Lenovo ThinkSystem SR250 Server (E-2200)
Product Guide

Lenovo ThinkSystem SR250 is an affordable, single-socket 1U rack server for small and medium businesses that need optimized performance and flexibility for future growth, along with enterprise-class reliability, management, and security.

The SR250 server offers a wide range of processors — from Intel Celeron to Intel Xeon E Series. With support for a memory capacity of up to 128 GB and internal storage of up to 32 TB, the SR250 server is an ideal choice for small- to medium-sized business, workgroups, distributed locations, and web-scale workloads.

Flexible and scalable internal storage configurations include up to ten 2.5-inch or four 3.5-inch drives with affordable software RAID or advanced hardware RAID protection and a wide selection of drive sizes and types, including NVMe PCIe SSDs, SAS/SATA SSDs, and SAS/SATA HDDs. Also, it features integrated dual-port 1 Gb Ethernet NIC and additional PCIe expansion slots for hardware RAID protection, network scalability, and external storage connectivity.

The next-generation Lenovo XClarity Controller, which is built into the SR250 server, provides advanced service processor control, monitoring, and alerting functions.

The following figure shows the Lenovo ThinkSystem SR250.

Figure 1 Lenovo ThinkSystem SR250

Did you know?

The SR250 server offers enterprise-class reliability features such as error correcting code (ECC), hot-swap components, and advanced RAID protection with flexible storage options at an affordable price.

The SR250 server has a mere 19.6-inch (498 mm) deep chassis, helping customers reduce their business footprint.

The SR250 server offers performance, energy efficiency, and serviceability features, such as NVMe PCIe SSDs, 80 PLUS Gold and Platinum certified power supplies, and easy access to upgrades and serviceable parts (such as memory DIMMs and adapter cards), which is not typically found in the single-socket value servers.

The SR250 server offers easy-to-use, enterprise-class manageability to monitor server availability and perform remote management with the built-in Lenovo XClarity Controller.

Key features

The SR250 server is a compact, cost-effective, single-processor 1U rack server that has been optimized to provide enterprise-class features to small-to-medium-sized businesses, retail stores, or distributed enterprises.

Scalability and performance

The SR250 server offers numerous features to boost performance, improve scalability, and reduce costs:

- Improves productivity by offering superior system performance with the Intel Xeon E Series processors with up to eight cores, up to 16 MB of last level cache (LLC), up to 2666 MHz memory speeds, and up to 8 GT/s bus speed.
    - Choice of processors with up to eight cores and up to 16 threads to enable the effective use of multithreaded applications.
    - Intelligent and adaptive system performance with energy efficient Intel Turbo Boost 2.0 Technology allows CPU cores to run at maximum speeds during peak workloads by temporarily going beyond processor thermal design power (TDP).
    - Intel Hyper-Threading Technology boosts performance for multithreaded applications by enabling simultaneous multithreading within each processor core, up to two threads per core.
    - Intel Virtualization Technology integrates hardware-level virtualization hooks that allow operating system vendors to better utilize the hardware for virtualization workloads.
    - Intel Advanced Vector Extensions (AVX) enable acceleration of enterprise-class and high performance computing (HPC) workloads.
- Provides memory speed, availability, and capacity of up to 128 GB memory with up to four 2666 MHz DDR4 ECC UDIMMs.
- Offers flexible and scalable internal storage in a 1U rack form factor with up to 10x 2.5-inch drives for performance-optimized configurations or up to 4x 3.5-inch drives for capacity-optimized configurations, providing a wide selection of SAS/SATA HDD/SSD and PCIe NVMe SSD types and capacities.
- Provides I/O scalability with the onboard LOM interface and up to three PCI Express (PCIe) 3.0 I/O expansion slots in a 1U rack form factor.
- Reduces I/O latency and increases overall system performance with Intel Integrated I/O Technology that embeds the PCI Express 3.0 controller with 16 lanes into the processors.

Availability and serviceability

The SR250 server provides many features to simplify serviceability and increase system uptime:

- Offers ECC protection which provides error correction not available in PC-class "servers" that use parity memory.
- Provides easy access to upgrades and serviceable parts (such as memory DIMMs and adapter cards) with tool-less cover removal.
- Offers data protection and greater system uptime with a choice of affordable onboard SATA RAID or advanced hardware RAID redundancy, along with hot-swap drives (select models).
- Provides availability for business-critical applications with redundant hot-swap power supplies (select models).
- Allows preventive actions in advance of possible failure, thereby increasing server uptime and application availability with Proactive Platform Alerts (including PFA and SMART alerts) for memory, internal storage (SAS/SATA HDDs and SSDs, NVMe SSDs, M.2 SSDs), RAID controllers, and server ambient and sub-component temperatures.
- Continuously monitors system parameters, triggers alerts, and performs recovery actions in case of failure to minimize downtime with Built-in XClarity Controller (XCC).
- Provides quick access to system status, firmware, network, health, and alerts information via Virtual Operator Panel from the XClarity Mobile App running on the Android or iOS mobile device that is connected to the front USB port with XClarity Controller access.
- Speeds up troubleshooting tasks to reduce service time with diagnostics built into the XClarity Provisioning Manager.

Manageability and security

Powerful systems management features simplify local and remote management of the SR250 server and deliver enterprise-class data protection:

- Provides advanced service processor control, monitoring, and alerting functions with XClarity Controller, a next generation service processor.
- Improves Unified Extensible Firmware Interface (UEFI) system setup, configuration, updates, simplified error handling, and operating system deployment with the embedded XClarity Provisioning Manager.
- Offers XClarity Essentials software tools that can help customers set up, use, and maintain the server.
- Increases uptime, reduces costs, and improves productivity through advanced server management capabilities with Lenovo XClarity Administrator that provides comprehensive hardware management.
- Provides on-the-go monitoring and management of devices in XClarity Administrator from anywhere with the Lenovo XClarity mobile app, which can help improve efficiency and reduce downtime risks.
- Centralizes infrastructure resource management with Lenovo XClarity Integrators for VMware vCenter and Microsoft System Center, extending XClarity Administrator features to virtualization management software tools and enabling users to deploy and manage infrastructure end-to-end.
- Offers advanced cryptographic functionality (such as digital signatures and remote attestation) with an integrated Trusted Platform Module (TPM) or optional Nationz TPM (available only in PRC).
- Keeps user data safe with Lenovo Business Vantage, a security software tool suite designed to work with the Nationz Trusted Platform Module (available only in PRC).
- Establishes a solid security foundation for workloads by delivering firmware that is securely built, tested, digitally signed, and verified prior to execution.
- Offers enterprise-class data protection with advanced RAID and optional self-encrypting drives.
- Provides faster, stronger encryption with industry-standard AES NI support.
- Helps prevent certain classes of malicious buffer overflow attacks with Intel Execute Disable Bit functionality, when combined with a supporting operating system.
- Enhances security through hardware-based resistance to malicious software attacks with Intel Trusted Execution Technology (Xeon E Series processors only), allowing an application to run in its own isolated space, protected from all other software running on a system.
- Helps prevent unauthorized software from running on the server by protecting against boot block-level malicious software with Intel Boot Guard technology.
- Protects application code and data from disclosure or modification with Intel Software Guard Extensions (SGX), enabling high-assurance security use cases, such as blockchain, identity and records privacy, secure browsing, and digital rights management (DRM).

Energy efficiency

The SR250 server offers the following energy-efficiency features to save energy, reduce operational costs, increase energy availability, and contribute to the green environment:

- Delivers optimized compute power per watt, featuring 80 PLUS Gold (fixed) and Platinum (hot-swap) AC power supplies.
- Reduces power drawn with Intel Intelligent Power Capability that powers individual processor elements on and off as needed.
- Helps reduce power consumption with variable speed fans.
- Helps achieve lower heat output and reduced cooling needs with Lenovo XClarity Energy Manager that provides advanced data center power notification, analysis, and policy-based management.

Components and connectors

The following figure shows the front of the SR250 server with four 3.5-inch drive bays.

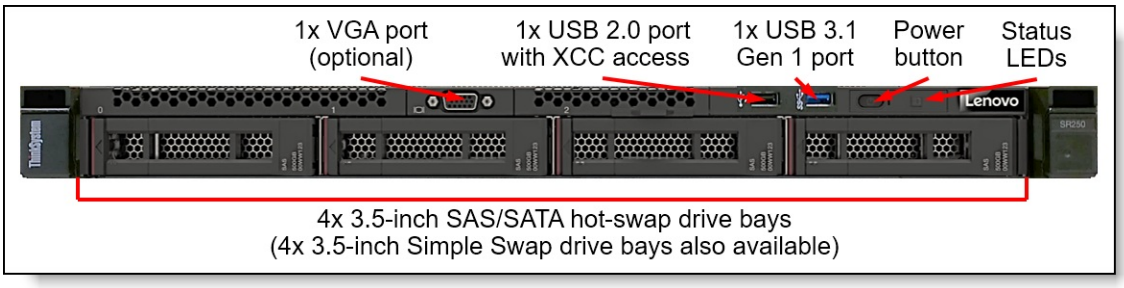

Figure 2. Front view of the SR250: 4x 3.5-inch drive bays

The following figure shows the front of the SR250 server with eight 2.5-inch drive bays.

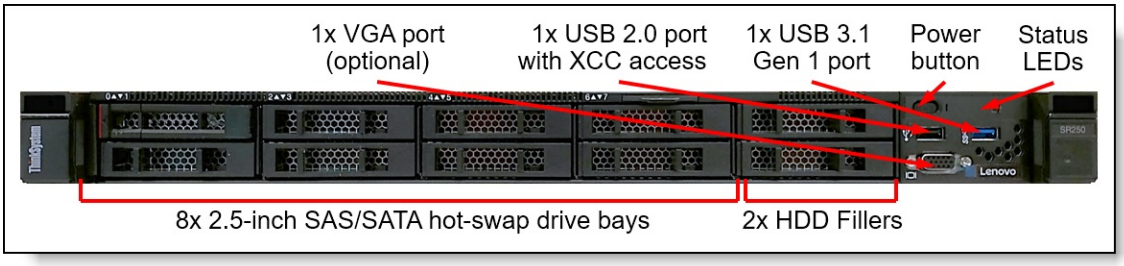

Figure 3. Front view of the SR250: 8x 2.5-inch drive bays

The following figure shows the front of the SR250 server with ten 2.5-inch drive bays.

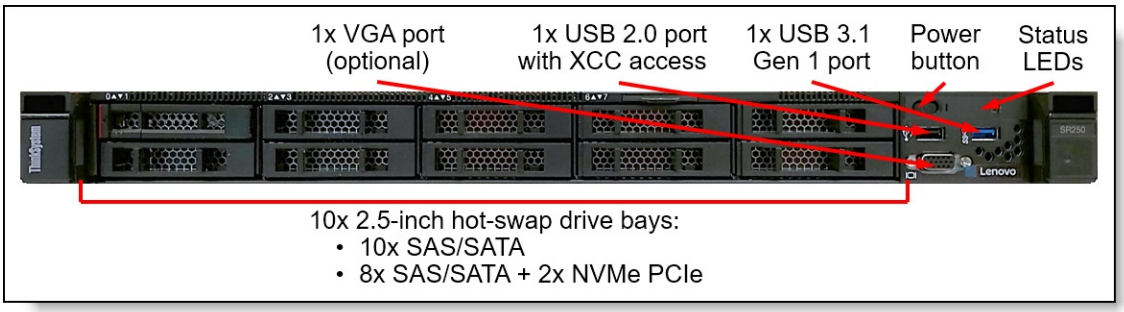

Figure 4. Front view of the SR250: 10x 2.5-inch drive bays

The front of the SR250 server includes the following components:

- Drive bays:
  - 4x 3.5-inch (Large Form Factor [LFF]) SATA simple-swap; or
  - 4x 3.5-inch SAS/SATA hot-swap; or
  - 8x 2.5-inch (Small Form Factor [SFF]) SAS/SATA hot-swap; or
  - 10x 2.5-inch hot-swap drive bays:
    - 10x SAS/SATA
    - 8x SAS/SATA and 2x NVMe PCIe
- One VGA port (optional)
- One USB 2.0 port with XClarity Controller access
- One USB 3.1 Gen 1 port
- A Power button
- Status LEDs

The following figure shows the rear of the SR250 server.

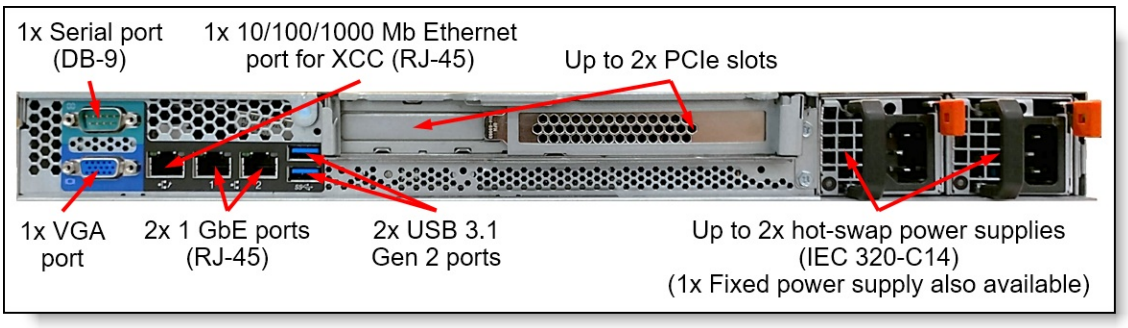

Figure 5. Rear view of the SR250

The rear of the SR250 server includes the following components:

- Up to two PCIe expansion slots (depending on the riser cards selected)
- One 1 GbE port for XClarity Controller
- One RS-232 serial port
- One VGA port
- Two 1 GbE data network ports
- Two USB 3.1 Gen 2 ports
- Power supplies
    - Up to two hot-swap power supplies; or
    - One fixed power supply

The following figure shows the locations of key components inside the SR250 server.

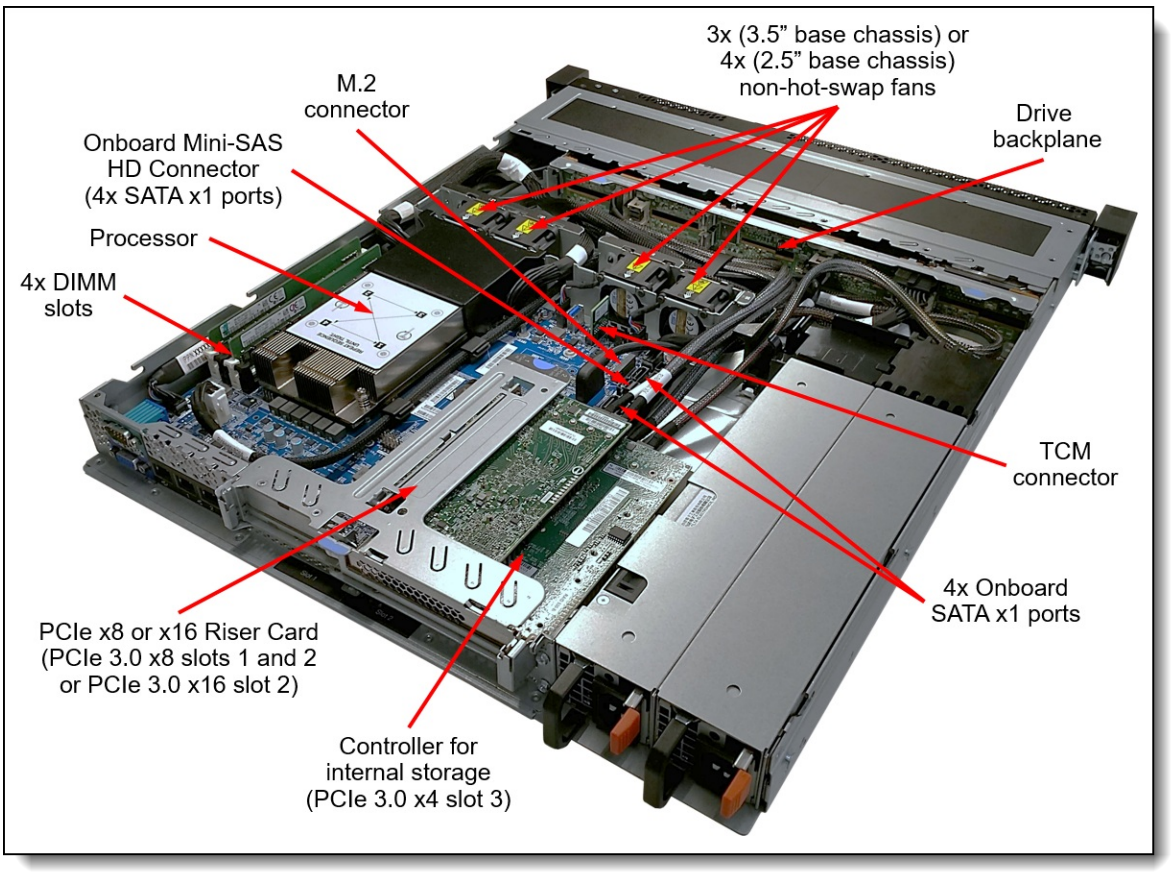

Figure 6. Internal view of the SR250

The SR250 server includes the following internal components:

- One processor
- Four DIMM slots
- Up to three PCIe 3.0 slots:
  - Slot 1: PCIe 3.0 x8 (not present if the Slot 2 is PCIe x16)
  - Slot 2: PCIe 3.0 x8 or x16
  - Slot 3: PCIe 3.0 x4 (only supports a controller for internal storage)
- Eight onboard SATA ports:
  - One Mini-SAS HD connector (4x SATA x1 ports)
  - Four SATA connectors (each connector provides the SATA x1 port)
- One TCM/TPM connector (supports Nationz TPM available in PRC only)
- Drive backplanes:
  - 4x LFF SATA simple-swap bracket; or
  - 4x LFF SAS/SATA hot-swap; or
  - 8x SFF SAS/SATA hot-swap; or
  - 8x SFF SAS/SATA and 2x SFF AnyBay hot-swap
- Four non-hot-swap system fans
- One M.2 connector

System specifications

The following table lists the system specifications for the SR250 server.

Table 1. SR250 system specifications

Attribute	Specification
Form factor	1U rack-mount.
Processor	One Intel Xeon E, Core i3, Pentium Gold, or Celeron processor.
Chipset	Intel C246.
Memory	4 DIMM sockets (two memory channels with two DIMMs per channel). Support for ECC UDIMMs. Memory speed up to 2666 MHz.
Memory capacity	• Xeon E Series: Up to 128 GB (4x 32 GB UDIMMs). • Core i3, Pentium Gold, Celeron G Series: Up to 64 GB (4x 16 GB UDIMMs).
Memory protection	Error correction code (ECC).

Drive bays	• 4 LFF (3.5-inch) SATA Simple Swap drive bays.
	• 4 LFF (3.5-inch) SAS/SATA hot-swap drive bays.
	• 8 SFF (2.5-inch) SAS/SATA hot-swap drive bays.
	• 10 SFF (2.5-inch) hot-swap drive bays:
	  ◦ 10x 2.5" SAS/SATA.
	  ◦ 8x 2.5" SAS/SATA & 2x 2.5" NVMe PCIe.

Drive types	3.5-inch simple-swap drives: • 6 Gbps Nearline (NL) SATA HDDs up to 8 TB • 6 Gbps SATA SSDs up to 960 GB (2.5" SSD in a 3.5" tray) 3.5-inch hot-swap drives: • 12 Gbps SAS HDDs up to 900 GB (2.5" HDD in a 3.5" tray) • 12 Gbps NL SAS HDDs up to 8 TB • 6 Gbps NL SATA HDDs up to 8 TB • 6 Gbps SATA SSDs up to 960 GB (2.5" SSD in a 3.5" tray) 2.5-inch hot-swap drives: • 12 Gbps SAS HDDs up to 2.4 TB • 12 Gbps SAS HDD SEDs up to 300 GB • 12 Gbps NL SAS HDDs up to 2 TB • 6 Gbps NL SATA HDDs up to 2 TB • 6 Gbps SATA SSDs up to 960 GB • U.2 NVMe PCIe 3.0 x4 SSDs up to 1 TB Internal M.2 SSDs: • 6 Gbps SATA up to 480 GB **Note:** Intermix of SAS, SATA, and NVMe PCIe drives is supported within a system, but not within a RAID array. NVMe PCIe SSDs do not support RAID controllers.
Internal storage capacity	• LFF models: Up to 72 TB using 4x 18 TB SAS or SATA HDDs. • SFF models: 38.4TB using 10x 3.84TB SATA SSDs

Storage controller	• Onboard 6 Gbps SATA:
	  ◦ AHCI non-RAID.
	  ◦ RAID 0/1/10/5 with Intel RSTe.
	• 12 Gbps SAS/6 Gbps SATA RAID:
	  ◦ RAID 0/1/10/5/50 with RAID 530-8i or RAID 730-8i 1GB Cache.
	  ◦ RAID 0/1/10/5/50/6/60 with RAID 730-8i 2GB Flash, RAID 930-8i 2GB Flash, or RAID 930-16i 4GB Flash.
	• 12 Gbps SAS/6 Gbps SATA non-RAID: 430-8i or 16i HBA.
	• NVMe PCIe non-RAID: 1610-4P NVMe Switch Adapter.

Attribute	Specification
Optical drive bays	None. Support for an external USB DVD RW Optical Disk Drive (SeeOptical drives).
Network interfaces	2x Onboard 10/100/1000 Mb Ethernet RJ-45 ports (BCM5720 NIC).
I/O expansion slots	Up to three slots. Slot 3 is the fixed slot on the system planar, and the remaining slots depend on the riser cards installed. The slots are as follows: • Slot 1: PCIe 3.0 x8; low profile (not present if the Slot 2 is x16) • Slot 2: PCIe 3.0 x8 (x16 physical connector) or x16; full-height, half-length • Slot 3: PCIe 3.0 x4 (supports an internal storage controller)
Ports	• Front: 1x VGA port (optional), 1x USB 3.1 Gen 1 port, and 1x USB 2.0 port with XClarity Controller access. • Rear: 1x VGA port, 2x USB 3.1 Gen 2 ports, 1x DB-9 serial port, and 1x RJ-45 10/100/1000 Mb Ethernet systems management port.
Cooling	Four non-hot-swap system fans.
Power supply	One fixed 300 W Gold, or up to two redundant hot-swap 450 W Platinum AC power supplies.
Video	Matrox G200 with 16 MB memory integrated into the XClarity Controller. Maximum resolution is 1920x1200 at 60 Hz with 32 bits per pixel.
Hot-swap parts	Drives (select models) and power supplies (select models).
Systems management	XClarity Controller (XCC) Standard, Advanced, or Enterprise (Pilot 4 chip), proactive platform alerts, XClarity Provisioning Manager, XClarity Essentials, XClarity Administrator, XClarity Integrators for VMware vCenter and Microsoft System Center, XClarity Energy Manager, Capacity Planner.
Security features	Power-on password, administrator's password, secure firmware updates, Trusted Platform Module (TPM) 1.2 or 2.0 (configurable UEFI setting). Optional lockable front bezel. Optional Nationz TPM (available only in PRC). Optional Lenovo Business Vantage security software (available only in PRC).
Operating systems	Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware ESXi. See the Operating systems section for specifics.
Warranty	One-year (7Y52) or three-year (7Y51, 7Y72, and 7Y73) customer-replaceable unit (CRU) and onsite limited warranty with 9x5 Next Business Day Parts Delivered.
Service and support	Optional service upgrades are available through Lenovo Services: 2-hour or 4-hour response time, 6-hour or 24-hour committed service repair (select areas), warranty extension up to 5 years, 1-year or 2-year post-warranty extensions, Premier Support, YourDrive YourData, Enterprise Software Support, and Basic Hardware Installation Services.
Dimensions	Width: 435 mm (17.1 in.), height: 43 mm (1.7 in.), depth: 545 mm (21.5 in.). SeePhysical specifications for details.
Weight	Base configuration: 9.1 kg (20.1 lb), maximum: 12.3 kg (27.1 lb)

Models

ThinkSystem SR250 models can be configured by using the Lenovo Data Center Solution Configurator (DCSC).

Configure-to-order (CTO) models are used to create models with factory-integrated server customizations. For CTO models, two base CTO models are available for the SR250 as listed in the following table, CTO1WW and CTOLWW:

- The CTO1WW base CTO model is for general business and is selectable by choosing **General Purpose** mode in DCSC.
- The CTOLWW base model is intended for High Performance Computing (HPC) and Artificial Intelligence (AI) configurations and solutions, including configurations for Lenovo Scalable Infrastructure (LeSI), and is enabled using either the **HPC & AI LeSI Solutions** mode or **HPC & AI ThinkSystem Hardware** mode in DCSC. CTOLWW configurations can also be built using System x and Cluster Solutions Configurator (x-config).

Preconfigured server models may also be available for the SR250, however these are region-specific; that is, each region may define their own server models, and not all server models are available in every region.

The following table lists the base CTO models of the ThinkSystem SR250 server.

Table 2. Base CTO models

Description	Machine Type/Model General purpose	Machine Type/Model for HPC and AI
ThinkSystem SR250 - 3 year Warranty	7Y51CTO1WW	7Y51CTOLWW
ThinkSystem SR250 - 1 year Warranty	7Y52CTO1WW	7Y52CTOLWW

For customers in India, additional machine types are available as listed in the following table.

Table 3. CTO base models for India

Description	Machine Type/Model
ThinkSystem SR250 India with RDN PSU (3-Year Warranty)	7Y72CTO1WW
ThinkSystem SR250 India with Fixed PSU (3-Year Warranty)	7Y73CTO1WW

The following table lists the base chassis for CTO models of the SR250 server.

Table 4. Base chassis for CTO models

Feature code	Description
B403	ThinkSystem SR250/SR150 4x3.5" Chassis
B404	ThinkSystem SR250 2.5" Chassis

All models of the SR250 server are shipped with the *Electronic Publications Flyer.*

Models table conventions: The model tables shown in this section use the following conventions:

- Drive bays:
  - If the number is shown as "x", it represents the quantity of the SAS/SATA drive bays.
  - If the number is shown as "x+y", it represents the quantity of the SAS/SATA + NVMe drive bays.
- XClarity Controller: "S" = Standard, "A" = Advanced, "E" = Enterprise.
- Front VGA port: "Y" = Included; "N" = Not included, optional.
- Tool-less 4-Post Rail Kit: "Y" = Included; "N" = Not included, optional.
- Power cord:
  - "R1" = 1.5 m C13-C14 rack power cable.
  - "R2" = 2.8 m C13-C14 rack power cable.
  - "L2" = 2.8 m line cord.

- "N" = Not included; see Power supplies and cables for the ordering information.

The following tables list the models of the SR250 server for the following regions:

- North America
- Brazil
- Latin America (except Brazil)
- Europe, Middle East, and Africa (EMEA)
- India
- Hong Kong, Taiwan, Korea
- Japan
- Association of Southeast Asian Nations (ASEAN)
- Australia and New Zealand

Table 5. SR250 server models (3-year warranty): North America

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
Relationship models - North America												
7Y51A04UNA	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	E	Y	Y	R2
7Y51A054NA	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	2x 1TB SATA HDD†	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	E	Y	Y	R2
7Y51A04RNA	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	E	Y	Y	R2
7Y51A051NA	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 SS LFF	2x 2TB SATA HDD‡	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	E	Y	Y	R2
7Y51A050NA	1x E-2288G 8C 95W 3.7GHz	1x 8GB (1Rx8)	1x SATA AHCI	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	E	Y	Y	R2
7Y51A053NA	1x E-2288G 8C 95W 3.7GHz	1x 16GB (2Rx4)	1x RAID 530-8i	8 / 10 HS SFF	2x 480GB S4510 SSD‡	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	E	Y	Y	R2

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.
† Configured in a RAID-1 drive group; ships with the Windows Server 2019 Essentials - English factory preload.
‡ Configured in a RAID-1 drive group; ships with the Windows Server 2019 Standard (16 core) - English factory preload.

Table 6. SR250 server models (3-year warranty): Brazil

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
TopSeller models - Brazil												
7Y511000BR	1x E-2224 4C 71W 3.4GHz	1x 16GB (2Rx8)	1x SATA AHCI	4 / 4 SS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	N	L2

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Table 7. SR250 server models: Latin America (except Brazil)

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
TopSeller models (3-year warranty) - Latin America (except Brazil)												
7Y511002LA	1x E-2224 4C 71W 3.4GHz	1x 16GB (2Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	R2
7Y511003LA	1x E-2224 4C 71W 3.4GHz	1x 16GB (2Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R2
7Y51A07RLA	1x E-2224G 4C 71W 3.5GHz	1x 16GB (2Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	2x 480GB PM883	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R2
7Y51A07ULA	1x E-2226G 6C 80W 3.4GHz	1x 16GB (2Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	2x 2TB SATA HDD	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R2
7Y51A084LA	1x E-2288G 8C 95W 3.7GHz	1x 32GB (2Rx8)	1x SATA AHCI	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R2
Relationship models (3-year warranty) - Latin America (except Brazil)												
7Y511004LA	1x E-2226G 6C 80W 3.4GHz	1x 16GB (2Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R1
TopSeller models (1-year warranty) - Latin America (except Brazil)												
7Y521003LA	1x E-2224 4C 71W 3.4GHz	1x 16GB (2Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	R2
7Y521004LA	1x E-2224 4C 71W 3.4GHz	1x 16GB (2Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R2

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Table 8. SR250 server models: EMEA

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
Relationship models (3-year warranty) - EMEA												
7Y51A077EA	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 SS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	N	Y	R2
7Y51A075EA	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 SS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	N	Y	R2
7Y51A07GEA	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	N	Y	R2
7Y51A078EA	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A07KEA	1x E-2224 4C 71W 3.4GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A07AEA	1x E-2234 4C 71W 3.6GHz	1x 16GB (2Rx4)	1x SATA AHCI	4 / 4 SS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	N	Y	R2
7Y51A07BEA	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A076EA	1x E-2244G 4C 71W 3.8GHz	1x 16GB (2Rx4)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
7Y51A07FEA	1x E-2246G 6C 80W 3.6GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A079EA	1x E-2246G 6C 80W 3.6GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A07EEA	1x E-2276G 6C 80W 3.8GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A07DEA	1x E-2276G 6C 80W 3.8GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A07CEA	1x E-2278G 8C 80W 3.4GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y51A081EA	Xeon E-2288G 8C 95W 3.7GHz	1x 16GB (2Rx8)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	E	N	Y	R2
Relationship models (1-year warranty) - EMEA												
7Y521000EA	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	N	Y	R2
7Y521001EA	1x E-2246G 6C 80W 3.6GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y521002EA	1x E-2276G 6C 80W 3.8GHz	1x 16GB (2Rx4)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	R2
7Y521005EA	1x E-2288G 8C 95W 3.7GHz	1x 16GB (2Rx8)	1x SATA RAID	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	N	Y	R2

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Table 9. SR250 server models (3-year warranty): India

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
TopSeller models - India												
7Y72A006SG	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A00FSG	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A00ASG	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A00CSG	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A00ESG	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A009SG	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A00BSG	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A00DSG	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
7Y72A008SG	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A005SG	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A007SG	1x E-2274G 4C 83W 4.0GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N
7Y72A004SG	1x E-2274G 4C 83W 4.0GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	N	Y	N

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Table 10. SR250 server models (3-year warranty): Hong Kong, Taiwan, Korea

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
Relationship models - Hong Kong, Taiwan, Korea												
7Y51A04WCN	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	N	N
7Y51A05DCN	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A056CN	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05PCN	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A068CN	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05HCN	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05BCN	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05KCN	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05FCN	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05WCN	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y511005CN	1x E-2236 6C 80W 3.4GHz	1x 16GB (2Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	1x PCIe x16 1x PCIe x4	1x 450W HS	E	N	Y	Y
7Y51A04YCN	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05QCN	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05RCN	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05ACN	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05JCN	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A062CN	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A066CN	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05SCN	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05LCN	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A061CN	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y511006CN	1x E- 2274G 4C 83W 4.0GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
Relationship models - Taiwan												
7Y51A05UCN	1x E-2236 6C 80W 3.4GHz	2x 16GB (2Rx4)	1x SATA RAID	4 / 4 SS LFF	2x 2TB SATA HDD	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	N	Y	N

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Table 11. SR250 server models (3-year warranty): Japan

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
Relationship models - Japan												
7Y51A06DJP	1x G5420 2C 54W 3.8GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06AJP	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06BJP	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06CJP	1x E-2224 4C 71W 3.4GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06EJP	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06JJP	1x E-2226G 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06UJP	1x E-2226G 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06YJP	1x E-2226G 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06FJP	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06RJP	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06ZJP	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06KJP	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06GJP	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06SJP	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A070JP	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06LJP	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06HJP	1x E-2274G 4C 83W 4.0GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06TJP	1x E-2274G 4C 83W 4.0GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A071JP	1x E-2274G 4C 83W 4.0GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06MJP	1x E-2276G 6C 80W 3.8GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06PJP	1x E-2278G 8C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06WJP	1x E-2278G 8C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A073JP	1x E-2278G 8C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
7Y51A06NJP	1x E-2286G 6C 95W 4.0GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06VJP	1x E-2286G 6C 95W 4.0GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A072JP	1x E-2286G 6C 95W 4.0GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06QJP	1x E-2288G 8C 95W 3.7GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A06XJP	1x E-2288G 8C 95W 3.7GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N
7Y51A074JP	1x E-2288G 8C 95W 3.7GHz	1x 8GB (1Rx8)	1x RAID 730-8i 2GB	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	A	N	Y	N

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Table 12. SR250 server models (3-year warranty): ASEAN

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
Relationship models - ASEAN												
7Y51A05NSG	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A04SSG	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A04TSG	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A067SG	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05MSG	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A052SG	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A04VSG	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05GSG	1x E-2234 4C 71W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A04ZSG	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A058SG	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05TSG	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05ZSG	1x E-2236 6C 80W 3.4GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A059SG	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
7Y51A055SG	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A063SG	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A05CSG	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A05XSG	1x E-2244G 4C 71W 3.8GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A057SG	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A04XSG	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x SATA RAID	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N
7Y51A065SG	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 300W Fixed	S	Y	Y	N
7Y51A064SG	1x E-2246G 6C 80W 3.6GHz	1x 8GB (1Rx8)	1x RAID 530-8i	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	N

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Table 13. SR250 server models (3-year warranty): Australia and New Zealand

Model number	Intel processor*	Memory UDIMM (4 max)	Storage controller	Drive bays (std / max)	Drives	Eth. LOM	I/O slots	Power supply^	XClarity Controller	Front VGA port	Tool-less Rail Kit	Power cord
Relationship models - Australia and New Zealand												
7Y51A060AU	1x E-2224G 4C 71W 3.5GHz	1x 8GB (1Rx8)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R1
TopSeller models - Australia and New Zealand												
7Y51A05YAU	1x E-2246G 6C 80W 3.6GHz	1x 16GB (2Rx4)	1x SATA AHCI	4 / 4 HS LFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R1
7Y51A069AU	1x E-2246G 6C 80W 3.6GHz	1x 16GB (2Rx4)	1x SATA AHCI	8 / 10 HS SFF	Open bay	2x 1 GbE	2x PCIe x8 1x PCIe x4	1x 450W HS	S	Y	Y	R1

* Processor details: Processor quantity and model, cores, thermal design power (TDP), and core speed.
^ The server supports one fixed power supply or up to two hot-swap (HS) power supplies.

Processors

The SR250 supports one processor from the Intel product family formerly known by the codename "Coffee Lake-S Refresh". This includes processors from the Intel Xeon E, Core i3, Pentium Gold, and Celeron G families.

The server supports the processors that are listed in the following table.

Integrated graphics and management: Xeon processors with a G suffix include integrated graphics, however, this functionality is not used in the SR250. Instead, graphics support is provided by XClarity Controller (XCC), or by an GPU add-in card. Similarly system management of the SR250 is handled by XCC and as a result, the AMT management processor is disabled.

Table 14. Processor specifications (HT = Hyper-Threading, TB = Turbo Boost, VT = Virtualization Technology)

CPU model	Core frequency (Base / TB Max)	Number of cores / threads	Cache	Max DDR4 frequency	Max memory capacity	Bus speed	TDP	ECC	HT	TB	VT-x	VT-d	SGX
Intel Xeon E processors													
E-2224	3.40 / 4.60 GHz	4 / 4	8 MB	2666 MHz	128 GB	8 GT/s	71 W	Yes	No	Yes	Yes	Yes	No
E-2224G	3.50 / 4.70 GHz	4 / 4	8 MB	2666 MHz	128 GB	8 GT/s	71 W	Yes	No	Yes	Yes	Yes	No
E-2226G	3.40 / 4.70 GHz	6 / 6	12 MB	2666 MHz	128 GB	8 GT/s	80 W	Yes	No	Yes	Yes	Yes	No
E-2234	3.60 / 4.80 GHz	4 / 8	8 MB	2666 MHz	128 GB	8 GT/s	71 W	Yes	Yes	Yes	Yes	Yes	No
E-2236	3.40 / 4.80 GHz	6 / 12	12 MB	2666 MHz	128 GB	8 GT/s	80 W	Yes	Yes	Yes	Yes	Yes	No
E-2244G	3.80 / 4.80 GHz	4 / 8	8 MB	2666 MHz	128 GB	8 GT/s	71 W	Yes	Yes	Yes	Yes	Yes	No
E-2246G	3.60 / 4.80 GHz	6 / 12	12 MB	2666 MHz	128 GB	8 GT/s	80 W	Yes	Yes	Yes	Yes	Yes	No
E-2274G	4.00 / 4.90 GHz	4 / 8	8 MB	2666 MHz	128 GB	8 GT/s	83 W	Yes	Yes	Yes	Yes	Yes	Yes
E-2276G	3.80 / 4.90 GHz	6 / 12	12 MB	2666 MHz	128 GB	8 GT/s	80 W	Yes	Yes	Yes	Yes	Yes	Yes
E-2278G	3.40 / 5.00 GHz	8 / 16	16 MB	2666 MHz	128 GB	8 GT/s	80 W	Yes	Yes	Yes	Yes	Yes	Yes
E-2286G	4.00 / 4.90 GHz	6 / 12	12 MB	2666 MHz	128 GB	8 GT/s	95 W	Yes	Yes	Yes	Yes	Yes	Yes
E-2288G	3.70 / 5.00 GHz	8 / 16	16 MB	2666 MHz	128 GB	8 GT/s	95 W	Yes	Yes	Yes	Yes	Yes	Yes
Intel Core i3 processors													
i3-9100	3.60 / 4.20 GHz	4 / 4	6 MB	2400 MHz	64 GB	8 GT/s	65 W	Yes	No	Yes	Yes	Yes	No
Intel Pentium Gold processors													
G5420	3.80 GHz	2 / 4	4 MB	2400 MHz	64 GB	8 GT/s	54 W	Yes	Yes	No	Yes	Yes	No

The following table lists feature codes for the processors that are available for the SR250 server.

Table 15. Processor feature codes

Description	Feature code
Intel Xeon E processors	
Intel Xeon E-2224 4C 71W 3.4GHz Processor	BAJY
Intel Xeon E-2224G 4C 71W 3.5GHz Processor	BAJX
Intel Xeon E-2226G 6C 80W 3.4GHz Processor	BAJW
Intel Xeon E-2234 4C 71W 3.6GHz Processor	BAJV
Intel Xeon E-2236 6C 80W 3.4GHz Processor	BAJU
Intel Xeon E-2244G 4C 71W 3.8GHz Processor	BAJT
Intel Xeon E-2246G 6C 80W 3.6GHz Processor	BAJS
Intel Xeon E-2274G 4C 83W 4.0GHz Processor	BAJR
Intel Xeon E-2276G 6C 80W 3.8GHz Processor	BAJQ
Intel Xeon E-2278G 8C 80W 3.4GHz Processor	BAJN
Intel Xeon E-2286G 6C 95W 4.0GHz Processor	BAJP

Description	Feature code
Intel Xeon E-2288G 8C 95W 3.7GHz Processor	BAJM
Intel Core i3 processors	
Intel Core i3-9100 4C 65W 3.6GHz Processor	BAK4
Intel Pentium Gold processors	
Intel Pentium G5420 2C 54W 3.8GHz Processor	BAK7

Memory

The SR250 server supports up to 4 TruDDR4 memory UDIMMs with ECC protection. The processor has two memory channels with two DIMMs per channel.

Lenovo TruDDR4 memory uses the highest-quality components sourced from Tier 1 DRAM suppliers and only memory that meets strict requirements is selected. It is compatibility tested and tuned on every ThinkSystem server to maximize performance and reliability.

TruDDR4 memory has a unique signature programmed into the DIMM, which enables Lenovo servers to verify whether the memory installed is qualified and supported. Lenovo qualified and supported TruDDR4 memory is covered by Lenovo warranty, and service and support provided worldwide.

The following rules apply when selecting the memory configuration:

- The server supports memory configurations with 1, 2, 3, or 4 UDIMMs.
- Mixing UDIMMs of different capacity is *not* supported.
- All DIMMs in the server operate at the same speed up to 2666 MHz, which is determined by the maximum memory speed supported by the specific processor (see Processors for details).
  Note: Maximum memory speed can be achieved when Max performance mode is enabled in UEFI.
- The server supports up to 128 GB of memory.
  Note: 32 GB UDIMMs are supported only with the Intel Xeon E Series processors; Core i3, Pentium Gold, and Celeron G Series processors do not support 32 GB UDIMMs.

The following table lists memory options available for the SR250 server.

Table 16. Memory options

Description	Part number	Feature code	Maximum quantity
ThinkSystem 8GB TruDDR4 2666MHz (1Rx8, 1.2V) ECC UDIMM	4ZC7A08696	B35J	4
ThinkSystem 16GB TruDDR4 2666MHz (2Rx8, 1.2V) ECC UDIMM	4ZC7A08699	B35K	4
ThinkSystem 32GB TruDDR4 2666MHz (2Rx8, 1.2V) ECC UDIMM	4ZC7A15142	B96E	4

Internal storage

The SR250 server supports the following internal drive bay configurations:

1. 4 LFF SATA Simple Swap drive bays
2. 4 LFF SAS/SATA hot-swap drive bays
3. 8 SFF SAS/SATA hot-swap drive bays
4. 10 SFF hot-swap drive bays:
   a. 10x 2.5" SAS/SATA
   b. 8x 2.5" SAS/SATA & 2x 2.5" NVMe PCIe

In addition, the SR250 server models can be configured with one internal M.2 SATA non-hot-swap SSD.

The following figure shows the internal drive bay configurations.

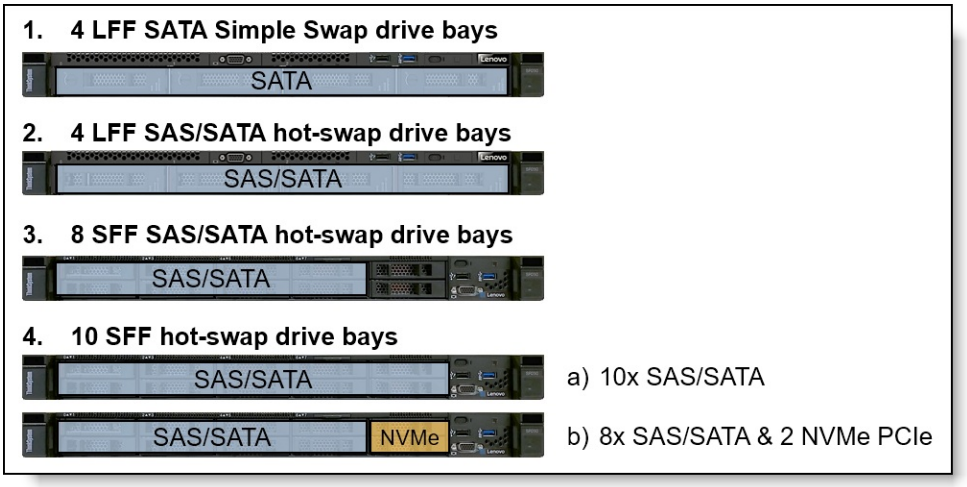

Figure 7. Internal drive bay configurations

The following table lists the internal storage options for the SR250 server.

Table 17. Internal storage options

Description	Part number	Feature code	Maximum quantity
Simple-swap (SS) backplane kits			
ThinkSystem SR250 4x3.5" SS Backplane Bracket Kit for SW RAID/AHCI	None*	B407	1
ThinkSystem SR250/SR150 4x3.5" SS Backplane Bracket Kit for HW RAID/HBA	4M17A14200	B408	1
Hot-swap (HS) backplanes and kits			
ThinkSystem SR250 3.5" HS SATA/SAS 4-Bay Backplane Cable Kit	4M17A13565	B412	1
ThinkSystem SR250 2.5" HS SATA/SAS 8-Bay Backplane	None*	B413	1
ThinkSystem SR250 2.5" HS AnyBay 10-Bay Backplane	4C57A12112	B414	1
Cables for hot-swap backplanes			
ThinkSystem SR250 4x3.5" HS SATA x4 Cable for SW RAID/AHCI	None*	B405	1
ThinkSystem SR250 8x2.5" HS SATA 2x4 Cable for SW RAID/AHCI	None*	B406	1
ThinkSystem SR250 3.5"/2.5" HS SAS/SATA x4 Cable for HW RAID/HBA	4Z57A12652	B415	3
ThinkSystem SR250 10x2.5" HS NVMe Cable	4Z57A12651	B416	2

* Factory-installed only, no field upgrade.

Configuration notes:

- The AnyBay backplane allows either SAS/SATA drives or NVMe PCIe drives in the drive bays 8 and 9.
- Configurations with NVMe PCIe drives are supported only for Machine Types 7Y51, 7Y52, and 7Y72; Machine Type 7Y73 does not support configurations with NVMe PCIe drives.
- Field upgrades for models with 3.5-inch drive bays:
  - Models with 4x 3.5" SS drive bays and an onboard SATA controller can be upgraded to support a hardware RAID controller or HBA by using the 4x3.5" SS Backplane Bracket Kit for HW RAID/HBA (4M17A14200).
  - Models with 4x 3.5" SS drive bays can be upgraded to support 4x 3.5" HS drive bays and a hardware RAID controller or HBA by using the 3.5" HS SATA/SAS 4-Bay Backplane Cable Kit (4M17A13565). The kit includes the hot-swap backplane (B412) and the SAS/SATA cable for HW RAID/HBA (B415).
  - Models with 4x 3.5" HS drive bays and an onboard SATA controller can be upgraded to support a hardware RAID controller or HBA by using the 3.5"/2.5" HS SAS/SATA x4 Cable for HW RAID/HBA (4Z57A12652).
- Field upgrades for models with 2.5-inch drive bays:
  - Models with 8x 2.5" HS drive bays and an onboard SATA controller can be upgraded to support a hardware RAID controller or HBA by using two 3.5"/2.5" HS SAS/SATA x4 Cables for HW RAID/HBA (4Z57A12652).
  - Models with 8x 2.5" HS drive bays and an onboard SATA controller can be upgraded to support 10x 2.5" HS drive bays and a hardware RAID controller or HBA by using the 2.5" HS AnyBay 10-Bay Backplane (4C57A12112). The following additional cables are needed:
    - NVMe support: Two 3.5"/2.5" HS SAS/SATA x4 Cables for HW RAID/HBA (4Z57A12652) and two 10x2.5" HS NVMe Cables (4Z57A12651).
    - No NVMe support: Three 3.5"/2.5" HS SAS/SATA x4 Cables for HW RAID/HBA (4Z57A12652).
  - Models with 8x 2.5" HS drive bays and a hardware RAID controller or HBA can be upgraded to support 10x 2.5" HS drive bays by using the 2.5" HS AnyBay 10-Bay Backplane (4C57A12112). The following additional cables are needed:
    - NVMe support: Two 10x2.5" HS NVMe Cables (4Z57A12651).
    - No NVMe support: One 3.5"/2.5" HS SAS/SATA x4 Cable for HW RAID/HBA (4Z57A12652).
  - Models with 10x 2.5" HS drive bays and an NVMe Switch Adapter can be upgraded to support a hardware RAID controller or HBA by using two 3.5"/2.5" HS SAS/SATA x4 Cables for HW RAID/HBA (4Z57A12652).
- Controllers for internal storage are not included with the field upgrade options.
- The M.2 SSD cannot be used in the configurations with eight drives that are connected to the onboard SATA controller (the SATA port 7 is shared between the drive bay 7 and the M.2 connector).

The following table lists supported internal storage configurations with the SAS/SATA and AnyBay backplanes.

Table 18. Internal storage configurations

Drive bay configuration	Backplane and cable type and quantity									Storage controller quantity and type*
	4x 3.5" SS BP SW (B407)	4x 3.5" SS BP HW (B408)	4x 3.5" HS BP (B412)	8x 2.5" HS BP (B413)	10x 2.5" HS BP (B414)	4x3.5" HS x4 Cable SW (B405)	8x2.5" HS 2x4 Cable SW (B406)	3.5"/2.5" HS x4 Cable HW (B415)	10x 2.5" HS NVMe Cable (B416)	
3.5" chassis (Feature code B403)										
4x 3.5-in. SATA simple-swap	1	0	0	0	0	0	0	0	0	1x Onboard AHCI / RSTe (4)
	0	1	0	0	0	0	0	0	0	1x RAID 530/730/930-8i/930-16i (4)
										1x 430-8i/16i HBA (4)
4x 3.5-in. SAS/SATA hot-swap	0	0	1	0	0	1	0	0	0	1x Onboard AHCI / RSTe (4)
	0	0	1	0	0	0	0	1	0	1x RAID 530/730/930-8i/930-16i (4)
										1x 430-8i/16i HBA (4)
2.5" chassis (Feature code B404)										
8x 2.5-in. SAS/SATA hot-swap	0	0	0	1	0	0	1	0	0	1x Onboard AHCI / RSTe (8)
	0	0	0	1	0	0	0	2	0	1x RAID 530/730/930-8i/930-16i (8)
										1x 430-8i/16i HBA (8)
10x 2.5-in. SAS/SATA hot-swap	0	0	0	0	1	0	0	3	0	1x RAID 930-16i (10)
										1x 430-16i HBA (10)
8x 2.5-in. SAS/SATA + 2x 2.5-in. NVMe hot-swap	0	0	0	0	1	0	0	2	2	1x RAID 530/730/930-8i/930-16i (8) + 1x 1610-4P (2)
										1x 430-8i/16i HBA (8) + 1x 1610-4P (2)
2x 2.5-in. NVMe hot-swap	0	0	0	0	1	0	0	0	2	1x 1610-4P (2)

* The number in brackets (x) specifies the quantity of drive bays connected to each of the controllers.

Controllers for internal storage

The following table lists the storage controllers and options for internal storage of the SR250 server.

Table 19. RAID controllers and HBAs for internal storage

Description	Part number	Feature code	Maximum quantity	I/O slots supported
6 Gbps SATA controllers				
Onboard AHCI (non-RAID) / Intel RSTe (RAID)	None*	None*	1	-
12 Gb SAS/SATA RAID controllers				
ThinkSystem RAID 530-8i PCIe 12Gb Adapter	7Y37A01082	AUNG	1	2, 3
ThinkSystem RAID 730-8i 1GB Cache PCIe 12Gb Adapter	7Y37A01083	AUNH	1	2, 3
ThinkSystem RAID 730-8i 2GB Flash PCIe 12Gb Adapter	4Y37A09722	B4RQ	1	2, 3
ThinkSystem RAID 930-8i 2GB Flash PCIe 12Gb Adapter	7Y37A01084	AUNJ	1	2, 3
ThinkSystem RAID 930-16i 4GB Flash PCIe 12Gb Adapter	7Y37A01085	AUNK	1	2, 3
12 Gb SAS/SATA HBAs (non-RAID)				
ThinkSystem 430-8i SAS/SATA 12Gb HBA	7Y37A01088	AUNL	1	2, 3
ThinkSystem 430-16i SAS/SATA 12Gb HBA	7Y37A01089	AUNM	1	2, 3
NVMe PCIe adapters (non-RAID)				
ThinkSystem 1610-4P NVMe Switch Adapter	7Y37A01081	AUV2	1	2

* The onboard SATA controller integrated into the Intel C246 Platform Controller Hub (PCH) supports non-RAID (JBOD) AHCI mode or a hardware-assist, software RAID feature (Intel Rapid Storage Technology Enterprise [RSTe]).

Configuration notes:

- The onboard SATA controller does not consume a PCIe slot.
- SAS RAID controllers and HBAs for internal storage are supported in the following PCIe slots:
  - PCIe slot 2 on the PCIe x8/x8 Riser Card (feature code B418):
    - No additional PCIe adapters are installed
    - One additional PCIe adapter is installed in the server in the PCIe slot 1
  - PCIe slot 3 on the system board:
    - Two additional PCIe adapters are installed in the server in the PCIe slots 1 and 2
    - A GPU adapter is installed in the server in the PCIe slot 2
    - The PCIe x16 Riser Card (feature code B417) is installed in the server
- The total quantity of the RAID 730-8i 2GB, 930-8i, 930-16i, and 930-8e controllers in the server must not exceed 1 (up to 1 supercapacitor can be mounted in the server).
- The 1610-4P NVMe Switch Adapter is supported in the PCIe slot 2 supplied by the PCIe x8 or x16 riser card.
- The 1610-4P NVMe Switch Adapter provides two PCIe 3.0 x4 ports for JBOD (non-RAID) connectivity to U.2 NVMe PCIe SSDs in the drive bays 8 and 9.

The following table summarizes features of supported SAS/SATA storage controllers.

Table 20. Storage controller features and specifications (LP = Low profile)

Feature	Intel RSTe	RAID 530-8i	RAID 730-8i 1GB	RAID 730-8i 2GB	RAID 930-8i	RAID 930-16i	430-8i HBA	430-16i HBA
Form factor	Onboard	PCIe LP	PCIe LP	PCIe LP	PCIe LP	PCIe LP	PCIe LP	PCIe LP
SAS controller	None	SAS3408	SAS3108	SAS3108	SAS3508	SAS3516	SAS3408	SAS3416
Host interface	PCH	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8
Port interface	6 Gb SATA	12 Gb SAS	12 Gb SAS	12 Gb SAS	12 Gb SAS	12 Gb SAS	12 Gb SAS	12 Gb SAS
Number of ports	8	8	8	8	8	16	8	16

Feature	Intel RSTe	RAID 530-8i	RAID 730-8i 1GB	RAID 730-8i 2GB	RAID 930-8i	RAID 930-16i	430-8i HBA	430-16i HBA
Connector type	1x SATA x4, 4x SATA x1	SFF-8643 x4	SFF-8643 x4	SFF-8643 x4	SFF-8643 x4	SFF-8643 x4	SFF-8643 x4	SFF-8643 x4
Number of connectors	5	2	2	2	2	4	2	4
Drive interface	SATA	SAS, SATA	SAS, SATA	SAS, SATA	SAS, SATA	SAS, SATA	SAS, SATA	SAS, SATA
Drive type	HDD, SSD	HDD, SSD, SED	HDD, SSD	HDD, SSD, SED	HDD, SSD, SED	HDD, SSD, SED	HDD, SSD, SED*	HDD, SSD, SED*
Hot-swap drive support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of drives	8	8	8	8	8	16	8	16
RAID levels	0/1/10/5	0/1/10/5/50	0/1/10/5/50	0/1/10/5/ 50/6/60	0/1/10/5/ 50/6/60	0/1/10/5/ 50/6/60	None	None
JBOD mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cache	None	None	1 GB	2 GB	2 GB	4 GB; 8 GB	None	None
Cache protection	None	None	None	Flash backup (Included)	Flash backup (Included)	Flash backup (Included)	None	None
SED key management (SafeStore)	No	Yes	No	Yes	Yes	Yes	No	No
SSD I/O acceleration (FastPath)	No	Yes	No	Yes	Yes	Yes	No	No
SSD Caching (CacheCade Pro 2.0)	No	No	No	No	No**	No**	No	No
Consistency check	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Patrol read	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Online capacity expansion	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Online RAID level migration	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Global Hot Spare	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Auto-rebuild	Yes	Yes	Yes	Yes	Yes	Yes	No	No

* HBAs do not support key management for SEDs; third-party host software is responsible for managing the keys.
** The SSD caching feature has been phased out in the new generation of advanced RAID controllers.

Important:

- The onboard Intel RSTe is not supported by virtualization hypervisors, including VMware vSphere (ESXi), Linux KVM, Xen, and Microsoft Hyper-V.
- The onboard Intel RSTe supports up to eight drives in a RAID-0 or RAID-5 array, two drives in a RAID-1 array, and four drives in a RAID-10 array. In a Windows Server-based environment, the onboard Intel RSTe supports up to six drives in a RAID-0 or RAID-5 array.

For more information, see the list of Product Guides in the following categories:

- RAID adapters
  http://lenovopress.com/servers/options/raid#rt=product-guide
- Host bus adapters
  http://lenovopress.com/servers/options/hba#rt=product-guide

Drives for internal storage

The following tables list the hard disk drive and solid-state drive options for the internal disk storage of the server.

2.5-inch hot-swap drives:

- 2.5-inch hot-swap 12 Gb SAS HDDs
- 2.5-inch hot-swap 6 Gb SATA HDDs
- 2.5-inch hot-swap 6 Gb SATA SSDs
- 2.5-inch hot-swap PCIe 4.0 NVMe SSDs
- 2.5-inch hot-swap PCIe 3.0 NVMe SSDs

3.5-inch hot-swap drives:

- 3.5-inch hot-swap 12 Gb SAS HDDs
- 3.5-inch hot-swap 6 Gb SATA HDDs
- 3.5-inch hot-swap 6 Gb SATA SSDs

Simple-swap drives:

- 3.5-inch simple-swap 6 Gb SATA HDDs
- 3.5-inch simple-swap 6 Gb SATA SSDs

M.2 drives:

- M.2 SATA drives

M.2 drive support: The use of M.2 drives requires an additional adapter as described in the M.2 drives subsection.

PCIe 4.0 NVMe drive support: When installed in this server, PCIe 4.0 NVMe drives will operate at PCIe 3.0 speeds.

Table 21. 2.5-inch hot-swap 12 Gb SAS HDDs

Part number	Feature	Description	Maximum supported
2.5-inch hot-swap HDDs - 12 Gb SAS 10K			
7XB7A00024	AULY	ThinkSystem 2.5" 300GB 10K SAS 12Gb Hot Swap 512n HDD	10
7XB7A00025	AULZ	ThinkSystem 2.5" 600GB 10K SAS 12Gb Hot Swap 512n HDD	10
7XB7A00026	AUM0	ThinkSystem 2.5" 900GB 10K SAS 12Gb Hot Swap 512n HDD	10
7XB7A00027	AUM1	ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD	10
7XB7A00028	AUM2	ThinkSystem 2.5" 1.8TB 10K SAS 12Gb Hot Swap 512e HDD	10
7XB7A00069	B0YS	ThinkSystem 2.5" 2.4TB 10K SAS 12Gb Hot Swap 512e HDD	10
2.5-inch hot-swap HDDs - 12 Gb SAS 15K			
7XB7A00021	AULV	ThinkSystem 2.5" 300GB 15K SAS 12Gb Hot Swap 512n HDD	10
7XB7A00022	AULW	ThinkSystem 2.5" 600GB 15K SAS 12Gb Hot Swap 512n HDD	10
7XB7A00023	AULX	ThinkSystem 2.5" 900GB 15K SAS 12Gb Hot Swap 512e HDD	10
2.5-inch hot-swap HDDs - 12 Gb NL SAS			
7XB7A00034	AUM6	ThinkSystem 2.5" 1TB 7.2K SAS 12Gb Hot Swap 512n HDD	10
7XB7A00035	AUM7	ThinkSystem 2.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD	10
2.5-inch hot-swap SED HDDs - 12 Gb SAS 10K			
7XB7A00030	AUM4	ThinkSystem 2.5" 300GB 10K SAS 12Gb Hot Swap 512n HDD SED	10

Table 22. 2.5-inch hot-swap 6 Gb SATA HDDs

Part number	Feature	Description	Maximum supported
2.5-inch hot-swap HDDs - 6 Gb NL SATA			
7XB7A00036	AUUE	ThinkSystem 2.5" 1TB 7.2K SATA 6Gb Hot Swap 512n HDD	10
7XB7A00037	AUUJ	ThinkSystem 2.5" 2TB 7.2K SATA 6Gb Hot Swap 512e HDD	10

Table 23. 2.5-inch hot-swap 6 Gb SATA SSDs

Part number	Feature	Description	Maximum supported
2.5-inch hot-swap SSDs - 6 Gb SATA - Mixed Use/Mainstream (3-5 DWPD)			
4XB7A17087	B8J1	ThinkSystem 2.5" 5300 240GB Mainstream SATA 6Gb Hot Swap SSD	10
4XB7A17088	B8HY	ThinkSystem 2.5" 5300 480GB Mainstream SATA 6Gb Hot Swap SSD	10
4XB7A17089	B8J6	ThinkSystem 2.5" 5300 960GB Mainstream SATA 6Gb Hot Swap SSD	10
4XB7A17090	B8JE	ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD	10
4XB7A13633	B49L	ThinkSystem 2.5" Intel S4610 240GB Mainstream SATA 6Gb Hot Swap SSD	10
4XB7A13634	B49M	ThinkSystem 2.5" Intel S4610 480GB Mainstream SATA 6Gb Hot Swap SSD	10
4XB7A13635	B49N	ThinkSystem 2.5" Intel S4610 960GB Mainstream SATA 6Gb Hot Swap SSD	10
4XB7A10237	B488	ThinkSystem 2.5" 5200 240GB Mainstream SATA 6Gb Hot Swap SSD	10
2.5-inch hot-swap SSDs - 6 Gb SATA - Read Intensive/Entry (<3 DWPD)			
4XB7A38271	BCTC	ThinkSystem 2.5" Multi Vendor 240GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A38272	BCTD	ThinkSystem 2.5" Multi Vendor 480GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A38273	BCTE	ThinkSystem 2.5" Multi Vendor 960GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A38274	BCTF	ThinkSystem 2.5" Multi Vendor 1.92TB Entry SATA 6Gb Hot Swap SSD	10
4XB7A38275	BCTG	ThinkSystem 2.5" Multi Vendor 3.84TB Entry SATA 6Gb Hot Swap SSD	10
4XB7A17075	B8HV	ThinkSystem 2.5" 5300 240GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A17076	B8JM	ThinkSystem 2.5" 5300 480GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A17077	B8HP	ThinkSystem 2.5" 5300 960GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A17078	B8J5	ThinkSystem 2.5" 5300 1.92TB Entry SATA 6Gb Hot Swap SSD	10
4XB7A38185	B9AC	ThinkSystem 2.5" 5210 960GB Entry SATA 6Gb Hot Swap QLC SSD	10
4XB7A10247	B498	ThinkSystem 2.5" Intel S4510 240GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A10248	B499	ThinkSystem 2.5" Intel S4510 480GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A10249	B49A	ThinkSystem 2.5" Intel S4510 960GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A10195	B34H	ThinkSystem 2.5" PM883 240GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A10196	B34J	ThinkSystem 2.5" PM883 480GB Entry SATA 6Gb Hot Swap SSD	10
4XB7A10197	B34K	ThinkSystem 2.5" PM883 960GB Entry SATA 6Gb Hot Swap SSD	10

Table 24. 2.5-inch hot-swap PCIe 4.0 NVMe SSDs (operate at PCIe 3.0 speeds in this server)

Part number	Feature	Description	Maximum supported
2.5-inch SSDs - U.2 PCIe 4.0 NVMe - Read Intensive/Entry (<3 DWPD)			
4XB7A17145	BCFT	ThinkSystem U.2 Intel P5500 1.92TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	2

Table 25. 2.5-inch hot-swap PCIe 3.0 NVMe SSDs

Part number	Feature	Description	Maximum supported
2.5-inch SSDs - U.2 PCIe 3.0 NVMe - Read Intensive/Entry (<3 DWPD)			
4XB7A10202	B58F	ThinkSystem U.2 Intel P4510 1.0TB Entry NVMe PCIe3.0 x4 Hot Swap SSD	2

Note: NVMe PCIe SSDs support surprise hot removal and hot insertion, provided the operating system supports PCIe SSD hot-swap.

Table 26. 3.5-inch hot-swap 12 Gb SAS HDDs

Part number	Feature	Description	Maximum supported
3.5-inch hot-swap HDDs - 12 Gb SAS 15K			
7XB7A00038	AUU2	ThinkSystem 3.5" 300GB 15K SAS 12Gb Hot Swap 512n HDD	4
7XB7A00039	AUU3	ThinkSystem 3.5" 600GB 15K SAS 12Gb Hot Swap 512n HDD	4
7XB7A00040	AUUC	ThinkSystem 3.5" 900GB 15K SAS 12Gb Hot Swap 512e HDD	4
3.5-inch hot-swap HDDs - 12 Gb NL SAS			
7XB7A00041	AUU4	ThinkSystem 3.5" 1TB 7.2K SAS 12Gb Hot Swap 512n HDD	4
7XB7A00042	AUU5	ThinkSystem 3.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD	4
7XB7A00043	AUU6	ThinkSystem 3.5" 4TB 7.2K SAS 12Gb Hot Swap 512n HDD	4
7XB7A00044	AUU7	ThinkSystem 3.5" 6TB 7.2K SAS 12Gb Hot Swap 512e HDD	4
7XB7A00045	B0YR	ThinkSystem 3.5" 8TB 7.2K SAS 12Gb Hot Swap 512e HDD	4
7XB7A00067	B117	ThinkSystem 3.5" 12TB 7.2K SAS 12Gb Hot Swap 512e HDD	4
4XB7A13911	B7EZ	ThinkSystem 3.5" 16TB 7.2K SAS 12Gb Hot Swap 512e HDD	4
4XB7A38266	BCFP	ThinkSystem 3.5" 18TB 7.2K SAS 12Gb Hot Swap 512e HDD	4

Table 27. 3.5-inch hot-swap 6 Gb SATA HDDs

Part number	Feature	Description	Maximum supported
3.5-inch hot-swap HDDs - 6 Gb NL SATA			
7XB7A00049	AUUF	ThinkSystem 3.5" 1TB 7.2K SATA 6Gb Hot Swap 512n HDD	4
7XB7A00050	AUUD	ThinkSystem 3.5" 2TB 7.2K SATA 6Gb Hot Swap 512n HDD	4
7XB7A00051	AUU8	ThinkSystem 3.5" 4TB 7.2K SATA 6Gb Hot Swap 512n HDD	4
7XB7A00052	AUUA	ThinkSystem 3.5" 6TB 7.2K SATA 6Gb Hot Swap 512e HDD	4
7XB7A00053	AUU9	ThinkSystem 3.5" 8TB 7.2K SATA 6Gb Hot Swap 512e HDD	4
7XB7A00068	B118	ThinkSystem 3.5" 12TB 7.2K SATA 6Gb Hot Swap 512e HDD	4
4XB7A13914	B7F0	ThinkSystem 3.5" 16TB 7.2K SATA 6Gb Hot Swap 512e HDD	4
4XB7A38130	BCFH	ThinkSystem 3.5" 18TB 7.2K SATA 6Gb Hot Swap 512e HDD	4

Table 28. 3.5-inch hot-swap 6 Gb SATA SSDs

Part number	Feature	Description	Maximum supported
3.5-inch hot-swap SSDs - 6 Gb SATA - Mixed Use/Mainstream (3-5 DWPD)			
4XB7A17096	B8JL	ThinkSystem 3.5" 5300 240GB Mainstream SATA 6Gb Hot Swap SSD	4
4XB7A17097	B8JF	ThinkSystem 3.5" 5300 480GB Mainstream SATA 6Gb Hot Swap SSD	4
4XB7A17098	B8J0	ThinkSystem 3.5" 5300 960GB Mainstream SATA 6Gb Hot Swap SSD	4
4XB7A17099	B8HR	ThinkSystem 3.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD	4
4XB7A13639	B49R	ThinkSystem 3.5" Intel S4610 240GB Mainstream SATA 6Gb Hot Swap SSD	4
4XB7A13640	B49S	ThinkSystem 3.5" Intel S4610 480GB Mainstream SATA 6Gb Hot Swap SSD	4
4XB7A13641	B49T	ThinkSystem 3.5" Intel S4610 960GB Mainstream SATA 6Gb Hot Swap SSD	4
4XB7A10242	B48D	ThinkSystem 3.5" 5200 240GB Mainstream SATA 6Gb Hot Swap SSD	4
3.5-inch hot-swap SSDs - 6 Gb SATA - Read Intensive/Entry (<3 DWPD)			
4XB7A38276	BCTH	ThinkSystem 3.5" Multi Vendor 240GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A38277	BCTJ	ThinkSystem 3.5" Multi Vendor 480GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A38278	BCTK	ThinkSystem 3.5" Multi Vendor 960GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A38279	BCTL	ThinkSystem 3.5" Multi Vendor 1.92TB Entry SATA 6Gb Hot Swap SSD	4
4XB7A38281	BCTM	ThinkSystem 3.5" Multi Vendor 3.84TB Entry SATA 6Gb Hot Swap SSD	4
4XB7A17081	B8JB	ThinkSystem 3.5" 5300 240GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A17082	B8J9	ThinkSystem 3.5" 5300 480GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A17083	B8JC	ThinkSystem 3.5" 5300 960GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A17084	B8HZ	ThinkSystem 3.5" 5300 1.92TB Entry SATA 6Gb Hot Swap SSD	4
4XB7A13625	B49D	ThinkSystem 3.5" Intel S4510 240GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A13626	B49E	ThinkSystem 3.5" Intel S4510 480GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A13627	B49F	ThinkSystem 3.5" Intel S4510 960GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A17176	B6TM	ThinkSystem 3.5" PM883 240GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A17177	B6TN	ThinkSystem 3.5" PM883 480GB Entry SATA 6Gb Hot Swap SSD	4
4XB7A17179	B6JY	ThinkSystem 3.5" PM883 1.92TB Entry SATA 6Gb Hot Swap SSD	4

Table 29. 3.5-inch simple-swap 6 Gb SATA HDDs

Part number	Feature	Description	Maximum supported
3.5-inch simple-swap HDDs - 6 Gb NL SATA			
7XB7A00055	AUZS	ThinkSystem 1TB 7.2K 6Gbps SATA 3.5" Simple Swap 512n HDD	4
7XB7A00056	AUZT	ThinkSystem 2TB 7.2K 6Gbps SATA 3.5" Simple Swap 512n HDD	4
7XB7A00057	AUZU	ThinkSystem 4TB 7.2K 6Gbps SATA 3.5" Simple Swap 512n HDD	4
7XB7A00058	AXC7	ThinkSystem 6TB 7.2K 6Gbps SATA 3.5" Simple Swap 512e HDD	4
7XB7A00059	AXC6	ThinkSystem 8TB 7.2K 6Gbps SATA 3.5" Simple Swap 512e HDD	4

Table 30. 3.5-inch simple-swap 6 Gb SATA SSDs

Part number	Feature	Description	Maximum supported
3.5-inch simple-swap SSDs - 6 Gb SATA - Mixed Use/Mainstream (3-5 DWPD)			
4XB7A13960	B5Y5	ThinkSystem 3.5" Intel S4610 240GB Mainstream SATA 6Gb Simple Swap SSD	4
4XB7A13961	B5Y6	ThinkSystem 3.5" Intel S4610 480GB Mainstream SATA 6Gb Simple Swap SSD	4
4XB7A13962	B5Y7	ThinkSystem 3.5" Intel S4610 960GB Mainstream SATA 6Gb Simple Swap SSD	4
4XB7A14052	B5Y8	ThinkSystem 3.5" 5200 240GB Mainstream SATA 6Gb Simple Swap SSD	4
3.5-inch simple-swap SSDs - 6 Gb SATA - Read Intensive/Entry (<3 DWPD)			
4XB7A13952	B4KC	ThinkSystem 3.5" Intel S4510 480GB Entry SATA 6Gb Simple Swap SSD	4
4XB7A13953	B4KD	ThinkSystem 3.5" Intel S4510 960GB Entry SATA 6Gb Simple Swap SSD	4
4XB7A13951	B4KE	ThinkSystem 3.5" Intel S4510 240GB Entry SATA 6Gb Simple Swap SSD	4

Table 31. M.2 SATA drives

Part number	Feature	Description	Maximum supported
M.2 SSDs - 6 Gb SATA - Read Intensive/Entry (<3 DWPD)			
7N47A00129	AUUL	ThinkSystem M.2 32GB SATA 6Gbps Non-Hot Swap SSD	1
7N47A00130	AUUV	ThinkSystem M.2 128GB SATA 6Gbps Non-Hot Swap SSD	1
4XB7A17071	B8HS	ThinkSystem M.2 5300 240GB SATA 6Gbps Non-Hot Swap SSD	1
4XB7A17073	B919	ThinkSystem M.2 5300 480GB SATA 6Gbps Non-Hot Swap SSD	1

USB memory key

For general portable storage needs, the server also supports the USB memory key option that is listed in the following table.

Table 32. USB memory key

Part number	Feature	Description
00ML200	None*	32GB Enterprise Value USB Memory Key

* Field upgrade only.

Optical drives

The server supports the external USB optical drive listed in the following table.

Table 33. External optical drive

Part number	Feature code	Description
7XA7A05926	AVV8	ThinkSystem External USB DVD RW Optical Disk Drive

The drive is based on the Lenovo Slim DVD Burner DB65 drive and supports the following formats: DVD-RAM, DVD-RW, DVD+RW, DVD+R, DVD-R, DVD-ROM, DVD-R DL, CD-RW, CD-R, CD-ROM.

I/O expansion

The SR250 server supports up to three PCIe slots: one slot on the system planar that supports an internal storage controller and up to two PCIe slots on a riser card.

The slot form factors are as follows:

- Slot 1: PCIe 3.0 x8; low profile (not present if the Slot 2 is x16)
- Slot 2: PCIe 3.0 x8 (x16 physical connector) or x16; full-height, half-length
- Slot 3 PCIe 3.0 x4 (x8 physical connector; supports an internal storage controller)

The locations of the PCIe slots are shown in the following figure.

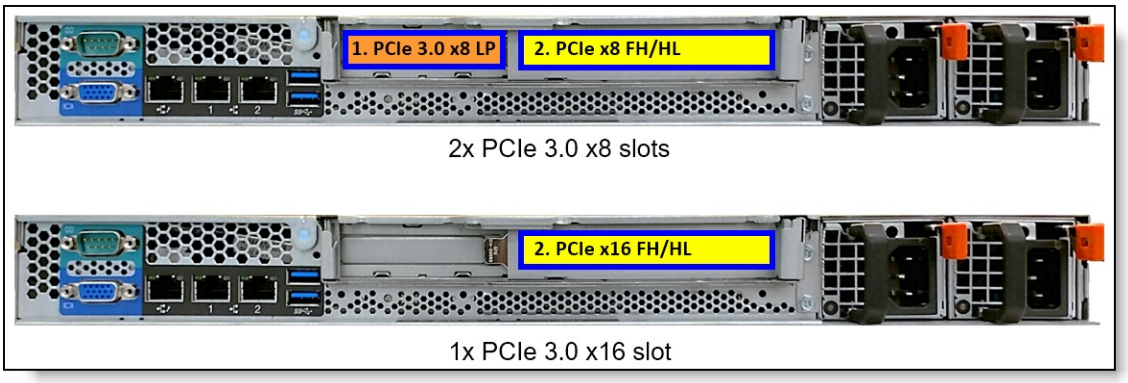

Figure 8. Slot locations

The following table lists available PCIe riser card options.

Table 34. PCIe riser cards

Description	Part number	Feature code	Maximum quantity
ThinkSystem SR250/SR150 PCIe x16/x8 Riser	4C57A12111	B418	1
ThinkSystem SR250 PCIe x16 Riser	4C57A12110	B417	1

Configuration notes:

- A riser card is required.
- The PCIe x8 riser card supplies slots 1 and 2, and the PCIe x16 riser card supplies slot 2.

The following adapter types are supported:

- Controllers for internal storage
- Network adapters
- SAS adapters for external storage
- Fibre Channel host bus adapters
- GPU adapters

Network adapters

The SR250 server supports two onboard Gigabit Ethernet network ports that are based on the Broadcom BCM5720 network interface controller (NIC) chip.

The integrated NIC has the following features:

- Two 10/100/1000 Mb Ethernet RJ-45 ports
- NIC Teaming (load balancing and failover)
- IEEE 802.3ad Link Aggregation
- I/O Virtualization (IOV) for VMWare NetQueue and Microsoft VMQ
- IEEE 802.1Q Virtual Local Area Networks (VLANs)
- IEEE 802.3x flow control
- TCP, IP, and UDP checksum offload
- Large Send Offload (LSO) and TCP Segmentation Offload (TSO)
- Receive Side Scaling (RSS) and Transmit Side Scaling (TSS)
- Jumbo frames up to 9600 bytes
- IEEE 802.3az-2010 Energy Efficient Ethernet (EEE) compliant
- Hardware assist for IEEE 1588 and IEEE 802.1AS time synchronization implementations
- Preboot eXecution Environment (PXE) and iSCSI remote boot options

The following table lists the network adapters that are supported with the SR250 server.

Table 35. Network adapters

Description	Part number	Feature code	Maximum quantity	I/O slots supported
PCIe Low Profile adapters - 1 Gb Ethernet				
Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter	7ZT7A00482	AUZX	2	1, 2
Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	7ZT7A00484^	AUZV^	2	1, 2
ThinkSystem I350-F1 PCIe 1Gb 1-Port SFP Ethernet Adapter	7ZT7A00533	AUZZ	2	1, 2
ThinkSystem I350-T2 PCIe 1Gb 2-Port RJ45 Ethernet Adapter	7ZT7A00534	AUZY	2	1, 2
ThinkSystem I350-T4 PCIe 1Gb 4-Port RJ45 Ethernet Adapter	7ZT7A00535	AUZW	2	1, 2
PCIe Low Profile adapters - 10 Gb Ethernet				
Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter	7ZT7A00496	AUKP	2	1, 2
Emulex VFA5.2 2x10 GbE SFP+ PCIe Adapter	00AG570	AT7S	2*	1, 2
Emulex VFA5.2 2x10 GbE SFP+ Adapter and FCoE/iSCSI SW	00AG580	AT7T	2*	1, 2
Intel X550-T1 Single Port 10GBase-T Adapter	00MM850	ATRY	2	1, 2
Intel X550-T2 Dual Port 10GBase-T Adapter	00MM860	ATPX	2	1, 2
Intel X710-DA2 PCIe 10Gb 2-Port SFP+ Ethernet Adapter	7ZT7A00537	AUKX	2*	1, 2
Intel X710-T4 PCIe 10Gb 4-Port Base-T Adapter	7XC7A05927	B0X1	2	1, 2
QLogic QL41134 PCIe 10Gb 4-Port Base-T Ethernet Adapter	4XC7A08225	B31G	2	1, 2
PCIe Full Height adapters - 10 Gb Ethernet				
Emulex OCe14104B-NX PCIe 10Gb 4-Port SFP+ Ethernet Adapter	7ZT7A00493	AUKN	1*	2
Intel X710-DA4 PCIe 10Gb 4-Port SFP+ Ethernet Adapter	7XC7A05525	B0YL	1*	2
PCIe Low Profile adapters - 25 Gb Ethernet				
Broadcom 57412 10/25GbE SFP28 1-Port PCIe Ethernet Adapter	7ZT7A00505	AUKS	2*	1, 2
Intel XXV710-DA2 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	7XC7A05523	B0WY	2*	1, 2
Mellanox ConnectX-4 Lx 10/25GbE SFP28 2-Port PCIe Eth. Adapter	01GR250	AUAJ	2*	1, 2
QLogic QL41262 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	4XC7A08228	B21R	2*	1, 2

^ Field upgrade option only; no factory installation.
* The adapter comes without transceivers or cables; for ordering information, see the adapter product guide.

Configuration notes:

- PCIe full-height network adapters are supported in the full-height PCIe slot 2 supplied by the PCIe x8 or x16 riser card.
- PCIe Low Profile network adapters are supported in the full-height and low profile slots supplied by the PCIe x8 or x16 riser card.
- Supported transceivers or DAC cables should be purchased for the SFP+ and SFP28 adapters, and UTP Category 6 or Category 5e cables should be purchased for the 10 GbE (Cat6) or 1 GbE (Cat5e or Cat6) RJ-45 adapters. The maximum number of transceivers or cables that are supported per adapter equals the quantity of the adapter ports, and all adapter ports must have the same type of the transceiver or cable selected.

For more information, see the list of Product Guides in the Ethernet Adapters category:
http://lenovopress.com/servers/options/ethernet#rt=product-guide

SAS adapters for external storage

The following table lists SAS RAID controllers and HBAs for external storage attachments that are supported by the SR250 server.

Table 36. SAS RAID adapters and HBAs for external storage

Description	Part number	Feature code	Maximum quantity	I/O slots supported
12 Gbps SAS RAID adapters				
ThinkSystem RAID 930-8e 4GB Flash PCIe 12Gb Adapter	7Y37A01087	AUNQ	1	1, 2
12 Gbps SAS HBAs				
ThinkSystem 430-8e SAS/SATA 12Gb HBA	7Y37A01090	AUNR	1	1, 2
ThinkSystem 430-16e SAS/SATA 12Gb HBA	7Y37A01091	AUNN	1	1, 2

Configuration notes:

- Low profile SAS RAID controllers and HBAs for external storage are supported in the low profile and full-high PCIe slots supplied by the x8 or x16 riser card.
- The total quantity of the RAID 730-8i 2GB, 930-8i, 930-16i, and 930-8e controllers in the server must not exceed 1 (up to 1 supercapacitor can be mounted in the server).

The following table summarizes features of supported RAID controllers and HBAs for external storage.

Table 37. Features and specifications of the RAID controllers and HBAs for external storage

Feature	RAID 930-8e	430-8e HBA	430-16e HBA
Form factor	PCIe LP	PCIe LP	PCIe LP
SAS controller chip	SAS3516	SAS3408	SAS3416
Host interface	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8
Port interface	12 Gb SAS	12 Gb SAS	12 Gb SAS
Number of ports	8	8	16
Connector type	SFF-8644 x4	SFF-8644 x4	SFF-8644 x4
Number of connectors	2	2	4
Drive interface	SAS, SATA	SAS, SATA	SAS, SATA
Drive type	HDD, SSD, SED	HDD, SSD, SED*	HDD, SSD, SED*
Hot-swap drive support	Yes	Yes	Yes
Number of devices	240	1024	1024
RAID levels	0/1/10/5/50/6/60	None	None

Feature	RAID 930-8e	430-8e HBA	430-16e HBA
JBOD mode	Yes	Yes	Yes
Cache	4 GB	None	None
Cache protection	Flash backup (Included)	None	None
SED key management (SafeStore)	Yes	No	No
SSD I/O acceleration (FastPath)	Yes	No	No
SSD Caching (CacheCade Pro 2.0)	No**	No	No
Consistency check	Yes	No	No
Patrol read	Yes	No	No
Online capacity expansion	Yes	No	No
Online RAID level migration	Yes	No	No
Global Hot Spare	Yes	No	No
Auto-rebuild	Yes	No	No

* HBAs do not support key management for SEDs; third-party host software is responsible for managing the keys.
** The SSD caching feature has been phased out in the new generation of advanced RAID controllers.

For more information, see the list of Product Guides in the following categories:

- RAID adapters
  http://lenovopress.com/servers/options/raid#rt=product-guide
- Host bus adapters
  http://lenovopress.com/servers/options/hba#rt=product-guide

Fibre Channel host bus adapters

The following table lists Fibre Channel HBAs supported by the SR250 server.

Table 38. Fibre Channel HBAs

Description	Part number	Feature code	Maximum quantity	I/O slots supported
Emulex 16Gb Gen6 FC Single-port HBA	01CV830	ATZU	2	1, 2
Emulex 16Gb Gen6 FC Dual-port HBA	01CV840	ATZV	2	1, 2

Configuration note: FC HBAs are supported in the low profile and full-high PCIe slots supplied by the PCIe x8 or x16 riser card.

For more information, see the list of Product Guides in the Host bus adapters category:
http://lenovopress.com/servers/options/hba#rt=product-guide

GPU adapters

The SR250 server supports graphics processing unit (GPU) adapters listed in the following table.

Table 39. GPU adapters

Description	Part number	Feature code	Maximum quantity	I/O slots supported
ThinkSystem NVIDIA Quadro P620 2GB PCIe Active GPU (PCIe 3.0 x16)	4X67A11584	B31D	1	2

Configuration notes:

- The GPU adapters are supported only in the configurations with 450 W hot-swap power supplies.
- The GPU adapters are supported in the PCIe slot 2 supplied by the PCIe x8 or x16 riser card.

Cooling

The SR250 server ships with four non-hot-swap system fans.

Configuration note: The server performance might be impacted in case of a system fan failure.

Power supplies and cables

The SR250 server supports one fixed power supply or up to two redundant hot-swap power supplies. With two power supplies, the server is capable of N+N redundancy depending on the configuration. A second power supply can be added to the models that come with one hot-swap power supply.

The following table lists the power supply options.

Table 40. Power supplies

Description	Part number	Feature code	Maximum quantity
ThinkSystem SR250/SR150 Fixed 300W Power Supply	None*	B40Q	1
ThinkSystem 450W (230V/115V) Platinum Hot-Swap Power Supply	4P57A12649	B40R	2
ThinkSystem 450W (230V/115V) Platinum Hot-Swap Power Supply India	4P57A16264	B5LC	2

* Factory-installed only.

Configuration notes:

- Configurations with 300 W fixed power supplies (feature code B40Q) are supported only for Machine Types 7Y51, 7Y52, and 7Y73.
- Configurations with 450 W hot-swap power supplies (4P57A12649) that are available worldwide (except India) are supported only for Machine Types 7Y51 and 7Y52.
- Configurations with 450 W hot-swap power supplies for India (4P57A16264) are supported only for Machine Type 7Y72.
- To ensures that the properly sized power supply is chosen for optimal performance, it is highly recommended to validate system configuration for specific power requirements by using the latest version of the Lenovo Capacity Planner: http://datacentersupport.lenovo.com/us/en/solutions/lnvo-lcp

The SR250 server ship standard with or without a power cord (model dependent). A hot-swap power supply option ships without a power cord.

The following table lists the line cords and rack power cables that can be ordered for the SR250 server. One or two power cables can be ordered, depending on the quantity of power supplies in the server.

Table 41. Power cables

Description	Part number	Feature code
Rack power cables		
1.0m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	00Y3043	A4VP
1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7937	6201
2.0m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08365	B0N4
2.0m, 13A/125V-10A/250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08369	6570
2.8m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08366	6311
2.8m, 13A/125V-10A/250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08370	6400
2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable	39Y7938	6204
4.3m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7932	6263
4.3m, 13A/125V-10A/250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08371	6583
Line cords		
2.8m, 10A/125V, C13 to CNS 10917-3 Line Cord	23R7158	6386
2.8m, 10A/125V, C13 to NEMA 5-15P Line Cord	90Y3016	6313
2.8m, 10A/250V, C13 to AS/NZS 3112 Line Cord	39Y7924	6211

Description	Part number	Feature code
2.8m, 10A/250V, C13 to BS 1363/A Line Cord	39Y7923	6215
2.8m, 10A/250V, C13 to CEE7-VII Line Cord	39Y7917	6212
2.8m, 10A/250V, C13 to CEI 23-16 Line Cord	39Y7921	6217
2.8m, 10A/250V, C13 to CNS 10917-3 Line Cord	81Y2375	6317
2.8m, 10A/250V, C13 to DK2-5a Line Cord	39Y7918	6213
2.8m, 10A/250V, C13 to GB 2099.1 Line Cord	39Y7928	6210
2.8m, 10A/250V, C13 to IRAM 2073 Line Cord	39Y7930	6222
2.8m, 10A/250V, C13 to IS 6538 Line Cord	39Y7927	6269
2.8m, 10A/250V, C13 to NBR 14136 Line Cord	69Y1988	6532
2.8m, 10A/250V, C13 to NEMA 6-15P Line Cord	46M2592	A1RF
2.8m, 10A/250V, C13 to SABS 164 Line Cord	39Y7922	6214
2.8m, 10A/250V, C13 to SEV 1011-S24507 Line Cord	39Y7919	6216
2.8m, 10A/250V, C13 to SI 32 Line Cord	39Y7920	6218
2.8m, 12A/125V, C13 to JIS C-8303 Line cord	46M2593	A1RE
2.8m, 12A/250V, C13 to JIS C-8303 Line Cord	4L67A08357	6533
2.8m, 12A/250V, C13 to KS C8305 Line Cord	39Y7925	6219
4.3m, 10A/125V, C13 to CNS 10917-3 Line Cord	4L67A08363	AX8B
4.3m, 10A/125V, C13 to NEMA 5-15P Line Cord	4L67A08359	6370
4.3m, 10A/250V, C13 to AS/NZS 3112 Line Cord	81Y2383	6574
4.3m, 10A/250V, C13 to BS 1363/A Line Cord	81Y2377	6577
4.3m, 10A/250V, C13 to CEE7-VII Line Cord	81Y2376	6572
4.3m, 10A/250V, C13 to CEI 23-16 Line Cord	81Y2380	6493
4.3m, 10A/250V, C13 to CNS 10917-3 Line Cord	81Y2389	6531
4.3m, 10A/250V, C13 to DK2-5a Line Cord	81Y2382	6575
4.3m, 10A/250V, C13 to GB 2099.1 Line Cord	81Y2378	6580
4.3m, 10A/250V, C13 to IRAM 2073 Line Cord	81Y2384	6492
4.3m, 10A/250V, C13 to IS 6538 Line Cord	81Y2386	6567
4.3m, 10A/250V, C13 to NBR14136 Line Cord	81Y2387	6404
4.3m, 10A/250V, C13 to NEMA 6-15P Line Cord	4L67A08361	6373
4.3m, 10A/250V, C13 to SABS 164 Line Cord	81Y2379	6576
4.3m, 10A/250V, C13 to SEV 1011-S24507 Line Cord	81Y2390	6578
4.3m, 10A/250V, C13 to SI 32 Line Cord	81Y2381	6579
4.3m, 12A/125V, C13 to JIS C-8303 Line Cord	39Y7926	6335
4.3m, 12A/250V, C13 to JIS C-8303 Line Cord	4L67A08362	6495
4.3m, 12A/250V, C13 to KS C8305 Line Cord	81Y2385	6494

Systems management

The SR250 supports the following systems management tools:

- Lenovo XClarity Controller
- Lenovo XClarity Provisioning Manager
- Lenovo XClarity Essentials
- Lenovo XClarity Administrator
- Lenovo XClarity Integrators
- Lenovo XClarity Energy Manager
- Lenovo Capacity Planner

Lenovo XClarity Controller

The SR250 server contains Lenovo XClarity Controller (XCC), which provides advanced service-processor control, monitoring, and alerting functions. XClarity Controller offers three functional levels: Standard, Advanced, and Enterprise.

By default, the SR250 server includes XClarity Controller Standard features, and it can be upgraded to Advanced or Enterprise functionality by using the Features on Demand (FoD) upgrades.

XClarity Controller Standard offers the following capabilities:

- Gathering and viewing system information and inventory
- Monitoring system status and health
- Alerting and notifications
- Event logging
- Configuring network connectivity
- Configuring security
- Updating system firmware
- Configuring server settings and devices
- Real-time power usage monitoring
- Remotely controlling server power (Power on, Power off, Restart)
- Managing FoD activation keys
- Redirecting serial console via IPMI
- Capturing the video display contents when an operating system hang condition is detected

XClarity Controller Advanced Upgrade adds the following functionality to the Standard features:

- Remotely viewing video with the following graphics resolutions:
    - Up to 1600x1200 with up to 23 bits per pixel; or
    - Up to 1920x1200 with up to 15 bits per pixel
- Remotely accessing the server using the keyboard and mouse from a remote client
- Remotely deploying an operating system
- Syslog alerting
- Redirecting serial console via SSH
- Displaying graphics for real-time and historical power usage data and temperature

XClarity Controller Enterprise Upgrade adds the following functionality to the Advanced features:

- Capping power usage
- Mapping the ISO and image files located on the local client as virtual drives for use by the server
- Mounting the remote ISO and image files via HTTPS, SFTP, CIFS, and NFS
- Collaborating across up to six users of the virtual console
- Controlling quality and bandwidth usage

The XClarity Controller provides remote server management through industry-standard interfaces:

- Intelligent Platform Management Interface (IPMI) Version 2.0
- Simple Network Management Protocol (SNMP) Version 3
- Common Information Model (CIM)
- Data Center Manageability Interface (DCMI) Version 1.5
- Redfish REpresentational State Transfer (REST) API
- Web browser with HTML5 support
- Command-line interface
- Virtual Operator Panel with XClarity Mobile App via the front USB port with XClarity Controller access

Virtual Operator Panel provides quick access to system status, firmware, network, health, and alerts information. With proper authentication, it also allows to configure systems management and network settings and to control system power (Power on, Power off, Restart). The Virtual Operator Panel can be accessed from the XClarity Mobile App running on the Android or iOS mobile device that is connected to the front USB port with XClarity Controller access (See Components and connectors).

Note: Depending on the system settings, the front USB port can be assigned to XClarity Controller for management functions, or to the system as a regular USB 2.0 port, or switched between two functions by using the system ID button.

IPMI via the Ethernet port (IPMI over LAN) is supported, however it is disabled by default. For CTO orders you can specify whether you want to the feature enabled or disabled in the factory, using the feature codes listed in the following table.

Table 42. IPMI-over-LAN settings

Part number	Feature code	Description
CTO only	B7XZ	Disable IPMI-over-LAN (default)
CTO only	B7Y0	Enable IPMI-over-LAN

The following table lists the XClarity Controller FoD upgrades.

Table 43. XClarity Controller FoD upgrades

Description	Part number	Feature code	Maximum quantity
ThinkSystem XClarity Controller Standard to Advanced Upgrade	4L47A09132	AVUT	1
ThinkSystem XClarity Controller Standard to Enterprise Upgrade	None*	AUPW	1
ThinkSystem XClarity Controller Advanced to Enterprise Upgrade	4L47A09133	None**	1

* Factory-installed only.
** Field-upgrade only.

Configuration notes:

- For factory-installed upgrades, either Standard to Advanced Upgrade (feature AVUT) or Standard to Enterprise Upgrade (feature AUPW) can be selected, but not both.
- For field upgrades, the Advanced to Enterprise Upgrade (4L47A09133) requires the Standard to Advanced Upgrade to be activated on the server previously with either the factory-installed feature AVUT or field upgrade 4L47A09132.

Lenovo XClarity Provisioning Manager

Lenovo XClarity Provisioning Manager is a UEFI-embedded GUI application that combines the functions of configuring system setup settings, configuring RAID, and updating applications and firmware. It also enables you to install the supported operating systems and associated device drivers, run diagnostics, and collect service data.

Lenovo XClarity Provisioning Manager has the following features:

- Automatic hardware detection
- Collecting and viewing system inventory information
- Configuring UEFI system setup settings
- Updating the system firmware
- Configuring RAID by using the RAID Setup Wizard or Advanced mode
- Installing an operating system and device drivers automatically or manually
- Running diagnostics and collecting service data

Lenovo XClarity Essentials

Lenovo offers the following XClarity Essentials software tools that can help you set up, use, and maintain the server at no additional cost:

- Lenovo XClarity Essentials OneCLI
  OneCLI is a collection of server management tools that utilize a command line interface program to manage firmware, hardware, and operating systems. It provides functions to collect full system health information (including health status), configure system setting, and update system firmware and drivers.
- Lenovo XClarity Essentials UpdateXpress
  The UpdateXpress tool is a standalone GUI application for firmware and device driver updates that enables you to maintain your server firmware and device drivers up-to-date and help you avoid unnecessary server outages. The tool acquires and deploys individual updates and UpdateXpress System Packs (UXSPs) which are integration-tested bundles.
- Lenovo XClarity Essentials Bootable Media Creator
  The Bootable Media Creator (BOMC) tool is used to create bootable media for offline firmware update.

For more information and downloads, visit the Lenovo XClarity Essentials web page:
http://support.lenovo.com/us/en/documents/LNVO-center

Lenovo XClarity Administrator

Lenovo XClarity is a centralized systems management solution that helps administrators deliver infrastructure faster. This solution integrates easily with Lenovo x86 servers, certified nodes, appliances, RackSwitch switches, and select Lenovo storage, providing automated agent-less discovery, monitoring, firmware updates, configuration management, and bare metal deployment of operating systems and hypervisors across multiple servers.

Lenovo XClarity Administrator is an optional software component for the SR250 server which can be downloaded and used at no charge to discover and monitor the SR250 and manage firmware upgrades for them.

If software support is required for Lenovo XClarity Administrator, or Lenovo XClarity Administrator premium features (such as configuration management and operating system deployment) are required, or both, Lenovo XClarity Pro software subscription should be ordered. Lenovo XClarity Pro is licensed on a per managed system basis, that is, each managed Lenovo system requires a license.

The following table lists the geo-specific Lenovo XClarity software license options.

Table 44. Lenovo XClarity software options

Description	Part number (NA, AP, Japan)*	Part number (EMEA, LA)**	Quantity
Lenovo XClarity Pro, per Managed Endpoint w/1 Yr SW S&S	00MT201	00MT207	1
Lenovo XClarity Pro, per Managed Endpoint w/3 Yr SW S&S	00MT202	00MT208	1
Lenovo XClarity Pro, per Managed Endpoint w/5 Yr SW S&S	00MT203	00MT209	1

* NA = North America; AP = Asia Pacific
** EMEA = Europe, Middle East, Africa; LA = Latin America

Lenovo XClarity Administrator offers the following standard features that are available at no charge:

- Auto-discovery and monitoring of Lenovo x86 servers, appliances, certified nodes, RackSwitch switches, Flex System chassis, and select Lenovo storage systems
- Firmware updates and compliance enforcement
- External alerts and notifications via SNMP traps, syslog remote logging, and e-mail
- Secure connections to managed endpoints
- NIST 800-131A or FIPS 140-2 compliant cryptographic standards between the management solution and managed endpoints
- Integration into existing higher-level management systems such as cloud automation and orchestration tools through REST APIs, providing extensive external visibility and control over hardware resources
- An intuitive, easy-to-use GUI
- Scripting with Windows PowerShell, providing command-line visibility and control over hardware resources

Lenovo XClarity Administrator offers the following premium features that require an optional Pro license:

- Pattern-based configuration management that allows to define configurations once and apply repeatedly without errors when deploying new servers or redeploying existing servers without disrupting the fabric
- Bare-metal deployment of operating systems and hypervisors to streamline infrastructure provisioning

For more information, refer to the Lenovo XClarity Administrator Product Guide:
http://lenovopress.com/tips1200

Lenovo XClarity Integrators

Lenovo offers at no charge (if software support is required, a Lenovo XClarity Pro software subscription license should be ordered) two software plug-in modules, Lenovo XClarity Integrators, to manage physical infrastructure from leading external virtualization management software tools from Microsoft and VMware:

- Lenovo XClarity Integrator for Microsoft System Center
- Lenovo XClarity Integrator for VMware vCenter

Lenovo XClarity Integrators offer the following additional features:

- Ability to discover, manage, and monitor Lenovo server hardware from VMware vCenter or Microsoft System Center
- Deployment of firmware updates and configuration patterns to Lenovo x86 rack servers and Flex System from the virtualization management tool
- Non-disruptive server maintenance in clustered environments that reduces workload downtime by dynamically migrating workloads from affected hosts during rolling server updates or reboots
- Greater service level uptime and assurance in clustered environments during unplanned hardware events by dynamically triggering workload migration from impacted hosts when impending hardware failures are predicted

For more information, refer to the Lenovo XClarity Integrators web page:
http://www3.lenovo.com/us/en/data-center/software/systems-management/xclarity-integrators

Lenovo XClarity Energy Manager

Lenovo XClarity Energy Manager provides a stand-alone, web-based agent-less power management console that provides real time data and enables you to observe, plan and manage power and cooling for Lenovo servers. Using built-in intelligence, it identifies server power consumption trends and ideal power settings and performs cooling analysis so that you can define and optimize power-saving policies.

Lenovo XClarity Energy Manager offers the following capabilities:

- Monitors room, row, rack, and device levels in the data center
- Reports vital server information, such as power, temperature and resource utilization
- Monitors inlet temperature to locate hot spots, reducing the risk of data or device damage
- Provides finely-grained controls to limit platform power in compliance with IT policy
- Generates alerts when a user-defined threshold is reached

Lenovo XClarity Energy Manager is an optional software component for the SR250 server that is licensed on a per managed node basis, that is, each managed server requires a license. The 1-node Energy Manager license is included in the XClarity Controller Enterprise upgrade.

To manage systems without XClarity Controller Enterprise licenses, a node license pack should be purchased. The following table lists the geo-specific Lenovo XClarity Energy Manager software license options.

Table 45. Lenovo XClarity Energy Manager software options

Description	Part number (NA, AP, Japan)*	Part number (EMEA, LA)**	Quantity
Lenovo XClarity Energy Manager, 1 Node w/ 1 Yr S&S	01DA225	01DA228	1

* NA = North America; AP = Asia Pacific.
** EMEA = Europe, Middle East, Africa; LA = Latin America.

For more information, refer to the Lenovo XClarity Energy Manager web page:
http://datacentersupport.lenovo.com/us/en/solutions/lnvo-lxem

Lenovo Capacity Planner

Lenovo Capacity Planner is a power consumption evaluation tool that enhances data center planning by enabling IT administrators and pre-sales professionals to understand various power characteristics of racks, servers, and other devices. Capacity Planner can dynamically calculate the power consumption, current, British Thermal Unit (BTU), and volt-ampere (VA) rating at the rack level, improving the planning efficiency for large scale deployments.

For more information, refer to the Capacity Planner web page:
http://datacentersupport.lenovo.com/us/en/solutions/lnvo-lcp

Security

The SR250 server offers the following security features:

- Power-on password
- Administrator's password
- Secure firmware updates
- Onboard Trusted Platform Module (TPM) version 1.2 or 2.0 (configurable UEFI system setting)
- Nationz Trusted Platform Module v2.0 (optional; PRC only)
- Lockable front bezel (optional)
- Lenovo Business Vantage security software (optional; PRC only)

The server is NIST SP 800-147B compliant.

The following table lists the security options that are available for the SR250 server.

Table 46. Security options

Description	Part number	Feature code	Maximum quantity
Lockable front bezel			
ThinkSystem 1U Security Bezel	7Z17A02581	AUWR	1
Trusted Platform Module (PRC only)			
ThinkSystem Nationz Trusted Platform Module v2.0	None*	B22N	1

* Factory-installed only; no field upgrade.

Lenovo Business Vantage is a security software tool suite (available only in PRC) designed to work with the Nationz TPM for enhanced security, to keep user data safe, and to erase confidential data completely from a hard disk drive.

Lenovo Business Vantage provides the following features:

- Encrypts files to ensure data safety by using the Nationz TPM.
- Erases confidential data from a hard disk.
- Prohibits unauthorized access to the USB port of devices.
- Encrypts files to ensure data security on a USB storage device.

For more information, refer to the Lenovo Business Vantage web page:
http://support.lenovo.com.cn/lenovo/wsi/es/es.html

Rack installation

The following table lists the rack installation options that are available for the SR250 server.

Table 47. Rack installation options

Description	Part number	Feature code	Maximum quantity
4-post rail kits			
ThinkSystem Tool-less Friction Rail v2	4M17A13564	B42B	1
ThinkSystem Short Rack Rail Kit	4M17A37605	B7L3	1
2-post rail kits			
ThinkSystem Friction 2-Post Screw-in Rail Kit	4M17A37105	B6H2	1
Front VGA port			
ThinkSystem SR250/SR150 Front VGA Connector Kit	4Z57A12653	B419	1

The following table summarizes the rail kit features and specifications.

Table 48. Rail kit features and specifications summary

Feature	4-Post Tool-less Rail Kit	4-Post Short Rail Kit	2-Post Screw-in Rail Kit
Part number	4M17A13564	4M17A37605	4M17A37105
CMA	None	None	None
Rail length	751.2 mm (29.6 in.)	484.0 mm (19.1 in.)	486.2 mm (19.2 in.)
Rail type	Half-out slide (friction)	Half-out slide (friction)	Half-out slide (friction)
Tool-less installation	Yes	Yes	No
In-rack server maintenance	No	No	No
1U PDU support	Yes	Yes	Yes

Feature	4-Post Tool-less Rail Kit	4-Post Short Rail Kit	2-Post Screw-in Rail Kit
0U PDU support	Limited*	Yes	Not applicable
Rack type	IBM or Lenovo 4-post, EIA standard-compliant	4-post, EIA standard-compliant	2-post, EIA standard-compliant
Mounting holes	Square or round	Square or round	Square, round, or threaded
Mounting flange thickness	2 mm (0.08 in.) – 3.3 mm (0.13 in.)	2 mm (0.08 in.) – 3.3 mm (0.13 in.)	2 mm (0.08 in.) – 3.3 mm (0.13 in.)
Distance between front and rear mounting flanges^	609.6 mm (24 in.) – 863.6 mm (34 in.)	355.6 mm (14 in.) – 609.6 mm (24 in.)	Not applicable

* If a 0U PDU used, the rack cabinet must be at least 1000 mm (39.37 in.) deep.
^ Measured when mounted on the rack cabinet, from the front surface of the front mounting flange to the rear most point of the rail.

Operating systems

The server supports the following operating systems:

- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Red Hat Enterprise Linux 7.7
- Red Hat Enterprise Linux 7.8
- Red Hat Enterprise Linux 7.9
- Red Hat Enterprise Linux 8.1
- Red Hat Enterprise Linux 8.2
- Red Hat Enterprise Linux 8.3
- Red Hat Enterprise Linux 8.4
- SUSE Linux Enterprise Server 12 SP5
- SUSE Linux Enterprise Server 12 Xen SP5
- SUSE Linux Enterprise Server 15 SP1
- SUSE Linux Enterprise Server 15 SP2
- SUSE Linux Enterprise Server 15 SP3
- SUSE Linux Enterprise Server 15 Xen SP1
- SUSE Linux Enterprise Server 15 Xen SP2
- SUSE Linux Enterprise Server 15 Xen SP3
- VMware ESXi 6.5 U3
- VMware ESXi 6.7 U3
- VMware ESXi 7.0
- VMware ESXi 7.0 U1
- VMware ESXi 7.0 U2

For a complete list of supported, certified and tested operating systems, plus additional details and links to relevant web sites, see the Operating System Interoperability Guide: https://lenovopress.com/osig#servers=sr250-7y51-7y52-e-2200

For configure-to-order configurations, the server can be preloaded with VMware ESXi. Ordering information is listed in the following table.

Table 49. VMware ESXi preload

Part number	Feature code	Description
CTO only	B6U0	VMware ESXi 6.5 U3 (factory installed)
CTO only	B88T	VMware ESXi 6.7 U3 (factory installed)
CTO only	BBZG	VMware ESXi 7.0 (Factory Installed)
CTO only	BE5E	VMware ESXi 7.0 U1 (Factory Installed)
CTO only	BHSR	VMware ESXi 7.0 U2 (Factory Installed)

Physical specifications

The SR250 has the following overall physical dimensions, excluding components that extend outside the standard chassis, such as EIA flanges, front security bezel (if any), and power supply handles:

- Width: 435 mm (17.1 inches)
- Height: 43 mm (1.7 inches)
- Depth: 545 mm (21.5 inches)

The following table lists the detailed dimensions. See the figure below for the definition of each dimension.

Table 50. Detailed dimensions

Dimension	Description
482 mm	X_a = Width, to the outsides of the front EIA flanges
435 mm	X_b = Width, to the rack rail mating surfaces
435 mm	X_c = Width, to the outer most chassis body feature
43 mm	Y_a = Height, from the bottom of chassis to the top of the chassis
501 mm	Z_a = Depth, from the rack flange mating surface to the rearmost I/O port surface
509 mm	Z_b = Depth, from the rack flange mating surface to the rearmost feature of the chassis body
523 mm	Z_c = Depth, from the rack flange mating surface to the rearmost feature such as power supply handle
36 mm	Z_d = Depth, from the forwardmost feature on front of EIA flange to the rack flange mating surface
47 mm	Z_e = Depth, from the front of security bezel (if applicable) or forwardmost feature to the rack flange mating surface

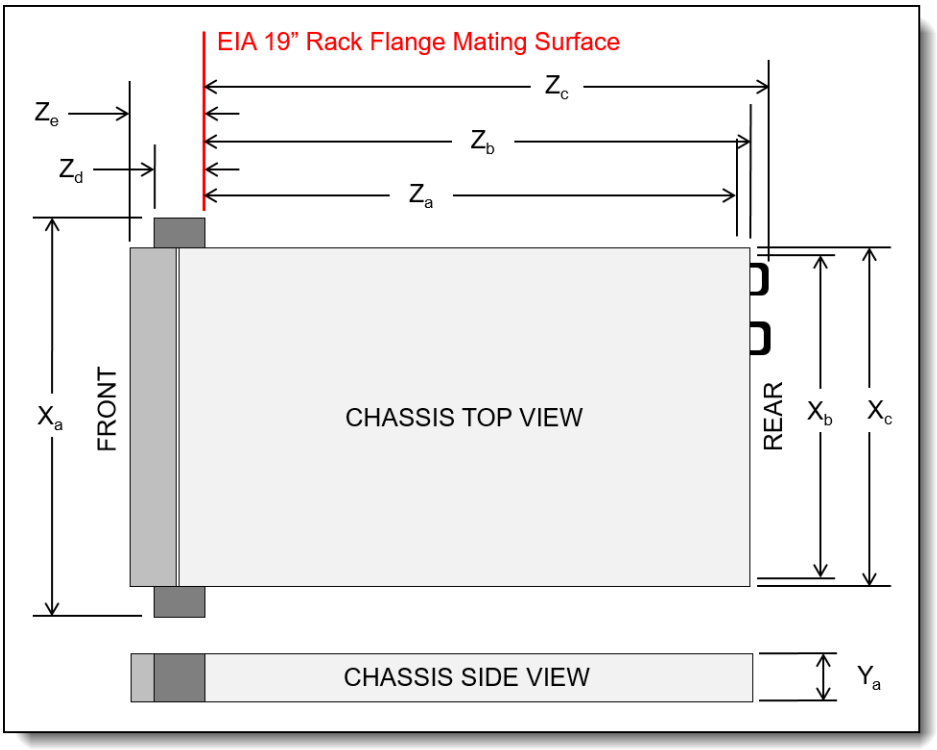

Figure 9. Server dimensions

The shipping dimensions (cardboard packaging) of the SR250 are as follows:

- Width: 186 mm (7.3 inches)
- Height: 879 mm (34.6 inches)
- Depth: 600 mm (23.6 inches)

The SR250 server has the following weight:

- Base configuration: 9.1 kg (20.1 lb)
- Maximum configuration: 12.3 kg (27.1 lb)

Operating environment

The SR250 server complies with ASHRAE class A2 specifications. The server performance might be impacted when the operating temperature is outside the ASHRAE A2 specifications or in case of a system fan failure. Depending on the hardware configuration, some server models comply with ASHRAE class A3 specifications. To comply with ASHRAE class A3 specifications, the SR250 server models must be configured with 8x 2.5-inch hot-swap drive bays and a processor with up to 80 W TDP.

The SR250 server is supported in the following environment:

- Air temperature:
  - Operating:
    - ASHRAE Class A3: 5 °C - 40 °C (41 °F - 104 °F); for altitudes above 900 m (2,953 ft), decrease the maximum ambient temperature by 1 °C for every 175-m (574-ft) increase in altitude
    - ASHRAE Class A2: 10 °C - 35 °C (50 °F - 95 °F); for altitudes above 900 m (2,953 ft), decrease the maximum ambient temperature by 1 °C for every 300-m (984-ft) increase in altitude
  - Non-operating: 5 °C - 45 °C (41 °F - 113 °F)
  - Storage: -40 °C - +60 °C (-40 °F - 140 °F)
- Maximum altitude: 3050 m (10,000 ft)
- Humidity:
  - Operating:
    - ASHRAE Class A3: 8% - 85% (non-condensing); maximum dew point: 24 °C (75 °F)
    - ASHRAE Class A2: 8% - 80% (non-condensing); maximum dew point: 21 °C (70 °F)
  - Storage: 8% - 90% (non-condensing)
- Electrical:
  - 100 - 127 (nominal) V AC; 50 Hz / 60 Hz
  - 200 - 240 (nominal) V AC; 50 Hz / 60 Hz
- Acoustics:
  - Minimum configuration:
    - Operating: 5.3 bels
    - Idle: 4.9 bels
  - Maximum configuration:
    - Operating: 5.7 bels
    - Idle: 5.4 bels
- Vibration:
  - Operating: 0.21 G rms at 5 Hz to 500 Hz for 15 minutes across 3 axes
  - Non-operating: 1.04 G rms at 2 Hz to 200 Hz for 15 minutes across 6 surfaces
- Shock:
  - Operating: 15 G for 3 milliseconds in each direction (positive and negative X, Y, and Z axes)
  - Non-operating: 50 G for 152 in./sec velocity change across 6 surfaces

The following table lists the maximum system power load, rated inlet current, and system heat output based on the power supply and source voltage.

Table 51. Rated system power, inlet current, and system heat output

Power supply	Source voltage	Maximum power load per system	Rated current per inlet	System heat output
300 W Gold (One power supply)	100 - 127 V AC	334 W	4 A	1139 BTU/hour
	200 - 240 V AC	326 W	2 A	1111 BTU/hour
450 W Platinum (Two power supplies)	100 - 127 V AC	503 W	5.8 A	1717 BTU/hour
	200 - 240 V AC	484 W	2.9 A	1650 BTU/hour

Warranty and support

The SR250 server comes with a three-year (Machine Type 7Y51) or one-year (Machine Type 7Y52) customer-replaceable unit (CRU) and onsite limited (for field-replaceable units [FRUs] only) warranty with standard call center support during normal business hours and 9x5 Next Business Day Parts Delivered.

Lenovo's additional support services provide a sophisticated, unified support structure for a customer's data center, with an experience consistently ranked number one in customer satisfaction worldwide. The following Lenovo support services are available:

- **Premier Support** provides a Lenovo-owned customer experience and delivers direct access to technicians skilled in hardware, software, and advanced troubleshooting, in addition to the following capabilities:
  - Direct technician-to-technician access through a dedicated phone line.
  - 24x7x365 remote support.
  - Single point of contact service.
  - End to end case management.
  - 3rd Party collaborative software support.
  - Online case tools and live chat support.
  - On-demand remote system analysis.
- **Warranty Upgrades (Preconfigured Support)** are available to meet the on-site response time targets that match the criticality of customer's systems:
  - 3, 4, or 5 years of service coverage.
  - 1-year or 2-year post-warranty extensions.
  - **Foundation Service:** 9x5 service coverage with next business day onsite response, with optional YourDrive YourData.
  - **Essential Service:** 24x7 service coverage with 4-hour onsite response or 24-hour committed repair (available only in select regions), bundled with YourDrive YourData.
  - **Advanced Service:** 24x7 service coverage with 2-hour onsite response or 6-hour committed repair (available only in select regions), bundled with YourDrive YourData.
- **Managed Services**
  Lenovo Managed Services provide continuous 24x7 remote monitoring (plus 24x7 call center availability) and proactive management of a customer's data center using state of the art tools, systems, and practices by a team of highly skilled and experienced Lenovo services professionals.

  Quarterly reviews check error logs, verify firmware and operating system device driver levels, and software as needed. Lenovo will also maintain records of latest patches, critical updates, and firmware levels, to ensure customer's systems are providing business value through optimized performance.
- **Technical Account Management (TAM)**
  A Lenovo Technical Account Manager helps customers optimize operations of their data centers based on a deep understanding of customer's business. Customers gain direct access to a Lenovo TAM, who serves as their single point of contact to expedite service requests, provide status updates, and furnish reports to track incidents over time. Also, a TAM helps proactively make service recommendations and manage service relationship with Lenovo to make certain that customer's needs are met.
- **Enterprise Software Support**
  Lenovo Enterprise Software Support is an additional support service that provides customers with software support on Microsoft, Red Hat, SUSE, and VMWare applications and systems. Around the clock availability for critical problems plus unlimited calls and incidents helps customers address challenges fast, without incremental costs. Support staff can answer troubleshooting and diagnostic questions, address product compatibility and interoperability issues, isolate causes of problems, report defects to software vendors, and more.
- **YourDrive YourData**
  Lenovo's YourDrive YourData service is a multi-drive retention offering that ensures that customer's data is always under their control, regardless of the number of drives that are installed in their Lenovo server. In the unlikely event of a drive failure, customers retain possession of their drive while Lenovo replaces the failed drive part. Customer's data stays safely on customer premises, in their hands. The YourDrive YourData service can be purchased in convenient bundles with Foundation, Essential, or Advanced Service upgrades and extensions.

- **Health Check**
  Having a trusted partner who can perform regular and detailed health checks is central to maintaining efficiency and ensuring that customer systems and business are always running at their best. Health Check supports Lenovo-branded server, storage, and networking devices, as well as select Lenovo-supported products from other vendors that are sold by Lenovo or a Lenovo-Authorized Reseller.

Some regions might have different warranty terms and conditions than the standard warranty. This is due to local business practices or laws in the specific region. Local service teams can assist in explaining region-specific terms when needed. Examples of region-specific warranty terms are second or longer business day parts delivery or parts-only base warranty.

If warranty terms and conditions include onsite labor for repair or replacement of parts, Lenovo will dispatch a service technician to the customer site to perform the replacement. Onsite labor under base warranty is limited to labor for replacement of parts that have been determined to be field-replaceable units (FRUs). Parts that are determined to be customer-replaceable units (CRUs) do not include onsite labor under base warranty.

If warranty terms include parts-only base warranty, Lenovo is responsible for delivering only replacement parts that are under base warranty (including FRUs) that will be sent to a requested location for self-service. Parts-only service does not include a service technician being dispatched onsite. Parts must be changed at customer's own cost and labor and defective parts must be returned following the instructions supplied with the spare parts.

Lenovo support services are region-specific. Not all support services are available in every region. For information about Lenovo support services that are available in a specific region, refer to the following resources:

- Service part numbers in Data Center Solution Configurator (DCSC):
  http://dcsc.lenovo.com/#/services
- Lenovo Services Availability Locator
  https://lenovolocator.com/

For service definitions, region-specific details, and service limitations, refer to the following documents:

- Lenovo Statement of Limited Warranty for Infrastructure Solutions Group (ISG) Servers and System Storage
  http://pcsupport.lenovo.com/us/en/solutions/ht503310
- Lenovo Data Center Services Agreement
  http://support.lenovo.com/us/en/solutions/ht116628

Services

Lenovo Services is a dedicated partner to customer success. Lenovo's goal for customers is to reduce capital outlays, mitigate IT risks, and accelerate time to productivity.

Here is a more in-depth look at what Lenovo can do for their customers:

- **Asset Recovery Services**
  Asset Recovery Services (ARS) helps customers recover the maximum value from their end-of-life equipment in a cost-effective and secure way. On top of simplifying the transition from old to new equipment, ARS mitigates environmental and data security risks associated with data center equipment disposal. Lenovo ARS is a cash-back solution for equipment based on its remaining market value, yielding maximum value from aging assets and lowering total cost of ownership for customers. For more information, see the ARS page, http://lenovopress.com/lp1266.

- **Assessment Services**
  An assessment helps solve customer IT challenges through an onsite, multi-day session with a Lenovo technology expert. Lenovo performs a tools-based assessment which provides a comprehensive and thorough review of a company's environment and technology systems. In addition to the technology-based functional requirements, the consultant also discusses and records the non-functional business requirements, challenges, and constraints. Assessments help organizations, no matter how large or small, get a better return on their IT investment and overcome challenges in the ever-changing technology landscape.

- **Design Services**
  Professional Services consultants perform infrastructure design and implementation planning to support customer's strategy. The high-level architectures provided by the assessment service are turned into low level designs and wiring diagrams, which are reviewed and approved prior to implementation. The implementation plan will demonstrate an outcome-based proposal to provide business capabilities through infrastructure with a risk-mitigated project plan.
- **Basic Hardware Installation**
  Lenovo experts can seamlessly manage the physical installation of customer's server, storage, or networking hardware. Working at a time convenient for the customer (business hours or off shift), the technician will unpack and inspect the systems on customer site, install options, mount in a rack cabinet, connect to power and network, check and update firmware to the latest levels, verify operation, and dispose of the packaging, allowing customers to focus on other priorities.
- **Deployment Services**
  When investing in new IT infrastructures, customers need to ensure that their business will see quick time to value with little to no disruption. Lenovo deployments are designed by development and engineering teams who know Lenovo products and solutions better than anyone else, and Lenovo technicians own the process from delivery to completion. Lenovo will conduct remote preparation and planning, configure and integrate systems, validate systems, verify and update appliance firmware, train on administrative tasks, and provide post-deployment documentation. Customer’s IT teams leverage Lenovo skills to enable IT staff to transform with higher level roles and tasks.
- **Integration, Migration, and Expansion Services**
  Integration, Migration, and Expansion Services allow to move existing physical and virtual workloads easily, or to determine technical requirements to support increased workloads while maximizing performance. These services include tuning, validation, and documenting ongoing run processes, and they leverage migration assessment planning documents to perform necessary migrations.

Some service options may not be available in every region. For more information about Lenovo service offerings that are available in a specific region, contact a local Lenovo sales representative or business partner.

Regulatory compliance

The ThinkSystem SR250 server conforms to the following regulations:

- FCC Title 47 CFR Part 15 Subpart B
- ICES-003/NMB-03, Class A
- UL62368-1
- NOM-019
- VCCI, Class A
- AS/NZS CISPR 32, Class A
- CCC GB4943.1, GB9254 Class A, GB17625.1, CECP, CELP
- BSMI CNS13438, Class A; CNS14336-1; CNS15663
- KN32, Class A; KN35
- BIS
- TR CU 020/2011; TR CU 004/2011
- IEC60950-1, IEC62368-1 (CB Certificate and CB Test Report)
- CE Mark (EN55032 Class A, EN60950-1, EN55024, EN50581, EN61000-3-2, EN61000-3-3, EN62368-1)
- CISPR 32, Class A
- TUV-GS (EK1-ITB2000, EN62368-1)
- Reduction of Hazardous Substances (ROHS)

External drive enclosures

The following table lists the 12 Gbps SAS external drive enclosures that are offered by Lenovo that can be used with the ThinkSystem SR250 for storage expansion.

Note: Information provided in this section is for ordering reference purposes only. For the operating system and adapter support details, refer to the interoperability matrix for a particular storage enclosure that can be found on the Lenovo Data Center Support web site:
http://datacentersupport.lenovo.com

Table 52. External drive enclosures

Description	Part number		
	Worldwide	Japan	PRC
Lenovo Storage D1212 LFF Disk Expansion with Dual SAS IO Modules	4587A11	4587A1J	4587A1C
Lenovo Storage D1224 SFF Disk Expansion with Dual SAS IO Modules	4587A31	4587A3J	4587A3C
Lenovo Storage D3284 4TB x 84 HD Expansion Enclosure	641311F		
Lenovo Storage D3284 6TB x 84 HD Expansion Enclosure	641312F		
Lenovo Storage D3284 8TB x 84 HD Expansion Enclosure	641313F		
Lenovo Storage D3284 10TB x 84 HD Expansion Enclosure	641314F		

For details about supported drives, adapters, and cables, see the following Lenovo Press Product Guides:

- Lenovo Storage D1212 and D1224
  http://lenovopress.com/lp0512
- Lenovo Storage D3284
  http://lenovopress.com/lp0513

External storage systems

The following table lists the external storage systems that are currently offered by Lenovo that can be used with the ThinkSystem SR250 server for external NAS, SAS, iSCSI, or FC storage connectivity.

Note: Information provided in this section is for ordering reference purposes only. End-to-end storage configuration support *must* be verified through the interoperability matrix for a particular storage system that can be found on the Lenovo Data Center Support web site:
http://datacentersupport.lenovo.com

Table 53. External storage systems: DE Series

Description	Part number	
	Worldwide	Japan
Lenovo ThinkSystem DE Series Storage (SAS connectivity)		
Lenovo ThinkSystem DE2000H SAS Hybrid Flash Array LFF (16 GB cache)	7Y70A000WW	7Y701003JP
Lenovo ThinkSystem DE2000H SAS Hybrid Flash Array SFF (16 GB cache)	7Y71A000WW	7Y711003JP
Lenovo ThinkSystem DE4000H SAS Hybrid Flash Array 4U60 (16 GB cache)	7Y77A002WW	7Y771000JP
Lenovo ThinkSystem DE4000H SAS Hybrid Flash Array LFF (16 GB cache)	7Y74A000WW	7Y74A000JP
Lenovo ThinkSystem DE4000H SAS Hybrid Flash Array SFF (16 GB cache)	7Y75A000WW	7Y75A000JP
Lenovo ThinkSystem DE4000F SAS All Flash Array SFF (16 GB cache)	7Y76A000WW	7Y76A000JP
Lenovo ThinkSystem DE4000F SAS All Flash Array SFF (64 GB cache)	7Y76A005WW	7Y76A008JP
Lenovo ThinkSystem DE6000H SAS Hybrid Flash Array 4U60 (32 GB cache)	7Y80A000WW	7Y801002JP
Lenovo ThinkSystem DE6000H SAS Hybrid Flash Array SFF (32 GB cache)	7Y78A000WW	7Y781002JP
Lenovo ThinkSystem DE6000F SAS All Flash Array SFF (128 GB cache)	7Y79A000WW	7Y79A000JP

Description	Part number	
	Worldwide	Japan
Lenovo ThinkSystem DE Series Storage (iSCSI connectivity)		
Lenovo ThinkSystem DE2000H 10GBASE-T Hybrid Flash Array LFF (16 GB cache)	7Y70A003WW	7Y701001JP
Lenovo ThinkSystem DE2000H 10GBASE-T Hybrid Flash Array SFF (16 GB cache)	7Y71A002WW	7Y711005JP
Lenovo ThinkSystem DE2000H iSCSI Hybrid Flash Array LFF (16 GB cache)	7Y70A004WW	7Y701000JP
Lenovo ThinkSystem DE2000H iSCSI Hybrid Flash Array SFF (16 GB cache)	7Y71A003WW	7Y711006JP
Lenovo ThinkSystem DE4000H iSCSI Hybrid Flash Array 4U60 (16 GB cache)	7Y77A000WW	7Y771002JP
Lenovo ThinkSystem DE4000H iSCSI Hybrid Flash Array LFF (16 GB cache)	7Y74A002WW	7Y74A002JP
Lenovo ThinkSystem DE4000H iSCSI Hybrid Flash Array SFF (16 GB cache)	7Y75A001WW	7Y75A001JP
Lenovo ThinkSystem DE4000F iSCSI All Flash Array SFF (16 GB cache)	7Y76A002WW	7Y76A002JP
Lenovo ThinkSystem DE4000F iSCSI All Flash Array SFF (64 GB cache)	7Y76A007WW	7Y76A00AJP
Lenovo ThinkSystem DE6000H iSCSI Hybrid Flash Array 4U60 (32 GB cache)	7Y80A002WW	7Y801000JP
Lenovo ThinkSystem DE6000H iSCSI Hybrid Flash Array SFF (32 GB cache)	7Y78A002WW	7Y781000JP
Lenovo ThinkSystem DE6000F iSCSI All Flash Array SFF (128 GB cache)	7Y79A002WW	7Y79A002JP
Lenovo ThinkSystem DE Series Storage (FC connectivity)		
Lenovo ThinkSystem DE2000H FC Hybrid Flash Array LFF (16 GB cache)	7Y70A002WW	7Y701002JP
Lenovo ThinkSystem DE2000H FC Hybrid Flash Array SFF (16 GB cache)	7Y71A001WW	7Y711004JP
Lenovo ThinkSystem DE4000H FC Hybrid Flash Array 4U60 (16 GB cache)	7Y77A001WW	7Y771001JP
Lenovo ThinkSystem DE4000H FC Hybrid Flash Array LFF (16 GB cache)	7Y74A001WW	7Y74A001JP
Lenovo ThinkSystem DE4000H FC Hybrid Flash Array SFF (16 GB cache)	7Y75A002WW	7Y75A002JP
Lenovo ThinkSystem DE4000F FC All Flash Array SFF (16 GB cache)	7Y76A001WW	7Y76A001JP
Lenovo ThinkSystem DE4000F FC All Flash Array SFF (64 GB cache)	7Y76A006WW	7Y76A009JP
Lenovo ThinkSystem DE6000H FC Hybrid Flash Array 4U60 (32 GB cache)	7Y80A001WW	7Y801001JP
Lenovo ThinkSystem DE6000H FC Hybrid Flash Array SFF (32 GB cache)	7Y78A001WW	7Y781001JP
Lenovo ThinkSystem DE6000F FC All Flash Array SFF (128 GB cache)	7Y79A001WW	7Y79A001JP

Table 54. External storage systems: DM Series

Description	Part number
Lenovo ThinkSystem DM Series Storage (NAS or iSCSI connectivity)	
ThinkSystem DM3000H, 48TB (12x 4TB HDDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y421003EA*
ThinkSystem DM3000H, 48TB (12x 4TB HDDs), 10GBASE-T, ONTAP 9.5	7Y421007EA*
ThinkSystem DM3000H, 96TB (12x 8TB HDDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y421005EA*
ThinkSystem DM3000H, 96TB (12x 8TB HDDs), 10GBASE-T, ONTAP 9.5	7Y421001EA*
ThinkSystem DM5000H, 11.5TB (12x 960GB SSDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y571004EA*
ThinkSystem DM5000H, 11.5TB (12x 960GB SSDs), 10GBASE-T, ONTAP 9.5	7Y57100LEA*
ThinkSystem DM5000H, 14.4TB (12x 1.2TB HDDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y57100CEA*
ThinkSystem DM5000H, 21.6TB (12x 1.8TB HDDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y57100GEA*
ThinkSystem DM5000H, 23TB (24x 960GB SSDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y571006EA*
ThinkSystem DM5000H, 23TB (24x 960GB SSDs), 10GBASE-T, ONTAP 9.5	7Y57100NEA*
ThinkSystem DM5000H, 28.8TB (24x 1.2TB HDDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y57100EEA*
ThinkSystem DM5000H, 28.8TB (24x 1.2TB HDDs), 10GBASE-T, ONTAP 9.5	7Y57100VEA*
ThinkSystem DM5000H, 43.2TB (24x 1.8TB HDDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y57100JEA*
ThinkSystem DM5000H, 43.2TB (24x 1.8TB HDDs), 10GBASE-T, ONTAP 9.5	7Y571002EA*

Description	Part number
ThinkSystem DM5000H, 46TB (12x 3.84TB SSDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y571008EA*
ThinkSystem DM5000H, 46TB (12x 3.84TB SSDs), 10GBASE-T, ONTAP 9.5	7Y57100QEA*
ThinkSystem DM5000H, 92TB (24x 3.84TB SSDs), 10GBASE-T, ONTAP 9.5 Fundamentals	7Y57100AEA*
ThinkSystem DM5000H, 92TB (24x 3.84TB SSDs), 10GBASE-T, ONTAP 9.5	7Y57100REA*
ThinkSystem DM5000F, 11.5TB (12x 960GB SSDs), 10GBASE-T, ONTAP 9.5	7Y411002EA*
ThinkSystem DM5000F, 23TB (24x 960GB SSDs), 10GBASE-T, ONTAP 9.5	7Y411004EA*
ThinkSystem DM5000F, 46TB (12x 3.84TB SSDs), 10GBASE-T, ONTAP 9.5	7Y411006EA*
ThinkSystem DM5000F, 92TB (24x 3.84TB SSDs), 10GBASE-T, ONTAP 9.5	7Y411007EA*
Lenovo ThinkSystem DM Series Storage (NAS, iSCSI, or FC connectivity)	
ThinkSystem DM3000H Hybrid Storage Array (2U12 LFF, CTO only)	7Y42CTO1WW
ThinkSystem DM3000H, 48TB (12x 4TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y421009NA*
ThinkSystem DM3000H, 48TB (12x 4TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y421002EA*
ThinkSystem DM3000H, 48TB (12x 4TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y421006EA*
ThinkSystem DM3000H, 96TB (12x 8TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y421004EA*
ThinkSystem DM3000H, 96TB (12x 8TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y421008EA*
ThinkSystem DM5000H Hybrid Storage Array (2U24 SFF, CTO only)	7Y57CTO1WW
ThinkSystem DM5000H, 11.5TB (12x 960GB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y571011NA*
ThinkSystem DM5000H, 11.5TB (12x 960GB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y571003EA*
ThinkSystem DM5000H, 11.5TB (12x 960GB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y57100KEA*
ThinkSystem DM5000H, 14.4TB (12x 1.2TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y57100BEA*
ThinkSystem DM5000H, 21.6TB (12x 1.8TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y57100FEA*
ThinkSystem DM5000H, 23TB (24x 960GB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y571005EA*
ThinkSystem DM5000H, 23TB (24x 960GB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y57100MEA*
ThinkSystem DM5000H, 28.8TB (24x 1.2TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y57100DEA*
ThinkSystem DM5000H, 43.2TB (24x 1.8TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y571010NA*
ThinkSystem DM5000H, 43.2TB (24x 1.8TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y57100HEA*
ThinkSystem DM5000H, 43.2TB (24x 1.8TB HDDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y57100ZEA*
ThinkSystem DM5000H, 46TB (12x 3.84TB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y571007EA*
ThinkSystem DM5000H, 46TB (12x 3.84TB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y57100PEA*
ThinkSystem DM5000H, 92TB (24x 3.84TB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5 Fundamentals	7Y571009EA*
ThinkSystem DM5000H, 92TB (24x 3.84TB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y57100SEA*
ThinkSystem DM5000F Flash Storage Array (2U24 SFF, CTO only)	7Y41CTO1WW
ThinkSystem DM5000F, 11.5TB (12x 960GB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y411001EA*
ThinkSystem DM5000F, 23TB (24x 960GB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y411003EA*
ThinkSystem DM5000F, 46TB (12x 3.84TB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y411005EA*
ThinkSystem DM5000F, 92TB (24x 3.84TB SSDs), 16Gb FC / 10GbE SFP+, ONTAP 9.5	7Y411000EA*
ThinkSystem DM7000H Hybrid Storage Array (3U, CTO only)	7Y56CTO1WW
ThinkSystem DM7000F Flash Storage Array (3U, CTO only)	7Y40CTO1WW
ThinkSystem DM7100H Hybrid Storage Array (4U, CTO only)	7D26CTO1WW
ThinkSystem DM7100F Flash Storage Array (4U, CTO only)	7D25CTO1WW

* Preconfigured models that are available only in North America (part numbers that have NA at the end) or EMEA (part numbers that have EA at the end) and require Preconfigured support to be purchased with the storage system (See the respective product guide for details).

For more information, see the list of Product Guides in the Lenovo Storage category:
http://lenovopress.com/storage/san/lenovo#rt=product-guide

External backup units

The following table lists the external backup options that are offered by Lenovo that can be used with the ThinkSystem SR250 server for backup solutions.

Note: Information provided in this section is for ordering reference purposes only. End-to-end LTO Ultrium configuration support for a particular tape backup unit *must* be verified through the System Storage Interoperation Center (SSIC):
http://www.ibm.com/systems/support/storage/ssic

Table 55. External backup options

Description	Part number
External RDX USB drives	
ThinkSystem RDX External USB 3.0 Dock (special bid only)	4T27A10725
External SAS tape backup drives	
IBM TS2260 Tape Drive Model H6S	6160S6E
IBM TS2270 Tape Drive Model H7S	6160S7E
IBM TS2280 Tape Drive Model H8S	6160S8E
External SAS tape backup autoloaders	
IBM TS2900 Tape Autoloader w/LTO6 HH SAS	6171S6R
IBM TS2900 Tape Autoloader w/LTO7 HH SAS	6171S7R
IBM TS2900 Tape Autoloader w/LTO8 HH SAS	6171S8R
External tape backup libraries	
IBM TS4300 3U Tape Library-Base Unit	6741A1F
SAS backup drives for TS4300 Tape Library	
LTO 6 HH SAS Drive	01KP934
LTO 7 HH SAS Drive	01KP937
LTO 8 HH SAS Drive	01KP953
Fibre Channel backup drives for TS4300 Tape Library	
LTO 6 FH Fibre Channel Drive	01KP935
LTO 6 HH Fibre Channel Drive	01KP933
LTO 7 FH Fibre Channel Drive	01KP938
LTO 7 HH Fibre Channel Drive	01KP936
LTO 8 FH Fibre Channel Drive	01KP954
LTO 8 HH Fibre Channel Drive	01KP952

For more information, see the list of Product Guides in the Backup units category:
http://lenovopress.com/servers/options/backup#rt=product-guide

Fibre Channel SAN switches

The following table lists currently available Fibre Channel SAN switches that are offered by Lenovo that can be used with the ThinkSystem SR250 server for external FC SAN storage connectivity.

Table 56. Fibre Channel SAN switches

Description	Part number
16 Gb FC	
Lenovo ThinkSystem DB610S, 8 ports licensed, 8x 16Gb SWL SFPs, 1 PS, Rail Kit, 1Yr FW	6559F2A
Lenovo ThinkSystem DB610S, ENT., 24 ports licensed, 24x 16Gb SWL SFPs, 1 PS, Rail Kit, 1Yr FW	6559F1A
Lenovo ThinkSystem DB620S, 24 ports licensed, 24x 16Gb SWL SFPs, 2 PS, Rail Kit, 1Yr FW	6415J1A
Lenovo ThinkSystem DB620S, 24 ports licensed, 24x 16Gb SWL SFPs, 2 PS, Rail Kit (1yr)	6415L3A
32 Gb FC	
Lenovo ThinkSystem DB610S, 8 ports licensed, No SFPs, 1 PS, Rail Kit, 1Yr FW	6559F3A
Lenovo ThinkSystem DB620S, 24 ports licensed, 24x 32Gb SWL SFPs, 2 PS, Rail Kit, 1Yr FW	6415H11
Lenovo ThinkSystem DB620S, 24 ports licensed, 24x 32Gb SWL SFPs, 2 PS, Rail Kit (1yr)	6415L1A
Lenovo ThinkSystem DB620S, ENT., 48 ports licensed, 48x 32Gb SWL SFPs, 2 PS, Rail Kit, 1Yr FW	6415H2A
Lenovo ThinkSystem DB620S, ENT., 48 ports licensed, 48x 32Gb SWL SFPs, 2 PS, Rail kit (1yr)	6415L2A
Lenovo ThinkSystem DB630S, 48 ports licensed, No SFPs, 2 PS, Rail Kit, 1Yr FW	7D1SA001WW
Lenovo ThinkSystem DB630S, 48 ports licensed, 48x 32Gb SWL SFPs, 2 PS, Rail Kit (1yr)	7D1SA004WW
Lenovo ThinkSystem DB630S, ENT., 96 ports licensed, 96x 32Gb SWL SFPs, 2 PS, Rail Kit (1yr)	7D1SA005WW
Lenovo ThinkSystem DB400D 32Gb FC Director, ENT., 4 Blade slots, 8U, 1Yr FW	6684D2A
Lenovo ThinkSystem DB800D 32Gb FC Director, ENT., 8 Blade slots, 14U, 1Yr FW	6682D1A

For more information, see the list of Product Guides in the Rack SAN Switches category:
http://lenovopress.com/storage/switches/rack#rt=product-guide

Rack cabinets

The following table lists the supported rack cabinets.

Table 57. Rack cabinets

Part number	Description
7D3F0001WW / 7D3G0001WW	6U 800mm Deep Micro Datacenter Rack
7D3H0001WW / 7D3J0001WW	6U 1200mm Deep Micro Datacenter Rack
7D2A0001WW / 7D2M0001WW	6U Acoustic 1200mm Deep Micro Datacenter Rack
7D2B0001WW / 7D2N0001WW	12U 1200mm Deep Micro Datacenter Rack
7D2C0001WW / 7D2P0001WW	18U 1200mm Deep Micro Datacenter Rack
93072RX	25U Standard Rack
93072PX	25U Static S2 Standard Rack
93634PX	42U 1100mm Dynamic Rack
93634EX	42U 1100mm Dynamic Expansion Rack
93604PX	42U 1200mm Deep Dynamic Rack
93614PX	42U 1200mm Deep Static Rack
93084EX	42U Enterprise Expansion Rack
93084PX	42U Enterprise Rack
93074RX	42U Standard Rack

For specifications about these racks, see the Lenovo Rack Cabinet Reference, available from:
https://lenovopress.com/lp1287-lenovo-rack-cabinet-reference

For more information, see the list of Product Guides in the Rack cabinets category:
https://lenovopress.com/servers/options/racks

KVM switches and consoles

The following table lists the KVM switches and consoles that are offered by Lenovo that can be used for providing console access to the ThinkSystem SR250 servers.

Table 58. KVM switch and console options

Description	Part number
Consoles	
1U 18.5" Standard Console (without keyboard)	17238BX
Console keyboards	
ThinkSystem Keyboard w/ Int. Pointing Device USB - Arabic 253 RoHS v2	7ZB7A05469
ThinkSystem Keyboard w/ Int. Pointing Device USB - Belg/UK 120 RoHS v2	7ZB7A05468
ThinkSystem Keyboard w/ Int. Pointing Device USB - Czech 489 RoHS v2	7ZB7A05206
ThinkSystem Keyboard w/ Int. Pointing Device USB - Danish 159 RoHS v2	7ZB7A05207
ThinkSystem Keyboard w/ Int. Pointing Device USB - Dutch 143 RoHS v2	7ZB7A05208
ThinkSystem Keyboard w/ Int. Pointing Device USB - Fr/Canada 445 RoHS v2	7ZB7A05210
ThinkSystem Keyboard w/ Int. Pointing Device USB - French 189 RoHS v2	7ZB7A05209
ThinkSystem Keyboard w/ Int. Pointing Device USB - German 129 RoHS v2	7ZB7A05211
ThinkSystem Keyboard w/ Int. Pointing Device USB - Greek 219 RoHS v2	7ZB7A05212
ThinkSystem Keyboard w/ Int. Pointing Device USB - Hebrew 212 RoHS v2	7ZB7A05213
ThinkSystem Keyboard w/ Int. Pointing Device USB - Hungarian 208 RoHS v2	7ZB7A05214

Description	Part number
ThinkSystem Keyboard w/ Int. Pointing Device USB - Italian 141 RoHS v2	7ZB7A05215
ThinkSystem Keyboard w/ Int. Pointing Device USB - Japanese 194 RoHS v2	7ZB7A05216
ThinkSystem Keyboard w/ Int. Pointing Device USB - Korean 413 RoHS v2	7ZB7A05217
ThinkSystem Keyboard w/ Int. Pointing Device USB - LA Span 171 RoHS v2	7ZB7A05218
ThinkSystem Keyboard w/ Int. Pointing Device USB - Norwegian 155 RoHS v2	7ZB7A05219
ThinkSystem Keyboard w/ Int. Pointing Device USB - Polish 214 RoHS v2	7ZB7A05220
ThinkSystem Keyboard w/ Int. Pointing Device USB - Portugese 163 RoHS v2	7ZB7A05221
ThinkSystem Keyboard w/ Int. Pointing Device USB - Russian 441 RoHS v2	7ZB7A05222
ThinkSystem Keyboard w/ Int. Pointing Device USB - Slovak 245 RoHS v2	7ZB7A05223
ThinkSystem Keyboard w/ Int. Pointing Device USB - Slovenian 234 RoHS v2	7ZB7A05231
ThinkSystem Keyboard w/ Int. Pointing Device USB - Spanish 172 RoHS v2	7ZB7A05224
ThinkSystem Keyboard w/ Int. Pointing Device USB - Swed/Finn 153 RoHS v2	7ZB7A05225
ThinkSystem Keyboard w/ Int. Pointing Device USB - Swiss F/G 150 RoHS v2	7ZB7A05226
ThinkSystem Keyboard w/ Int. Pointing Device USB - Thai 191 RoHS v2	7ZB7A05227
ThinkSystem Keyboard w/ Int. Pointing Device USB - Trad Chinese/US 467 RoHS v2	7ZB7A05467
ThinkSystem Keyboard w/ Int. Pointing Device USB - Turkish 179 RoHS v2	7ZB7A05228
ThinkSystem Keyboard w/ Int. Pointing Device USB - UK Eng 166 RoHS v2	7ZB7A05229
ThinkSystem Keyboard w/ Int. Pointing Device USB - US Eng 103P RoHS v2	7ZB7A05470
ThinkSystem Keyboard w/ Int. Pointing Device USB - US Euro 103P RoHS v2	7ZB7A05230
Console switches and cables - ThinkSystem Digital KVM	
ThinkSystem Digital 2x1x16 KVM Switch (DVI video output port)	1754D1T
ThinkSystem VGA to DVI Conversion Cable	4X97A11108
ThinkSystem Single-USB Conversion Cable for Digital KVM	4X97A11109
ThinkSystem Dual-USB Conversion Cable for Digital KVM	4X97A11107
Console switches and cables - ThinkSystem Analog KVM	
ThinkSystem Analog 1x8 KVM Switch (DVI video output port)	1754A1T
ThinkSystem VGA to DVI Conversion Cable	4X97A11108
ThinkSystem USB Conversion Cable for Analog KVM	4X97A11106
Console switches and cables - Global Console Managers	
Global 2x2x16 Console Manager (GCM16) (VGA video output port)	1754D1X
Global 4x2x32 Console Manager (GCM32) (VGA video output port)	1754D2X
Virtual Media Conversion Option Gen2 (VCO2)	46M5383
Serial Conversion Option (SCO)	46M5382
Console switches and cables - Local Console Managers	
Local 1x8 Console Manager (LCM8) (VGA video output port)	1754A1X
Local 2x16 Console Manager (LCM16) (VGA video output port)	1754A2X
Virtual Media Conversion Option Gen2 (VCO2)	46M5383

For more information, see the list of Product Guides in the KVM Switches and Consoles category:
http://lenovopress.com/servers/options/kvm#rt=product-guide

Power distribution units

The following table lists the power distribution units (PDUs) that are currently offered by Lenovo that can be used for distributing electrical power to the ThinkSystem SR250 servers and other IT infrastructure building blocks mounted in a rack cabinet.

Table 59. Power distribution units

Description	Part number
0U Basic PDUs	
0U 36 C13/6 C19 24A/200-240V 1 Phase PDU with NEMA L6-30P line cord	00YJ776
0U 36 C13/6 C19 32A/200-240V 1 Phase PDU with IEC60309 332P6 line cord	00YJ777
0U 21 C13/12 C19 32A/200-240V/346-415V 3 Phase PDU with IEC60309 532P6 line cord	00YJ778
0U 21 C13/12 C19 48A/200-240V 3 Phase PDU with IEC60309 460P9 line cord	00YJ779
Switched and Monitored PDUs	
0U 20 C13/4 C19 Switched and Monitored 24A/200-240V/1Ph PDU w/ NEMA L6-30P line cord	00YJ781
0U 20 C13/4 C19 Switched and Monitored 32A/200-240V/1Ph PDU w/ IEC60309 332P6 line cord	00YJ780
0U 18 C13/6 C19 Switched / Monitored 32A/200-240V/346-415V/3Ph PDU w/ IEC60309 532P6 cord	00YJ782
0U 12 C13/12 C19 Switched and Monitored 48A/200-240V/3Ph PDU w/ IEC60309 460P9 line cord	00YJ783
1U 9 C19/3 C13 Switched and Monitored DPI PDU (without line cord)	46M4002
1U 9 C19/3 C13 Switched and Monitored 60A 3Ph PDU with IEC 309 3P+Gnd cord	46M4003
1U 12 C13 Switched and Monitored DPI PDU (without line cord)	46M4004
1U 12 C13 Switched and Monitored 60A 3 Phase PDU with IEC 309 3P+Gnd line cord	46M4005
Ultra Density Enterprise PDUs (9x IEC 320 C13 + 3x IEC 320 C19 outlets)	
Ultra Density Enterprise C19/C13 PDU Module (without line cord)	71762NX
Ultra Density Enterprise C19/C13 PDU 60A/208V/3ph with IEC 309 3P+Gnd line cord	71763NU
C13 Enterprise PDUs (12x IEC 320 C13 outlets)	
DPI C13 Enterprise PDU+ (without line cord)	39M2816
DPI Single Phase C13 Enterprise PDU (without line cord)	39Y8941
C19 Enterprise PDUs (6x IEC 320 C19 outlets)	
DPI Single Phase C19 Enterprise PDU (without line cord)	39Y8948
DPI 60A 3 Phase C19 Enterprise PDU with IEC 309 3P+G (208 V) fixed line cord	39Y8923
Front-end PDUs (3x IEC 320 C19 outlets)	
DPI 30amp/125V Front-end PDU with NEMA L5-30P line cord	39Y8938
DPI 30amp/250V Front-end PDU with NEMA L6-30P line cord	39Y8939
DPI 32amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8934
DPI 60amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8940
DPI 63amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8935
Universal PDUs (7x IEC 320 C13 outlets)	
DPI Universal 7 C13 PDU (with 2 m IEC 320-C19 to C20 rack power cord)	00YE443
NEMA PDUs (6x NEMA 5-15R outlets)	
DPI 100-127V PDU with fixed NEMA L5-15P line cord	39Y8905
Line cords for PDUs that ship without a line cord	
DPI 30a Line Cord (NEMA L6-30P)	40K9614
DPI 32a Line Cord (IEC 309 P+N+G)	40K9612
DPI 32a Line Cord (IEC 309 3P+N+G)	40K9611
DPI 60a Cord (IEC 309 2P+G)	40K9615

Description	Part number
DPI 63a Cord (IEC 309 P+N+G)	40K9613
DPI Australian/NZ 3112 Line Cord (32A)	40K9617
DPI Korean 8305 Line Cord (30A)	40K9618

For more information, see the list of Product Guides in the Power infrastructure category:
http://lenovopress.com/servers/options/pdu#rt=product-guide

Uninterruptible power supply units

The following table lists the uninterruptible power supply (UPS) units that are currently offered by Lenovo that can be used for providing electrical power protection to the ThinkSystem SR250 servers and other IT infrastructure building blocks.

Table 60. Uninterruptible power supply units

Description	Part number
Worldwide models	
RT1.5kVA 2U Rack or Tower UPS (100-125VAC) (8x NEMA 5-15R 12A outlets)	55941AX
RT1.5kVA 2U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A outlets)	55941KX
RT2.2kVA 2U Rack or Tower UPS (100-125VAC) (8x NEMA 5-20R 16A outlets)	55942AX
RT2.2kVA 2U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 1x IEC 320 C19 16A outlets)	55942KX
RT3kVA 2U Rack or Tower UPS (100-125VAC) (6x NEMA 5-20R 16A, 1x NEMA L5-30R 24A outlets)	55943AX
RT3kVA 2U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 1x IEC 320 C19 16A outlets)	55943KX
RT5kVA 3U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 2x IEC 320 C19 16A outlets)	55945KX
RT6kVA 3U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 2x IEC 320 C19 16A outlets)	55946KX
RT8kVA 6U Rack or Tower UPS (200-240VAC) (4x IEC 320-C19 16A outlets)	55948KX
RT11kVA 6U Rack or Tower UPS (200-240VAC) (4x IEC 320-C19 16A outlets)	55949KX
RT8kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC) (4x IEC 320-C19 16A outlets)	55948PX
RT11kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC) (4x IEC 320-C19 16A outlets)	55949PX
ASEAN, HTK, INDIA, and PRC models	
ThinkSystem RT3kVA 2U Standard UPS (200-230VAC) (2x C13 10A, 2x GB 10A, 1x C19 16A outlets)	55943KT
ThinkSystem RT3kVA 2U Long Backup UPS (200-230VAC) (2x C13 10A, 2x GB 10A, 1x C19 16A outlets)	55943LT
ThinkSystem RT6kVA 5U UPS (200-230VAC) (2x C13 10A outlets, 1x Terminal Block output)	55946KT
ThinkSystem RT10kVA 5U UPS (200-230VAC) (2x C13 10A outlets, 1x Terminal Block output)	5594XKT

For more information, see the list of Product Guides in the Uninterruptible Power Supply Units category:
http://lenovopress.com/servers/options/ups#rt=product-guide

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Related publications and links

For more information, see these resources:

- Lenovo ThinkSystem SR250 product page
  http://www3.lenovo.com/us/en/p/77XX7SRSR25
- Lenovo Data Center Solution Configurator (DCSC):
  http://dcsc.lenovo.com
- User Guides - ThinkSystem SR250
  http://thinksystem.lenovofiles.com/help/topic/7Y51/introduction.html
- Lenovo Data Center Support Downloads - ThinkSystem SR250
  http://datacentersupport.lenovo.com/products/servers/thinksystem/sr250/7y51/downloads
  http://datacentersupport.lenovo.com/products/servers/thinksystem/sr250/7y52/downloads
  http://datacentersupport.lenovo.com/products/servers/thinksystem/sr250/7y72/downloads
  http://datacentersupport.lenovo.com/products/servers/thinksystem/sr250/7y73/downloads

Related product families

Product families related to this document are the following:

- 1-Socket Rack Servers
- ThinkSystem SR250 Server

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