



850 Kacena Rd., Hiawatha, IA 52233 Ph. 319-378-1636
AS9100 Certified QMS

The MOST TRUSTED provider of computer architecture for operational, deployable, and high-reliability applications



Tested to Extreme Environments

Performance, Reliability, Scalability, and Longevity

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

Compact and Powerful

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 under 18" (457mm) fits most any rack space. The RS114PS18 continues to provide leading edge performance to the industrial and DoD markets optimizing value for the end users.

Rugged and Dependable

Using our expertise in industrial and DoD electronics development, we have set the industries expectations in rugged computing performance. Designed for and proven in the harshest environments, the RS114PS18 boasts the highest up-time reliability in the industry. Whether mission critical or vital to your business, the RS114PS18 will exceed your expectations.

High Reliability at a Fraction of the Cost

Innovative packaging techniques and our attention to the details makes our product run cooler and operate over wider temperature ranges. We demand un-throttled CPU performance at the temperature extremes unlike many of our competitors. Our design approach limits chassis deflection to extend the solder joint life of our circuit boards. We provide incredible processing power in the RS114PS18 package with exceptional life at a fraction of the cost of our competition.

Want to Work with a Company that Listens to You?

We don't just sell computers, we provide solutions. That means we are most interested in helping you meet your individual needs. We are fast, flexible, and responsive. We guarantee you will never work with a more customer focused computer company.

**CONTACT A CRYSTAL GROUP BUSINESS DEVELOPMENT MANAGER AT:
800.378.1636 / info@crystalrugged.com / crystalrugged.com**



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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 LGA2011, X9DRL-IF
Option 2: Sandy Bridge or Ivy Bridge LGA1155, X9SAE-V
Option 3: Haswell LGA2011, X10SRL-F or X10DRL-I
Dual, Quad, Hexa, Octa, Deca, or Dodeca Core options (dependent on motherboard)

Expansion

One (1) full-height, 3/4 length PCIe or PCI slot, combination is configuration 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

8- 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: X9DRL-IF, Dual LGA2011 Xeon®, ATX, 2LAN1000, VGA, 1 PCI 3.3V, 4 PCI-E X8, 1 PCI-E X1, IPMI, IPKVM, SATA3X8, SATA3X2
Option 2: 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, SATA3X4, SATA3X2
Option 3: X10DRL-I, Dual LGA2011 R3 Xeon®, ATX, 2LAN1000, VGA, 5 PCI-E X8, 1 PCI-E X16, IPMI, IPKVM, SATA3X10
Option 4: X10SRL-F, Single LGA2011 R3 Xeon®, ATX, 2LAN1000, VGA, 2 PCI-E X16, 5 PCI-E X8, IPMI, IPKVM, SATA3X10

Testing Standards* see www.crystalrugged.com for certification reports

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 select processors
MIL-STD-810, Storage, Method 501, Procedure I/II: -40°C to +85°C
MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours with humidity kit
MIL-STD-810, Operating Altitude, Method 500, Procedure II: 12,500ft
MIL-STD-810, Vibration, Method 514, Category 13: 5.5 GRMS, 10-2000Hz, 60 min/axis with solid state drives + vibration kits
MIL-STD-810, Crash Hazard Shock for Flight Vehicle Equipment, Method 516, Procedure V: 40G 20 ms
MIL-S-901, Grade A, Class 2, Type B
MIL-S-901, Grade A, Class 2, Type A: With solid state drives & vibration kits

Electromagnetic Compatibility Standards

Some standards may require an internal kit

AC, FCC Compliant
AC, MIL-STD-461, RE102, CE102 compliant
DC, MIL-STD-461, RE102, CE102 compliant
RTCA DO-160 Section 21, Category M

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 7®, Windows 8®, Windows Server 2008®, Windows Server 2012®, VMware®, or Linux®

*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.

Need something different?

We customize!

Contact a Crystal Group Business Development Manager at:
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