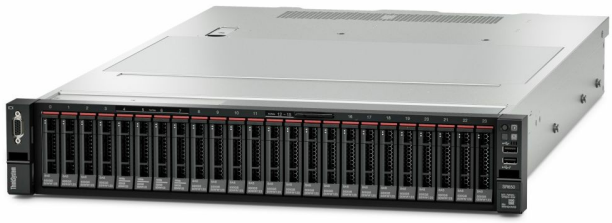
ThinkSystem SR650

High-performance scalable server



For Compute-Intensive Workloads

For medium to large enterprises, and managed and cloud service providers, Lenovo ThinkSystem SR650 is the optimum 2U, two-socket server—the most widely used server type worldwide. It's engineered to deliver high performance with 205W CPUs, low-latency NVMe drives, and high-power GPUs.

With Lenovo's history of reliability, the highly flexible and configurable SR650 is the ideal platform for hyperconverged infrastructure (HCI) or software-defined storage (SDS). It provides a solid foundation for: 1) transforming physical resources into services, using validated designs for hybrid cloud; 2) performing analytics on streaming data, using validated designs for Big Data; and 3) increasing productivity of virtualized transactional systems, using validated designs for OLTP databases.

Versatile and Scalable

ThinkSystem SR650 incorporates up to two powerful Intel® Xeon® processor Scalable family CPUs, with 27 percent more cores and twice the memory capacity of the previous generation server*. It supports two 300W high-performance GPUs and ML2 NIC adapters with shared management. Unique Lenovo AnyBay technology provides the flexibility to mix-and-match SAS/SATA HDDs/SSDs and NVMe SSDs in the same drive bays.

Four direct-connect NVMe ports on the motherboard provide ultra-fast read/writes with NVMe drives and reduce costs by eliminating PCIe switch adapters.

Plus, storage can be tiered for greater application performance, to provide the most cost-effective solution. Optional mirrored M.2 drives ensure reliability and quick OS initialization. SR650 also features 80 PLUS Platinum and Titanium PSUs, as well as continuous operation at 45°C, to reduce energy costs.

Easily Managed

Lenovo XClarity Controller is an all-new hardware embedded management engine common in every ThinkSystem server. XClarity Controller features an uncluttered graphical user interface, industry standard Redfish-compliant REST APIs, and enables booting in half the time of prior generation servers, with up to 6x faster firmware updates.

Lenovo XClarity Administrator is a virtualized application that centrally manages ThinkSystem servers, storage, and networking. Via reusable patterns and policies, it ramps up and scales infrastructure provisioning and maintenance. It serves as a central integration point to extend your data center management processes to physical IT. Running XClarity Integrators in external IT applications, or integrating through REST APIs, helps you further speed services provisioning, streamline IT management, and contain costs.

Lenovo servers continue to be the industry's #1 most reliable†, with the industry's highest customer satisfaction‡ rating.

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ThinkSystem

intel XEON PLATINUM inside™

Specifications

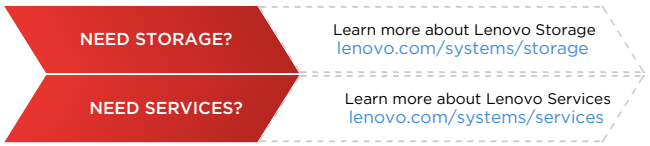
Form Factor/Height	2U rack server
Number of Processors	Up to 2x Intel® Xeon® Platinum processors, up to 205W
Memory	Up to 3TB in 24x DIMM slots using 128GB DIMMs; 2666MHz TruDDR4
Expansion Slots	Up to 7x PCIe 3.0 via multiple riser options, including 1x dedicated PCIe slot for RAID adapter
Drive Bays	Up to 24 HS bays (incl. 4 or 8 AnyBay): plus up to 2x mirrored M.2 boot (opt. RAID 1)
HBA/RAID Support	Hardware RAID (up to 24 ports) with flash cache; up to 16-port HBAs
Security and Availability Features	TPM 1.2/2.0; PFA; HS/redundant drives, fans, and PSUs; 45°C continuous operation; light path diagnostic LEDs; front-access diagnostics via dedicated USB port
Network Interface	2/4-port 1GbE LOM; 2/4-port 10GbE LOM (Base-T or SFP+); 1x dedicated 1GbE mngmt port
Power (Energy Star 2.0 compliant)	2x hot swap/redundant: 550W/750W/1100W/1600W 80 PLUS Platinum; or 750W 80 PLUS Titanium
Systems Management	XClarity Controller embedded management, XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management
OSes Supported	Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware vSphere. Visit lenovopress.com/osig for details.
Limited Warranty	1- and 3-year customer replaceable unit and onsite service, next business day 9x5; opt. service upgrades

Featured Options

NVIDIA Tesla P100 16GB Passive GPU	**Intel Single-port PCIe 3.0 x16 HFA**	**2.5-inch 7.68TB SAS 12Gb HS SSD**
7X67A00068	00WE027	7N47A00122
Designed to boost throughput for HPC and hyperscale data centers	Designed for HPC workloads with low end-to-end latency	High-performance solution for read/capacity-intensive applications

For More Information

To learn more about the Lenovo ThinkSystem SR650, contact your Lenovo representative or Business Partner or visit www.lenovo.com/thinksystem. For detailed specs, consult the SR650 Product Guide.



* Compared to Lenovo x3650 M5. † 2016-2017 Global Hardware, Server OS Reliability Report , ITIC; October 2016; and ITIC Reliability Study 2016-2017 Mid-year Update, May 2017. ‡ 2H16 Corporate IT Buying Behavior and Customer Satisfaction Study, TBR; July 2017.

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