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 a carbon fiber 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 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 – 6”H x 15.4”W x 9.6”D footprint
- Compact composite construction provides low SWaP
- Xeon®-D CPU technology
- Up to 16 cores Xeon-D
- 18-72 VDC power
- Up to nine 7/9mm SSD storage options, removable drives
- Up to 128GB ECC DDR4 unbuffered, non ECC DDR4 1.2V SO-DIMM or 128GB ECC DDR4 with Xeon-D offering
- MIL-STD-461 CE102, RE102 compliant
- Bulk head or tray mounted options
- Supports full height, half length expansion cards
- Offers high volume, high speed network connections
Specifications

**Mechanical**
- Height: 6" (15.24 cm) max
- Width: 15.4" (39.11 cm)
- Depth: 9.6" (24.38 cm) excluding connectors
- Weight: 7.52 lbs. (3.4 kg)
- Power: 55-80W with select configurations, CPU dependent

**Expansion**
- Two PCIe 3.0x16 full height, half length expansion bay

**Environmental Standards**
- MIL-STD-810, Operational Temperature: -40°C to +60°C¹
- 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 kit¹
- MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport¹
- MIL-STD-810, Vibration, Method 514, Procedure I: 5.5G, 5-2,000Hz, 60 min/axis, 3 axes with vibration kit¹

**Electromagnetic Compatibility Standards**
- Some standards may require an internal kit
- MIL-STD-461, CE102, RE102¹

**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.

**Internal Bay**
- Up to nine SATA 2.5" SSD (externally removable)

**Cooling**
- Three high reliability 92mm fans

**Mounting**
- Tray or bulkhead mounted using ears supplied

**Power Supply**
- Option 1: 18-36 VDC
- Option 2: 36-72 VDC, 120VAC Watt power brick

**System Board**
- Option 1: X10 SDV - 7TP8F
- Option 2: X10 SDV - 7TP4F
- Other options available

**Software Compatibility**
- Windows® 10, Server 2016®, RHEL® 6.8/7.1/7.2, SUSE SLES® 11, 12 Ubuntu® 16/18, or Centos® 7.1

¹ - 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.