

Crystal Group RS4104 Rugged 4U Server



Intel® Xeon® Scalable processors

GPGPU ready

Six PCIe 4.0 x16

Four removable HDDs or eight SSD SATA/SAS bays

1780W N+1 AC power supply

Up to 2TB

Trusted, long-life performance in extreme conditions


Bringing advanced technology to the edge requires powerful compute solutions that deliver seamless accuracy, security, and reliability, even in the most demanding, unpredictable operating environments. Based on proven testing and field performance, the RS4104 provides high-performance computing, data storage, and cyber protections across critical military and industrial applications.

Constructed with ruggedized, all-aluminum chassis, and state-of-the-art thermal management, this Crystal Group server is tailored to meet the specific requirements of the application and platform to optimize operational life, maximize performance, and ensure program success.

Use cases

- Real-time communications and networking
- Weapons control
- Situational awareness
- Surveillance
- Unmanned aircraft and autonomous operations

Tested to MIL-STD-810



Humidity **Shock** **Operational Temperature** **Vibration** **Altitude**

Crystal Group RS4104 technical specifications

Mechanical	Height: 7.0" (17.8 cm) Width: 17.5" (44.5 cm); EIA-310 Rack Compliant Depth: 20" (51.1cm) Weight: 65 lbs. (29.5 kg)
CPU Architecture	3rd Gen Intel® Xeon® Scalable processors
Expansion	Six PCIe 4.0 x16 with X12DPG-QT6
External Bay	Option 1: Up to four 3.5" HDD or eight 2.5" SSD Option 2: One CD/DVD/BD (R/W); Can be combined with HDD option
Memory	32GB-2TB DDR4
Power Supply	1780W 120/240VAC 50/60Hz w/PFC, N+1 redundant, 115VAC 400Hz
Cooling	15 high-speed, high-volume fans; CPU temperature controlled
Software Compatibility	Supports Windows 10®, Windows Server, VMware®, or Linux®
Mounting	Jonathan rails or Crystal Glide rails

Environmental testing standards

MIL-STD-810: Environmental Engineering Considerations and Laboratory Tests	MIL-STD-810, Operational Temperature, Method 501/502 Procedure I/II: -15°C to +55°C ¹ MIL-STD-810, Storage, Method 501, Procedure I/II: -55°C to +85°C ¹ MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours with humidity kit ¹ MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport ¹ MIL-STD-810, Vibration, Method 514, Procedure I: 4.63 GRMS, 5-2000Hz, 60 min/axis with solid state drives + vibration kits ¹
MIL-S-901	Grade A: With solid state drives + shock kits ¹ Grade B ¹

Electromagnetic compatibility standards

FCC Compliant	AC
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In-house test reports provided for baseline units; customer-specific test options available upon request.

¹: Designed to meet standard

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