable remote host to perform the following on this device:<br>Power on/off (Gracefully shutdown)<br>Zeroization(if unit supports it)<br>Unit state readback (Unit ready)<br>Blanking |
| **RAM memory** | Up to 512 GB ECC RAM |
| **CMOS battery** | Replaceable CMOS battery, located behind a cover for easy access |
| **Secure boot** | Supported |
| **Zeroization** | Zeroization by pressing the system button for 12 sec |
| **Electronics ground to chassis** | Isolated |
| **MIL-STD-1275D** | 5.3.2.2<br>5.3.2.3<br>5.3.2.4 |
| **Polarity protection** | Protected against incorrect polarity connection on the power input within the normal operating voltage range |
| **Power consumption** | 450 W (with heater)<br>350 W (without heater) |
| **Power input** | 18-36 VDC |
| **Power to chassis** | Isolated |
| **Power to electronics ground** | Isolated |
| **Chassis material** | Aluminum |
| **Coating and color** | AE0305-7703520 Axalta (RAL 7035) |
| **Dimensions width and height** | 220 x 132.3 mm (8.7 x 5.2 in) (WxH) |
| **Earth point** | M6 12 mm |
| **Hot swap** | Docking bays |
| **Surface treatment chassis** | Chromit-Al |
| **Unit depth** | 464 mm (18.3 in) |
| **Weight** | 10.9 kg (24 lbs) |
| **CE** | Compliant |

## Environmental Specification

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|---|---|
| **Functional shock - Operating** | MIL-STD-810H, Method 516.8, Procedure I - Functional shock. Table 516.8-IV, Terminal peak sawtooth pulse, Ground materiel<br>40 g<br>11 ms |
| **High temperature - Operating** | MIL-STD-810H, Method 501.7, Procedure II - Operation<br>55 °C (131 °F) |
| **High temperature - Storage** | MIL-STD-810H, Method 501.7, Procedure I - Storage<br>71 °C (160 °F) |
| **Humidity** | MIL-STD-810H, Method 507.6, Procedure II - Aggravated<br>95 ± 4% RH<br>Ten 24-hour cycles |
| **IP Class (Solid Particle Protection)** | IP Class 6X |
| **IP Class (Water)** | IP Class X5 |
| **Low air pressure - Rapid decompression** | MIL-STD-810H, Method 500.6, Procedure III - Rapid decompression<br>2,438 m (8,000 ft)<br>12,192 m (40,000 ft) |
| **Low air pressure - Operating** | MIL-STD-810H, Method 500.6, Procedure II - Operation/air carriage<br>4,572 m (15,000 ft) |
| **Low temperature - Operating** | MIL-STD-810H, Method 502.7, Procedure II - Operation<br>-40 °C (-40 °F) |
| **Low temperature - Storage** | MIL-STD-810H, Method 502.7, Procedure I - Storage<br>-46 °C (-50.8 °F) |

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|---|---|
| **Noise level** | Maximum noise level of 60 dB SPL A-weighting at 1 m (3.3 ft) distance |
| **Salt fog** | MIL-STD-810H, Method 509.7<br>5 ± 1% (by weight)<br>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<br>55 °C (131 °F)<br>-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

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|---|---|
| **EMI conducted CE102** | MIL-STD-461F, Method CE102, Conducted emissions, power leads<br>BASIC CURVE<br>10 kHz - 10 MHz |
| **EMI radiated RE102** | MIL-STD-461F, Method RE102, Radiated emissions, electric field<br>Navy Mobile & Army<br>2 MHz - 18 GHz |
| **EMS conducted CS101** | MIL-STD-461F, Method CS101, Conducted susceptibility, power leads<br>CURVE #1<br>30 Hz - 150 kHz |
| **EMS conducted CS114** | MIL-STD-461F, Method CS114, Conducted bulk susceptibility<br>Army, Ground<br>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<br>10 kHz - 100 MHz |
| **EMS radiated RS103** | MIL-STD-461F, Method RS103, Radiated susceptibility, electric field<br>Army<br>2 MHz - 1 GHz |