



Field tested, combat proven and long-life performance in extreme conditions. Feature rich Crystal Group Embedded Computer Systems are powerful, compact and rugged. Easily configurable, the embedded product line boasts advanced thermal management with a light carbon fiber chassis, and withstands extreme shock, vibration, extended temperature ranges, and harsh environments. Crystal Group embedded computer systems follow the Intel® Roadmap to ensure access to the latest, powerful Intel chipsets and processors.

Rugged and secure. Crystal Group designs in vital end-to-end security features from the start to meticulously integrate leading-edge rugged hardware Roots of Trust with encryption software from certified partners. With a foundation of essential features, including Trusted Performance Modules (TPM 2.0), FIPS 140-2 SAS solid state drives, intrusion detection, tamper evidence and instant data destruction, we can protect your critical data from attempted breaches at the edge, when it matters most.

Dependable services. When an application requires a custom computing 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, cybersecurity accreditation 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

- Light weight aluminum construction – 15lbs. (6.8kg)
- Tray or wall mounted
- Thermostatically controlled fans for quiet operation
- MIL-C-26482 military circular I/O connectors
- Up to eight 2.5" SSD removable drives
- Intel® Xeon® D, or Skylake CPU
- Modular power supply for multiple input options
- One PCIe x16 expansion slot
- Ultra rugged compact for extreme ambient conditions

A clear advantage.

Specifications

Mechanical rack or panel mount

Height: 4.1" (10.41 cm)
Width: 10" (26.04 cm)
Depth: 14.4" (36.58 cm) excluding connectors
Weight: 14.5 - 16 lbs. (6.54 - 7.26 kg) depends on card content (fully loaded)

Storage

Up to eight removable 2.5" drives

Mounting

Fixed mount or tray mount

Power Supply

Option 1: 9-18VDC (144W) with MIL-STD-461 filtering, MIL-STD-704
Option 2: 18-36VDC (200W) with MIL-STD-461 filtering, MIL-STD-704
Option 3: 36-75VDC (200W) with MIL-STD-461 filtering, MIL-STD-704
Option 4: 120/240VAC (200W) 50/60Hz/115VAC 400Hz with MIL-STD-461 filtering, MIL-STD-704

Software Compatibility

Windows 10®, Redhat® 6.5/6.6, Windows Server® 2016, VMWare®, Linux®

Cooling

High speed, high volume thermostatically controlled fans, air over components cooling design

Environmental Standards

MIL-STD-810, Operational Temperature: -40°C to +60°C, with solid state drives¹
MIL-STD-810, Storage, Method 501, Procedure I/II: -55°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 transport²
MIL-STD-810, Vibration, Method 514, Procedure I: 7.18GRMS x- and y-axis, 4.63GRMS z-axis, 5-2000Hz, 60 min/axis¹
MIL-STD-810, Shock, Method 516, Procedures I/IV: 20g, 11msec - functional shock; 40g, 11msec - crash hazard shock¹

Electromagnetic Compatibility Standards

Some standards may require an internal kit

MIL-STD-461 CE102 (conducted) & RE102 (radiated) emissions, EMC²
Emissions: radiated FCC Part 15. 109, Class A; conducted FCC Part 15. 107, Class A²
Testing with solid state drives

Export Compliance

ECCN: 5A992

Classification is dependent on configuration and is subject to change. Please contact your program manager to receive the classification of your product.

Motherboard	Motherboard Description	Processors	Maximum Memory
*X11SSV-Q	LGA 1151, DP, HDMI, DVI-I, 2x 1G LAN, 1x PCI-E 3.0 x16	Variable, various options	32GB DDR4
X10SDV-6C-TLN4F	FCBGA1667, VGA, IPMI, 2x 1G + 2x 10G LAN, 1x PCI-E 3.0 x16	XEON D-1528, 2.2GHz/2.6GHz	128GB DDR4



For further information or pricing, please contact us:

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1 - Test report available
2 - Designed to meet standard

*Default Option

Certification reports for select products are available on Crystalrugged.com. Crystal Group designs all products 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 Group program manager for test data on desired requirements.

