

Lenovo ThinkSystem SR650a V4

Optimize GPU density and performance for scalable, AI workloads



Performance Optimized for GPU-Intensive Workloads

The Lenovo ThinkSystem SR650a V4 is designed to accelerate GPU-intensive workloads like AI, deep learning, and HPC. Powered by Intel® Xeon® 6 processors, it delivers exceptional GPU density, advanced storage, and PCIe Gen5 connectivity for peak performance. It supports up to 4x double-width or 8x single-width GPUs and offers up to 8x E3.S NVMe drives for fast, low-latency data access.

Built for scalability and reliability, the SR650a V4 handles demanding GPU workloads with ease. It provides unrivaled I/O bandwidth with up to 14x PCIe Gen5 slots and 2x OCP 3.0 slots, while Lenovo XClarity offers AI-driven management and predictive analytics to reduce downtime.

AI-Driven Intelligence Meets GPU Density - Smarter AI Everywhere

Lenovo ThinkSystem SR650a V4 servers with XClarity One provide fast, secure deployment of AI workloads across on-prem, co-located, or cloud infrastructures. XClarity One simplifies scalability, security, and management, while XClarity Controller enables remote infrastructure management. AI-driven predictive analytics help prevent downtime by monitoring SSD failures and GPU workloads.

The SR650a V4 is built for high-performance AI workloads, offering GPU density and efficiency to accelerate innovation. Features like SSD Predictive Failure Analysis reduce downtime, while enhanced security with federated directory simplify access and protect infrastructure.

Engineered for Sustainability in GPU Workloads from Design to Disposal

The Lenovo ThinkSystem SR650a V4 balances performance with sustainability, optimizing GPU workloads while minimizing environmental impact. It supports GPU-dense configurations and advanced cooling, reducing energy use and achieving up to 3:1 rack consolidation with Intel® Xeon® 6 processors.

With its energy-efficient platforms meet ENERGY STAR® standards, and optional innovative liquid cooling via Lenovo Neptune®, it helps organizations meet sustainability goals while delivering high performance for AI and HPC workloads.

Lenovo

Specifications

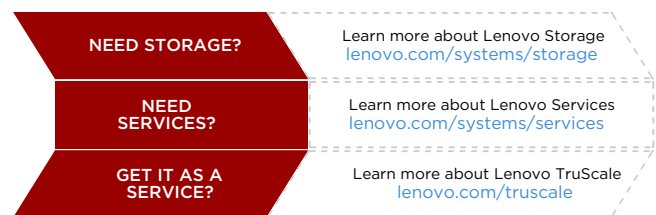
Form Factor/Height	2U rack server
Processors	Up to 2x Intel® Xeon® 6 processors, up to 86 cores and 350W TDP
Drive Bays	<ul style="list-style-type: none"> ● Front: Up to 8x 2.5" SAS/SATA/NVMe, 8x E3.S NVMe drives ● Bootable Device: Up to 2x M.2 SATA/NVMe drives with RAID support, optional hot swap ● Supports Direct NVMe, VROC/VMD
Memory	Up to 32x TruDDR5 3DS/RDIMMs with speeds up to 6400MHz; up to 16x TruDDR5 MRDIMMs with speeds up to 8000MHz. Maximum capacity up to 8TB.
Expansion Slots	<ul style="list-style-type: none"> ● Up to 14x PCIe Gen5 slots ● 2x OCP 3.0 slots for flexible networking options
GPUs	Up to 8x single-width GPUs or 4x double-width GPUs
Network Interface	<ul style="list-style-type: none"> ● OCP adapter installed in the OCP 3.0 slot ● Networking PCIe adapters
Ports	<ul style="list-style-type: none"> ● Front: <ul style="list-style-type: none"> ○ Optional 2x USB 3.0 with XClarity Mobile support and 1x mini DP ○ Optional 1x external diagnostics handset port ● Rear: <ul style="list-style-type: none"> ○ 2x USB 3.0 G1 ○ 1x VGA ○ 1x 1GbE RJ-45 dedicated management port ○ Optional 2nd 1GbE management port in OCP slot location ○ Optional 1x Serial port
HBA/RAID Support	VROC for NVMe SW RAID (0,1,5,10); common building blocks including standard and internal PCIe RAID/HBA adapters
Cooling Solution	Lenovo Neptune® Core and Neptune® Air technology
Power	Dual Redundant AC & DC (multiple wattages); Platinum & Titanium rated PSUs
Systems Management	Lenovo XClarity Controller
OS Support	Microsoft, SUSE, Red Hat, VMware. Visit lenovopress.com/osig for details.
Limited Warranty	1-year and 3-year customer replaceable unit and onsite service, next business day 9x5; optional service upgrades

About Lenovo

Lenovo (HKSE: 992) (ADR: LNVGY) is a US\$62 billion revenue global technology powerhouse, ranked #171 in the Fortune Global 500, employing 77,000 people around the world, and serving millions of customers every day in 180 markets. Focused on a bold vision to deliver smarter technology for all, Lenovo is expanding into new growth areas of infrastructure, mobile, solutions and services. This transformation is building a more inclusive, trustworthy, and sustainable digital society for everyone, everywhere.

For More Information

To learn more about the Lenovo ThinkSystem SR650a V4, contact your Lenovo representative or Business Partner or visit www.lenovo.com/thinksystem. For detailed specs, consult the [SR650a V4 Product Guide](#)



© 2025 Lenovo. All rights reserved.

Availability: Offers, prices, specifications and availability may change without notice. Lenovo is not responsible for photographic or typographic errors. **Warranty:** For a copy of applicable warranties, write to: Lenovo Warranty Information, 1009 Think Place, Morrisville, NC, 27560. Lenovo makes no representation or warranty regarding third-party products or services. **Trademarks:** Lenovo, the Lenovo logo, Neptune®, ThinkSystem®, and XClarity® are trademarks or registered trademarks of Lenovo. Intel® and Xeon® are trademarks of Intel Corporation or its subsidiaries. Microsoft® is a trademark of Microsoft Corporation in the United States, other countries, or both. Other company, product, or service names may be trademarks or service marks of others. Document number DS0195, published February 24, 2025. For the latest version, go to lenovopress.lenovo.com/ds0195.

