

Altos BrainSphere™ R680-F7

Scalable Foundation for Evolving AI Workloads



CPU
350W



GPU
600W



Memory
8TB



Storage
Up to 188TB



Form Factor
4U



Certified Technology



The Altos BrainSphere™ R680-F7 is a 4U GPU server platform designed to meet the high-performance demands of AI training, high-performance computing (HPC), and enterprise data workloads. Powered by dual 6th Gen Intel® Xeon® processors, DDR5 memory, and support for high-performance GPUs, it delivers compute density and configuration flexibility for a wide range of deployments.

Extreme Compute Power for AI and HPC

Equipped with Intel® Xeon® 6700/6500 series CPUs, the R680-F7 delivers strong per-core performance and AI acceleration. It supports up to 8x dual-slot GPUs and is capable of hosting 8x NVIDIA H200 NVL with 4-way NVLink™ bridges—ideal for training large AI models, simulations, and generative workloads. With 32 DDR5 RDIMM/MRDIMM slots supporting up to 8000 MT/s, it ensures high-throughput memory access for latency-sensitive applications like deep learning and analytics.

Optimized Thermal, Power, and Manageability

The 4U chassis maintains thermal stability under full load, with streamlined airflow and tool-less fan modules. Redundant 3+1 Titanium 3000W PSUs support efficient, continuous operation in dense deployments. It also features the ASPEED® AST2600 BMC for remote management via IPMI, HTML5 KVM, and SNMP v3, along with built-in security features such as TPM 2.0 and UEFI Secure Boot.

Flexible Architecture with Scalable Investment Efficiency

The R680-F7 offers a more flexible PCIe-based architecture compared to HGX platforms, providing greater configuration scalability to balance performance and cost. This enables phased GPU deployment, supports a broader range of accelerators and adapts more easily to evolving AI workloads. With the integration of Altos aiWorks solution, the R680-F7 further enhances resource allocation, simplifies AI workflow orchestration and maximizes return on infrastructure investment.

Specification

CPU	Dual Intel® Xeon® 6 processors (6700-/6500-series), TDP up to 350W • Intel® Xeon® 6700-Series Processors • Intel® Xeon® 6500-Series Processors
GPU	Supports up to 8 x Dual slot Gen5 GPU • NVIDIA H200 NVL GPU* • NVIDIA RTX PRO™ 6000 Blackwell Server Edition* • NVIDIA L40S
Memory	32 DIMM slots, 8-channel DDR5, RDIMM/MRDIMM • RDIMM up to 6400 MT/s (1DPC) / 5200 MT/s (2DPC) • MRDIMM up to 8000 MT/s
LAN	• 2 × 10GbE (NCSI) • 1 × 1GbE management port
TPM	1 × TPM 2.0 module
Drive Bay	Storage card is required to support SATA and SAS drives.
I/O Ports	• 2 × USB 3.2 Gen1 • 1 × VGA • 2 × 10GbE RJ45 ports • 1 × 1GbE management port
PCIe Expansion	• 8 × FHFL x16 (Gen5 x16) for GPUs • 4 × FHHL x16 (Gen5 x16) • 3 × LP x16 (Gen5 x16).
Power Supply	3+1 3000W 80 Plus Titanium redundant power supplies
Cooling	Air cool
Operating Range	Operating: 10°C to 35°C, 8% to 80% (non-condensing) Non-operating: -40°C to 60°C, 20% to 95% (non-condensing)
Security / Manageability	• ASPEED® AST2600 BMC • TPM 2.0 (FIPS, CC-TCG certification) • UEFI Secure Boot • SNMP v3 Support
Form Factor	4U • 448(W) x 176(H) x 880(D) mm • 448(W) x 176(H) x 1000.5(D) mm (The system supports 8 x NVIDIA H200 NVL PCIe GPUs at 25°C ambient, arranged as two 4-GPU sets, each with a 4-way NVLink bridge.)
OS	Windows Server 2025 Red Hat Enterprise Linux server 10.1 x64 Ubuntu 24.04.3 LTS x64

* The system supports 8 x RTX PRO 6000 Blackwell Server Edition GPUs at 25°C ambient.

** MRDIMMs are only supported with Intel® Xeon® 6 Processors with P-cores and in a 1DPC configuration.

About Altos Computing Inc.

Altos Computing Inc. (abbr. Altos) is established in 2017, is a subsidiary of Acer Group. Leveraging in-house R&D and collaborations with ODM, IHV, and ISV partners, Altos delivers streamlined and cost-effective integrated solutions. Its product portfolio covers AI servers, AI workstations, and AI resource management platforms. In an era of rapid innovation, Altos provides leading solutions across diverse domains, including High Performance Computing (HPC), Virtual Desktop Infrastructure (VDI), Cloud Infrastructure, and Software-Defined Storage (SDS). Our customers include government agencies, academic institutions, cloud service providers, data center operators, and enterprises. In a continuing effort to improve the quality of our products, information in this brochure is subject to change without notice. Images appearing are only representations of some of the configurations available for this model. Availability may vary depending on region. Altos disclaims any liability for errors and omissions in product descriptions. © 2026. All rights reserved. Altos and the Altos logo are registered trademarks of Altos Computing, Inc. Other trademarks, registered trademarks and/or service marks, indicated or otherwise the properties of their respective owners.