ThinkSystem SN850

The orchestration platform for conducting business



Infrastructure Made Simple

The Lenovo Flex System Enterprise Chassis now supports two new blades, incorporating powerful second-generation Intel® Xeon® Processor Scalable family CPUs: the four-processor Lenovo ThinkSystem SN850 and the two-processor Lenovo ThinkSystem SN550.

The chassis was engineered to support high-speed networking and multiple generations of Intel Xeon processors.

SN850 offers massively increased memory capacity and bandwidth, more processor cores, faster and larger storage capacity, plus enhanced RAS and security features.** As a result, SN850's four-CPU, 48 DIMM-slot design is powerful enough for even your most demanding memory-intensive workloads.

Examples include in-memory databases, batch and real-time analytics, virtualization, large traditional databases, distributed computing, or consolidating multiple past generation servers onto a single blade.

In addition, SN850 is also compatible with your current Flex System Enterprise chassis, protecting your investment in chassis infrastructure.

Elastic Infrastructure for Ever-Changing Workloads

Making your infrastructure more easily composable is what Flex System is all about. Teamed with the Lenovo XClarity management suite, you can compose compute, storage, and networking resources to adapt to changing workload and capacity requirements.

This extreme agility gives you new levels of command over your resources:

- Faster virtual machine deployment and movement for easier orchestration
- Storage flexibility, from no drives to a choice of mix-and-match SAS/SATA HDDs/SSDs, U.2/NVMe
- Intel® Optane™ DC Persistent Memory - new, flexible tier that offers an unprecedented combination of high capacity, affordability and persistence for a reduction of restart times, 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.†
- NVMe drives, for ultra-fast read/write storage that can be tiered for caching and data analytics
- Direct-Connect NVMe ports—Four direct motherboard connections for NVMe storage provide ultra-fast read/writes and reduce costs by eliminating PCIe switch adapters. Plus, storage can be tiered for faster application performance to deliver the most cost-effective solution.
- Choice of multiple boot devices, including dual-mirrored M.2

These are a few of the incorporated technologies and features that deliver an extremely agile blade architecture, and provide the infrastructure control to free your staff time to focus on innovation and new challenges.

Efficient On Multiple Levels

The Flex System Enterprise Chassis houses up to 7 ThinkSystem SN850 blades and 4 integrated switches, delivering up to 80% greater density than 2U 4-processor rack servers and 1U switches*—with the added bonus of reducing the number of cables (and cabling complexity) by nearly half.

The chassis design creates efficiency via:

- Simplified, flexible, and fast deployment and management with Lenovo XClarity Administrator software
- Up to four integrated networking switches for improved throughput and reduced cabling
- Zoned adaptive cooling varies system fan speeds to reduce energy costs
- Energy-efficient components, including 80 Plus Platinum hot-swap power supplies

Flex System saves time and money by reducing your energy costs and floor/rack-space, and by simplifying management. Reduced complexity enables your infrastructure to become a powerful tool instead of a drain on resources.

A Proven Platform

Flex System is a second-generation blade system that has helped customers streamline their infrastructure since 2012. The ability to run four generations of Intel® Xeon® processor-based blades concurrently in the same chassis, makes Flex System ready for the "future-defined data center".



The Flex System Enterprise Chassis houses up to 7 SN850 compute nodes, delivering high density.

Redundancy is prevalent throughout, including switches, management modules, blades, power supplies, and cooling systems. There is no single point of failure in Flex System. It also features:

- Enterprise-class CPU RAS—such as MCA Recovery, Memory Post Package Repair, and Fatal Error Handling—to keep systems running.
- Cable-free blades, which accelerate servicing and reduce upgrade times
- The XClarity mobile app, which allows remote diagnostics and management from a credentialed mobile device or smart phone
- Worldwide Lenovo service and support, available in more than 140 countries



ThinkSystem Server Deployment and Management

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 the prior generation servers,** with up to 600% 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 ThinkShield is a comprehensive end-to-end approach to security that begins with development and continues through supply chain and the full life cycle of the device. From the data center to the edge of the network our priority is protecting your business with each product.

Specifications

Form Factor	Double-wide blade for Flex System Enterprise Chassis
Processor	Up to 4 second-generation Intel® Xeon® Platinum processors, up to 165W
Memory	Up to 6TB in 48x slots, using 128GB DIMMs; 2666MHz / 2933MHz TruDDR4; supports Intel® Optane™ DC Persistent Memory
Expansion Slots	Up to 4x PCIe x16 mezzanine adapters
Internal Storage	Up to 4x 2.5″ storage bays supporting SAS/SATA HDDs/SSDs or U.2 NVMe SSDs; plus up to 2x mirrored M.2 boot drives (optional RAID 1)
Network Interface	4x 10GbE LOM with fabric connector; or 2x 10GbE, 4x 10GbE, converged network mezzanine adapters, or 4x 25GbE or 2x 50GbE network mezzanine adapters
Power Supply	Contained in the chassis
Security and Availability Features	Lenovo ThinkShield, hot-swap 2.5″ SAS/SATA/U.2 drives; operating temperature up to 40°C (with limitations)
RAID Support	SW RAID standard (6Gbps SATA); optional HW basic RAID (12Gbps SAS/SATA); optional HW advanced RAID (12Gbps SAS/SATA 2GB flash-backed cache)
Systems Management	XClarity Controller, XClarity Administrator, XClarity Integrator plugins, and XClarity Energy Manager
Operating Systems Supported	Microsoft Windows Server, Red Hat, SUSE, VMware vSphere. Visit lenovopress.com/osig for details.
Limited Warranty	3-year customer replaceable unit and onsite service, next business day 9x5; optional service upgrades



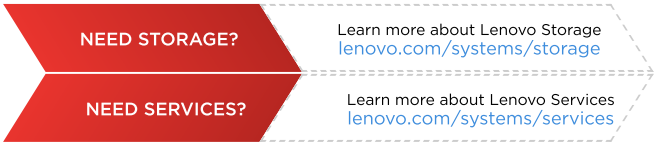
About Lenovo

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.

In addition, Lenovo servers continue to be the industry's #1 most reliable§.

For More Information

To learn more about the ThinkSystem SN850 Compute Node, contact your Lenovo representative or Business Partner or visit www.lenovo.com/thinksystem. For detailed specifications, consult the SN850 Product Guide.



** Compared to the prior-generation Lenovo Flex System x440. † Based on Intel internal testing, August 2018. * 7x ThinkSystem SN850 nodes + 4x integrated switches = 10U; 7x 2U servers + 4x 1U switches = 18U. § ITIC 2018 Global Reliability Report.

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