

# 19"/2<sup>®</sup> CS2291



## Powerful computer with extensive network capabilities

The CS9100 series provides a high performance computer with up to 12 ethernet ports, ideal as a platform for router or switch applications. It is optimized for low size, weight and power (SWaP) to meet industry requirements without sacrificing reliability, ruggedness or performance.

### Small form factor

The MilDef 19"/2<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> HD Graphics P630
- 64 GB ECC RAM
- M.2 SSD NVMe disk
- 2.0 GHz, Intel<sup>®</sup> Xeon<sup>®</sup> 9th Gen, E-2276ML
- 16-32 VDC
- Passively cooled

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## Connector Interfaces

DC IN (back)	• 1x Power
CONSOLE (front)	• 1x RS232 Console
ETH0 PoE+, ETH1 PoE+ (front)	2 connectors which each has: <ul style="list-style-type: none"> <li>• 1x ETH</li> </ul>
ETH10 - ETH11 (back)	2 connectors which each has: <ul style="list-style-type: none"> <li>• 1x ETH</li> </ul>
ETH2 - ETH9 (front)	8 connectors which each has: <ul style="list-style-type: none"> <li>• 1x ETH</li> </ul>
HDMI (back)	• 1x HDMI
SERVICE (back)	• 1x RS232 Service
USB3/4 (back)	• 2x USB 2.0
USB1/2 (front)	• 2x USB 3.0
VGA (back)	• 1x VGA

## Other Interfaces

1x System button (front)

## Technical Specification

Blanking	Double-pressing the System button
Computer graphics	Intel <sup>®</sup> HD Graphics P630
Computer memory	64 GB ECC RAM
Internal disk	M.2 SSD NVMe disk
LAN 1000BASE-T	1000BASE-T standard
LAN POE power delivery	ETH0 and ETH1 shall deliver power according to (802.3af, Class3).
Processor	2.0 GHz, Intel <sup>®</sup> Xeon <sup>®</sup> 9th Gen, E-2276ML 6 cores, 12 threads
Electronics ground to chassis	Isolated
MIL-STD-1275D	5.3.2.2 5.3.2.3 5.3.2.4
Polarity protection	Protected against incorrect polarity connection on the power input within the normal operating voltage range
Power consumption	130 W
Power input	16-32 VDC
Power to chassis	Isolated
Power to electronics ground	Isolated
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
Surface treatment chassis	Chromit-Al
Unit depth	350 mm (13.8 in)
Weight	4.1 kg
MTBF	> 85,000 h
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 71 °C (160 °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 X5
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)

<b>Vibration - Helicopter</b>	MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter
<b>Vibration - Loose cargo</b>	MIL-STD-810H, Method 514.8, Procedure II - Loose cargo transportation, Category 5 - Truck/trailer - loose cargo
<b>Vibration - Tracked vehicle</b>	MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 20 - Ground vehicle - ground mobile, Tracked vehicle
<b>Vibration - Wheeled vehicle</b>	MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 20 - Ground vehicle - ground mobile, Wheeled vehicle

<b>EMC Specification</b>	
<b>EMI conducted CE102</b>	MIL-STD-461F, Method CE102, Conducted emissions, power leads BASIC CURVE 10 kHz - 10 MHz
<b>EMI radiated RE102</b>	MIL-STD-461F, Method RE102, Radiated emissions, electric field Navy Mobile & Army 2 MHz - 18 GHz
<b>EMS conducted CS101</b>	MIL-STD-461F, Method CS101, Conducted susceptibility, power leads CURVE #1 30 Hz - 150 kHz
<b>EMS conducted CS114</b>	MIL-STD-461F, Method CS114, Conducted bulk susceptibility Army, Ground 10 kHz - 200 MHz
<b>EMS conducted CS115</b>	MIL-STD-461F, Method CS115, Conducted susceptibility, bulk cable injection, impulse excitation
<b>EMS conducted CS116</b>	MIL-STD-461F, Method CS116, Conducted susceptibility, damped sinusoidal transients, cables and power leads 10 kHz - 100 MHz
<b>EMS radiated RS103</b>	MIL-STD-461F, Method RS103, Radiated susceptibility, electric field Army 2 MHz - 1 GHz