

RE0412

RUGGED EMBEDDED COMPUTER



Intel® Xeon® D
and Core i7 CPU
options



One PCIe,
low-profile
slot



Ultra lightweight,
small form factor



AC and DC
power supply
options



Up to 16 TB
of internal
storage



Two 2.5" non-
removable SSDs

POWERFUL, COMPACT, RUGGED COMPUTE SYSTEM

With an aluminum frame, carbon fiber chassis weighing in at 4.25 lbs., the RE0412 provides big capability in a small package. The unit was optimized for airborne and ground mobile applications where significant processing power is required. Easily configurable to meet specific customer needs, the embedded product line boasts advanced thermal management and a carbon fiber chassis field-tested to withstand shock and vibration, extended temperature ranges, harsh elements and environments.

Crystal Group provides a 5-year warranty and forward-looking configuration management to enhance the long-term investment of your compute solution.



USE CASES

- Ground mobile applications
- Airborne applications
- UAV/UGV applications
- Industrial workstations (fixed or mobile)
- Video processing workstation when attached to rugged displays

CRYSTAL GROUP RE0412 SERIES TECHNICAL SPECIFICATIONS

Mechanical	Height: 3.13" (7.95 cm) Width: 10.76 (27.33 cm) Depth: 8.63" (21.9 cm) excluding connectors, ground stud, or drive carrier protrusions Weight: less than 4.5 lbs. (2.04 kg) with graphics card
Mounting	Glides, fixed mount (front and rear), or Jonathan rails
CPU Architecture	Intel Xeon D-1700, Core i7 13th Generation
Expansion Slots	One PCIe, low-profile
Cooling	Two high speed fans, thermostatically controlled
Memory	Up to 128GB ECC DDR4 RIMM for Xeon D-1700; up to 64GB DDR4 SO-DIMM for Core i7 series
Drives & I/O	Up to two 2.5" SSD and one M.2 NVMe SSD
Connections	Power: Mini-con-x 3pin shell size 3
Power Supply	Option 1: 150W, 18-36VDC Option 2: 120/240 VAC with external power brick (rugged available)
Software Compatability	Windows 11®, Windows Server®, VMWare®, Linux

ENVIRONMENTAL TESTING STANDARDS

MIL-STD-810: Environmental Engineering Considerations and Laboratory Tests	Operational Temperature, Method 501, Procedure I/II: -20°C to +55 with rotational HDD, -40°C to +55°C with solid state HDD Storage, Method 501, Procedure I/II: -55°C to +85°C Vibration, Method 514, Procedure I: 5.5G, 10-2,000Hz, 60 min/axis, 3 axes Shock, Method 516, Procedures I/V: 20g
MIL-S-901	Grade A: With solid state drives + shock kits

ELECTROMAGNETIC COMPATIBILITY STANDARDS

MIL-STD-461	AC/DC: RE102, CE102 compliant
Emissions	Radiated FCC Part 15. 109, Class A; conducted FCC Part 15. 107, Class A

In-house test reports provided for baseline units; customer-specific test options available upon request.

1: Test report available

2: Testing in progress

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