Lenovo NVIDIA HGX Rubin NVL8

High-Density, Liquid-Cooled Acceleration for Advanced AI

Built for the Next Generation of AI

Lenovo NVIDIA HGX™ Rubin NVL8 brings together eight NVIDIA Rubin GPUs in a dense 2U platform designed for large-scale AI training, high-throughput inference, reasoning, agentic reinforcement learning, and scientific research. Based on NVIDIA HGX™ Rubin NVL8 architecture, the system provides the accelerated computing capabilities needed to develop and deploy increasingly complex AI models.

High-Bandwidth GPU Acceleration

Eight NVIDIA Rubin GPUs are interconnected through four NVIDIA® NVLink Switches, creating a tightly connected platform for demanding AI workloads. Eight NVIDIA ConnectX®-9 SuperNICs and NVIDIA BlueField-4 DPU provide the high-speed networking infrastructure needed to support AI training, inference, and other data-intensive workloads.

Scale AI Infrastructure in Flexible Steps

The 2U design enables organizations to deploy AI infrastructure incrementally, starting with a single HGX™ Rubin NVL8 system and scaling to as many as nine systems in a 48U NVIDIA MGX™ rack.

This modular approach provides deployment flexibility while allowing customers to expand GPU capacity as workload requirements grow.

Fully Liquid-Cooled for Dense Computing

The HGX™ Rubin NVL8 uses a fully direct-water-cooled, zero-airflow system design to manage heat from its processors, GPUs, NVLink Switches, and networking components. Support for inlet-water temperatures up to 45°C enables better performance per watt and dense GPU computing within a compact 2U chassis, helping data centers deploy high-performance AI infrastructure while reducing dependence on system-level air cooling.

Compute, Memory, and Storage for AI

Two Intel® Xeon® 6 6776P processors provide the x86 host architecture, supported by 32 DDR5 RDIMM slots with up to 4TB of memory. Up to eight E1.S drives and two M.2 boot devices provide local storage, while the separate CPU and GPU sled design supports cold-aisle serviceability.

Specifications

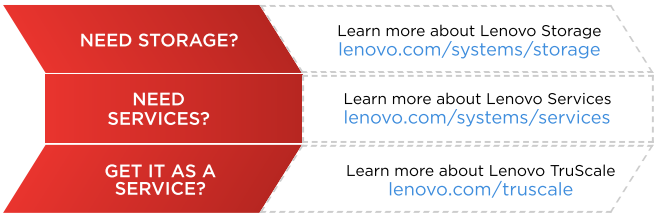
Form Factor	2U, 2-socket, 19-inch rack server; 87 x 448 x 800mm
Processor	2x Intel® Xeon® 6 6776P processors, 64 cores and 350W per processor
Memory	32x DDR5 RDIMM slots at up to 6400MHz; up to 4TB
GPU	8x NVIDIA Rubin GPUs on an HGX Rubin NVL8 baseboard; up to 1.8kW DSX MaxLPS or up to 2.3kW MaxP per GPU
GPU Interconnect	4x NVLink Switch chips with sixth-generation NVIDIA NVLink connectivity
I/O Expansion	1x PCIe x16 adapter
Networking	• 8x ConnectX®-9 on GPU baseboard for E/W network • 1x NVIDIA BlueField-4 DPU with 2x 400Gb/s ports for north-south networking The system includes eight OSFP connections in total, with one OSFP port associated with each ConnectX-9 networking path.
Storage	• Up to 8x E1.S drives • 2x M.2 boot devices
Rack Configuration	Up to 9 systems in a 48U NVIDIA 3rd generation MGX v1.2 rack
Cooling	• Fully direct-water-cooled, zero-airflow system • Supports inlet-water temperatures up to 45°C
Management	Pluggable DC-SCM with AMI OpenBMC
Architecture	NVIDIA HGX Rubin NVL8 reference architecture

About Lenovo

Lenovo is a US$83 billion revenue global technology powerhouse, ranked #153 in the Fortune Global 500, and serving millions of customers every day in 180 markets. Guided by its **vision** of "Smarter Technology for All", Lenovo is executing a **Hybrid AI strategy** that spans Personal AI – one personal AI, multiple devices; and Enterprise AI – helping customers turn data into insights and value. This strategy is delivered through the Group's commitment to **world-class innovation** and a full-stack AI portfolio, including devices, infrastructure solutions, software, and services. Lenovo is widely recognized for its **operational excellence**, with a global footprint spanning more than 20 R&D locations and a supply chain that includes more than 30 manufacturing sites across 10 markets.

For More Information

To learn more about the Lenovo NVIDIA HGX Rubin NVL8, contact your Lenovo representative or Business Partner or visit lenovo.com/thinksystem. For detailed specifications consult the Lenovo NVIDIA HGX Rubin NVL8 Product Guide.



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