

Accelerate Local AI Inference and Real-Time 3D Rendering



SYS-542AW-TR

Generate Content Faster with This All-New Intel High-Performance Workstation

Running AI models in the cloud exposes your team to latency, bandwidth bottlenecks, and data security risks. The Supermicro SYS-542AW-TR solves this by bringing massive inferencing power directly to your local environment in a rackmountable full-tower enclosure.

Powered by a single Intel® Xeon® 600 Series processor with up to 86 cores, and accelerated by Intel® Arc™ Pro B70 graphics, this workstation allows AI engineering teams to run and serve production-scale models locally, and to iterate on LoRA and adapter fine-tuning without moving data off-site. It features unparalleled expandability with five PCIe 5.0 x16 slots to stack workstation GPUs, alongside 8 hot-swap 3.5" NVMe/SATA drive bays for high-speed local data access.

Backed by up to 2x 2000W or 2600W (1+1) Titanium Level (96%) power supplies, this all-Intel powerhouse delivers the uptime and throughput required to make local AI inferencing seamless and secure.



***One system.
Many concurrent
users. SR-IOV
GPU partitioning
for multi-agent
workloads.***

Intel Products and Technologies

Accelerating AI and Analytics at the Edge



Intel® Xeon® 600
Series Processor



Intel® Arc™ Pro
B70 Graphics



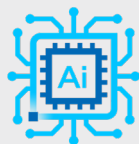
Intel® Ethernet



OpenVINO™
Toolkit

Key Features

Empowered by Intel.



High-Speed AI
Inferencing



Unmatched
Expandability

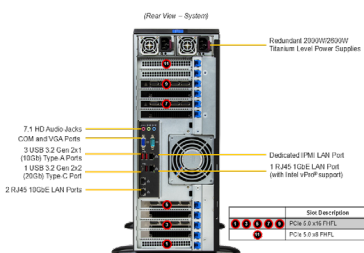


Secure, Local
Datasets



Rock-Solid
Uptime

Supermicro SYS-542AW-TR



intel ai

Intel® AI Edge Systems

Product Specifications

CPU	Intel® Xeon® 600 Series processor (LGA 4710-2/Socket E2) up to 86 cores
Graphics	Up to 4 double-width or 2 triple-width PCIe 5.0 x16 GPU cards
Memory	8 DIMM slots, 8-channel DDR5-6400 ECC RDIMM / 3DS RDIMM — up to 2TB, ~410 GB/s peak memory bandwidth
Storage	8 Hot-swap 3.5" NVMe/SATA drive bays 4 M.2 (support 2280/22110, M-socket, 2x PCIe 5.0 x4 attached to CPU and 2x PCIe 4.0 x4 attached to PCH)
Network	2 RJ45 10 GbE LAN port(s) (Intel® Ethernet Controller E610) 1 RJ45 1GbE LAN port (Intel® Ethernet Connection I219-LM) 1 RJ45 1GbE Dedicated BMC LAN port (Aspeed AST2600)
Operating / Storage Temp.	1 RJ45 1GbE LAN port (Intel® Ethernet Connection I219-LM)
Dimension (W x D x H)	1 RJ45 1GbE Dedicated BMC LAN port (Aspeed AST2600)
Weight	20.9 kg (net weight)
OS	Ubuntu, RHEL, SLES, Rocky Linux, and Windows 11 Pro supported
Power Supply	2x 2000W or 2x 2600W (200–240V input only) redundant (1+1) Titanium Level (96%). 1+1 redundancy provides the capacity of one supply

Learn More

[Supermicro SYS-542AW-TR](#)

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