



Field tested, fail-safe and long-life performance in extreme conditions. As processing performance continues to improve, Crystal Group is dedicated to minimize the SWaP envelope of the RS112PS18M. High-end computing performance in a 1U chassis with a depth of 18" (45.7cm) fits most any rack space.

Crystal Group combines 35 years of server experience with advanced carbon-fiber and coating technologies to deliver its innovative Rugged Carbon Fiber Server product line. An ultra-lightweight chassis providing EMI/EMC protection and shock and vibration resilience make Crystal Group Carbon Fiber Servers a popular choice for airborne, shipboard, land-based, and transit case applications.

Available in multiple form factors, Crystal Group's turnkey rugged systems combine high-capacity data storage with leading-edge data protection features that meet or exceed strict critical certification levels and standards. With a range of capabilities, including FIPS 140-2 SAS solid state drives, NIAP-certified IPsec data encryption, intrusion detection and instant data destruction, your critical, confidential data is secure from attempted breaches, even in the most extreme air, land, sea and space conditions.

Innovative solutions. Crystal Group's portfolio of rugged and industrial computing products are engineered and tested to withstand challenging environments, meet and exceed military and industrial standards, and provide the latest COTS technologies and benefits, such as cost, availability, upgradability, and flexibility.

Dependable services. When a computing application requires a custom solution, Crystal Group delivers – on time and on budget – with professional services, including product design and development, testing, systems engineering and integration, mechanical and electrical engineering, configuration management, and product lifecycle planning.

Dedicated support. Crystal Group's expert staff and global network provide fast and effective product support when and where it is needed, whether in-house or in the field. Count on Crystal Group for fast response times, quick turnarounds, 5+ year warranties, and quality service around the clock and around the globe.

FEATURES

- Ultra-lightweight carbon fiber chassis – 10.5-15 lbs.
- Up to 64 GB of memory
- Easily mounted on Crystal slides, Delrin glides or Jonathan® rails
- Rugged 1U, rack mounted 18" depth, available with optional MIL-CIRC I/O
- Versatility with four 2.5" drive bays
- Expandable with one PCIe x16 slot
- Intel® Core™ i7, i9 processors

A clear advantage.

Specifications

Mechanical 1U
Height: 1.75" (4.45 cm)
Width: 17.5" (44.45 cm) [accepts Crystal Slides, Delrin glides or Johnathan rails] EIA-310 rack compliant
Depth: 18" (45.7 cm)
Weight: 10.5-15 lbs. (4.76 - 6.80 kg)

CPU
Intel® CPU architecture options from Intel embedded long-life roadmap
Intel® Core™ i7, i9 processors

Expansion
One full-height, 1/2 length PCIe X16 slot

External Bay
Option 1: Two removable SATA or SAS 2.5"
Option 2: Four 2.5" SATA or SAS HDDs
Option 3: Can be combined with HDD option: One CD/DVD/BD (R/W)

Memory
2-32 GB DDR4

Mounting
Option 1: Crystal slides
Option 2: Delrin glides
Option 3: Jonathan rails

Power Supply
Option 1: 460W 120/240VAC 50/60Hz w/PFC, 115VAC 400Hz
Option 2: 425W 18-36VDC

System Board
X11SSV-Q, LGA 1151, 4-32 GB NON-ECC DDR4, DP, HDMI, DVI-I, 2X 1G LAN, 5X SATA3, 2X SERIAL, 4-USB 3.0, HD AUDIO, On-board SATA3

Environmental Standards
MIL-STD-810, Operational Temperature, Method 501, Procedure I/II: -40°C to +55°C w/SSD, capable of -40°C to +71°C with SSDs ²
MIL-STD-810, Storage, Method 501, Procedure I/II: -40°C to +85°C ²
MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours with humidity kit ²
MIL-STD-810, Operating Altitude, Method 500, Procedure II: 12,500ft ²
MIL-STD-810, Vibration, Method 514, Category 13: 5.5 GRMS 10-2000Hz, 60 min/axis with solid state drives + vibration kits ¹
MIL-STD-810, Shock, Method 516, Procedure I: 20G 11 ms ¹
MIL-S-901, Grade B ²
MIL-S-901, Grade A: With solid state drives & shock kits ²

Electromagnetic Compatibility Standards
Some standards may require an internal kit
AC, FCC Compliant ²
AC, MIL-STD-461, RE102, CE102 compliant ²
DC, MIL-STD-461, RE102, CE102 compliant ²
RTCA DO-160 Section 21, Category M ²

14 CFR 25 - Airworthiness Standards
Flammability Airworthiness Test 14 CFR Part 25: Amendment 25-83 and 25-116, Appendix F, Part I, Para a(1), subparagraphs i, ii, and iv

MIL-CIRC I/O
MIL-CIRC I/O options are motherboard dependent.

Cooling
High-speed, high-volume fans (6) CPU temperature controlled

Software Compatibility
Windows 10®, Windows Server 2019®, VMware®, or Linux®



1 - Test report available
2 - Designed to meet standard

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