

ThinkSystem SR850P

Engineered for maximum performance in a 2U-4S form factor



Growth is Inevitable

The Lenovo ThinkSystem SR850P is engineered to deliver advanced performance and reliability required today, with the scalability and versatility needed as you advance toward the “future-defined” data center and intelligent transformation.

The flexible 2U ThinkSystem SR850P features four powerful second-generation Intel® Xeon® Processor Scalable family CPUs in a full UPI mesh design, delivering up to 20% total performance improvement over the ThinkSystem SR850*. The ThinkSystem SR850P delivers up to 112 cores and 15TB of memory**.

Engineered for high-growth areas such as memory intensive databases and virtualization, the ThinkSystem SR850P can also support general business applications and server consolidation. The agile design of ThinkSystem SR850P provides rapid upgrades for processors and memory, and its large, flexible storage capacity helps you keep pace with data growth.

Intelligently Designed for Value

When expansion is inevitable, systems have to respond quickly. However, if that response is beyond your budget, system capabilities don't really matter. If you are locked into an inflexible proprietary ecosystem that makes growth painfully expensive, you could face daunting choices between progress and budget. ThinkSystem SR850P is smartly designed to deliver affordable scalability in a standard x86 platform.

In today's data-critical world, customers are looking for additional storage that's both high performing and flexible. ThinkSystem SR850P provides the ultimate flexibility in processor, memory, and storage selection, to meet your workload requirements.

With four of the latest Intel Xeon processors installed you can run a wide variety of applications, from databases to client virtualization, to server consolidation projects. The ThinkSystem SR850P design allows for drive configuration flexibility, as well as providing tremendous memory density, in the same 2U as many 2-socket servers.

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.

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The Confidence to Run Anything

Your business depends on reliable systems to keep you running. The ThinkSystem SR850P delivers multiple layers of resiliency to protect data and ensure continuous operation from the entire system, giving you the confidence to run any workload, at any time.

- Enterprise-class CPU reliability, availability, and serviceability (RAS) features
- Light path diagnostics—Onboard component LEDs to instantly identify components needing replacement, for faster serviceability and reduced downtime
- TPM 2.0—Secures and authenticates the system to prevent unauthorized intrusion
- Predictive Failure Analysis—Identifies a failing component prior to failure, to enable scheduled parts replacement—rather than reacting after a failure—and minimizes or avoids downtime.

The ThinkSystem SR850P delivers an economical and dependable platform, built on industry-standard technologies, with reliability and security designed into the system, for the most demanding users and applications.

Optimized with the Future in Mind

Your business does not stand still. It can't. You have to be able to expand and grow. Your systems must go past just adding components to the inside. There are constant emerging technologies that you must be able to take advantage of and having the ability to increase performance and capabilities for a competitive advantage are required. The ThinkSystem SR850P has multiple features that enable you to take advantage of tomorrow's technologies:

- Unique dense scalability—four CPUs and 48 DIMMs, in a 2U system
- Up to eight NVMe storage bays for ultrafast read/write storage that can be tiered for greater application performance.

- Easy expansion with up to eight PCIe slots (including four x16), one LOM slot, and one optional ML2 slot and LOM
- M.2 storage for rapid OS boot, faster than either USB keys or SD cards; frees up drive bays for data storage

Workload-Optimized Support

Intel Optane™ DC Persistent Memory delivers a new, flexible tier of memory designed specifically for data center workloads that offers an unprecedented combination of high-capacity, affordability and persistence. This technology will have a significant impact on real-world data center operations: reduction of restart times from minutes down to seconds, 1.2x virtual machine density, dramatically improved data replication with 14x lower latency and 14x higher IOPS, and greater security for persistent data built into hardware.*

ThinkSystem Deployment, Management and Security

Lenovo XClarity Controller is the embedded management engine in all 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/Height	2U rack server
Processor	4x second-generation Intel Xeon Processor Scalable family CPUs, up to 205W
Memory	Up to 15TB in 48x slots using 24x 128GB DIMMs and 24x 512GB Intel Optane DC Persistent Memory
Expansion Slots	Up to 8x PCIe (with four x16) plus 1x LOM; optional 1x ML2 slot and LOM
Internal Storage	Up to 16x 2.5" storage bays supporting SAS/SATA HDD and SSDs or up to 8x 2.5" NVMe SSD; plus up to 2x mirrored M.2 boot
Network Interface	Multiple options with 1GbE, 10GbE, 25GbE, 40GbE, 100GbE or InfiniBand PCIe adapters; one (2-/4-port) 1GbE or 10GbE LOM card
Power Supply	2x hot-swap/redundant: 750W/1100W/1600W/2000W AC 80 PLUS Platinum
Security and Availability Features	Lenovo ThinkShield, TPM 1.2/2.0; PFA; hot-swap/redundant drives, fans, and PSUs; internal light path diagnostic LEDs; front-access diagnostics via dedicated USB port; diagnostic LCD panel
RAID Support	HW RAID (up to 16 ports) with flash cache; up to 16 ports using SAS HBAs
Systems Management	XClarity Controller embedded management, XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management
Operating Systems Supported	Microsoft Windows Server, RHEL, SLES, VMware vSphere. 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\$45 billion Fortune 500 company and a global technology leader in driving Intelligent Transformation. Lenovo's data center solutions (ThinkSystem, ThinkAgile) are creating the capacity and computing power that are changing business and society.

For More Information

To learn more about the ThinkSystem SR850P, contact your Lenovo representative or Business Partner or visit: lenovo.com/thinksystem. For detailed specifications, consult the [SR850P Product Guide](#).

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* Based on internal projections ** 24x 128GB DIMMs and 24x 512GB Intel Optane DC Persistent Memory

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