



Field tested, failsafe and long-life performance in extreme conditions. Feature-rich Crystal Group embedded computer systems are powerful, compact, and rugged. Designed for applications requiring a small footprint with huge GPU capabilities, the RE1739 is ideal for signal processing and autonomous vehicle sensor processing and inference, the system is light weight and small. Complete with an integrated DC power supply designed for low-voltage vehicular applications.

Completely and easily configurable, our embedded product line boasts advanced thermal management in a billet aluminum chassis for rugged compute performance. Crystal Group embedded computer systems follow leading-edge CPU and GPU roadmaps to ensure access to the latest, most powerful silicon 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 to best manage cost, availability, scalability and flexibility.

Dependable services. When a computing application requires a custom solution, Crystal Group delivers with vertically-integrated services, including product design and development, testing, systems engineering and integration, mechanical and electrical engineering, configuration management, and product life-cycle planning.

Dedicated support. Our expert staff and global network provide fast and effective product support when and where it is needed. Count on Crystal Group for prompt response times, quick turnarounds, 5+ year warranties, and quality service around the clock and around the globe.

FEATURES

- Compact construction – 6.1" (15.3cm)H x 16.3" (41.4cm)W x 13" (33.cm)D
- Modular chassis accommodates multiple micro-ATX motherboard/processor configurations
- Multiple DC input options and 120- 240VAC
- Up to six 7 or 9mm SSD storage options, including removable drives
- MIL-STD-461 CE102, RE102 compliant with power supply filter option
- Rack, bulkhead or tray mount options
- Supports full-height, full-length cards; GPU ready
- IPMI intelligent management

A clear advantage.

Specifications

Mechanical
Height: 6.1" (15.3 cm)
Width: 16.3" (41.4 cm)
Depth: 13" (33 cm)
Weight: 20-26 lbs (9.1-11.8kg)
Power: 75-650W with select configurations; CPU/GPU dependent

Internal Bay
Six SATA/SAS 2.5" SSD (externally removable)

Power Supply
Option 1: 10-36VDC
Option 2: 18-36VDC
Option 3: 120-240VAC 50/60Hz, 115VAC 400Hz

Mounting
Option 1: Tray
Option 2: Bulkhead; ears supplied
Option 3: Rack

Environmental Standards
MIL-STD-810, Operational temperature: -40°C to +60°C ¹ MIL-STD-810, Storage, Method 501, Procedure I/II: -40°C to +85°C ¹
MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours with humidity kit ¹
MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport ¹
MIL-STD-810, Vibration, Method 514, Procedure I: 5.5G, 5-2,000Hz, 60 min/axis, 3 axis with vibration kit ¹

Electromagnetic Compatibility Standards
MIL-STD-461, CE102, RE102 ¹ with kit

Cooling
Three high-reliability, 120mm fans; back to front airflow

Option	Motherboard	CPU	Form Factor	DDR Slots / Max Capacity per slot	LAN	PCIe	BMC	Video	OB USB	Audio	SATA	m.2	OS Compatibility
1	SUPERMICRO X12SCZ-TLN4F	Intel Core I, 10th/11th Gen LGA1200	Micro-ATX 9.6"x9.6"	2 DIMM slots 128G DDR4	2x 10GbE 2x 1GbE	1PCI-E 3.0 x16 1PCI-E 3.0 x4 1PCI-E 3.0 x4	VGA, IPMI, AS2500, GbE	DVI-D, 2xDP	4x3.2	Yes	4x	2x	Windows® 10, Windows 10 Enterprise, RHEL® 6.10, 7.6, 8.0, 8.1, CentOS 7.7, 8.1, SLES 12 SP1, 15 SP2, Ubuntu® 18.04.3, 19.04, FreeBSD 11.3, 12.1
2	ASROCK SPC621D8U-2T	3RD GEN INTEL XEON Scalable	Micro-ATX 9.6"x9.6"	8 DIMM Slots 256G DDR4	2x 10GbE	4 PCIe4.0 x16	VGA, IPMI, AS2500, GbE	N	2x3.2	No	11x	1x	Microsoft® Windows® - Server 2016 (64 bit) - Server 2019 (64 bit) - Server 2022 (64 bit) Linux® - Red Hat Enterprise Linux Server 7.9 (64 bit) / 8.3 (64 bit) - CentOS 7.9 (64 bit) / 8.3 (64 bit) - SUSE Enterprise Linux Server 15 SP2 (64 bit) / 15 SP3 (64 bit) - Ubuntu 20.04.3 (64 bit) / 21.04 (64 bit) Hypervisor - VMware® ESXi 6.7.0 U3 / vSphere 6.7.0 U3 - VMware® ESXi 7.0U3 / vSphere 7.0U3 - Hyper-V Windows Server 2016 - Hyper-V Windows Server 2019
3	SUPERMICRO X12SPM-TF	3RD GEN INTEL XEON Scalable	Micro-ATX 9.6"x9.6"	8 DIMM Slots 256G DDR4	2x 10GbE 4x 1GbE	1PCI-E 4.0 x8 2PCI-E 4.0 x16	VGA, IPMI, AS2500, GbE	N	2x 2.0 2x 3.2	No	10x	1x	Microsoft® Windows® - Server 2016 (64 bit) - Server 2019 (64 bit) - Server 2022 (64 bit) Linux® - Red Hat Enterprise Linux Server 7.9 (64 bit) / 8.3 (64 bit) - CentOS 7.9 (64 bit) / 8.3 (64 bit) - SUSE Enterprise Linux Server 15 SP2 (64 bit) / 15 SP3 (64 bit) - Ubuntu 20.04.3 (64 bit) / 21.04 (64 bit) Hypervisor - VMware® ESXi 6.7.0 U3 / vSphere 6.7.0 U3 - VMware® ESXi 7.0U3 / vSphere 7.0U3 - Hyper-V Windows Server 2016 - Hyper-V Windows Server 2019
4	ASROCK ROMEDU6U-2L2T	EPYC 7002/7003	Micro-ATX 9.6"x9.6"	6 DIMM Slots 256G DDR4	1x GbE, 2x 10GbE	4 PCIe4.0 x16	VGA, IPMI, AS2500, GbE	N	2x3.1	No	31x	2x	Microsoft® Windows® - Server 2016 (64 bit) - Server 2019 (64 bit) Linux® - Red Hat Enterprise Linux Server 8.0 (64 bit) / 7.6 (64 bit) - CentOS 8.0 (64 bit) / 7.6 (64 bit) - SUSE SLES 15.1 (64 bit) / 12.4 (64 bit) - Ubuntu 18.04.3 (64 bit) / 16.04.6 (64 bit) - CITRIX Hypervisor 8.1.0 Virtual - VMware ESXi 6.5 u3 / 6.7 u3 - vSphere 6.5 u3 / 6.7 u3

1 - Testing in progress

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