

Lenovo ThinkSystem SR850 V3

Calculated efficiency, optimized
for growth



Optimized for Growth

The Lenovo ThinkSystem SR850 V3 delivers high performance, reliability, and versatility to effortlessly tackle the workloads that keep your organization moving, enabling you to quickly respond to the expansion of your data infrastructure needs.

Built for standard workloads such as general business applications and server consolidation projects, the SR850 V3 also accommodates high-growth areas of your business such as database and virtualization efforts. The versatile design of the system enables you to rapidly upgrade its capabilities with more CPUs, memory, and storage capacity to help you keep pace with growing IT needs.

Intelligently Agile Design

The ThinkSystem SR850 V3 has intelligent design aspects that allow affordable and seamless scalability in a standard x86 server platform to address growing workload areas. The system has the capability to scale from two to four 4th Gen Intel® Xeon® Scalable processor family CPUs that offers a simple “pay as you grow” upgrade for both processors and memory, resulting in greater system performance to handle growing next-generation workloads.

In addition, the SR850 V3 supports ample amounts of ultra-fast DDR5 memory, considerable on-board storage capabilities with support for up to 24 2.5-inch drives, up to 24 direct link NVMe drive support for latency-sensitive applications, and even up to two double-width 350W or four single-width GPUs.

The data-critical nature of today's IT environments stresses the data processing capabilities of any modern organization. The high CPU density of the SR850 V3, featuring up to four 4th Gen Intel® Xeon® Scalable processors in just 2U of rack space, provides an efficient use of data center space. Additionally, numerous configuration options including the ability to expand internal storage capabilities, and varied I/O connectivity options suits a wide range of enterprise applications.

Enable Next-Generation Workloads

The combination of up to four 350W 4th Gen Intel® Xeon® Scalable processors configured with a mesh topology combines with the following technologies to provide great value and performance with the SR850 V3:

- One or two (mirrored) 7mm rear or M.2 internal drives provide rapid OS boot that is faster and more secure than either USB keys or SD cards, and free up drive bays for data storage.

Lenovo

- Direct connect NVMe storage speeds database response times, reducing latency and eliminating storage as the throughput bottleneck in I/O-intensive applications such as transactional processing, HPC, and Big Data applications, providing tight compliance windows for backup and replication and helping improve VM density and migration.
- High I/O bandwidth coupled with a generous number of PCIe expansion slots provides additional connectivity as your business and workload demands increase.

These are merely a few of the incorporated technologies that create the exceptional performance, scalability, and value needed for enterprise-class workloads, both today and into the future.

Reliability You Can Trust

Because your business depends on your systems, you need servers built for reliability. The ThinkSystem SR850 V3 delivers multiple layers of reliability from the processors up, so you can have the confidence that you're running your workloads on a platform built to stay up and running.

Lenovo servers are so dependable that they continue to be rated the industry's [#1 most reliable](#).

- Enterprise-class CPU reliability, availability, and serviceability (RAS) features
- Predictive Failure Analysis—Identifies a failing component prior to failure, to enable scheduled parts replacement—rather than reacting after a failure—and minimize or avoid downtime. PFA alerts are available for all major components, including CPUs, DIMMs, adapter slots, fans, PSUs, storage devices, and voltage regulators.

- Light path diagnostics—Onboard component LEDs to instantly identify components needing replacement (based on PFA alerts), for faster serviceability and reduced downtime.
- Root of Trust (RoT) module includes Platform Firmware Resiliency (PFR), Trusted Platform Module (TPM) 2.0 or TCM for PRC, which further enhances key platform subsystem protections by detecting unauthorized firmware updates, recovering corrupted images to a known-safe image, and monitoring firmware to ensure it has not been compromised. Secures and authenticates system to prevent unauthorized access.

With reliability and security designed into the system, the SR850 V3 builds on industry-standard technologies to deliver an economical, dependable platform for the most demanding users and applications.

Server Deployment, Management and Security

Lenovo XClarity Controller is the embedded management engine in ThinkSystem servers that is designed to standardize, simplify, and automate foundation server management tasks.

Lenovo XClarity Administrator is a virtualized application that centrally manages ThinkSystem servers, storage, and networking, which can reduce provisioning time up to 95% versus manual operation. Running XClarity Integrator helps you streamline IT management, speed provisioning, and contain costs by seamlessly integrating XClarity into an existing IT environment.

ThinkShield is a comprehensive approach to security designed to secure the data center, from the foundation of your infrastructure to the network's edge and guard against a security breach. ThinkShield protects your business with each offering, from development through disposal.

Specifications

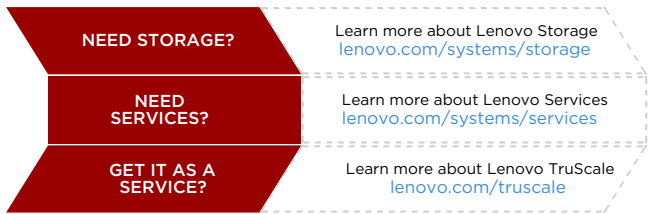
Form Factor	2U
Processors	Two or four 4th Gen Intel® Xeon® Scalable processors, up to 350W Mesh topology with 3x UPI links With Up to 4x QAT, DLB, IAA and DSA Accelerators
Memory	Up to 16TB of TruDDR5 memory in 64x slots Memory speeds up to 4800MHz
Expansion	Up to 12x (8x Gen5 + 4x Gen4) or 7x (6x Gen5 + 1x Gen4) or 12x Gen4 or 9x Gen4 expansion slots Front: VGA, 1x USB 3.1, 1x USB 2.0 Rear: 2x USB 3.1, optional Serial port, VGA port, 1GbE dedicated management port
Internal Storage	Up to 24x 2.5" drives; Supports up to 24x direct connection NVMe drives; 2x 7mm or 2x M.2 drives for boot
GPU Support	Up to 2x double-width 350W GPUs or 4x single-width 75W GPUs
Network Interface	2 Dedicated OCP 3.0 slots supporting 1GbE, 10GbE, 25GbE or 100GbE
Power	2x Platinum or Titanium hot-swap power supplies; N+N redundancy supported
High Availability	PFA; hot-swap/redundant drives and power supplies; redundant fans; internal light path diagnostic LEDs; front-access diagnostics via dedicated USB port; optional External Diagnostics Panel Handset with LCD display
Security	Root of Trust (RoT) module includes Platform Firmware Resiliency (PFR), Trusted Platform Module (TPM) 2.0 or TCM for PRC and optional Chassis Intrusion Switch. Secures and authenticates the system to prevent unauthorized intrusion.
RAID Support	Support for ThinkSystem PCIe RAID/HBA cards
Management	Lenovo XClarity Controller; Redfish support
OS Support	Microsoft, Red Hat, SUSE, VMware. Visit lenovopress.com/osig for more information
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 SR850 V3, contact your Lenovo representative or Business Partner or visit www.lenovo.com/thinksystem. For detailed specs, consult the [SR850 V3 Product Guide](#)



© 2024 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, ThinkShield®, 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 DS0155, published January 10, 2023. For the latest version, go to lenovopress.lenovo.com/ds0155.

