



Accelerate artificial intelligence, automation and autonomous projects. Put advanced projects on the fast track to market with the Crystal Group AVC5904, designed specifically for autonomous semi-truck OEMs to reduce development time and streamline systems integration while improving driving safety without sacrificing reliability.

The AVC5904 combines impressive compute power, data-handling capabilities, and storage capacity in a 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 AVC5904 high-performance computer optimizes the latest Intel® Xeon® 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 AVC5904 delivers real-time situational awareness and pinpoint accuracy with dual Intel Xeon scalable processors housed in a rugged, aluminum enclosure.

Faster time to market. Our scalable systems put AV/ADAS projects into high gear with off-the-shelf and customizable 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

- 10-32 VDC input power
- Up to 384GB DDR4 memory
- Expandable with nine PCIe slots
- Eight removable 2.5" 15mm drives or 12 removable 7mm drives
- Supports up to four GPUs
- Intel® Xeon® Scalable processors

A clear advantage.

Specifications

Mechanical

Height: 8.75" (22.2 cm)
 Width: 19" (48.26 cm) EIA-310 rack compliant
 Depth: 20" (50.8 cm)
 Weight: 60-70 lbs. (27.2 -31.75 kg) [content dependent]

CPU

Intel® CPU architecture options from Intel embedded long-life roadmap
 Intel® Xeon® Scalable processors

Expansion

Up to nine PCIe expansion slots available

External Bay

Standard: 12 removable 7mm SATA 2.5" SSDs
 Optional: Eight removable 15mm NVME 2.5" SSDs

Memory

Up to 384GB registered DDR4

System Board

Advantech ASMB-975

Environmental Standards

Operational temperature: -20°C to +40°C
 Storage: -40°C to +85°C
 Humidity: 5-95%; 240 hours
 Altitude: 12,500ft operation, 40,000ft transport
 Shock: 12G 15MS 400 shock pulses, Z-axis, half-sine
 Vibration: EN60068-2-64, Category 2A

Cooling

Air cooled via 12 high durability chassis fans configurable for front-to-back airflow or back-to-front airflow
 System **liquid cooled**; redundant internal low noise fans circulate air through chassis to cool components not directly cooled by liquid

Mounting

Standard 19" rack mount or custom mounting provisions available

Power Supply

Standard: 1500W 10-32VDC, Amphenol PowerLock™ Series 300 connectors
 Optional: 2000W 10-32VDC, Amphenol PowerLock™ Series 300 connectors

Customization

Customization of all components and vehicle integration services are available



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