

Crystal Group RE3423M Sealed Server



High-performance compute in a completely sealed chassis

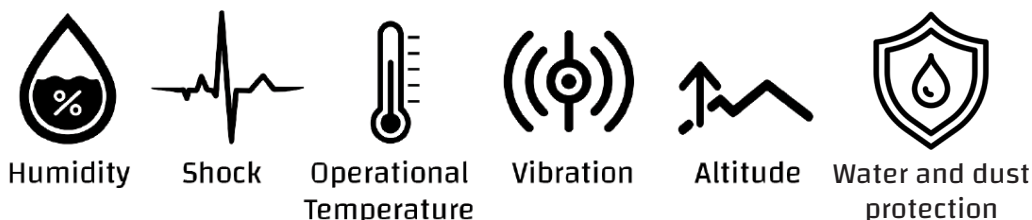
The RE3423M is designed to meet the IP67 water and dust ingress protection levels with up to 220 watts of combined CPU and GPU power without sacrificing performance at 65°C. This purpose designed chassis enables demanding applications to be deployed into harsh elements and extreme environments. The custom internal heatsinks developed for the RE3423M allow industry leading operation for mission equipment in high temperature environments.

The RE3423M is currently configured with Intel® Xeon® Scalable processor and NVIDIA professional graphics card for high reliability in the field. Crystal Group's embedded computer systems align with industry processor roadmaps to ensure access to the latest in long life, powerful processors.

Use cases

- Ground vehicles
- Aircraft in unmanned areas of heavy humidity and condensation
- Applications with outdoor exposure to heavy rain and splashing
- High temperature applications in dusty environments

Designed to MIL-STD-810



Crystal Group RE3423M Technical Specifications

Height	5.80" (14.7 cm)
Width	15.75" (40.0 cm) max
Depth	12.60" (32.0 cm) over body, 13.35" (33.9cm) max including MIL-CIRC connectors
Weight	33 lbs. (15.0 kg) max with all drives populated and one card installed
CPU Architecture	Up to 20 cores, 150W TDP
Internal Expansion Slots	One PCIeX16 low profile, single slot, full length card, up to 70W TDP
Removable Drives & I/O	Option 1: Two non-removable NVME SSDs Option 2: Three non-removable SATA SSDs Option 3: Inquire about sealed removable drive options
Cooling	External heat sink cooled by 4 external IP68 rated fans
Mounting	Mounted from base flanges
Power Supply	18-36VDC MIL-STD-1275, MIL-STD-461 ¹
System Board	X12SPM-TF
Software Compatibility	Supports Windows® 11, Linux®, or VMware®

Environmental testing standards¹

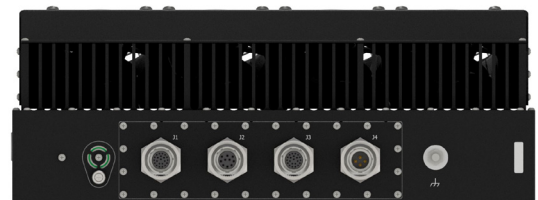
MIL-STD-810: Environmental Engineering Considerations and Laboratory Tests

MIL-STD-810, Operational Temperature, Method 501, Procedure I/II: -40°C to +65°C (Horizontal Orientation), +63°C (Vertical Orientation), unthrottled full performance
MIL-STD-810, Storage, Method 501, Procedure I/II: -55°C to +80°C
MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours
MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport
MIL-STD-810, Vibration, Method 514, Procedure I: 5.5Grms, 10-2,000Hz, 60 min/axis, 3 axis with vibration kit
MIL-STD-810, Shock, Method 516, Procedures I/V 10g, 11msec – functional shock; 40g, 11msec – crash hazard shock

Electromagnetic Compatibility Standards¹

MIL-STD-461F

CE102, CS101, CS114, CS115, CS116, RE102, and RS103 compliant



1: Designed to meet standard

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info@crystalrugged.com | 800.378.1636 | crystalrugged.com

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