CORE SYSTEMS



RUGGED AR707 MISSION COMPUTER

Military-Grade Tactical Computer

The **AR707** is a rugged edge computer designed for demanding AI, defense, and industrial applications. Powered by NVIDIA Grace Blackwell architecture and a 20-core Arm CPU, it delivers high compute density, efficiency, and AI performance in a compact 2.5-inch chassis. With up to 128 GB unified LPDDR5x memory and 4 TB encrypted NVMe storage, the AR707 supports mission-critical workloads requiring low latency and high reliability in harsh environments.

Tested to MIL-STD-810 and MIL-STD-461 standards, the AR707 withstands shock, vibration, humidity, and temperatures from –15 °C to +55 °C. It operates at altitudes up to 12,500 ft and is transport survivable to 40,000 ft. Optional EMI filtering ensures CE and RE compliance, making it ideal for tactical, aerospace, and rugged edge computing where performance and durability matter.

- Application-specific design
- Tested to meet military standards
- Built in the USA

Featured Specifications

GPU
NVIDIA Grace Blackwell
Blackwell Architecture DGX Spark

CPU
20 core Arm
10 Cortex-X925 + 10 Cortex-A725

Memory
128 GB LPDDR5x unified system
273 GB/s bandwidth

Storage
4 TB NVMe M.2 with self-encryption

Networking
10 GbE 1x RJ-45 connector
ConnectX-7 Smart NIC
4x USB Type C

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Technical Specifications

Dimensions
Height: 2.50 inches, Width: 7.00 inches, Depth: 7.00 inches

GPU
NVIDIA Grace Blackwell
Blackwell Architecture

CPU
20 core Arm,10 Cortex-X925 + 10 Cortex-A725

GPU
NVIDIA Grace Blackwell DGX Spark

Tensor Cores
5th Generation

RT Cores
4th Generation

Tensor Performance1
1,000 AI TOPS

System Memory
128GB LPDDR5x, unified system memory

Memory Interface
256-bit

Memory Bandwidth
273 GB/s

OS
DGX OS

Storage
4 TB NVME.M2 with self-encryption

Connectivity
4x USB Type C
10 GbE 1x RJ-45 connector
ConnectX-7 Smart NIC

Environmental Specifications

Operational Temperature
-15°C to +55°C; MIL-STD-810F, Method 502.4 Procedure II (Low Temperature) and Method 501.4 Procedure II (High Temperature)

Storage Temperature
-55°C to +85°C; MIL-STD-810F, Method 502.4 Procedure I (Low Temperature) and Method 501.4 Procedure I (High Temperature)

Humidity
MIL-STD-810F, Method 507.4: 95% RH, 48 hours at 40 – 65°C

Altitude
MIL-STD-810F, Method 500.4: 12,500 ft operation; 40,000 ft transport

Vibration
MIL-STD-810G, Method 514.6: 4.43 GRMS, 5-20000Hz, 60 min/axis

Shock
MIL-STD-810G, Method 516.6: 20g, 11ms functional; 40g, 11ms crash hazard

EMC
MIL-STD-461F: CE & RE emissions

Work With Core Systems Today

Core Systems designs and builds rugged servers, displays, mission computers, and integrated cabinet solutions for military and industrial applications. From our 85,000 sq. ft. San Diego facility, we deliver cutting-edge, durable computing solutions for mission-critical needs.



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