



Field tested, failsafe and long life performance in extreme conditions. Feature rich Crystal Group Embedded Computer Systems are powerful, compact, and rugged. Completely and easily configurable, the Embedded product line boasts advanced thermal management and an all-aluminum chassis, are field-tested to withstand shock and vibration, extended temperature ranges, harsh elements and harsh environments. Crystal Group Embedded Computer Systems follow the Intel® Roadmap to ensure access to the latest, powerful Intel chipsets and processors.

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

- Compact construction – 4.5"H x 11" x 16.5" footprint
- Panel or rack mounting options
- Power efficient Intel Core i3® and Intel Core i7® options
- Up to four (4) SSD hard drives
- Billet construction from milled and strain hardened 6061T651 structural aircraft aluminum
- No moving parts, fanless, natural convection design

A clear advantage.

Specifications

Mechanical rack or panel mount

Height: 1.75" (4.4 cm) max
 Width: 16.5" (41.9 cm)
 Depth: 11" (27.9 cm) excluding connectors
 Weight: 9.20 lbs. (4.2 kg)
 Power: 30-55W with select configurations, CPU dependent

Expansion

One PCIe X16 low profile

Internal Bay

One, two, three, or four SATA 2.5" SSD (not externally removable)

Cooling

Natural convection, rack panel, or tray mounted

Mounting

Panel mounting via ears on base
 19" rack mount kit

Power Supply

Option 1: 90-250 VAC 50/60 Hz with locking power cord
 Option 2: 18-36 VDC
 Option 3: 48 VDC
 Option 4: 125 VDC

System Board (Note, these features are at the board level and may not all be available in the standard configuration)

Option 1: X9SPV-LN4F-3LE, FCBGA1023, i7-3555LE CPU, 2-16 GB ECC DDR3, 4-USB 2.0, 4-GBLAN, On-board SATA2 & SATA3
 Option 2: X9SPV-F-3217UE, FCBGA1023, i3-3217UE CPU, 2-16 GB ECC DDR3, 2-USB 2.0, 2-GBLAN, On-board SATA2 & SATA3
 Option 3: X9SPV-M4, FCBGA1023, i7-3555LE CPU, 2-16 GB ECC DDR3, 2-USB 3.0, 2-USB 2.0, 4-GBLAN, On-board SATA2 & SATA3
 Option 4: X9SPV-M4-3UE, FCBGA1023, i7-3517UE CPU, 2-16 GB ECC DDR3, 2-USB 3.0, 2-USB 2.0, 4-GBLAN, On-board SATA2 & SATA3

Software Compatibility

Windows 7®, Windows 8®, RHEL 5/6®, or VMWARE®

Environmental Standards

MIL-STD-810, Operational Temperature: -40°C to +70°C, +85°C with select configurations¹
 MIL-STD-810, Storage, Method 501, Procedure I/II: -40°C to +85°C¹
 MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours with humidity kit²
 MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport¹
 MIL-STD-810, Vibration, Method 514, Procedure I: 5.5G, 10-2,000Hz, 60 min/axis, 3 axes²
 MIL-STD-810, Shock, Method 516, Procedure I/V: 20 G, 11ms²

Electromagnetic Compatibility Standards

IEC 61850-3¹
 IEEE-1613¹
 Emissions: FCC Class A²
 Testing with solid state drives

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.



For further information or pricing,
 please contact Metromatics

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1 - Test report available
 2 - Designed to meet standard

Certification reports for select products are available on Crystalrugged.com. Crystal Group designs all embedded computers to meet or exceed the specifications listed herein. Due to the numerous models and component combinations, some configurations are still being tested. Please contact your Crystal Business Development Manager for test data on desired requirements.

AS9100C:2009 and ISO 9001:2008 Certified QMS

