Field-tested, fail-safe and long-life performance in extreme conditions. This feature-rich embedded computer system is powerful, compact, and rugged. Designed for applications requiring a small footprint with GPU capabilities, the RE1739 is ideal for signal processing and autonomous vehicle sensor processing and inference. The integrated DC power supply is designed for low-voltage noisy vehicular applications.

Completely and easily configurable, our embedded product line boasts advanced thermal management in a composite 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 and 120- 240VAC input options
- Up to six 9mm SSD storage options, including removable drives
- Multiple power supply options
- Rack, bulkhead or tray mount options
- Supports full-height, full-length cards; GPU ready
- IPMI intelligent management control

A clear advantage.

Crystal Group RE1739 Rugged Embedded Computer

Specifications

Mechanical

Height:	6.1" (15.3 cm)
Width:	16.3" (41.4 cm)
Depth:	13" (33 cm)
Weight:	18–30 lbs (8.2–13.6 kg); content dependent
Power:	75–650W with select configurations; CPU/GPU dependent

Internal Bay

Six SATA/SAS 2.5" SSD (externally removable)

Power Supply

Option 1: 10–32VDC

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

Motherboard options

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	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4, 1 PCI-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, FreeBDS 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 Winders Server 2016 - Hyper-V Winders 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	1 PCI-E 4.0 x8, 2 PCI-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 Winders Server 2016 - Hyper-V Winders 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® - RedHat 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