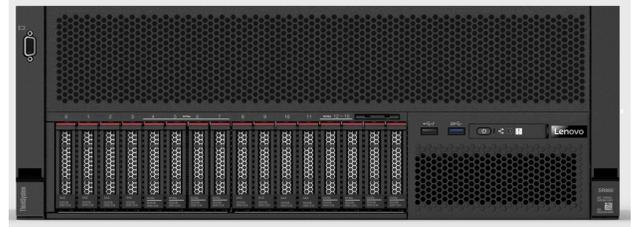


# ThinkSystem SR860

Perfect blend of price,  
performance and scalability



## Affordable Scalability

The Lenovo ThinkSystem SR860 is designed for exceptional price/performance. It provides the speed and reliability you require today, with the scalability and versatility you'll need tomorrow.

When expansion is inevitable, data centers 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 SR860 is smartly designed to deliver affordable scalability in an industry-standard x86 platform.

## Adaptable

The agile design of the ThinkSystem SR860 offers considerable configuration flexibility. It can scale from two to four powerful second-generation Intel® Xeon® Processor Scalable family CPUs via a customer-installable mezzanine tray that enables a quick and easy "pay as you grow" upgrade for processors and memory — and delivers up to a 36% total performance improvement over the first generation.\*

The SR860 is engineered to power through a wide range of workloads, from business consolidation to database virtualization, data analytics, and scientific/technical.

Plus, the SR860 supports plenty of ultra-fast memory, storage, and adapter slots, as well as multiple NIC form factors, and even two GPUs.

## Flexible For A Variety of Workloads

Many kinds of workloads can benefit from GPU-accelerated computing. The thousands of processor cores and parallel architecture make GPUs ideal for compute-intensive applications, such as machine learning, artificial intelligence, analytics, 3D modeling, and others that once required supercomputers.

However, many servers that offer GPUs are far more expensive than the SR860, while comparably priced servers typically don't offer GPUs at all.

Today's data-critical world requires additional storage that's both high-performing and flexible. The SR860 provides tremendous flexibility in storage selection, to meet these workload requirements:

- Lenovo AnyBay accommodates SAS, SATA, and NVMe storage devices in the same bays. This means you don't have to have bays dedicated to either HDDs/SSDs or U.2 NVMe drives. AnyBay lets you mix-and-match as needed.
- Four direct motherboard connections for U.2 NVMe storage provide ultra-fast read/writes and reduce costs by eliminating PCIe switch adapters and bypassing the SAS bus. (Four other NVMe drives can be used via a switch card.)

Lenovo

Plus, storage can be tiered within the system for faster application performance, to provide the most cost-effective solution. The speed of NVMe drives makes them ideal for I/O-intensive applications that require high IOPs throughput and low latency, such as Big Data, OLTP, and HPC. NVMe can ease tight compliance windows for backup or replication, and improve VM density.

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

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 SR860 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 durable that they continue to be rated the industry's #1 most reliable<sup>‡</sup>.

- 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
- TPM 2.0—Secures and authenticates the system to prevent unauthorized intrusion

With reliability and security designed into the system, the SR860 builds on industry-standard technologies to deliver an economical, dependable platform for the most demanding users and applications.

### 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.\*

### Server 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.

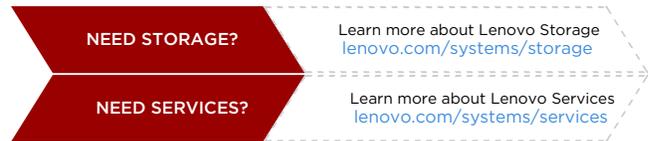


## Specifications

<b>Form Factor</b>	4U
<b>Processors</b>	2 or 4 second-generation Intel® Xeon® Processor Scalable family CPUs, up to 165W
<b>Memory</b>	Up to 6TB in 48x slots (with 4x CPUs) using 128GB DIMMs; 2666MHz / 2933MHz TruDDR4
<b>Expansion</b>	Up to 11x PCIe plus 1x LOM; optional 1x ML2 slot
<b>Internal Storage</b>	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
<b>Network Interface</b>	Multiple options with 1GbE, 10GbE, 25GbE, 32GbE, 40GbE or InfiniBand PCIe adapters; one (2-/4-port) 1GbE or 10GbE LOM card
<b>GPU Support</b>	Up to 2x supported GPUs
<b>Power</b>	2x hot-swap/redundant: 750W/1100W/1600W/2000 AC 80 PLUS Platinum
<b>Security and Availability</b>	TPM 1.2/2.0; PFA; hot-swap/redundant drives, and PSUs; redundant fans; internal light path diagnostic LEDs; front-access diagnostics via dedicated USB port; optional diagnostic LCD panel
<b>RAID Support</b>	HW RAID (up to 16 ports) with flash cache; up to 16-port HBAs
<b>Systems Management</b>	XClarity Controller embedded management, XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management
<b>OS Support</b>	Microsoft, Red Hat, SUSE, VMware. Visit <a href="https://lenovopress.com/osig">lenovopress.com/osig</a> for more information.
<b>Limited Warranty</b>	1-year and 3-year customer replaceable unit and onsite service, next business day 9x5; optional service upgrades

## For More Information

To learn more about the ThinkSystem SR860 enterprise server, contact your Lenovo representative or Business Partner, or visit [lenovo.com/systems/servers](https://lenovo.com/systems/servers). For detailed specifications, consult the [SR860 Product Guide](#).



\* Based on Intel internal testing, August 2018. † [ITIC 2018 Global Reliability Report](#).

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