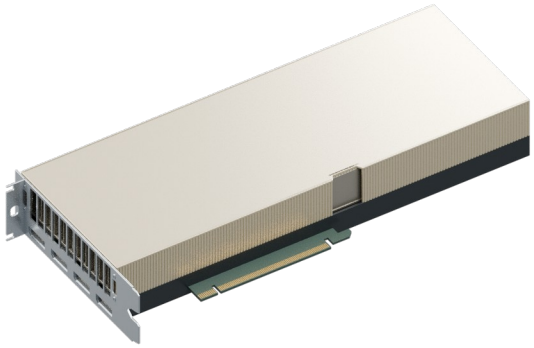
RTX PRO 6000 system brief

Eight GPU Blackwell Server Edition reference configuration

Plan an eight-GPU system around the workload, host platform and facility envelope. NexTec offers Intel and AMD reference configurations for quotation; the final supported bill of materials, power limits and acceptance scope are confirmed in writing.



Independent NexTec RTX PRO 6000 Server Edition GPU illustration. Approximate geometry; not manufacturer CAD or a view of either proposed server chassis.

Configuration element	Reference specification
Accelerators	8 x NVIDIA RTX PRO 6000 Blackwell Server Edition, passive air-cooled
GPU memory	96 GB GDDR7 ECC per GPU; 768 GB aggregate across eight devices
Memory bandwidth	1,597 GB/s per GPU
GPU interface	PCIe 5.0 x16; no HGX NVLink or NVSwitch fabric

Confirm the workload before the hardware

For inference, define the model, precision, context, concurrency and latency target. For fine-tuning or distributed workloads, specify the partitioning strategy and communication pattern. Rendering and visualization require application, scene and licensing review. Aggregate GPU memory is not automatically a shared pool.

HOST PLATFORM COMPARISON

Intel and AMD reference platforms

Both references use a 5U server and eight passive Server Edition GPUs. The CPU, memory population, boot arrangement and power hardware differ; maximum component ratings are not a qualified combined-load guarantee.

Item	Intel reference	AMD reference
Platform	Supermicro SYS-521GE-TNRT	Supermicro AS-5126GS-TNRT2
CPU family	Dual 4th or 5th Gen Intel Xeon Scalable	Dual AMD EPYC 9005 in the reference request
Starting CPU options	2 x Gold 6530: 64 total cores 2 x Platinum 8592+: 128 total cores	2 x EPYC 9555: 128 total cores 360 W TDP per CPU
DDR5 slots	32 DIMM slots	24 DIMM slots
Balanced memory choices	512 GB / 1 TB / 2 TB 16 matched RDIMMs at one DIMM per channel	768 GB / 1.5 TB / 3 TB 24 matched RDIMMs at one DIMM per channel
Boot arrangement	Two onboard M.2 slots; paired qualified drives and mirror method to specify	One onboard M.2 slot; a two-drive boot mirror request uses qualified SATA SSDs
Data storage reference	8 NVMe + 8 SATA hot-swap bays; additional NVMe needs hardware review	Up to 8 NVMe data bays + 2 SATA bays
Onboard networking	Dual 10GbE RJ45 plus dedicated management	Dual 10GbE RJ45 plus dedicated management
PSU hardware	4 x 2700 W Titanium 200-240 VAC	6 x 2700 W Titanium 200-240 VAC

Memory and topology qualification

The Intel platform supports up to 4 TB at one DIMM per channel or 8 TB at two DIMMs per channel; actual speed depends on the CPU and DIMMs. The AMD reference has 24 slots and up to 6 TB platform capacity. Capacity choices are not interchangeable between hosts.

Select application NICs, port counts, optics, cables and switches as a complete design. Validate PCIe peer access, switch uplinks, CPU and GPU locality, GPU and NIC affinity, storage throughput and application scaling.

Illustrations do not depict every host option or the exact supplied chassis. Exact risers, power harnesses, firmware and supported GPU configuration must match the ordered BOM.

DEPLOYMENT AND PROCUREMENT

Power planning and acceptance

A proposed configuration is not a measured system result. Agree the test scope and facility envelope before making performance, cooling or redundancy commitments.

GPU cap per card	Eight GPU subtotal	Plus two EPYC 9555 CPU TDPs
400 W	3.20 kW	3.92 kW
450 W	3.60 kW	4.32 kW
600 W	4.80 kW	5.52 kW

Illustrative AMD planning subtotals only: GPU caps plus 720 W combined CPU TDP. Memory, storage, NICs, fans and conversion losses are excluded. These are not measured wall-power figures or circuit recommendations. Supported GPU caps require OEM validation.

Facility and validation scope

- **Power and cooling.** Validate complete sustained load, A/B feeds, surviving PSU capacity, inlet conditions, rack loading, rails and cable clearances. Do not assume full-load redundancy from PSU count alone.
- **Acceptance evidence.** Agree GPU and ECC checks, storage and network tests, sustained thermal and power logs, firmware and driver versions, and representative workload results. Burn-in duration and thresholds are defined in writing.

Commercial conditions

Quotation and availability. Reference specifications and options are not a stock list. Exact parts, condition, compatibility, price, lead time and service scope are confirmed in the written quotation. An inquiry does not place an order or reserve inventory. Sales and delivery are within the United States only.

Purchase approval. Buyer vetting and NexTec approval are required before purchase. Manufacturer or distributor approval is required where applicable, including PNY review for applicable orders. Buyer, end-user, intended-use and installation-location details may be requested.

Manufacturer warranty. The applicable component manufacturer provides the warranty. Duration, eligibility and claim terms vary by part. Customers contact the manufacturer for claims; NexTec can assist with order and warranty information.

Technical references and next step

NVIDIA RTX PRO 6000 Blackwell Server Edition

Supermicro SYS-521GE-TNRT Intel platform

Supermicro AS-5126GS-TNRT2 AMD platform

Configure a system and request a written proposal