

Lenovo ThinkSystem SR670 V2

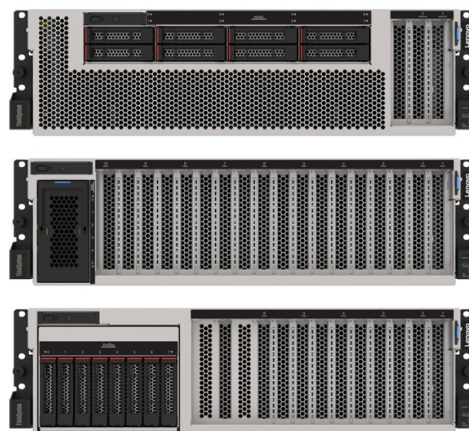
From Exascale to Everscale™ – a modular platform tailored to your enterprise AI requirements

Designed for Your Enterprise

Lenovo ThinkSystem SR670 V2 delivers optimal performance for Artificial Intelligence (AI), High Performance Computing (HPC) and graphical workloads across an array of industries. Retail, manufacturing, financial services and healthcare industries are leveraging GPUs to extract greater insights and drive innovation utilizing machine learning (ML) and deep learning (DL). Here are a few ways Accelerated Computing leveraging GPUs are being used in different organizations:

- Training DL models for self-driving cars
- Remote visualization for work-from-home teams
- Ray-traced rendering for photo-realistic graphics
- Powerful video encoding and decoding
- In-silico trials and immunology in Life Sciences
- Natural language processing (NLP) for call center
- Automatic optical inspection (AOI) for quality control
- Computer vision for retail customer experience

As more workloads leverage the capabilities of accelerators, the demand for GPU richness increases. The ThinkSystem SR670 V2 delivers an optimized enterprise-grade solution for deploying accelerated HPC and AI workloads in production, maximizing system performance.



EveryScale Platform means: Versatility

The SR670 V2 features a modular design for ultimate flexibility. With six different front shuttle options, configurations include:

- Up to eight double-width GPUs with NVLink Bridge
- Up to eight single-width GPUs with eight drives
- NVIDIA HGX A100 4-GPU with NVLink and Lenovo Neptune™ hybrid liquid cooling performance
- Choice of front or rear high-speed networking
- Choice of local high speed NVMe storage

Lenovo

The ThinkSystem SR670 V2 is built on two 3rd Gen Intel® Xeon® Scalable processors and is designed to support the vast NVIDIA Ampere datacenter portfolio:

- NVIDIA HGX A100 4-GPU with NVLink
- NVIDIA A100 Tensor Core GPU
- NVIDIA A40 Tensor Core GPU

The SR670 V2 delivers performance optimized for your workload, be it visualization, rendering or computationally intensive HPC and AI.

Cutting Edge Cooling Capability

Traditional air-cooling methods are reaching critical limits. Increases in component power especially on CPU and GPU have resulted in higher energy and infrastructure costs, extremely loud systems and heightened carbon footprints.

To combat these challenges and dissipate heat quickly, the SR670 V2 employs Lenovo Neptune™ liquid-to-air hybrid cooling technology. The heat of the NVIDIA HGX A100 GPUs is taken away through a multi-chamber pump directly at the source and in a closed loop transferred to a powerful radiator where airflow through the optimized fin-layout transfer heat from liquid to air using a liquid to air heat exchanger.

Solutions That Scale

Whether you're just starting with AI or moving into production, your solution must scale with your organization's needs. The ThinkSystem SR670 V2 can be used in a cluster environment using high-speed fabric to scale out as your workload demands increase.

Enabled with Lenovo intelligent Computing Orchestration (LiCO), you can support multiple users and scaling within a single cluster environment. LiCO is a powerful platform that manages cluster resources for HPC and AI applications. LiCO provides workflows for both AI and HPC, and supports multiple AI frameworks, including TensorFlow, Caffe, Neon, and MXNet, allowing you to leverage a single cluster for diverse workload requirements.

Get a Hands-on, Concierge Experience

Getting started is easy. At the Lenovo AI Innovation Centers, you can test your own Proof of Concept (PoC) on different hardware and software platforms, including the SR670 V2. Lenovo data scientists and AI solution architects are available to help you along the way. Lenovo can work with you to develop an end-to-end solution for your unique use case with professional services and deep industry partnerships to ensure your success.

Data Center Reliability Leader

At Lenovo, we take a customer-centric approach, which is why ThinkSystem servers consistently rank #1 in reliability*. Also, Lenovo is the leading provider of Supercomputer systems on the TOP500**. The ThinkSystem SR670 V2 provides the latest in performance and reliability in a scalable solution for enterprise and research.

Specifications

Form Factor	3U Rack-mount with three modules
Processor	2x 3rd Gen Intel® Xeon® Scalable processors per node
Memory	Up to 2.0TB using 32x 64GB 3200MHz TruDDR4 3DS RDIMMs per node Intel® Optane™ Persistent Memory 200 Series
Base Module	4x DW/SW FHFL GPUs up to 300W @ PCIe Gen4 x16, or 8x SW FHFL GPUs up to 150W @ PCIe Gen4 x8 8x 2.5" Hot Swap SAS/SATA/NVMe, or 4x 3.5" Hot Swap SAS/SATA/NVMe (selected configurations)
Dense Module	8x DW/SW FHFL GPUs up to 300W/150W @ PCIe Gen4 x16 with PCIe switch 6x EDSFF E.1S NVMe SSDs
HGX Module	NVIDIA HGX A100 4-GPU with 4x NVLink connected SXM4 GPUs 8x 2.5" Hot Swap NVMe SSDs
RAID Support	SW RAID standard; Intel® Virtual RAID on CPU (VROC), HBA or HW RAID with flash cache options
I/O Expansion	Up to 2x PCIe Gen4 x16 adapters (front or rear) and 1x PCIe Gen4 x16 OCP 3.0 mezz adapter (rear)
Power and Cooling	Four N+N redundant hot-swap PSUs (up to 2400W Platinum) Full ASHRAE A2 support with internal fans and Lenovo Neptune™ hybrid cooling on HGX A100
Management	Lenovo XClarity Controller (XCC) and Lenovo Intelligent Computing Orchestration (LiCO)
OS Support	Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Microsoft Windows Server, VMware ESXi Tested on CentOS and Canonical Ubuntu

* See [ITIC Reliability Study](#)

** See [Lenovo Celebrates #1 Vendor for TOP500 HPC Systems in 2020](#)

For More Information

To learn more about the ThinkSystem SR670 V2, contact your Lenovo representative or Business Partner or visit lenovo.com/thinksystem.

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