Crystal Group RS2704L22 Rugged 2U Server

Take real-time AI & ML from the data center to the edge

Hosts two dual-width, full-height GPUs or FPGAs with the latest generation Intel® Xeon® Scalable or AMD EPYC™ processors in an unmatched rugged design, the RS270422 delivers exceptional reliability and Tensor Core performance at the tactical edge.

Designed to handle challenging, yet critical inference obstacles, the extreme, scalable compute power of the RS2704L22 brings ultra-low latency and seamless operation to the most volatile, mission-critical conditions when real-time situational awareness and AI can't be compromised. InfiniBand I/O connectivity provides critical, rapid data transfer for low-latency backhaul applications.

This NVIDIA-Certified System is validated for optimal performance, manageability, security and scalability.

Use cases

- Battlespace management awareness
- Command and control communications
- Intelligence gathering and processing
- Data storage server
- Sensor fusion for air and ground vehicles
- Leader-follower autonomous vehicles
- GPU server
- Virtualization platform

Tested to MIL-STD-810

Humidity · Salt Fog · Shock · Electromagnetic Compatibility · Vibration · Sand Dust · Fungus

Crystal Group RS2704L22 Technical Specifications

Mechanical	**Height:** 3.5" (8.9 cm) **Width:** 17.5" (44.5 cm) **Depth:** 22" (58.9 cm) **Weight:** 34–40 lbs (15.4-18.1 kg)
Mounting	Delrin glides, fixed mount (front and rear), or Jonathan rails
Power Supply	1800WAC or 1620WDC
CPU Architecture	Gen3 Intel Xeon Scalable or AMD EPYC 7003 series processors
Memory	16GB–4TB DDR4 ECC SDRAM (motherboard dependent)
Expansion	2x Full Height, Dual Width GPU/FPGA, 3x low profile PCIe slots
I/O	Commercial I/O or optional MIL-CIRC connector I/O
Software Compatibility	Windows 11, Windows Server, VMware, Linux
Environmental Testing Standards	
MIL-STD-810: Environmental Engineering Considerations and Laboratory Tests	**Method 500, Altitude**: 12,500 ft. operation, 40,000 ft. transport [1] **Method 501, Operational Temperature, high:** Procedure II: +35°C, two-hour dwell, four cycles [1] **Method 502, Operational Temperature, low:** Procedure II: -40°C, two-hour dwell, four cycles [1] **Method 503, Thermal Shock:** Procedure II: 10 cycles, -40°C to +55°C, 15-min dwell, <1-min transfer time [1] **Method 507, Humidity**: Procedure II: 240 hours *with optional conformal coating kit* [1] **Method 508, Fungus**: 28 days, mixed spore, 30°C 95% RH [1] **Method 509, Salt fog**: 48-hour test [1] **Method 510, Sand-Dust**: Procedure I: Blasting dust, 12 hours [1] **Method 513, Acceleration**: Procedure II: 9g [1] **Method 514, Vibration:** Procedure I: 4.7G, 5–2,000Hz, 60 min/axis, 3 axis [1] **Method 516, Shock**: Procedures I & V: 40G, 11ms, 18 pulses, 3/axis both directions [1]
MIL-STD-1474E	**Acoustic Noise,** Requirement S, Grade A3 [2]
MIL-STD-167-1A	**Ship Vibration,** Type 1 [1]
MIL-S-901E	**Shipboard Shock,** Class II, A/B [2]
Electromagnetic Compatibility Standards	
MIL-STD-461	**EMI/EMC,** RE102, CE102; surface ship, below deck, and ground [1]
RTCA/DO-160	**Aircraft and airborne equipment,** Category M [2]

In-house test reports provided for baseline units; customer-specific test options available upon request.
1: Testing in progress

AS9100D CERTIFIED ISO 9001

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