CRYSTAL SPECS

RS114PS18
Crystal Carbon Fiber Server

Field tested, failsafe and long life performance in extreme conditions. As processing performance continues to improve, Crystal Group is dedicated to minimize the SWaP envelope of the RS114PS18. High-end computing performance in a 1U chassis with a depth of 18" (45.7cm) fits most any rack space.

Crystal Group combines 30 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.

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 light weight carbon fiber chassis – 12-14 lbs.**
- **Up to 512 GB of memory**
- **Easily mounted – Delrin glides or Jonathan® rails**
- **Rugged 1U, rack mounted 18" depth**
- **Versatility with up to six (6) removable 2.5" drive bays**
- **Expandable with one (1) slot**
- **Leading edge Intel® Sandy Bridge, Ivy Bridge, Haswell or Broadwell CPU options**

A clear advantage.

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Specifications

Mechanical 1U
Height: 1.75" (4.45 cm)
Width: 17.5" (44.45 cm) [accepts Crystal Slides and Johnathan Rails] EIA-310 Rack Compliant
Depth: 18" (45.7 cm)
Weight: 12-14 lbs. (5.44 - 6.35 kg)

CPU Intel® CPU architecture options from Intel embedded long-life roadmap
Option 1: Sandy Bridge or Ivy Bridge LGA1155, X9SAE-V
Option 2: Haswell or Broadwell LGA2011, X10SRL-F, X10DRL-I or X10DRL-CT
Up to 18 core options (motherboard dependent)

Expansion
One (1) PCIe or PCI full or half height slot (motherboard dependent)

External Bay
Option 1: Four (4) removable SATA or SAS 2.5" HDDs
Option 2: Six (6) removable SATA or SAS 2.5" HDDs
Option 3: (Can be combined with HDD option): One (1) CD/DVD/BD (R/W)

Memory
16 - 512 GB DDR3 or DDR4 (motherboard dependent)

Mounting
Option 1: Mounted on Delrin glides
Option 2: Jonathan rails

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

System Board
Option 1: X9SAE-V, Single LGA1155, Xeon®, i3/5/7, ATX, 2LAN1000, VGA, 2XHDMI, AUDIO, 1 PCI, 2 PCI-E X1, 1 PCI-E X4, 1 PCI-E X8, 2 PCI-E X16, SATAX4, SATA3X2
Option 2: X10DRL-I, Dual LGA2011 R3 Xeon®, ATX, 2LAN1000, VGA, 5 PCI-E X8, 1 PCI-E X16, IPMI, IPKVM, SATA3X10
Option 3: X10SRL-F, Single LGA2011 R3 Xeon®, ATX, 2LAN1000, VGA, 2 PCI-E X16, 5 PCI-E X8, IPMI, IPKVM, SATA3X10
Option 4: X10DRL-CT, Dual LGA2011 R3 Xeon®, ATX, 2LAN1000, 2 10GBase-T, VGA, 2 PCI-E X8, 1 PCI-E X16, IPMI, IPKVM, SATA3X10

Environmental Standards
MIL-STD-810, Operational Temperature, Method 501, Procedure I/II: -40°C to +55°C w/ SSD[1]
MIL-STD-810, Storage, Method 501, Procedure I/II: -40°C to +85°C[1]
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, Crash Hazard Shock for Flight Vehicle Equipment, Method 516, Procedure V: 40G 11 ms[1]
MIL-S-901, Grade B
MIL-S-901, Grade A: With solid state drives & shock kits

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[1]
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

Export Compliance
ECCN: 5A992
Classification is dependent on configuration and is subject to change. Please contact your Business Development Manager to receive the classification of your product.

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

Software Compatibility
Accepts Windows 10®, Windows Server 2012®, Windows Server 2016®, VMware®, or Linux®

1 - Test report available
2 - Designed to meet standard

Certification reports for select products are available on Crystalrugged.com. Crystal Group designs all servers to meet or exceed the specifications listed herein. Due to the sheer number of models and combinations of components (memory, CPU, peripheral cards, hard drives), it is not practical to test every combination of servers offered. Please ask your Crystal Business Development Manager for data on qualification testing for configurations similar to the desired configuration for your application.

AS9100C:2009 and ISO 9001:2008 Certified QMS

intel Technology Provider Platinum 2017

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Custom solutions. Superior performance.

Contact Crystal Group:
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