Accelerate artificial intelligence, automation and autonomous projects. Put advanced projects on the fast track to market with Crystal Group AVC1739, designed specifically to reduce development time and streamline systems integration.

The AVC1739 combines impressive compute power, data-handling capabilities, and storage capacity in a compact, rugged solution that can withstand harsh conditions and demanding environments— including potholes, collisions, shock and vibration, and extreme temperatures that cause traditional systems to fail. Available in custom or off-the-shelf configurations, the AVC1739 high-performance computer optimizes the latest processors, high-capacity DDR4 memory, and leading-edge thermal management in a rugged chassis.

Solution Benefits

High compute and storage. Road-ready and flexible, the AVC1739 delivers real-time situational awareness and pinpoint accuracy using the latest processors, housed in a rugged aluminum chassis.

Faster time to market. Our scalable systems put AV/ADAS projects into high gear with off-the-shelf or customized computer systems, development kits, and integration services for a complete turn-key solution.

Trusted and reliable. Rugged electronics and services from Crystal Group are trusted by military and industry leaders for defense, aerospace, industrial, critical infrastructure, and commercial applications—including AVs—for some of the world's largest OEMs.

Proven performance. Tested and proven to perform unparalleled sensor fusion per watt of power and operate on standard automotive voltages in mobile environments where other systems fail.

Speed, agility, quality and support. Crystal Group's 5+ year warranty, quick lead time, and global network provide fast and effective support around the clock and around the world.

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	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