



**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 RS112S14. High-end computing performance in a 1U chassis with a depth of 13.4" (34.04 cm) fits most any rack space.

Crystal Group Rugged Servers provide high-performance computing and high-capacity data storage in a rugged, all-aluminum package able to withstand the roughest terrains and toughest applications. Crystal Group's highly customizable Rugged Servers are used by the U.S. Armed Forces, Foreign Military, Power Distribution, Autonomous Vehicles, Oil & Gas, and others for everything from communications and networking to weapons control, sensor and surveillance, and unmanned aircraft systems.

**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

- Lightweight aluminum construction – 7 to 15 lbs.
- Full processor performance to +55°C
- Rugged 1U, rack mounted 13.4" depth
- Versatility with two or three removable 2.5" sleds and/or two internally fixed mount 2.5" SSDs
- Expandable with PCIe X16 slot
- Intel® Core i3/i5/i7/i9 processors

*A clear advantage.*



## Specifications

### Mechanical 1U

Height: 1.75" (4.45 cm)
Width: 17.5" (44.45 cm) [accepts Crystal Glides and Jonathan Rails] EIA-310 Rack Compliant
Depth: 13.4" (34.04 cm)
Weight: 7-15 lbs. (3.18-6.80 kg)

### CPU

Intel® CPU architecture options from Intel embedded long-life roadmap
Intel® Core i3/i5/i7/i9 processor

### Expansion

One PCIe X16 full height half depth slot
--

### Memory

Up to 64GB (2x DDR4 SO-DIMM)
------------------------------

### External Bay

Option 1: Two removable SATA SSDs or HDDs
Option 2: Three removable SATA SSDs or HDDs
Option 3: Two 2.5", SATA internally fixed mount SSDs (can exist with any other option)
Option 4: 1x M.2 SATA/PCIe 3.0x4, non-removable (can exist with any other option)

### Mounting

Option 1: Mounted on Crystal glide rails
Option 2: Fixed mount, front and rear
Option 3: Jonathan rails

### System Board

Option 1: Fujitsu/Kontron D3633-S, LGA1151, 8th/9th Gen Core i3/i5/i7/i9 series CPU, Q370 Chipset, up to 64GB via 2x DDR4 So-Dimm, 4x SATA, M.2, PCIe x16, 2x 1GbE, HD Audio, Intel HD Graphics via 1x DVI-D and 2X Displayport, 4x USB 2.0, 4x USB 3.1, PS/2 K/M
Option 2: Supermicro X11SSV-Q, LGA1151, 6th, 7th Gen Core i7/i5/i3 series CPU, Q170 Chipset, up to 32GB DDR4 So-Dimm, 5x SATA 3, 2x 1GbE, HD Audio, Intel HD Graphics via 1xHDMI, 1x Displayport, and 1x DVI-I, 2x RS-232 COM Ports, 4x USB 3.0 rear, 2x USB Front

### Environmental Standards

MIL-STD-810, Operational Temperature, Method 501/502 Procedure I/II: -40°C to +55°C <sup>1</sup>
MIL-STD-810, Storage, Method 501, Procedure I/II: -55°C to +85°C <sup>1</sup>
MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours with conformal coating option <sup>1</sup>
MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport <sup>1</sup>
MIL-STD-810, Vibration, Method 514, Procedure I: 4.63 GRMS, 5-2000Hz, 60 min/axis with solid state drives <sup>1</sup>
MIL-STD-810, Shock, Method 516, Procedures I/V: 20g, 11msec-functional shock; 40g, 11msec crash hazard shock <sup>1</sup>
MIL-S-901, Grade A: with solid state drives <sup>1</sup>
MIL-S-901, Grade B <sup>1</sup>

### 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

### Cooling

Thermally controlled high volume fans
---------------------------------------

### Software Compatibility

Supports Windows 10® or Linux®
--------------------------------

### Power Supply

Option 1: 460W 120/240VAC 50/60Hz w/PFC, 115VAC 400Hz
Option 2: 505W 18-36 VDC



Metromatics

For further information or pricing, please contact us:

Melbourne 03 9872 4592 Sydney 02 9460 4355  
Brisbane 07 3868 4255 Adelaide 08 8343 8516

sales@metromatics.com.au  
www.metromatics.com.au



1 - Designed to meet standard

Notice: This document is for informational purposes only and does not set forth any warranty, expressed or implied, concerning any equipment, equipment feature, or service offered or to be offered by Crystal Group. Crystal Group reserves the right to make changes to this document at any time, without notice, and assumes no responsibility for its use. This informational document describes features that may not be currently available. Due to the numerous models and component combinations, some configuration testing remains pending. Please contact your Crystal Group Program Manager for test data on desired requirements. Export of technical data contained in this document may require an export license from the United States government. Design and specifications are subject to change.

