# Lenovo ThinkSystem SR650 Server (Xeon SP Gen 1 / Gen 2)

## Product Guide (withdrawn product)

Lenovo ThinkSystem SR650 is an ideal 2-socket 2U rack server for small businesses up to large enterprises that need industry-leading reliability, management, and security, as well as maximizing performance and flexibility for future growth. The SR650 server is designed to handle a wide range of workloads, such as databases, virtualization and cloud computing, virtual desktop infrastructure (VDI), enterprise applications, collaboration/email, and business analytics and big data.

Featuring the second generation of Intel Xeon Processor Scalable Family (Xeon SP Gen 2), the SR650 server offers scalable performance, storage capacity, and I/O expansion. The SR650 server supports up to two processors and up to 3 TB of memory, up to 24x 2.5-inch or 14x 3.5-inch drive bays with an extensive choice of drive technologies, and flexible I/O expansion options with a LOM slot, a dedicated storage controller slot, and up to 6x rear PCIe expansion slots.

The following figure shows the ThinkSystem SR650 with 2.5-inch hot-swap drives.



Figure 1. Lenovo ThinkSystem SR650 with 2.5-inch drive bays

### Did you know?

The SR650 server offers onboard NVMe PCIe ports that allow direct connections to the U.2 NVMe PCIe SSDs, which frees up I/O slots and helps lower NVMe solution acquisition costs.

The SR650 server is designed to meet ASHRAE A4 standards (up to 45 °C, 113 °F) in select configurations, which enable customers to lower energy costs, while still maintaining world-class reliability.

The SR650 server delivers outstanding memory performance with Performance+ 2933 MHz DIMMs, which is achieved by supporting two-DIMMs-per-channel configurations at speeds up to 10% faster than the Intel specification defines, while still maintaining world-class reliability.

## Key features

Combining performance and flexibility, the SR650 server is a great choice for small and medium businesses up to the large enterprise. It can provide outstanding uptime to keep business-critical applications and cloud deployments running safely. Ease of use and comprehensive systems management tools help make deployment easier. Outstanding reliability, availability, and serviceability (RAS) and high-efficiency design improve your business environment and help save operational costs.

**Scalability and performance**

The SR650 server offers numerous features to boost performance, improve scalability, and reduce costs:

- Improves productivity by offering superior system performance with the second generation of the Intel Xeon Processor Scalable Family with up to 28-core processors, up to 38.5 MB of last level cache (LLC), up to 2933 MHz memory speeds, and up to 10.4 GT/s Ultra Path Interconnect (UPI) links.
    - Support for up to two processors, 56 cores, and 112 threads allows to maximize the concurrent execution 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 Speed Select Technology provides improvements in server utilization and guaranteed per-core performance service levels with more granular control over processor performance.
    - Intel Deep Learning Boost (Vector Neural Network Instruction set [VNNI]) is designed to deliver significant, more efficient Deep Learning (Inference) acceleration for high-performance Artificial Intelligence (AI) workloads.
    - Intel Advanced Vector Extensions 512 (AVX-512) enable acceleration of enterprise-class and high performance computing (HPC) workloads.
- Helps maximize system performance for data intensive applications with up to 2933 MHz memory speeds and up to 3 TB of memory capacity with 3DS RDIMMs.
- Boosts the performance of data-intensive applications and delivers consistent service levels at scale for virtualized and cloud environments by using the innovative persistent memory technology that provides a unique combination of affordable large memory capacity and non-volatility for up to 7.5 TB of total server memory capacity, including 3DS RDIMMs and DCPMMs (DC persistent memory modules).
- Offers flexible and scalable internal storage in a 2U rack form factor with up to 24x 2.5-inch and 2x 3.5-inch drives for performance-optimized configurations or up to 14x 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 flexibility to use SAS, SATA, or NVMe PCIe drives in the same drive bays with an AnyBay design.
- Provides I/O scalability with a LOM slot, PCIe 3.0 slot for an internal storage controller, and up to six PCI Express (PCIe) 3.0 I/O expansion slots in a 2U 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 into the Intel Xeon Processor Scalable Family.

**Availability and serviceability**

The SR650 server provides many features to simplify serviceability and increase system uptime:

- Designed to run 24 hours a day, 7 days a week
- Offers protection in the event of a non-correctable memory failure with Single Device Data Correction (SDDC, also known as Chipkill, requires x4-based DIMMs), Adaptive Double Device Data Correction (ADDDC, also known as Redundant Bit Steering [RBS], requires x4-based DIMMs and Intel Xeon Gold or Platinum processors), memory mirroring, and memory rank sparing.
- Provides easy access to upgrades and serviceable parts (such as processors, memory DIMMs, and adapter cards) with tool-less cover removal.
- Offers data protection and greater system uptime with hot-swap drives supporting basic or advanced RAID redundancy.
- Provides availability for business-critical applications with redundant hot-swap power supplies and redundant hot-swap system fans.
- Simplifies servicing, speeds up problem resolution, and helps improve system availability with light path diagnostics.
- 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 processors, voltage regulators, memory, internal storage (SAS/SATA HDDs and SSDs, NVMe SSDs, M.2 storage, flash storage adapters), fans, power supplies, 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 SR650 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 you 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 Trusted Cryptographic Module (TCM) or Nationz TPM (available only in PRC).

- Keeps user data safe with Lenovo Business Vantage, a security software tool suite designed to work with the Trusted Cryptographic Module (available only in PRC).
- 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, allowing an application to run in its own isolated space, protected from all other software running on a system.

**Energy efficiency**

The SR650 server offers the following energy-efficiency features to save energy, reduce operational costs, increase energy availability, and contribute to the green environment:

- Delivers impressive compute power per watt, featuring 80 PLUS Titanium and Platinum redundant power supplies.
- Enables customers to lower energy costs with design to meet ASHRAE A4 standards in select configurations.
- 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 SR650 server with up to 16x 2.5-inch drive bays.

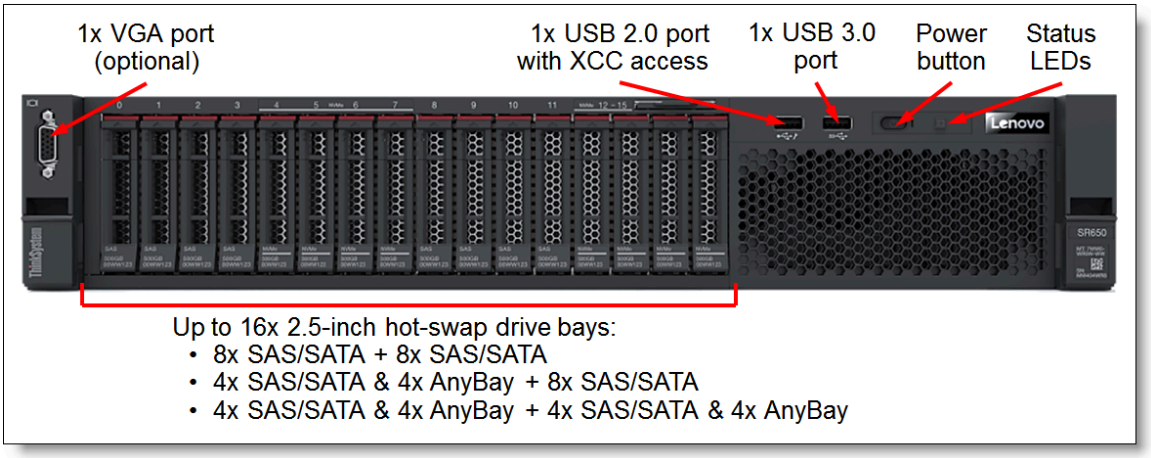



Figure 2. Front view of the SR650: Up to 16x 2.5-inch drive bays

The following figure shows the front of the SR650 server with up to 24x 2.5-inch drive bays.

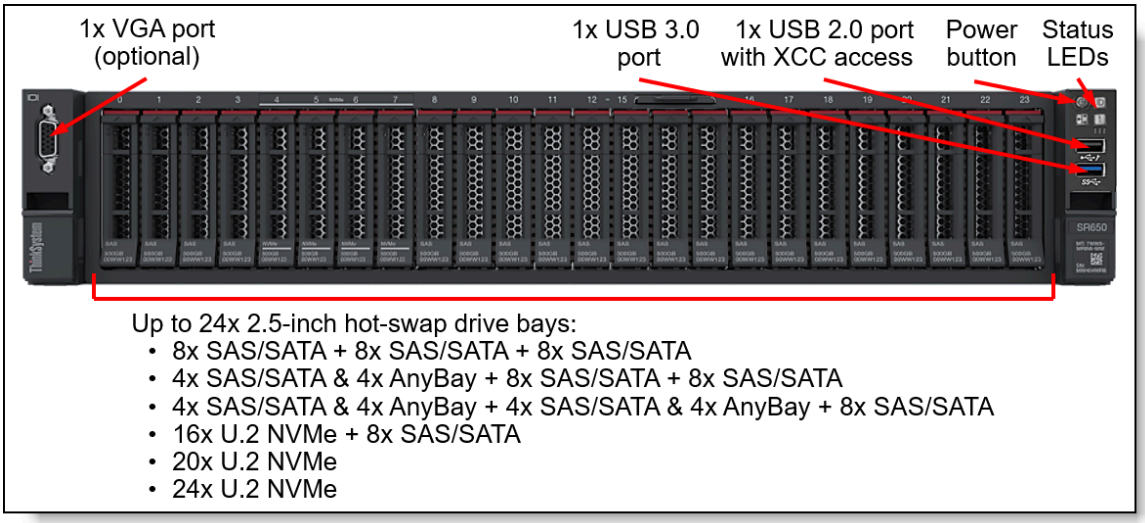



Figure 3. Front view of the SR650: Up to 24x 2.5-inch drive bays

The following figure shows the front of the SR650 server with 8x 3.5-inch drive bays.

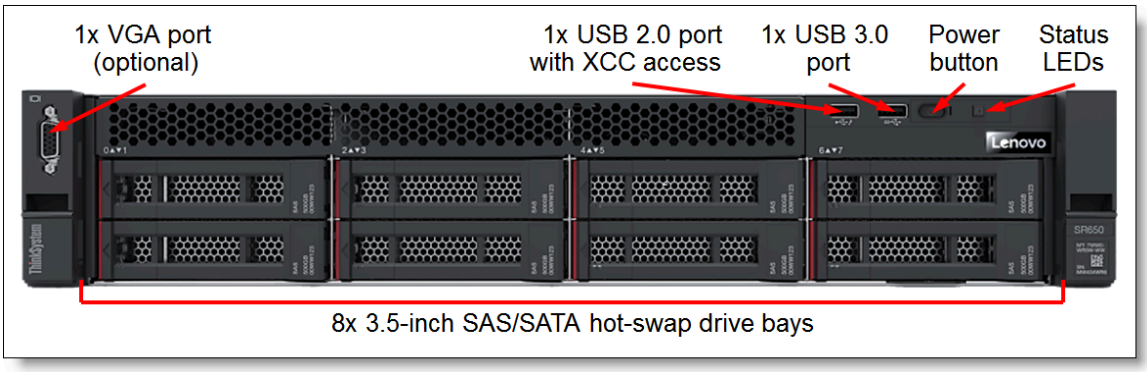



Figure 4. Front view of the SR650: 8x 3.5-inch drive bays

The following figure shows the front of the SR650 server with 12x 3.5-inch drive bays.

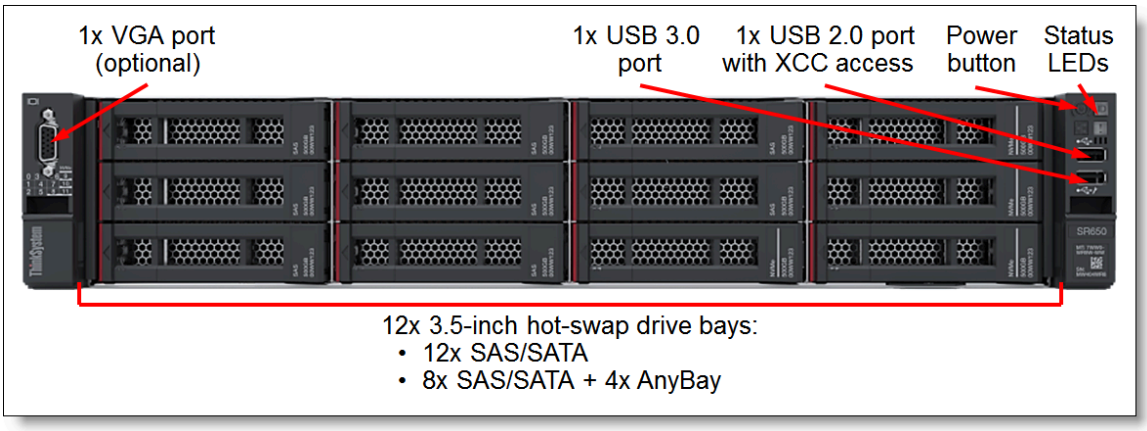



Figure 5. Front view of the SR650: 12x 3.5-inch drive bays

The front of the SR650 server includes the following components:

- Up to 16x 2.5-inch, or 24x 2.5-inch, or 8x 3.5-inch, or 12x 3.5-inch hot-swap drive bays.
- One VGA port (optional).
- One USB 3.0 port.
- One USB 2.0 port with XClarity Controller access.
- Power button.
- Status LEDs.

The following figure shows the rear of the SR650 server.

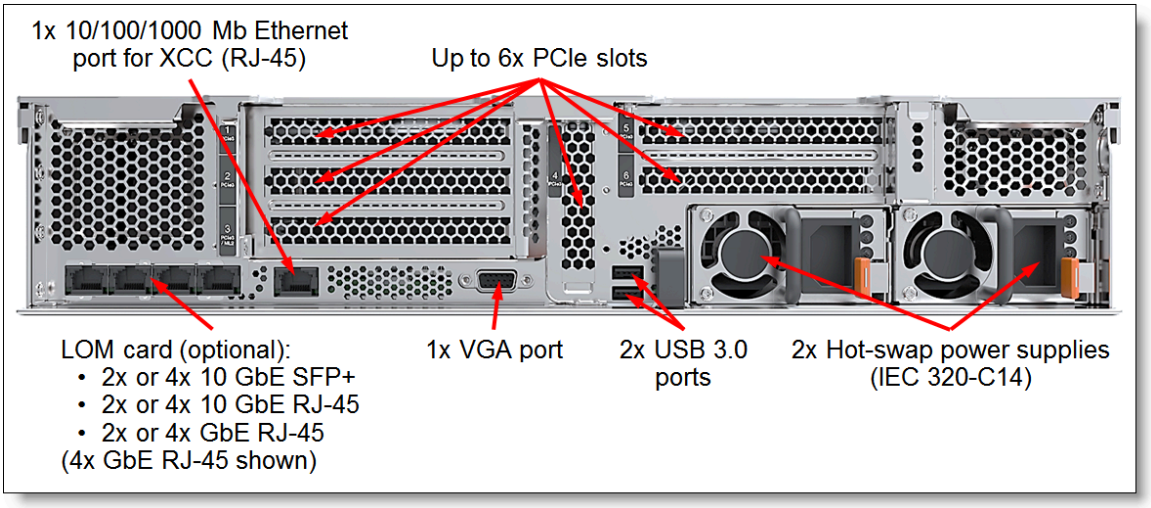



Figure 6. Rear view of the SR650

The rear of the SR650 server includes the following components:

- Up to six PCIe expansion slots (depending on the riser cards selected).
- One LOM card slot.
- One 1 GbE port for XClarity Controller.
- One VGA port.
- Two USB 3.0 ports.
- Up to two hot-swap power supplies.

The following figure shows the locations of key components inside the SR650 server.

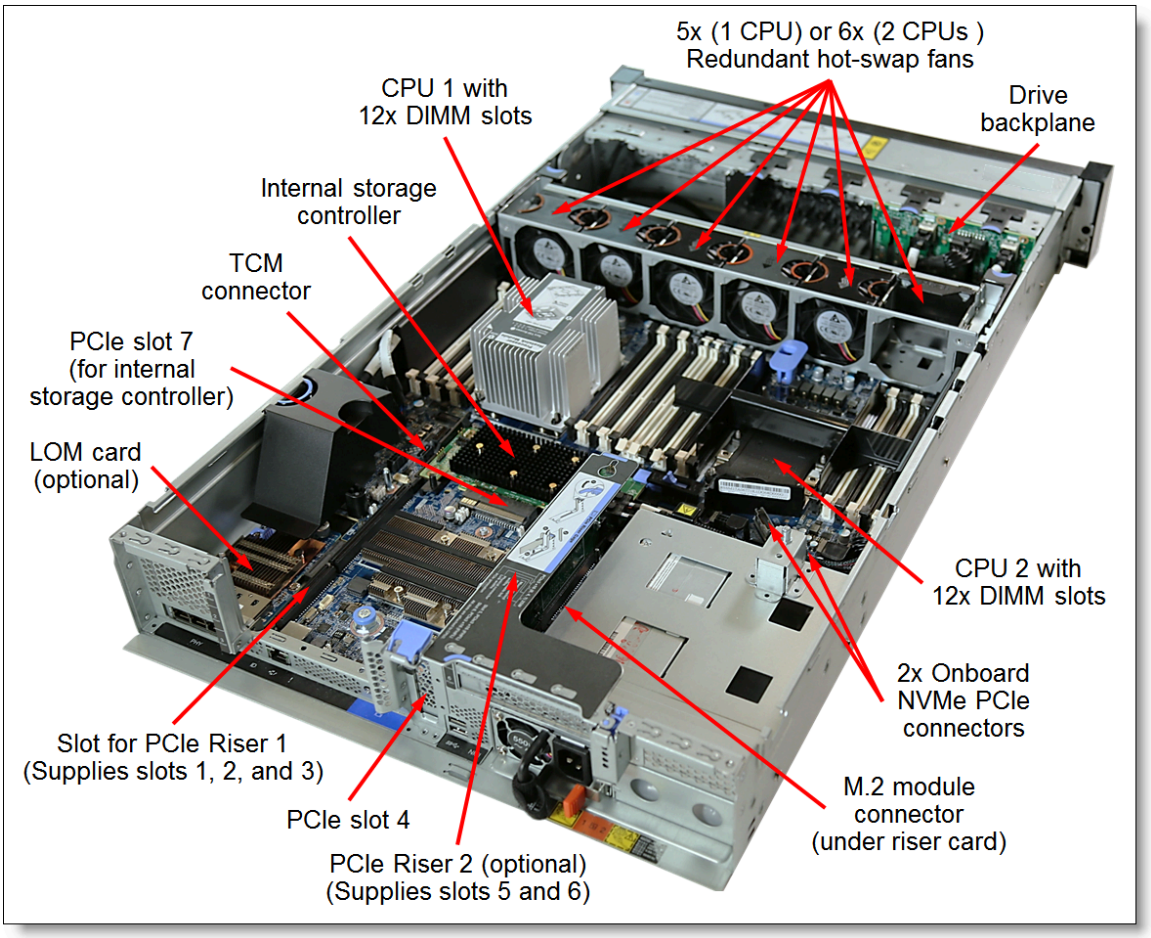



Figure 7. Internal view of the SR650

The following key components are located inside the SR650 server:

- Up to two processors.
- 24 DIMM slots (12 DIMM slots per processor).
- Drive backplanes.
- Two onboard NVMe PCIe connectors.
- One M.2 module connector.
- One LOM card connector.
- Two onboard PCIe slots 4 and 7.
- Two slots for PCIe riser cards.
- One TCM connector.
- Five (one processor) or six (two processors) hot-swap system fans.

## Standard specifications

The following table lists the system specifications for the SR650 server.

Table 1. SR650 system specifications

| Attribute | Specification |
|---|---|
| Machine types | 7X05 - 1 year warranty<br>7X06 - 3 year warranty |
| Form factor | 2U rack-mount. |

| Attribute | Specification |
|---|---|
| Processor | Up to two 2nd Gen Intel Xeon Bronze, Silver, Gold, or Platinum processors:<br>• Up to 28 cores (2.7 GHz core speeds).<br>• Up to 3.9 GHz core speeds (8 cores).<br>• UPI links up to 10.4 GT/s (2 UPI links used).<br>• Up to 38.5 MB cache.<br>• Up to 2933 MHz memory speed.<br>1st Gen Intel Xeon processors are also supported. |
| Chipset | Intel C624. |
| Memory | Up to 24 DIMM sockets (12 DIMMs per processor; six memory channels per processor with two DIMMs per channel). Support for RDIMMs, LRDIMMs (1st Gen processors only), or 3DS RDIMMs. Memory speed up to 2933 MHz depending on the processor selected. Memory types cannot be intermixed. |
| Persistent memory | Up to 12x TruDDR4 2666 MHz DCPMMs in the DIMM slots. Not supported with 1st Gen Intel Xeon SP processors. |
| Memory protection | • Processor's integrated memory controllers: Error correction code (ECC), SDDC (for x4-based memory DIMMs), ADDDC (for x4-based memory DIMMs, requires Intel Xeon Gold or Platinum processors), memory mirroring, memory rank sparing, patrol scrubbing, and demand scrubbing.<br>• DCPMM's onboard memory controllers: ECC, SDDC, DDDC, patrol scrubbing, and demand scrubbing.<br>**Note:** In the configurations with DCPMMs, memory mirroring is supported only in the App Direct mode (other DCPMM modes do not support memory mirroring) and applies only to the RDIMMs or 3DS RDIMMs (DCPMMs are not mirrored). Memory sparing is not supported in the configurations with DCPMMs. |
| Memory capacity | • Memory DIMMs only: Up to 3 TB with up to 24x 128 GB 3DS RDIMMs (Up to 1.5 TB per processor).<br>• Memory DIMMs and persistent memory modules:<br>  ◦ App Direct Mode: Up to 7.5 TB with up to 12x 128 GB 3DS RDIMMs and up to 12x 512 GB DCPMMs (Up to 3.75 TB per processor).<br>  ◦ Memory Mode: Up to 6 TB with up to 12x 512 GB DCPMMs (Up to 3 TB per processor).<br>**Note:** Server configurations with more than 1 TB of memory capacity per socket (including DCPMMs and RDIMMs or 3DS RDIMMs) require processors that support up to 2 TB (M-suffix) or 4.5 TB (L-suffix) per socket. Server configurations with more than 2 TB of memory capacity per socket (including DCPMMs and RDIMMs or 3DS RDIMMs) require processors that support up to 4.5 TB per socket (L-suffix). |

| Attribute | Specification |
|---|---|
| Drive bays | • Up to 16 SFF (front) and 2 LFF (rear) hot-swap drive bays:<br>  ◦ 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA<br>  ◦ 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA<br>  ◦ 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 2x 3.5" SAS/SATA<br>• Up to 24 SFF (front) and 2 LFF (rear) hot-swap drive bays:<br>  ◦ 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA<br>  ◦ 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA<br>  ◦ 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA<br>  ◦ 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay<br>  ◦ 16x 2.5" U.2 NVMe PCIe + 8x 2.5" SAS/SATA (factory-installed only)<br>  ◦ 20x 2.5" U.2 NVMe PCIe<br>  ◦ 24x 2.5" U.2 NVMe PCIe<br>• Up to 10 LFF SAS/SATA hot-swap drive bays: 8x 3.5" (front) + 2x 3.5" (rear)<br>• Up to 14 LFF hot-swap drive bays:<br>  ◦ 12x 3.5" SAS/SATA (front) + 2x 3.5" SAS/SATA (rear)<br>  ◦ 8x 3.5" SAS/SATA & 4x 3.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear) |
| Internal storage capacity | • 2.5-inch drives:<br>  ◦ 737.28TB using 24x 30.72TB 2.5-inch SAS/SATA SSDs<br>  ◦ 368.64TB using 24x 15.36TB 2.5-inch NVMe SSDs<br>  ◦ 57.6TB using 24x 2.4TB 2.5-inch HDDs<br>• 3.5-inch drives:<br>  ◦ 280TB using 14x 20TB 3.5-inch HDDs<br>  ◦ 215.04TB using 14x 15.36TB 3.5-inch SAS/SATA SSDs<br>  ◦ 30.72TB using 4x 7.68TB 3.5-inch NVMe SSDs |
| Storage controller | • 12 Gb SAS/SATA RAID adapters with up to 8GB flash-backed cache<br>• 12 Gb SAS/SATA HBA (non-RAID)<br>• Onboard PCIe NVMe (with Intel VROC NVMe RAID support for Intel SSDs and optionally non-Intel SSDs)<br>• NVMe Switch Adapters (with Intel VROC NVMe RAID support for Intel SSDs and optionally non-Intel SSDs) |
| Optical drive bays | None. Support for an external USB DVD RW Optical Disk Drive (See Optical drives). |
| Network interfaces | • Onboard LOM slot for up to 4x 1/10 Gb Ethernet ports:<br>  ◦ 2x or 4x 1 GbE RJ-45 ports (no 10/100 Mb support)<br>  ◦ 2x or 4x 10 GbE RJ-45 ports (no 10/100 Mb support)<br>  ◦ 2x or 4x 10 GbE SFP+ ports (no 10/100 Mb support)<br>• Optional Mezzanine LOM (ML2) slot for dual-port 10 GbE cards with SFP+ or RJ-45 connectors or single- or dual-port 25 GbE cards with SFP28 connectors.<br>• 1x RJ-45 10/100/1000 Mb Ethernet systems management port. |

| Attribute | Specification |
|---|---|
| I/O expansion slots | Up to seven slots. Slots 4 and 7 are the fixed slots on the system planar, and the remaining slots depend on the riser cards installed. The slots are as follows:<br>• Slot 1: PCIe 3.0 x16 or PCIe 3.0 x8; full-height, half-length (PCIe x16 slot can be single- or double-wide)<br>• Slot 2: PCIe 3.0 x8; full-height, half-length (not present if Slot 1 is PCIe x16 double-wide or Slot 3 is ML2 x16)<br>• Slot 3: PCIe 3.0 x8, or PCIe 3.0 x16, or ML2 x8, or ML2 x16; full-height, half-length<br>• Slot 4: PCIe 3.0 x8; low profile (vertical slot on system planar)<br>• Slot 5: PCIe 3.0 x16; full-height, half-length<br>• Slot 6: PCIe 3.0 x16; full-height, half-length<br>• Slot 7: PCIe 3.0 x8 (for an internal storage controller)<br>Slots 5 and 6 require the second processor to be installed. Single-wide PCIe x16 Slot 1 requires the second processor to be installed. |
| Ports | • Front: 1x USB 2.0 port with XClarity Controller access and 1x USB 3.0 port; optional 1x VGA port.<br>• Rear: 2x USB 3.0 ports and 1x VGA port; optional 1x DB-9 serial port. |
| Cooling | Five (one processor) or six (two processors) hot-swap single-rotor system fans with N+1 redundancy. |
| Power supply | Up to two redundant hot-swap 550 W, 750 W, or 1100 W (100 - 240 V), or 1600 W (200 - 240 V) High Efficiency Platinum AC power supplies, or 750 W (200 - 240 V) High Efficiency Titanium AC power supplies. HVDC support (PRC only). |
| Video | Matrox G200e 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, power supplies, and fans. |
| Systems management | XClarity Controller (XCC) Standard, Advanced, or Enterprise (Pilot 4 chip), proactive platform alerts, light path diagnostics, 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 Trusted Cryptographic Module (TCM) or 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 (Machine Type 7X05) or three-year (Machine Type 7X06) customer-replaceable unit (CRU) and onsite limited warranty with 9x5 Next Business Day Parts Delivered. |
| Service and support | Optional Lenovo Services upgrades: 2-hour or 4-hour response time, 6-hour or 24-hour committed service repair, warranty extension up to 5 years, 1-year or 2-year post-warranty extensions, YourDrive YourData, Enterprise Software Support, and Basic Hardware Installation Services. |
| Dimensions | Width: 445 mm (17.5 in.), height: 87 mm (3.4 in.), depth: 764 mm (30.1 in.). See Physical specifications for details. |
| Weight | Minimum configuration: 19 kg (41.9 lb), maximum: 32 kg (70.5 lb) |

## Models

ThinkSystem SR650 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 types of base CTO models are available for the SR650 as listed in the columns in the following table:

- General purpose base CTO models are for general business (non-HPC) and is selectable by choosing **General Purpose** mode in DCSC.
- AI and HPC base models are intended for Artificial Intelligence (AI) and High Performance Computing (HPC) configurations and solutions are enabled using the **AI & HPC Hardware - ThinkSystem Hardware** mode in DCSC. These configurations, along with Lenovo EveryScale Solutions, can also be built using System x and Cluster Solutions Configurator (x-config). **Tip**: Some HPC and AI models are not listed in DCSC and can only be configured in x-config.

Preconfigured server models may also be available for the SR650, 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 SR650 server.

Table 2. Base CTO models

| Machine Type/Model General purpose | Machine Type/Model for AI and HPC | Description |
|---|---|---|
| 7X06CTO1WW | 7X06CTOLWW | ThinkSystem SR650 - 3yr Warranty |
| 7X05CTO1WW | 7X05CTOLWW | ThinkSystem SR650 - 1yr Warranty |

For CTO orders, the following table lists the base chassis feature codes for the server.

Table 3. Base chassis for CTO models

| Feature code | Description |
|---|---|
| BMN6 | ThinkSystem SR650 2.5" Chassis with 8, 16 or 24 Bays v2 |
| AUVV | ThinkSystem SR650 2.5" Chassis with 8, 16 or 24 Bays |
| AUVW | ThinkSystem SR650 3.5" Chassis with 8 or 12 Bays |
| BMNE | ThinkSystem SR650 2.5" Chassis with 8 or 16 Bays v2 |
| AUVX | ThinkSystem SR650 2.5" Chassis with 8 or 16 Bays |

The following tables list the available models, grouped by region.

- Models for Australia and New Zealand
- Models for South East Asian countries (ASEAN)
- Models for Brazil
- Models for EMEA region
- Models for Hong Kong, Taiwan, Korea (HTK)
- Models for India
- Models for Japan
- Models for Latin American countries (except Brazil)
- Models for USA and Canada

Refer to the Specifications section for information about standard features of the server.

Common to all models:

- All models indicated as having the 750W power supply are using the Platinum power supply

## Models for Australia and New Zealand

Table 4. Models for Australia and New Zealand

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0EHAU | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EKAU | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EJAU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0ELAU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0E2AU | 1xSilver421010C 85W2.2G | 1x 32GB 2933 | 530-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0EPAU | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EUAU | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0ECAU | 1xSilver421412C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0ESAU | 1xSilver421412C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0E5AU | 1xSilver42158C 85W2.5G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0EFAU | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0ERAU | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DYAU | 1xSilver421616C 100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0E6AU | 1xSilver421616C 100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0F0AU | 1xSilver421616C 100W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0F3AU | 1xSilver421616C 100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EDAU | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EGAU | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EYAU | 1xGold52178C 115W3.0G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0F2AU | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0F8AU | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EMAU | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0F4AU | 1xGold521816C 125W2.3G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0F7AU | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0DZAU | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EEAU | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0F5AU | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0F6AU | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0E1AU | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0F1AU | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0E7AU | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EVAU | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EQAU | 1xGold62448C 150W3.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0E9AU | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EAAU | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0E8AU | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0ENAU | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0EBAU | 1xGold625418C 200W3.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| TopSeller models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0EWAU | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 530-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0ETAU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 530-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0EZAU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0KBAU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82666 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide CMA |
| 7X06A0KCAU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82666 | 930-16i 4GB | 12x3.5"SAS/12, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide CMA |
| 7X06A0PLAU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Ent | Slide CMA |
| 7X06A0Q0AU | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 9350-8i | 8x2.5"SAS/16, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Ent | Slide CMA |
| 7X06A0E0AU | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0E3AU | 1xSilver421010C 85W2.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0EXAU | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 530-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0PMAU | 1xSilver421010C 85W2.2G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Ent | Slide CMA |
| 7X06A0Q1AU | 1xSilver421010C 85W2.2G | 1x 32GB 2933 | 9350-8i | 8x2.5"SAS/16, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Ent | Slide CMA |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0K8AU | 1xSilver421412C 85W2.2G | 1x 16GB 2Rx82666 | 930-8i | 8x2.5"SAS/16, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide CMA |
| 7X06A0E4AU | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Ent | Slide CMA |
| 7X06A0LUAU | 1xSilver4215R8C 130W3.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0LTAU | 1xSilver421616C 100W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0LVAU | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0LWAU | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0LXAU | 1xGold6226R 16C150W2.9G | 1x 64GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0PKAU | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Ent | Slide CMA |
| 7X06A0PXAU | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 9350-8i | 8x2.5"SAS/16, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Ent | Slide CMA |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

### Models for South East Asian countries (ASEAN)

Table 5. Models for South East Asian countries (ASEAN)

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| TopSeller models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0BSSG | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D3SG | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CDSG | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CESG | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CTSG | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DCSG | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BRSG | 1xSilver421412C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D5SG | 1xSilver421412C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BVSG | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DJSG | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BNSG | 1xSilver421616C 100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CRSG | 1xSilver421616C 100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C7SG | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D7SG | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CUSG | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D6SG | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C8SG | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DFSG | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BYSG | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C0SG | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DASG | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DESG | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BXSG | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DNSG | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0BHSG | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D9SG | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C4SG | 1xGold62448C 150W3.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BDSG | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CMSG | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BTSG | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DMSG | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BMSG | 1xGold625418C 200W3.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

## Models for Brazil

Table 6. Models for Brazil

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0HCBR | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |
| 7X06A0HFBR | 1xGold5220 18C125W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Yes | Std | Slide |
| 7X06A0QGBR | 2xGold6226R 16C150W2.9G | 16x 128GB 2933 | 930-16i 4GB | 16x2.5"SAS/24, 2x400GB3732+ 8x1.92TB PM893,2x32GB M.2 | 2x1Gb | 3x PCIe x8, 2x PCIe x16 | 2x 1100W | Opt | Ent | Slide |
| 7X06A0QDBR | 2xGold6238L 22C140W2.1G | 8x 128GB 2933 | 930-16i 4GB | 16x2.5"SAS/24, 2x400GB3732+ 4x1.92TB PM893,2x32GB M.2 | 2x1Gb | 3x PCIe x8, 2x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06A0J4BR | 2xPlatinum 8276M28C 165W2.2G | 24x 128GB 2933 | 930-24i | 8xAny+16xSAS 2.5"/24,16x 960GBS4610 | 4x1Gb | 2x PCIe x8, 2x PCIe x16 | 2x 1100W | Opt | Ent | Slide CMA |
| TopSeller models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06100RBR | 1xBronze3204 6C85W1.9G | 1x 16GB 2Rx82666 | 530-8i | 8x3.5"SAS/8, Open bay | 4x1Gb | 5x PCIe x8 | 1x 550W | Opt | Std | Slide |
| 7X06A0N4BR | 1xBronze3204 6C85W1.9G | 1x 32GB 2933 | 730-8i 2GB | 8x3.5"SAS/8,2x 4TBSATAHDD | 4x1Gb | 5x PCIe x8 | 2x 750W | Yes | Std | Slide |
| 7X06A0N0BR | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 730-8i 2GB | 8x3.5"SAS/8,2x 4TBSATAHDD | 4x1Gb | 5x PCIe x8 | 2x 750W | Yes | Std | Slide |
| 7X06100VBR | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Std | Slide |
| 7X06A0HKBR | 1xSilver4210 10C85W2.2G | 1x 32GB 2666 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Std | Slide |
| 7X06A0KDBR | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Ent | Slide |
| 7X06A0KGBR | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Std | Slide |
| 7X06A0L2BR | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Std | Slide |
| 7X06A0L3BR | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Ent | Slide |
| 7X06A0M8BR | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x3.5"SAS/8, Open bay | 4x1Gb | 5x PCIe x8 | 2x 750W | Opt | Std | Slide |
| 7X06A0MABR | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x3.5"SAS/8,1x 2TBSATAHDD | 4x1Gb | 5x PCIe x8 | 2x 750W | Opt | Std | Slide |
| 7X06A0N5BR | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x3.5"SAS/8,2x 4TBSATAHDD | 4x1Gb | 5x PCIe x8 | 2x 750W | Yes | Std | Slide |
| 7X06100WBR | 1xSilver4214 12C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Std | Slide |
| 7X06A0HDBR | 1xSilver4214 12C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |
| 7X06A0HJBR | 1xSilver4214 12C85W2.2G | 1x 32GB 2666 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Yes | Std | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0KFBR | 1xSilver4214 12C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Std | Slide |
| 7X06A0L1BR | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Std | Slide |
| 7X06A0M5BR | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x3.5"SAS/8, Open bay | 4x1Gb | 5x PCIe x8 | 2x 750W | Opt | Std | Slide |
| 7X06A0M7BR | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 730-8i 2GB | 8x3.5"SAS/8,1x 2TBSATAHDD | 4x1Gb | 5x PCIe x8 | 2x 750W | Opt | Std | Slide |
| 7X06A0HEBR | 1xSilver4216 16C100W2.1G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |
| 7X06A0HUBR | 1xGold5218 16C125W2.3G | 1x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 2x PCIe x8 | 2x 750W | Yes | Std | Slide |
| 7X06A0HVBR | 2xGold5218 16C125W2.3G | 2x 32GB 2933 | 730-8i 2GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 2x PCIe x8 | 2x 750W | Yes | Std | Slide |
| 7X06A0MVBR | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 930-16i 4GB | 8x2.5"SAS/16, Open bay | 2x10Gb RJ45 | 5x PCIe x8 | 2x 750W | Yes | Ent | Slide |
| 7X06A0MXBR | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 930-16i 4GB | 8x2.5"SAS/16, Open bay | 2x10Gb RJ45 | 5x PCIe x8 | 2x 750W | Yes | Ent | Slide |
| 7X06A0MUBR | 1xGold6240R 24C165W2.4G | 2x 32GB 2933 | 930-16i 4GB | 16x2.5"SAS/16, Open bay | 4x10Gb RJ45 | 5x PCIe x8 | 2x 1100W | Yes | Ent | Slide |
| 7X06A0MWBR | 1xGold6240R 24C165W2.4G | 2x 32GB 2933 | 930-16i 4GB | 16x2.5"SAS/16, Open bay | 4x10Gb RJ45 | 5x PCIe x8 | 2x 1100W | Yes | Ent | Slide |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

## Models for EMEA region

Table 7. Models for EMEA region

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots & GPUs | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X061012EA | 1xSilver4208 8C85W2.1G | 2x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, 2x480GBMV SSD | 4x1Gb | 5x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X061014EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0ATEA | 1xSilver4208 8C85W2.1G | 1x 16GB 2Rx82666 | 930-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0AWEA | 1xSilver4208 8C85W2.1G | 1x 16GB 2Rx82666 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0H5EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, 2x480GB PM883 | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0HSEA | 1xSilver4208 8C85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0JPEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0K9EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0KAEA | 1xSilver4208 8C85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MJEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MQEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MREA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0NLEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0P1EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0P2EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0P5EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0P6EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0PFEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 9350-16i | 8xSAS+4xAny 3.5"/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0PPEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PREA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0PVEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots & GPUs | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0PZEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0Q9EA | 1xSilver4208 8C85W2.1G | 1x 64GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QAEA | 1xSilver4208 8C85W2.1G | 1x 64GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QVEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 530-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QWEA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0R2EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 930-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0R5EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0R6EA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | 530-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06101EEA | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0B0EA | 1xSilver4210 10C85W2.2G | 1x 32GB 2666 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0B3EA | 1xSilver4210 10C85W2.2G | 1x 16GB 2Rx82666 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0B4EA | 1xSilver4210 10C85W2.2G | 1x 16GB 2Rx82666 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0B7EA | 1xSilver4210 10C85W2.2G | 1x 16GB 2Rx82666 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0H7EA | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, 2x480GB PM883 | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0HTEA | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X061013EA | 1xSilver4210R 10C100W2.4G | 2x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, 2x480GBMV SSD | 4x1Gb | 5x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X061015EA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0JSEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0JXEA | 1xSilver4210R 10C100W2.4G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0JYEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0JZEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MDEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MMEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0MPEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MSEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots & GPUs | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0NMEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0P0EA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0P3EA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0P4EA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0PAEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 9350-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PDEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PQEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PSEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0PUEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0Q6EA | 1xSilver4210R 10C100W2.4G | 1x 64GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0Q7EA | 1xSilver4210R 10C100W2.4G | 1x 64GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QUEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 530-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QXEA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0R3EA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 930-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0R4EA | 1xSilver4210R 10C100W2.4G | 1x 32GB 2933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0AVEA | 1xSilver4214 12C85W2.2G | 1x 32GB 2666 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0AZEA | 1xSilver4214 12C85W2.2G | 1x 32GB 2666 | 930-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0B2EA | 1xSilver4214 12C85W2.2G | 1x 32GB 2666 | 930-16i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0B9EA | 1xSilver4214 12C85W2.2G | 1x 16GB 2Rx82666 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MYEA | 2xSilver4214 12C85W2.2G | 6x 32GB 2933 | 930-16i 8GB | 12x3.5" SAS/12,2x 3.2TB PM1645a,2x 128GBM.2 | 4x1Gb | 2x PCIe x8, 2x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06A0JREA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0K1EA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MEEA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MNEA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots & GPUs | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0NNEA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NZEA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0QYEA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0AREA | 1xSilver4215 8C85W2.5G | 1x 16GB 2Rx82666 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MKEA | 1xSilver4215 8C85W2.5G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NPEA | 1xSilver4215 8C85W2.5G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NYEA | 1xSilver4215 8C85W2.5G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0P7EA | 1xSilver4215 8C85W2.5G | 1x 32GB 2933 | 940-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0PBEA | 1xSilver4215 8C85W2.5G | 1x 32GB 2933 | 9350-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PCEA | 1xSilver4215 8C85W2.5G | 1x 32GB 2933 | 940-8i 4GB | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PGEA | 1xSilver4215 8C85W2.5G | 1x 32GB 2933 | 9350-16i | 8xSAS+4xAny 3.5"/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0Q8EA | 1xSilver4215 8C85W2.5G | 1x 64GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QFEA | 1xSilver4215 8C85W2.5G | 1x 64GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06101CEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | Option | Option3.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0JLEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0JNEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0K4EA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MFEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NREA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NWEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0P8EA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 940-16i 4GB | 12x3.5" SAS/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0P9EA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 9350-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PEEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 940-8i 4GB | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PHEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 9350-16i | 8xSAS+4xAny 3.5"/12, Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0PWEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots & GPUs | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0PYEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QEEA | 1xSilver4215R 8C130W3.2G | 1x 64GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QZEA | 1xSilver4215R 8C130W3.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0AXEA | 1xSilver4216 16C100W2.1G | 1x 16GB 2Rx82666 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MLEA | 1xSilver4216 16C100W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NQEA | 1xSilver4216 16C100W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NXEA | 1xSilver4216 16C100W2.1G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0B5EA | 1xGold5217 8C115W3.0G | 1x 16GB 2Rx82666 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0H6EA | 1xGold5217 8C115W3.0G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0ASEA | 1xGold5218 16C125W2.3G | 1x 32GB 2666 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0BCEA | 1xGold5218 16C125W2.3G | 1x 16GB 2Rx82666 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JHEA | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0K5EA | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0LSEA | 2xGold5218R 20C125W2.1G | 2x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MGEA | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NSEA | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NVEA | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0R0EA | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0K6EA | 1xGold5220R 24C150W2.2G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0B8EA | 1xGold5222 4C105W3.8G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0J9EA | 1xGold6226 12C125W2.7G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JJEA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0K7EA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0MHEA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NTEA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 940-8i 4GB | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0NUEA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots & GPUs | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0PJEA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0PTEA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QBEA | 1xGold6226R 16C150W2.9G | 1x 64GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QCEA | 1xGold6226R 16C150W2.9G | 1x 64GB 2933 | 9350-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0QLEA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0R1EA | 1xGold6226R 16C150W2.9G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06101DEA | 1xGold6230 20C125W2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W Titanium | Opt | Ent | Slide |
| 7X06A0BAEA | 1xGold6230 20C125W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0BBEA | 1xGold6230 20C125W2.1G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JKEA | 1xGold6230R 26C150W2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0K2EA | 1xGold6230R 26C150W2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0JCEA | 1xGold6234 8C130W3.3G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JUEA | 1xGold6238R 28C165W2.2G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0AQEA | 1xGold6240 18C150W2.6G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JMEA | 1xGold6240R 24C165W2.4G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Opt | Ent | Slide |
| 7X06A0B1EA | 1xGold6242 16C150W2.8G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JQEA | 1xGold6242R 20C205W3.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0B6EA | 1xGold6244 8C150W3.6G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0J7EA | 1xGold6246 12C165W3.3G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JTEA | 1xGold6246R 16C205W3.4G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0AUEA | 1xGold6248 20C150W2.5G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0GUEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0GVEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 3x PCIe x8, 3x PCIe x16 2x M10 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0GWEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0GYEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 3x PCIe x8, 3x PCIe x16 2x M10 GPU | 2x 1600W | Opt | Ent | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots & GPUs | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0HWEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0HXEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 3x PCIe x8, 3x PCIe x16 2x M10 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0HYEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0J0EA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x 128GBM.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Adv | Slide |
| 7X06A0J5EA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,1x 128GBM.2 | 4x10Gb RJ45 | 3x PCIe x8, 3x PCIe x16 2x M10 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0J6EA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,1x 128GBM.2 | 4x10Gb RJ45 | 3x PCIe x8, 3x PCIe x16 2x M10 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0JBEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,1x 128GBM.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0JEEA | 2xGold6248 20C150W2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,1x 128GBM.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0JVEA | 1xGold6248R 24C205W3.0G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0JWEA | 1xGold6250 8C185W3.9G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0AYEA | 1xGold6254 18C200W3.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0K0EA | 1xGold6256 12C205W3.6G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |
| 7X06A0K3EA | 1xGold6258R 28C205W2.7G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 1100W | Opt | Ent | Slide |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

### Models for Hong Kong, Taiwan, Korea (HTK)

Table 8. Models for Hong Kong, Taiwan, Korea (HTK)

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0NKCN | 2xSilver421412C 85W2.2G | 6x 32GB 2933 | 930-16i 8GB | 12x3.5"SAS/12,2x 3.2TBPM1645a,2x 128GBM.2 | 4x1Gb | 2x PCIe x8, 2x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06100YCN | 2xGold52178C 115W3.0G | 4x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8,2x 4TBSATAHDD+2x 480GBS4510 | 4x1Gb | 2x PCIe x8 | 2x 750W | Opt | Std | Slide |
| 7X06100ZCN | 2xGold52178C 115W3.0G | 4x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8,2x 4TBSATAHDD+2x 480GBS4510 | 4x1Gb | 3x PCIe x8, 3x PCIe x16 | 2x 750W | Opt | Std | Slide |
| 7X061010CN | 2xGold52178C 115W3.0G | 2x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8,2x 4TBSATAHDD+2x 480GBS4510 | 4x1Gb | 3x PCIe x8, 3x PCIe x16 | 2x 750W | Opt | Std | Slide |
| 7X06100XCN | 1xGold521816C 125W2.3G | 4x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24,4x 1.2TB10K+2x 480GBS4510 | 4x1Gb | 2x PCIe x8 | 2x 750W | Opt | Std | Slide |
| TopSeller models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0BSCN | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D3CN | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CDCN | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CECN | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CTCN | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DCCN | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LDCN | 1xSilver4210R 10C100W2.4G | 1x 16GB 2Rx82933 | Option | Option3.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LFCN | 1xSilver4210R 10C100W2.4G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LKCN | 1xSilver4210R 10C100W2.4G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BRCN | 1xSilver421412C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D5CN | 1xSilver421412C 85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0L5CN | 1xSilver4214R 12C100W2.4G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LLCN | 1xSilver4214R 12C100W2.4G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LPCN | 1xSilver4214R 12C100W2.4G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BVCN | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DJCN | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0LACN | 1xSilver4215R8C 130W3.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LJCN | 1xSilver4215R8C 130W3.2G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LNCN | 1xSilver4215R8C 130W3.2G | 1x 16GB 2Rx82933 | Option | Option3.5", Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BNCN | 1xSilver421616C 100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CRCN | 1xSilver421616C 100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C7CN | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D7CN | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CUCN | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D6CN | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C8CN | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DFCN | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0L4CN | 1xGold5218R 20C125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0L7CN | 1xGold5218R 20C125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BYCN | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C0CN | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LECN | 1xGold5220R 24C150W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LQCN | 1xGold5220R 24C150W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LGCN | 1xGold6226R 16C150W2.9G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LHCN | 1xGold6226R 16C150W2.9G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DACN | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DECN | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LMCN | 1xGold6230R 26C150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LRCN | 1xGold6230R 26C150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LBCN | 1xGold6238R 28C165W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BXCN | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DNCN | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0L9CN | 1xGold6240R 24C165W2.4G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BHCN | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D9CN | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0L6CN | 1xGold6242R 20C205W3.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C4CN | 1xGold62448C 150W3.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0L8CN | 1xGold6246R 16C205W3.4G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BDCN | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CMCN | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0LCCN | 1xGold6248R 24C205W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BTCN | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DMCN | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BMCN | 1xGold625418C 200W3.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

## Models for India

Table 9. Models for India

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0MYSG | 2xSilver4214 12C85W2.2G | 6x 32GB 2933 | 930-16i 8GB | 12x3.5"SAS/12, 2x3.2TB PM1645a,2x 128GBM.2 | 4x1Gb | 2x PCIe x8, 2x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06A0LYSG | 1xGold521816C 125W2.3G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | 2x10Gb RJ45 | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| 7X06A0LZSG | 1xGold522018C 125W2.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | 2x10Gb RJ45 | 2x PCIe x8 | 2x 750W | Opt | Ent | Opt |
| 7X06A0MTSG | 1xGold522018C 125W2.2G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | 2x10Gb RJ45 | 2x PCIe x8 | 2x 750W | Opt | Ent | Slide |
| TopSeller models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0CXSG | 1xBronze3204 6C85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D4SG | 1xBronze3204 6C85W1.9G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BWSG | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CYSG | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BLSG | 1xSilver4210 10C85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C6SG | 1xSilver4210 10C85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C5SG | 1xSilver4214 12C85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C9SG | 1xSilver4214 12C85W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BESG | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CCSG | 1xSilver42158C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CJSG | 1xSilver4216 16C100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D8SG | 1xSilver4216 16C100W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DHSG | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DKSG | 1xGold521510C 85W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0BUSG | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CQSG | 1xGold52178C 115W3.0G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CZSG | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DGSG | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DBSG | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0DLSG | 1xGold522018C 125W2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0C3SG | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DDSG | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CPSG | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D1SG | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CHSG | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0DQSG | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D2SG | 1xGold62448C 150W3.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CNSG | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0D0SG | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CBSG | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CKSG | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x3.5"SAS/8, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |
| 7X06A0CLSG | 1xGold625418C 200W3.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Std | Opt |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

## Models for Japan

Table 10. Models for Japan

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X061016JP | 1xBronze32046C 85W1.9G | 1x 16GB 1Rx42933 | 9350-8i | 8x 2.5" Any/24,4x 2TBHDD | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QTJP | 1xBronze32046C 85W1.9G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QRJP | 1xSilver42088C 85W2.1G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X061017JP | 1xSilver4209T8C 70W2.2G | 1x 16GB 1Rx42933 | 9350-8i | 8x 2.5" Any/24,4x 2TBHDD | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QSJP | 1xSilver4209T8C 70W2.2G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X061018JP | 1xSilver421010C 85W2.2G | 1x 16GB 1Rx42933 | 9350-8i | 8x 2.5" Any/24,4x 2TBHDD | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QMJP | 1xSilver421010C 85W2.2G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KSJP | 1xSilver4214R 12C100W2.4G | 1x 16GB 1Rx42666 | Option | Option16x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QPJP | 1xSilver4214R 12C100W2.4G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KNJP | 1xSilver4215R8C 130W3.2G | 1x 16GB 1Rx42666 | Option | Option16x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QKJP | 1xSilver4215R8C 130W3.2G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X061019JP | 1xGold521816C 125W2.3G | 1x 16GB 1Rx42933 | 9350-8i | 8x 2.5" Any/24,4x 2TBHDD | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QQJP | 1xGold521816C 125W2.3G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KPJP | 1xGold5218R 20C125W2.1G | 1x 16GB 1Rx42666 | Option | Option16x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KVJP | 1xGold5220R 24C150W2.2G | 1x 16GB 1Rx42666 | Option | Option24x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06101AJP | 1xGold52224C 105W3.8G | 1x 16GB 1Rx42933 | 9350-8i | 8x 2.5" Any/24,4x 2TBHDD | 4x1Gb | 3x PCIe x8, 1x PCIe x16 | 1x 750W | Opt | Adv | Slide |
| 7X06A0QNJP | 1xGold52224C 105W3.8G | 1x 16GB 2Rx82933 | 9350-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KUJP | 1xGold6226R 16C150W2.9G | 1x 16GB 1Rx42933 | Option | Option24x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0CGJP | 1xGold623020C 125W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KTJP | 1xGold6230R 26C150W2.1G | 1x 16GB 1Rx42933 | Option | Option16x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0KRJP | 1xGold6238R 28C165W2.2G | 1x 16GB 1Rx42933 | Option | Option16x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0DVJP | 1xGold624018C 150W2.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0KMJP | 1xGold6240R 24C165W2.4G | 1x 16GB 1Rx42933 | Option | Option24x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0DRJP | 1xGold624216C 150W2.8G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0KXJP | 1xGold6242R 20C205W3.1G | 1x 16GB 1Rx42933 | Option | Option24x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0DPJP | 1xGold62448C 150W3.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1600W | Opt | Adv | Slide |
| 7X06A0DWJP | 1xGold62448C 150W3.6G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0KQJP | 1xGold6246R 16C205W3.4G | 1x 16GB 1Rx42933 | Option | Option24x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0DTJP | 1xGold624820C 150W2.5G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0KWJP | 1xGold6248R 24C205W3.0G | 1x 16GB 1Rx42933 | Option | Option24x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0DUJP | 1xGold625224C 150W2.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0DSJP | 1xGold625418C 200W3.1G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0L0JP | 1xGold6258R 28C205W2.7G | 1x 16GB 1Rx42933 | Option | Option24x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0DXJP | 1xPlatinum 8280M28C205W 2.7G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| TopSeller models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0BKJP | 1xBronze32046C 85W1.9G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x3.5"SAS/8, Open bay | 4x1Gb | 5x PCIe x8 | 1x 550W | Opt | Adv | Slide |
| 7X06A0BQJP | 1xBronze32046C 85W1.9G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KZJP | 1xBronze3206R 8C85W1.9G | 1x 16GB 1Rx42666 | Option | Option16x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0BPJP | 1xSilver42088C 85W2.1G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0BGJP | 1xSilver421010C 85W2.2G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0CAJP | 1xSilver421010C 85W2.2G | 1x 16GB 1Rx42666 | 930-16i 4GB | 12x3.5"SAS/12, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0KYJP | 1xSilver4210R 10C100W2.4G | 1x 16GB 1Rx42666 | Option | Option16x2.5", Open bay | 4x1Gb | 2x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0BFJP | 1xSilver421412C 85W2.2G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0BJJP | 1xSilver42158C 85W2.5G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0BZJP | 1xSilver421616C 100W2.1G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0C2JP | 1xSilver421616C 100W2.1G | 1x 16GB 1Rx42666 | 930-16i 4GB | 12x3.5"SAS/12, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0C1JP | 1xGold521510C 85W2.5G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0CVJP | 1xGold52178C 115W3.0G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0CWJP | 1xGold521816C 125W2.3G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |
| 7X06A0CSJP | 1xGold522018C 125W2.2G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06A0CFJP | 1xGold52224C 105W3.8G | 1x 16GB 1Rx42666 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Opt | Adv | Slide |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

### Models for Latin American countries (except Brazil)

Table 11. Models with a 3-year warranty for Latin American countries (except Brazil)

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0H8LA | 1xSilver4210 10C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |
| 7X06A0M6LA | 1xSilver4210R 10C100W2.4G | 1x 16GB 2Rx82933 | 730-8i 1GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |
| 7X06A0M4LA | 1xSilver4214R 12C100W2.4G | 1x 32GB 2933 | 730-8i 1GB | 8x2.5"SAS/16, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |
| 7X06A0MBLA | 1xGold5218R 20C125W2.1G | 1x 32GB 2933 | 930-16i 4GB | 8x2.5"SAS/16, Open bay | 2x10Gb RJ45 | 5x PCIe x8 | 2x 750W | Yes | Ent | Slide |
| 7X06A0HBLA | 1xGold5220 18C125W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 1100W | Yes | Std | Slide |
| 7X06A0MCLA | 1xGold6230R 26C150W2.1G | 2x 32GB 2933 | 930-16i 4GB | 16x2.5"SAS/16, Open bay | 4x10Gb RJ45 | 5x PCIe x8 | 2x 1100W | Yes | Ent | Slide |
| 7X06A0M9LA | 1xGold6240R 24C165W2.4G | 2x 32GB 2933 | 930-16i 4GB | 16x2.5"SAS/16, Open bay | 4x10Gb RJ45 | 5x PCIe x8 | 2x 1100W | Yes | Ent | Slide |
| 7X06A0J3LA | 2xPlatinum 8276M28C 165W2.2G | 24x 128GB 2933 | 930-24i | 8xAny+16xSAS 2.5"/24,16x960GB S4610 | 4x1Gb | 2x PCIe x8, 2x PCIe x16 | 2x 1100W | Opt | Ent | Slide CMA |
| TopSeller models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0H9LA | 1xSilver4214 12C85W2.2G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |
| 7X06A0HALA | 1xSilver4216 16C100W2.1G | 1x 32GB 2933 | 730-8i 2GB | 8x 2.5" SAS/24, Open bay | 4x1Gb | 5x PCIe x8 | 1x 750W | Yes | Std | Slide |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

## Models for USA and Canada

Table 12. Models for USA and Canada

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| Standard models with a 3-year warranty (machine type 7X06) | | | | | | | | | | |
| 7X06A0FHNA | 1xSilver4208 8C85W2.1G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0KLNA | 1xSilver4208 8C85W2.1G | 1x 16GB 2Rx82933 | 530-8i | 8x3.5"SAS/8, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0NDNA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | Option | Option3.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0NFNA | 1xSilver4208 8C85W2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0QHNA | 1xSilver4208 8C85W2.1G | 4x 16GB 2Rx82933 | 430-8i HBA | 8x 2.5" SAS/24,2x 240GB5400PRO+4x 1.92TB5400MAX | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0M1NA | 1xSilver4210 10C85W2.2G | 2x 64GB 2933 | 530-16i | 8x 2.5" Any/24,2x 240GBPM883+3x 3.84TBPM983 | 4x10Gb SFP+ | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06A0FENA | 1xSilver4214 12C85W2.2G | 1x 16GB 2Rx82933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0N9NA | 2xSilver4214 12C85W2.2G | 6x 32GB 2933 | 930-16i 8GB | 12x3.5"SAS/12,2x 3.2TBPM1645a,2x 128GBM.2 | 4x1Gb | 3x PCIe x8, 2x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06A0NGNA | 1xSilver4214 12C85W2.2G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0NHNA | 2xSilver4214 12C85W2.2G | 6x 32GB 2933 | 930-16i 8GB | 12x3.5"SAS/12,2x 3.2TBPM1645a,2x 128GBM.2 | 4x1Gb | 3x PCIe x8, 2x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06A0PNNA | 2xSilver4214 12C85W2.2G | 6x 32GB 2933 | 930-16i 8GB | 12x3.5"SAS/12,2x 3.2TBPM1645a,2x 128GBM.2 | 4x1Gb | 3x PCIe x8, 2x PCIe x16 | 2x 750W | Opt | Ent | Slide |
| 7X06A0QJNA | 1xSilver4214 12C85W2.2G | 8x 32GB 2933 | 530-16i | 8x 2.5" Any/24,3x 7.68TBPM983+2x 240GB5400PRO | Open | 3x PCIe x8, 1x PCIe x16 | 2x 750W | Yes | Ent | Slide |
| 7X06A0FKNA | 1xSilver4216 16C100W 2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0N8NA | 1xSilver4216 16C100W 2.1G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0FJNA | 1xGold5217 8C115W3.0G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0FDNA | 1xGold5218 16C125W 2.3G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0FLNA | 1xGold5218 16C125W 2.3G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0NANA | 1xGold5218 16C125W 2.3G | 1x 32GB 2933 | Option | Option24x2.5", Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |
| 7X06A0FFNA | 1xGold5220 18C125W 2.2G | 1x 16GB 2Rx82933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 750W | Yes | Ent | Slide |

| Model | Intel Xeon Scalable processor† | Memory | RAID | Drive bays and drives | LOM | Slots | Power supply | Front VGA | XCC | Rail kit |
|---|---|---|---|---|---|---|---|---|---|---|
| 7X06100UNA | 1xGold6208U 16C150W 2.9G | 2x 8GB 2933 | Option | Option24x2.5", Open bay | 2x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06100SNA | 1xGold6230 20C125W 2.1G | 2x 8GB 2933 | Option | Option3.5", Open bay | 2x1Gb | 2x PCIe x8 | 1x 1100W | Opt | Std | Slide |
| 7X06A0FBNA | 1xGold6242 16C150W 2.8G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 1100W | Yes | Ent | Slide |
| 7X06A0FANA | 1xGold6248 20C150W 2.5G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 1100W | Yes | Ent | Slide |
| 7X06A0GTNA | 2xGold6248 20C150W 2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x128GB M.2 | 4x10Gb RJ45 | 3x PCIe x8, 3x PCIe x16 2x M10 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0GXNA | 2xGold6248 20C150W 2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x128GB M.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0H0NA | 2xGold6248 20C150W 2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x128GB M.2 | 4x10Gb RJ45 | 3x PCIe x8, 3x PCIe x16 2x M10 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0H1NA | 2xGold6248 20C150W 2.5G | 12x 32GB 2933 | Option | Option24x2.5", Open bay,2x128GB M.2 | 4x10Gb RJ45 | 5x PCIe x8, 2x PCIe x16 4x T4 GPU | 2x 1600W | Opt | Ent | Slide |
| 7X06A0F9NA | 1xGold6252 24C150W 2.1G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 1100W | Yes | Ent | Slide |
| 7X06100TNA | 1xPlatinum 825316C 125W2.2G | 2x 8GB 2933 | Option | Option3.5", Open bay | 2x1Gb | 5x PCIe x8 | 1x 1100W | Opt | Adv | Slide |
| 7X06A0FCNA | 1xPlatinum 826024C 165W2.4G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 1100W | Yes | Ent | Slide |
| 7X06A0FGNA | 1xPlatinum 826824C 205W2.9G | 1x 32GB 2933 | 930-8i | 8x 2.5" SAS/24, Open bay | Open | 2x PCIe x8 | 1x 1100W | Yes | Ent | Slide |

† Processor description: Processor model, number of cores, thermal design power (TDP), core frequency

## Processors

The SR650 server supports one or two Intel Xeon Bronze, Silver, Gold, or Platinum processors. The following table lists the specifications of the processors for the SR650 server.

Topics in this section:


- Processor specifications
- Processor ordering information
- Continued support for 1st Gen Intel Xeon Scalable processors
- UEFI operating modes


### Processor specifications

**Processor support**: Both 1st Gen and 2nd Gen Intel Xeon SP processors are supported. For supported 1st Gen processors, see the Continued support for 1st Gen Intel Xeon Scalable processors section.

Abbreviations used in the table:

- UPI: Ultra Path Interconnect
- TDP: Thermal Design Power
- HT: Hyper-Threading
- TB: Turbo Boost 2.0
- VT-x: Virtualization Technology
- VT-d: Virtualization Technology for Directed I/O
- SST-PP: Speed Select Technology - Performance Profile
- FMA: Fused-Multiply Add (AVX-512)
- DCPMM: DC Persistent Memory Module
- RAS: Reliability, Availability, and Serviceability
  - Std: Standard RAS
  - Adv: Advanced RAS

Table 13. Processor specifications

| CPU model | Cores / threads | Core speed (Base / TB Max) | Cache | Max DDR4 speed | Max memory capacity per socket | UPI speed | TDP | HT | TB | VT-x | VT-d | SST-PP | FMA units | DCPMM | RAS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intel Xeon Bronze processors** | | | | | | | | | | | | | | | |
| 3204 | 6 / 6 | 1.9 / 1.9 GHz | 8.25 MB | 2133 MHz | 1 TB | 9.6 GT/s | 85 W | N | N | Y | Y | N | 1 | N | Std |
| 3206R | 8 / 8 | 1.9 / 1.9 GHz | 11 MB | 2133 MHz | 1 TB | 9.6 GT/s | 85 W | N | N | Y | Y | N | 1 | N | Std |
| **Intel Xeon Silver processors** | | | | | | | | | | | | | | | |
| 4208 | 8 / 16 | 2.1 / 3.2 GHz | 11 MB | 2400 MHz | 1 TB | 9.6 GT/s | 85 W | Y | Y | Y | Y | N | 1 | N | Std |
| 4209T | 8 / 16 | 2.2 / 3.2 GHz | 11 MB | 2400 MHz | 1 TB | 9.6 GT/s | 70 W | Y | Y | Y | Y | N | 1 | N | Std |
| 4210 | 10 / 20 | 2.2 / 3.2 GHz | 13.75 MB | 2400 MHz | 1 TB | 9.6 GT/s | 85 W | Y | Y | Y | Y | N | 1 | N | Std |
| 4210R | 10 / 20 | 2.4 / 3.2 GHz | 13.75 MB | 2400 MHz | 1 TB | 9.6 GT/s | 100 W | Y | Y | Y | Y | N | 1 | N | Std |
| 4210T | 10 / 20 | 2.3 / 3.2 GHz | 13.75 MB | 2400 MHz | 1 TB | 9.6 GT/s | 95 W | Y | Y | Y | Y | N | 1 | N | Std |
| 4214 | 12 / 24 | 2.2 / 3.2 GHz | 16.5 MB | 2400 MHz | 1 TB | 9.6 GT/s | 85 W | Y | Y | Y | Y | N | 1 | N | Std |
| 4214R | 12 / 24 | 2.4 / 3.5 GHz | 16.5 MB | 2400 MHz | 1 TB | 9.6 GT/s | 100 W | Y | Y | Y | Y | N | 1 | N | Std |
| 4214Y | 12 / 24 | 2.2 / 3.2 GHz | 16.5 MB | 2400 MHz | 1 TB | 9.6 GT/s | 85 W | Y | Y | Y | Y | Y | 1 | N | Std |
| | 10 / 20 | 2.3 / 3.2 GHz | | | | | | | | | | | | | |
| | 8 / 16 | 2.4 / 3.2 GHz | | | | | | | | | | | | | |
| 4215 | 8 / 16 | 2.5 / 3.5 GHz | 11 MB | 2400 MHz | 1 TB | 9.6 GT/s | 85 W | Y | Y | Y | Y | N | 1 | Y | Std |
| 4215R | 8 / 16 | 3.2 / 4.0 GHz | 11 MB | 2400 MHz | 1 TB | 9.6 GT/s | 130 W | Y | Y | Y | Y | N | 1 | Y | Std |

| CPU model | Cores / threads | Core speed (Base / TB Max) | Cache | Max DDR4 speed | Max memory capacity per socket | UPI speed | TDP | HT | TB | VT-x | VT-d | SST-PP | FMA units | DCPMM | RAS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4216 | 16 / 32 | 2.1 / 3.2 GHz | 22 MB | 2400 MHz | 1 TB | 9.6 GT/s | 100 W | Y | Y | Y | Y | N | 1 | N | Std |
| **Intel Xeon Gold processors** | | | | | | | | | | | | | | | |
| 5215 | 10 / 20 | 2.5 / 3.4 GHz | 13.75 MB | 2666 MHz | 1 TB | 10.4 GT/s | 85 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5215M | 10 / 20 | 2.5 / 3.4 GHz | 13.75 MB | 2666 MHz | 2 TB | 10.4 GT/s | 85 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5215L | 10 / 20 | 2.5 / 3.4 GHz | 13.75 MB | 2666 MHz | 4.5 TB | 10.4 GT/s | 85 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5217 | 8 / 16 | 3.0 / 3.7 GHz | 11 MB | 2666 MHz | 1 TB | 10.4 GT/s | 115 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5218 | 16 / 32 | 2.3 / 3.9 GHz | 22 MB | 2666 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5218B | 16 / 32 | 2.3 / 3.9 GHz | 22 MB | 2666 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5218R | 20 / 40 | 2.1 / 4.0 GHz | 27.5 MB | 2666 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5218N | 16 / 32 | 2.3 / 3.7 GHz | 22 MB | 2666 MHz | 1 TB | 10.4 GT/s | 110 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5218T | 16 / 32 | 2.1 / 3.8 GHz | 22 MB | 2666 MHz | 1 TB | 10.4 GT/s | 105 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5220 | 18 / 36 | 2.2 / 3.9 GHz | 24.75 MB | 2666 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5220R | 24 / 48 | 2.2 / 4.0 GHz | 35.75 MB | 2666 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5220S | 18 / 36 | 2.7 / 3.9 GHz | 24.75 MB | 2666 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5220T | 18 / 36 | 1.9 / 3.9 GHz | 24.75 MB | 2666 MHz | 1 TB | 10.4 GT/s | 105 W | Y | Y | Y | Y | N | 1 | Y | Adv |
| 5222 | 4 / 8 | 3.8 / 3.9 GHz | 16.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 105 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6208U | 16 / 32 | 2.9 / 3.9 GHz | 22 MB | 2933 MHz | 1 TB | No UPI | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6222V | 20 / 40 | 1.8 / 3.6 GHz | 27.5 MB | 2400 MHz | 1 TB | 10.4 GT/s | 115 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6226 | 12 / 24 | 2.7 / 3.7 GHz | 19.25 MB | 2933 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6226R | 16 / 32 | 2.9 / 3.9 GHz | 22 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6230 | 20 / 40 | 2.1 / 3.9 GHz | 27.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6230N | 20 / 40 | 2.3 / 3.9 GHz | 27.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6230R | 26 / 52 | 2.1 / 4.0 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6230T | 20 / 40 | 2.1 / 3.9 GHz | 27.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6234 | 8 / 16 | 3.3 / 4.0 GHz | 24.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 130 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6238 | 22 / 44 | 2.1 / 3.7 GHz | 30.25 MB | 2933 MHz | 1 TB | 10.4 GT/s | 140 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6238M | 22 / 44 | 2.1 / 3.7 GHz | 30.25 MB | 2933 MHz | 2 TB | 10.4 GT/s | 140 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6238L | 22 / 44 | 2.1 / 3.7 GHz | 30.25 MB | 2933 MHz | 4.5 TB | 10.4 GT/s | 140 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6238R | 28 / 56 | 2.2 / 4.0 GHz | 38.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6238T | 22 / 44 | 1.9 / 3.7 GHz | 30.25 MB | 2933 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6240 | 18 / 36 | 2.6 / 3.9 GHz | 24.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6240M | 18 / 36 | 2.6 / 3.9 GHz | 24.75 MB | 2933 MHz | 2 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6240L | 18 / 36 | 2.6 / 3.9 GHz | 24.75 MB | 2933 MHz | 4.5 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6240R | 24 / 48 | 2.4 / 4.0 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6240Y | 18 / 36 | 2.6 / 3.9 GHz | 24.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | Y | 2 | Y | Adv |
| | 14 / 28 | 2.8 / 3.9 GHz | | | | | | | | | | | | | |
| | 8 / 16 | 3.1 / 3.9 GHz | | | | | | | | | | | | | |
| 6242 | 16 / 32 | 2.8 / 3.9 GHz | 22 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6242R | 20 / 40 | 3.1 / 4.1 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6244 | 8 / 16 | 3.6 / 4.4 GHz | 24.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6246 | 12 / 24 | 3.3 / 4.2 GHz | 24.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6246R | 16 / 32 | 3.4 / 4.1 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6248 | 20 / 40 | 2.5 / 3.9 GHz | 27.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6248R | 24 / 48 | 3.0 / 4.0 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6250 | 8 / 16 | 3.9 / 4.5 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 185 W | Y | Y | Y | Y | N | 2 | Y | Adv |

| CPU model | Cores / threads | Core speed (Base / TB Max) | Cache | Max DDR4 speed | Max memory capacity per socket | UPI speed | TDP | HT | TB | VT-x | VT-d | SST-PP | FMA units | DCPMM | RAS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6252 | 24 / 48 | 2.1 / 3.7 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6252N | 24 / 48 | 2.3 / 3.6 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 150 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6254 | 18 / 36 | 3.1 / 4.0 GHz | 24.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 200 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6256 | 12 / 24 | 3.6 / 4.5 GHz | 33 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6258R | 28 / 56 | 2.7 / 4.0 GHz | 38.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6262V | 24 / 48 | 1.9 / 3.6 GHz | 33 MB | 2400 MHz | 1 TB | 10.4 GT/s | 135 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 6271C* | 24 / 48 | 2.6 / 3.9 GHz | 33 MB | 2666 MHz | 1 TB | 10.4 GT/s | 165W | Y | Y | Y | Y | N | 2 | Y | Adv |
| **Intel Xeon Platinum processors** | | | | | | | | | | | | | | | |
| 8253 | 16 / 32 | 2.2 / 3.0 GHz | 22 MB | 2933 MHz | 1 TB | 10.4 GT/s | 125 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8256 | 4 / 8 | 3.8 / 3.9 GHz | 16.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 105 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8260 | 24 / 48 | 2.4 / 3.9 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8260M | 24 / 48 | 2.4 / 3.9 GHz | 35.75 MB | 2933 MHz | 2 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8260L | 24 / 48 | 2.4 / 3.9 GHz | 35.75 MB | 2933 MHz | 4.5 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8260Y | 24 / 48 | 2.4 / 3.9 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | Y | 2 | Y | Adv |
| | 20 / 40 | 2.5 / 3.9 GHz | | | | | | | | | | | | | |
| | 16 / 32 | 2.7 / 3.9 GHz | | | | | | | | | | | | | |
| 8268 | 24 / 48 | 2.9 / 3.9 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8270 | 26 / 52 | 2.7 / 4.0 GHz | 35.75 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8276 | 28 / 56 | 2.2 / 4.0 GHz | 38.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8276M | 28 / 56 | 2.2 / 4.0 GHz | 38.5 MB | 2933 MHz | 2 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8276L | 28 / 56 | 2.2 / 4.0 GHz | 38.5 MB | 2933 MHz | 4.5 TB | 10.4 GT/s | 165 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8280 | 28 / 56 | 2.7 / 4.0 GHz | 38.5 MB | 2933 MHz | 1 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8280M | 28 / 56 | 2.7 / 4.0 GHz | 38.5 MB | 2933 MHz | 2 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |
| 8280L | 28 / 56 | 2.7 / 4.0 GHz | 38.5 MB | 2933 MHz | 4.5 TB | 10.4 GT/s | 205 W | Y | Y | Y | Y | N | 2 | Y | Adv |

* Intel processor 6271C is only available in China

**Configuration notes:**

- The Intel Xeon Gold 5218 and 5218B processors have similar specifications; however, they use different silicon designs and cannot be mixed in the same system.
- Processors with a U suffix are only supported in single-processor configurations. This limits the PCIe slots that can be used.
- The processors that support SST-PP offer three distinct operating points that are defined by a core count with a base speed associated with that core count. The operating point is static, it is selected during the boot process and cannot be changed at runtime.

### Processor ordering information

For the SR650 server models that come standard with one processor, the second processor can be ordered, if required (see the following table for ordering information). The second processor must be of the same model as the first processor. The second processor option includes a processor and a heatsink; an additional system fan is not included and needs to be purchased with the second processor (see Cooling for details).

Table 14. Processor options

| Part number | Feature* | Description |
|---|---|---|
| Intel Xeon Bronze processors | | |

| Part number | Feature* | Description |
|---|---|---|
| 4XG7A37938 | B4HU | SR550/SR590/SR650 Intel Xeon Bronze 3204 6C 85W 1.9GHz Processor w/o FAN |
| 4XG7A37983 | B7N3 | SR550/SR590/SR650 Intel Xeon Bronze 3206R 8C 85W 1.9GHz Processor w/o FAN |
| Intel Xeon Silver processors | | |
| 4XG7A37935 | B4HT | SR550/SR590/SR650 Intel Xeon Silver 4208 8C 85W 2.1GHz Processor w/o FAN |
| 4XG7A37944 | B4P4 | SR550/SR590/SR650 Intel Xeon Silver 4209T 8C 70W 2.2GHz Processor w/o FAN |
| 4XG7A37932 | B4HS | SR550/SR590/SR650 Intel Xeon Silver 4210 10C 85W 2.2GHz Processor w/o FAN |
| 4XG7A37981 | B7N5 | SR550/SR590/SR650 Intel Xeon Silver 4210R 10C 100W 2.4GHz Processor w/o FAN |
| 4XG7A63276 | BAZT | SR650 Intel Xeon Silver 4210T 10C 95W 2.3GHz Processor w/o FAN |
| 4XG7A37929 | B4HR | SR550/SR590/SR650 Intel Xeon Silver 4214 12C 85W 2.2GHz Processor w/o FAN |
| 4XG7A37980 | B7N6 | SR550/SR590/SR650 Intel Xeon Silver 4214R 12C 100W 2.4GHz Processor w/o FAN |
| 4XG7A37941 | B4NW | SR550/SR590/SR650 Intel Xeon Silver 4214Y 12/10/8C 85W 2.2GHz Processor w/o FAN |
| 4XG7A37926 | B4HQ | SR550/SR590/SR650 Intel Xeon Silver 4215 8C 85W 2.5GHz Processor w/o FAN |
| 4XG7A63274 | BAZU | SR590/SR650 Intel Xeon Silver 4215R 8C 130W 3.2GHz Processor w/o FAN |
| 4XG7A37923 | B4HP | SR550/SR590/SR650 Intel Xeon Silver 4216 16C 100W 2.1GHz Processor w/o FAN |
| Intel Xeon Gold processors | | |
| 4XG7A37916 | B4HN | SR550/SR590/SR650 Intel Xeon Gold 5215 10C 85W 2.5GHz Processor w/o FAN |
| 4XG7A37913 | B4P1 | SR550/SR590/SR650 Intel Xeon Gold 5215M 10C 85W 2.5GHz Processor w/o FAN |
| 4XG7A37910 | B4P9 | SR550/SR590/SR650 Intel Xeon Gold 5215L 10C 85W 2.5GHz Processor w/o FAN |
| 4XG7A37919 | B4HM | SR550/SR590/SR650 Intel Xeon Gold 5217 8C 115W 3.0GHz Processor w/o FAN |
| 4XG7A37895 | B4HL | SR550/SR590/SR650 Intel Xeon Gold 5218 16C 125W 2.3GHz Processor w/o FAN |
| 4XG7A37958 | B6BS | SR550/SR590/SR650 Intel Xeon Gold 5218B 16C 125W 2.3GHz Processor w/o FAN |
| 4XG7A63272 | BAZS | SR550/SR590/SR650 Intel Xeon Gold 5218R 20C 125W 2.1GHz Processor w/o FAN |
| 4XG7A37955 | B5S0 | SR650 Intel Xeon Gold 5218N 16C 110W 2.3GHz Processor Option Kit w/o FAN |
| 4XG7A38016 | B4P3 | SR550/SR590/SR650 Intel Xeon Gold 5218T 16C 105W 2.1GHz Processor w/o FAN |
| 4XG7A37892 | B4HK | SR550/SR590/SR650 Intel Xeon Gold 5220 18C 125W 2.2GHz Processor w/o FAN |
| 4XG7A37974 | B7N9 | SR590/SR650 Intel Xeon Gold 5220R 24C 150W 2.2GHz Processor w/o FAN |
| 4XG7A38019 | B6CW | SR550/SR590/SR650 Intel Xeon Gold 5220S 18C 125W 2.7GHz Processor w/o FAN |
| 4XG7A38005 | B6CQ | SR550/SR590/SR650 Intel Xeon Gold 5220T 18C 105W 1.9GHz Processor w/o FAN |
| 4XG7A37951 | B5S1 | SR550/SR590/SR650 Intel Xeon Gold 5222 4C 105W 3.8GHz Processor w/o FAN |
| None** | BAZV | Intel Xeon Gold 6208U 16C 150W 2.9GHz Processor |
| 4XG7A38023 | B6CV | SR550/SR590/SR650 Intel Xeon Gold 6222V 20C 115W 1.8GHz Processor w/o FAN |
| 4XG7A38021 | B6CL | SR550/SR590/SR650 Intel Xeon Gold 6226 12C 125W 2.7GHz Processor w/o FAN |
| 4XG7A38082 | BAZW | SR590/SR650 Intel Xeon Gold 6226R 16C 150W 2.9GHz Processor w/o FAN |
| 4XG7A37889 | B4HJ | SR550/SR590/SR650 Intel Xeon Gold 6230 20C 125W 2.1GHz Processor w/o FAN |
| 4XG7A38028 | B5RY | SR550/SR590/SR650 Intel Xeon Gold 6230N 20C 125W 2.3GHz Processor w/o FAN |
| 4XG7A38081 | BAZX | SR590/SR650 Intel Xeon Gold 6230R 26C 150W 2.1GHz Processor w/o FAN |
| 4XG7A38006 | B6CP | SR550/SR590/SR650 Intel Xeon Gold 6230T 20C 125W 2.1GHz Processor w/o FAN |
| 4XG7A38001 | B6CK | SR590/SR650 Intel Xeon Gold 6234 8C 130W 3.3GHz Processor w/o FAN |
| 4XG7A38008 | B6CJ | SR590/SR650 Intel Xeon Gold 6238 22C 140W 2.1GHz Processor w/o FAN |
| 4XG7A37999 | B6CM | SR590/SR650 Intel Xeon Gold 6238M 22C 140W 2.1GHz Processor w/o FAN |
| 4XG7A38003 | B6CR | SR590/SR650 Intel Xeon Gold 6238L 22C 140W 2.1GHz Processor w/o FAN |
| 4XG7A38080 | BAZL | SR650 Intel Xeon Gold 6238R 28C 165W 2.2GHz Processor w/o FAN |
| 4XG7A37906 | B4P2 | SR550/SR590/SR650 Intel Xeon Gold 6238T 22C 125W 1.9GHz Processor w/o FAN |

| Part number | Feature* | Description |
|---|---|---|
| 4XG7A15895 | B4HH | SR650 Intel Xeon Gold 6240 18C 150W 2.6GHz Processor w/o FAN |
| 4XG7A38013 | B6CN | SR590/SR650 Intel Xeon Gold 6240M 18C 150W 2.6GHz Processor w/o FAN |
| 4XG7A38015 | B6CS | SR590/SR650 Intel Xeon Gold 6240L 18C 150W 2.6GHz Processor w/o FAN |
| 4XG7A38079 | BAZM | SR650 Intel Xeon Gold 6240R 24C 165W 2.4GHz Processor w/o FAN |
| 4XG7A37903 | B4NV | SR590/SR650 Intel Xeon Gold 6240Y 18/14/8C 150W 2.6GHz Processor w/o FAN |
| 4XG7A37886 | B4HG | SR590/SR650 Intel Xeon Gold 6242 16C 150W 2.8GHz Processor w/o FAN |
| 4XG7A38078 | BAZN | SR650 Intel Xeon Gold 6242R 20C 205W 3.1GHz Processor w/o FAN |
| 4XG7A15874 | B4HF | SR590/SR650 Intel Xeon Gold 6244 8C 150W 3.6GHz Processor w/o FAN |
| 4XG7A37963 | B6PD | SR650 Intel Xeon Gold 6246 12C 165W 3.3GHz Processor Option Kit w/o FAN |
| 4XG7A38077 | BAZP | SR650 Intel Xeon Gold 6246R 16C 205W 3.4GHz Processor w/o FAN |
| 4XG7A15892 | B4HE | SR650 Intel Xeon Gold 6248 20C 150W 2.5GHz Processor w/o FAN |
| 4XG7A38076 | BAZQ | SR650 Intel Xeon Gold 6248R 24C 205W 3.0GHz Processor w/o FAN |
| 4XG7A38075 | B96C | SR650 Intel Xeon Gold 6250 8C 185W 3.9GHz Processor w/o FAN |
| 4XG7A15889 | B4HC | SR650 Intel Xeon Gold 6252 24C 150W 2.1GHz Processor w/o FAN |
| 4XG7A38011 | B6CT | SR590/SR650 Intel Xeon Gold 6252N 24C 150W 2.3GHz Processor w/o FAN |
| 4XG7A15872 | B4HD | SR650 Intel Xeon Gold 6254 18C 200W 3.1GHz Processor w/o FAN |
| 4XG7A38074 | B96D | SR650 Intel Xeon Gold 6256 12C 205W 3.6GHz Processor w/o FAN |
| 4XG7A38073 | BAZR | SR650 Intel Xeon Gold 6258R 28C 205W 2.7GHz Processor w/o FAN |
| 4XG7A38010 | B6CU | SR590/SR650 Intel Xeon Gold 6262V 24C 135W 1.9GHz Processor w/o FAN |
| 4XG7A86156 | B4Q7 | SR650 Intel Xeon Gold 6271C 24C 165W 2.6GHz Processor Option Kit w/o Fan (PRC only) |
| Intel Xeon Platinum processors | | |
| 4XG7A37898 | B5RZ | SR550/SR590/SR650 Intel Xeon Platinum 8253 16C 125W 2.2GHz Processor w/o FAN |
| 4XG7A37947 | B5S2 | SR550/SR590/SR650 Intel Xeon Platinum 8256 4C 105W 3.8GHz Processor w/o FAN |
| 4XG7A15887 | B4HB | SR650 Intel Xeon Platinum 8260 24C 165W 2.4GHz Processor w/o FAN |
| 4XG7A15885 | B4NZ | SR650 Intel Xeon Platinum 8260M 24C 165W 2.4GHz Processor w/o FAN |
| 4XG7A15883 | B4P7 | SR650 Intel Xeon Platinum 8260L 24C 165W 2.4GHz Processor w/o FAN |
| 4XG7A37901 | B4NU | SR650 Intel Xeon Platinum 8260Y 24/20/16C 165W 2.4GHz Processor w/o FAN |
| 4XG7A15870 | B4HA | SR650 Intel Xeon Platinum 8268 24C 205W 2.9GHz Processor w/o FAN |
| 4XG7A15868 | B4H9 | SR650 Intel Xeon Platinum 8270 26C 205W 2.7GHz Processor w/o FAN |
| 4XG7A15881 | B4H8 | SR650 Intel Xeon Platinum 8276 28C 165W 2.2GHz Processor w/o FAN |
| 4XG7A15879 | B4NY | SR650 Intel Xeon Platinum 8276M 28C 165W 2.2GHz Processor w/o FAN |
| 4XG7A15877 | B4P6 | SR650 Intel Xeon Platinum 8276L 28C 165W 2.2GHz Processor w/o FAN |
| 4XG7A15866 | B4H7 | SR650 Intel Xeon Platinum 8280 28C 205W 2.7GHz Processor w/o FAN |
| 4XG7A15864 | B4NX | SR650 Intel Xeon Platinum 8280M 28C 205W 2.7GHz Processor w/o FAN |
| 4XG7A15862 | B4P5 | SR650 Intel Xeon Platinum 8280L 28C 205W 2.7GHz Processor w/o FAN |

* For CTO configurations, the feature code represents a processor, and fans and heatsinks are derived by the configuration tool.

** Factory-installed only; no field upgrade. Supported in the single-processor configurations only.

**Configuration notes:**

- Processors with 200 W or 205 W TDP, or Gold 6230N, 6240Y, 6244, or 6250 processors are supported in the following hardware configurations and ambient temperature requirements:
  - 24x 2.5” chassis.
  - Ambient temperature and drive bay configurations:
    - Up to 35 °C (95 °F): 8x 2.5” SAS/SATA drive bays (drive backplane in the middle).
    - Up to 30 °C (86 °F):
      - 4x 2.5" SAS/SATA and 4x 2.5" AnyBay (up to 4 NVMe SSDs).
      - 8x 2.5" SAS/SATA and 8x 2.5" AnyBay (up to 8 NVMe SSDs).

    **Note:** Gold 6242R, 6246R, 6248R, 6250, 6256, and 6258R processors are supported only at the ambient temperature of up to 30 °C (86 °F) and only with 8x 2.5” SAS/SATA drive bays (drive backplane in the middle).
  - No rear HDD kit installed.
  - No PCIe flash adapters installed.
  - No GPU adapters installed, or up to four T4 GPU adapters installed.
  - The server performance might be impacted in case of a system fan failure.
- Gold 6230T, 6246, or 6252N processors are supported in the following hardware configurations:
  - 8x 3.5" SAS/SATA drive bays.
  - 8x 2.5" SAS/SATA drive bays.
  - 4x 2.5" SAS/SATA and 4x 2.5" AnyBay drive bays.

### Continued support for 1st Gen Intel Xeon Scalable processors

The SR650 also continues to support the 1st Gen Intel Xeon Scalable processors (formerly codenamed "Skylake") listed in the following table.

Table 15. Long-life 1st Gen Intel Xeon Scalable processors

| Part number | Feature code | Description |
|---|---|---|
| 7XG7A05570 | AWEH | ThinkSystem SR650 Intel Xeon Bronze 3106 8C 85W 1.7GHz Processor Option Kit |
| 7XG7A05574 | No CTO* | ThinkSystem SR650 Intel Xeon Silver 4109T 8C 70W 2.0GHz Processor Option Kit |
| 7XG7A05575 | AWEE | ThinkSystem SR650 Intel Xeon Silver 4110 8C 85W 2.1GHz Processor Option Kit |
| 7XG7A05579 | No CTO* | ThinkSystem SR650 Intel Xeon Silver 4114T 10C 85W 2.2GHz Processor Option Kit |
| 7XG7A05576 | AWER | ThinkSystem SR650 Intel Xeon Silver 4116 12C 85W 2.1GHz Processor Option Kit |
| 7XG7A05573 | AWEA | ThinkSystem SR650 Intel Xeon Silver 4116T 12C 85W 2.1GHz Processor Option Kit |
| 7XG7A05596 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 5115 10C 85W 2.4GHz Processor Option Kit |
| 7XG7A05580 | AWEP | ThinkSystem SR650 Intel Xeon Gold 5118 12C 105W 2.3GHz Processor Option Kit |
| 7XG7A05581 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 5119T 14C 85W 1.9GHz Processor Option Kit |
| 7XG7A05582 | AWE8 | ThinkSystem SR650 Intel Xeon Gold 5120T 14C 105W 2.2GHz Processor Option Kit |
| 7XG7A05590 | AWEL | ThinkSystem SR650 Intel Xeon Gold 6126 12C 125W 2.6GHz Processor Option Kit |
| 7XG7A05589 | AWE5 | ThinkSystem SR650 Intel Xeon Gold 6126T 12C 125W 2.6GHz Processor Option Kit |
| 7XG7A05587 | AWEN | ThinkSystem SR650 Intel Xeon Gold 6130 16C 125W 2.1GHz Processor Option Kit |
| 7XG7A05586 | AWE4 | ThinkSystem SR650 Intel Xeon Gold 6130T 16C 125W 2.1GHz Processor Option Kit |
| 7XG7A05605 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 6134 8C 130W 3.2GHz Processor Option Kit |
| 7XG7A05585 | AWDZ | ThinkSystem SR650 Intel Xeon Gold 6138 20C 125W 2.0GHz Processor Option Kit |
| 7XG7A05584 | AWEM | ThinkSystem SR650 Intel Xeon Gold 6138T 20C 125W 2.0GHz Processor Option Kit |
| 7XG7A05603 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 6140 18C 140W 2.3GHz Processor Option Kit |
| 7XG7A05601 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 6142 16C 150W 2.6GHz Processor Option Kit |
| 7XG7A05600 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 6144 8C 150W 3.5GHz Processor Option Kit |

| Part number | Feature code | Description |
|---|---|---|
| 7XG7A05599 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 6146 12C 165W 3.2GHz Processor Option Kit |
| 7XG7A05598 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 6148 20C 150W 2.4GHz Processor Option Kit |
| 7XG7A05597 | No CTO* | ThinkSystem SR650 Intel Xeon Gold 6150 18C 165W 2.7GHz Processor Option Kit |
| 7XG7A05593 | No CTO* | ThinkSystem SR650 Intel Xeon Platinum 8153 16C 125W 2.0GHz Processor Option Kit |
| 7XG7A05592 | No CTO* | ThinkSystem SR650 Intel Xeon Platinum 8156 4C 105W 3.6GHz Processor Option Kit |
| 7XG7A05617 | No CTO* | ThinkSystem SR650 Intel Xeon Platinum 8158 12C 150W 3.0GHz Processor Option Kit |
| 7XG7A05616 | No CTO* | ThinkSystem SR650 Intel Xeon Platinum 8160 24C 150W 2.1GHz Processor Option Kit |
| 7XG7A05614 | AWEK | ThinkSystem SR650 Intel Xeon Platinum 8160T 24C 150W 2.1GHz Processor Option Kit |
| 7XG7A05610 | No CTO* | ThinkSystem SR650 Intel Xeon Platinum 8176 28C 165W 2.1GHz Processor Option Kit |
| 7XG7A05607 | No CTO* | ThinkSystem SR650 Intel Xeon Platinum 8180M 28C 205W 2.5GHz Processor Option Kit |

* Only available as a field upgrade for existing customers. Not available in CTO (configure to order) configurations.
For specifications of these processors, see the Intel Xeon Scalable Processor Reference for Lenovo ThinkSystem Servers:
https://lenovopress.com/lp1262-intel-xeon-sp-processor-reference#term=SKL
**Configuration note for 1st Gen processors:** If processors with 200 W or 205 W TDP are used, or if Gold 6126T, 6144, or 6146, or Platinum 8160T processors are used, the following conditions must be met:

- 24x 2.5” chassis only.
- Ambient temperature and drive bay configurations:
  - Up to 35 °C (95 °F):
    - Except Gold 6137: 8x 2.5” SAS/SATA drive bays (drive backplane in the middle).
  - Up to 30 °C (86 °F):
    - Gold 6137 only: 8x 2.5” SAS/SATA drive bays (drive backplane in the middle).
    - Except Gold 6137:
      - 4x 2.5" SAS/SATA and 4x 2.5" AnyBay (up to 4 NVMe SSDs).
      - 8x 2.5" SAS/SATA and 8x 2.5" AnyBay (up to 8 NVMe SSDs).
- No rear HDD kit installed.
- No PCIe flash adapters installed.
- No GPUs installed.
- The server performance might be impacted in case of a fan failure.

### UEFI operating modes

The SR650 offers preset operating modes that affect energy consumption and performance. These modes are a collection of predefined low-level UEFI settings that simplify the task of tuning the server to suit your business and workload requirements.

The following table lists the feature codes that allow you to specify the mode you wish to preset in the factory for CTO orders.

**UK and EU customers**: For compliance with the ERP Lot9 regulation, you should select feature BFYE. For some systems, you may not be able to make a selection, in which case, it will be automatically derived by the configurator.

Table 16. UEFI operating mode presets in DCSC

| Feature code | Description |
|---|---|
| BFYB | Operating mode selection for: "Maximum Performance Mode" |
| BFYC | Operating mode selection for: "Minimal Power Mode" |

| Feature code | Description |
|---|---|
| BFYD | Operating mode selection for: "Efficiency Favoring Power Savings Mode" |
| BFYE | Operating mode selection for: "Efficiency - Favoring Performance Mode" |

The preset modes for the SR650 are as follows:

- **Maximum Performance Mode** (feature BFYB): Achieves maximum performance but with higher power consumption and lower energy efficiency.
- **Minimal Power Mode** (feature BFYC): Minimize the absolute power consumption of the system.
- **Efficiency Favoring Power Savings Mode** (feature BFYD): Maximize the performance/watt efficiency with a bias towards power savings. This is the favored mode for SPECpower benchmark testing, for example.
- **Efficiency Favoring Performance Mode** (feature BFYE): Maximize the performance/watt efficiency with a bias towards performance. This is the favored mode for Energy Star certification, for example.

For details about these preset modes, and all other performance and power efficiency UEFI settings offered in the SR650, see the paper "Tuning UEFI Settings for Performance and Energy Efficiency on Intel Xeon Scalable Processor-Based ThinkSystem Servers", available from https://lenovopress.lenovo.com/lp1477.

## Memory

The SR650 server supports up to 12 TruDDR4 memory when one processor is installed and up to 24 DIMMs when two processors are installed. Each processor has six memory channels (two integrated memory controllers with three memory channels per memory controller), and there are two DIMMs per channel.

With 2nd Gen Xeon SP processors, the server supports memory up to 2933 MHz. With 1st Gen Xeon SP processors, the server supports memory up to 2666 MHz.

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 maximum memory capacities are supported by the server with 2nd Gen Xeon SP processors (up to 2933 MHz):

- RDIMMs: 1.5 TB (768 GB per processor)
- 3DS RDIMMs: 3 TB (1.5 TB per processor)

The following maximum memory capacities supported by the server with 1st Gen Xeon SP processors (up to 2666 MHz):

- RDIMMs: 768 GB (384 GB per processor)
- LRDIMMs: 1.5 TB (768 GB per processor)
- 3DS RDIMMs: 3 TB (1.5 GB per processor)

The following memory protection technologies are supported by the processor's integrated memory controllers:

- ECC
- SDDC (for x4-based memory DIMMs)
- ADDDC (for x4-based memory DIMMs; Gold and Platinum processors only)
- Memory mirroring
- Memory rank sparing
- Patrol scrubbing
- Demand scrubbing

The following table lists memory options are supported by the server. The table also indicates which processor generation is supported for each memory option.

Table 17. Memory options

| Part number | Feature code | Description | Maximum quantity** | Gen 1 CPU | Gen 2 CPU |
|---|---|---|---|---|---|
| RDIMMs - 2933 MHz Performance+ | | | | | |
| 4X77A12184 | B5N6 | ThinkSystem 16GB TruDDR4 Performance+ 2933MHz (2Rx8 1.2V) RDIMM | 12 / 24 | No | Yes |
| 4X77A12185 | B5N7 | ThinkSystem 32GB TruDDR4 Performance+ 2933MHz (2Rx4 1.2V) RDIMM | 12 / 24 | No | Yes |
| 4X77A12186 | B5N8 | ThinkSystem 64GB TruDDR4 Performance+ 2933MHz (2Rx4 1.2V) RDIMM | 12 / 24 | No | Yes |
| RDIMMs - 2933 MHz | | | | | |
| 4ZC7A08706 | B4H1 | ThinkSystem 8GB TruDDR4 2933MHz (1Rx8 1.2V) RDIMM | 12 / 24 | No | Yes |
| 4ZC7A08707 | B4LY | ThinkSystem 16GB TruDDR4 2933 MHz (1Rx4 1.2V) RDIMM | 12 / 24 | No | Yes |
| 4ZC7A08708 | B4H2 | ThinkSystem 16GB TruDDR4 2933MHz (2Rx8 1.2V) RDIMM | 12 / 24 | No | Yes |
| 4ZC7A08709 | B4H3 | ThinkSystem 32GB TruDDR4 2933MHz (2Rx4 1.2V) RDIMM | 12 / 24 | No | Yes |
| 4ZC7A08710 | B4H4 | ThinkSystem 64GB TruDDR4 2933MHz (2Rx4 1.2V) RDIMM | 12 / 24 | No | Yes |
| 3DS RDIMMs - 2933 MHz Performance+ | | | | | |
| 4X77A12187 | B5N9 | ThinkSystem 128GB TruDDR4 Performance+ 2933MHz (4Rx4 1.2V) 3DS RDIMM | 12 / 24 | No | Yes |
| 3DS RDIMMs - 2933 MHz | | | | | |
| 4ZC7A15113 | B587 | ThinkSystem 128GB TruDDR4 2933MHz (4Rx4 1.2V) 3DS RDIMM | 12 / 24 | No | Yes |
| RDIMMs - 2666 MHz | | | | | |
| 7X77A01301 | AUU1 | ThinkSystem 8GB TruDDR4 2666 MHz (1Rx8 1.2V) RDIMM | 12 / 24 | Yes | No |
| 7X77A01302 | AUNB | ThinkSystem 16GB TruDDR4 2666 MHz (1Rx4 1.2V) RDIMM | 12 / 24 | Yes | Yes |
| 7X77A01303 | AUNC | ThinkSystem 16GB TruDDR4 2666 MHz (2Rx8 1.2V) RDIMM | 12 / 24 | Yes | Yes |
| 7X77A01304 | AUND | ThinkSystem 32GB TruDDR4 2666 MHz (2Rx4 1.2V) RDIMM | 12 / 24 | Yes | Yes |
| LRDIMMs - 2666 MHz | | | | | |
| 7X77A01305 | AUNE | ThinkSystem 64GB TruDDR4 2666 MHz (4Rx4 1.2V) LRDIMM | 12 / 24 | Yes | No |
| 3DS RDIMMs - 2666 MHz | | | | | |
| 4ZC7A08716 | AUW5 | ThinkSystem 64GB TruDDR4 2666MHz (4Rx4, 1.2V) 3DS RDIMM | 12 / 24 | No | Yes |
| 7X77A01307 | AUNF | ThinkSystem 128GB TruDDR4 2666 MHz (8Rx4 1.2V) 3DS RDIMM | 12 / 24 | Yes | No |

** The maximum quantity shown is with one processor / two processors.

**Configuration notes:**

- All DIMMs in the server operate at the same speed, which is determined as the lowest value of:
  - DIMM rated speed (2666 MHz or 2933 MHz).
  - Memory speed supported by the specific processor (2133 MHz, 2400 MHz, 2666 MHz, or 2933 MHz).
  - Memory speed for the selected quantity of DIMMs per channel:
    - One DIMM per channel (1 DPC): 2933 MHz.
    - Two DIMMs per channel (2 DPC)
      - Performance+ DIMMs: 2933 MHz.
      - Other supported DIMMs: 2666 MHz.

  **Note:** Maximum memory speed can be achieved when Max performance mode is enabled in UEFI.
- Mixing different types of memory (RDIMMs, LRDIMMs, 3DS RDIMMs) is not supported.

- All Performance+ DIMMs in the server must be of the same type, rank, and capacity (the same part number or feature code) to operate at 2933 MHz in the configurations with two DIMMs per channel. Performance+ DIMMs cannot be mixed with other DIMMs.
- Mixing RDIMMs of different ranks (single- or dual-rank), DRAM chip types (x4 or x8), speeds (2666 MHz or 2933 MHz), and capacities (8 GB, 16 GB, 32 GB, or 64 GB) is supported in the independent channel mode (the default operational mode) (excluding Performance+ RDIMMs).
- Mixing 3DS RDIMMs of different speeds (2666 MHz or 2933 MHz) and capacities (64 GB or 128 GB) is supported in the independent channel mode (excluding Performance+ 3DS RDIMMs).
- The 128 GB Performance+ 2933 MHz 3DS RDIMMs (feature code B5N9) running at 2933 MHz with two DIMMs per channel are supported at the ambient temperature of up to 30 °C (86 °F).
- The maximum quantity of DIMMs supported is reduced by the quantity of DC Persistent Memory Modules used in the configuration.
- Server configurations with more than 1 TB of memory capacity per socket (including DCPMMs and RDIMMs or 3DS RDIMMs) require processors that support up to 2 TB (M-suffix) or 4.5 TB (L-suffix) per socket. Server configurations with more than 2 TB of memory capacity per socket (including DCPMMs and RDIMMs or 3DS RDIMMs) require processors that support up to 4.5 TB per socket (L-suffix).
- For server configurations with memory protection, the following rules apply:
    - Single Device Data Correction (SDDC) works only in the independent channel mode and supports only x4-based memory DIMMs.
    - Adaptive Double Device Data Correction (ADDDC) works with x4-based memory DIMMs and requires two DIMM ranks per channel, Intel Xeon Gold or Platinum processors, and the Closed Page memory access mode.
    - If memory mirroring is used, then DIMMs must be installed in quantities of 2, 4, or 8 per processor for mirroring across two memory channels, or in quantities of 3, 6, 9, or 12 per processor for mirroring across three memory channels. Mixing two- and three-channel mirroring in the server is allowed (one processor uses two-channel mirroring, and another processor uses three-channel mirroring). All DIMMs in the server must be identical in type and size.
    - If memory rank sparing is used, then a minimum of two ranks must be installed per populated channel (a least one dual-rank or quad-rank DIMM, or two single-rank DIMMs). In rank sparing mode, one rank in each populated channel is reserved as spare memory for other ranks on the same channel. All DIMMs in the server must be identical in type and size.
    - SDDC, memory mirroring, and memory rank sparing modes are mutually exclusive. Only one operational memory mode can be enabled on the server.
    - In the configurations with DCPMMs, memory mirroring is supported only in the App Direct mode (other DCPMM modes do not support memory mirroring) and applies only to the RDIMMs or 3DS RDIMMs (DCPMMs are not mirrored). Memory sparing is not supported in the configurations with DCPMMs.

## Persistent memory

Intel Optane DC persistent memory is an innovative technology that delivers a unique combination of affordable large memory capacity and persistence (non-volatility). The persistent memory technology can help boost the performance of data-intensive applications, such as in-memory analytics, databases, content delivery networks, and high performance computing (HPC), as well as deliver consistent service levels at scale with higher virtual machine and container density.

The SR650 server supports up to six TruDDR4 DC Persistent Memory Modules (DCPMMs) when one processor is installed and up to 12 DCPMMs when two processors are installed (up to one DCPMM per processor's memory channel) for a total of up to 6 TB of persistent memory capacity. The DCPMMs are installed in the same memory DIMM slots on the system board that are used for installing RDIMMs or 3DS RDIMMs.

**2nd Gen processors only**: Persistent Memory is only supported with 2nd Generation Intel Xeon SP processors. Not supported with 1st Generation processors.

The DCPMMs support the following modes of operation:

- Memory Mode

  Memory Mode seamlessly brings large memory capacity at affordable cost points to legacy applications. In this mode, DCPMMs provide volatile memory that behaves much like traditional RDIMMs or 3DS RDIMMs (the data will not be saved in case of a power loss) and is transparent to the operating system and applications. DCPMMs provide memory capacity and RDIMMs or 3DS RDIMMs provide cache memory that is managed by the processor's memory controller. The total memory capacity that is seen by the operating system is the capacity of the DCPMMs; the capacity of the RDIMMs or 3DS RDIMMs is hidden and does not appear as a memory resource in the operating system. This mode is considered particularly suited for virtualized database deployments and big-data analytics applications.

- App Direct Mode

  App Direct Mode brings persistency to the data and structures (the data will be saved in case of a power loss). This mode requires operating system and application awareness of two types of system memory: Persistent (DCPMMs) and DRAM (RDIMMs or 3DS RDIMMs). The total memory capacity that is seen by the operating system includes the capacity of the DCPMMs and RDIMMs or 3DS RDIMMs. This mode is considered particularly suited for in-memory databases, in-memory analytics frameworks, and ultrafast storage applications.

- Mixed Memory Mode

  Mixed Memory Mode is a combination of Memory Mode and App Direct Mode, where a portion of the capacity of the DCPMMs is used for the Memory Mode operations, and the remaining capacity of the DCPMMs is used for the App Direct Mode operations.

The following memory protection technologies are supported by the DCPMM's onboard memory controllers:

- ECC
- SDDC
- DDDC
- Patrol scrubbing
- Demand scrubbing

The following table lists DCPMM options available for the SR650 server.

Table 18. DCPMM options

| Description | Part number | Feature code | Maximum quantity* |
|---|---|---|---|
| ThinkSystem 128GB TruDDR4 2666MHz (1.2V) Intel Optane DC Persistent Memory | 4ZC7A15110 | B4LV | 6 / 12 |
| ThinkSystem 256GB TruDDR4 2666MHz (1.2V) Intel Optane DC Persistent Memory | 4ZC7A15111 | B4LW | 6 / 12 |
| ThinkSystem 512GB TruDDR4 2666MHz (1.2V) Intel Optane DC Persistent Memory | 4ZC7A15112 | B4LX | 6 / 12 |

* The maximum quantity shown is with one processor / two processors.

The following table lists supported combinations of the DCPMMs and memory DIMMs available for the SR650 server.

Table 19. Supported DCPMM and memory DIMM combinations

| DCPMM mode | DCPMM quantity* | Supported DCPMM sizes | Memory DIMM quantity* | Supported memory DIMM sizes |
|---|---|---|---|---|
| App Direct Mode | - / 1 | 128 GB, 256 GB, 512 GB | - / 12 | 16 GB, 32 GB, 64 GB, 128 GB |
| | 1 / 2 | 128 GB, 256 GB, 512 GB | 6 / 12 | 16 GB, 32 GB, 64 GB, 128 GB |
| | 2 / 4 | 128 GB, 256 GB, 512 GB | 4 / 8 | 16 GB, 32 GB, 64 GB, 128 GB |
| | 2 / 4 | 128 GB, 256 GB, 512 GB | 6 / 12 | 16 GB, 32 GB, 64 GB, 128 GB |
| | 2 / 4 | 128 GB, 256 GB, 512 GB | 8 / 16 | 16 GB, 32 GB, 64 GB, 128 GB |
| | 4 / 8 | 128 GB, 256 GB, 512 GB | 6 / 12 | 16 GB, 32 GB, 64 GB, 128 GB |
| | 6 / 12 | 128 GB, 256 GB, 512 GB | 6 / 12 | 16 GB, 32 GB, 64 GB, 128 GB |
| Memory Mode | 2 / 4 | 128 GB | 4 / 8 | 16 GB |
| | 2 / 4 | 256 GB | 4 / 8 | 32 GB |
| | 2 / 4 | 512 GB | 4 / 8 | 32 GB, 64 GB |
| | 2 / 4 | 256 GB | 6 / 12 | 16 GB |
| | 2 / 4 | 512 GB | 6 / 12 | 16 GB, 32 GB |
| | 4 / 8 | 128 GB | 6 / 12 | 16 GB |
| | 4 / 8 | 256 GB | 6 / 12 | 32 GB |
| | 4 / 8 | 512 GB | 6 / 12 | 32 GB, 64 GB |
| | 6 / 12 | 128 GB | 6 / 12 | 16 GB, 32 GB |
| | 6 / 12 | 256 GB | 6 / 12 | 32 GB, 64 GB |
| | 6 / 12 | 512 GB | 6 / 12 | 32 GB, 64 GB, 128 GB |
| Mixed Memory Mode | 2 / 4 | 256 GB | 6 / 12 | 16 GB |
| | 2 / 4 | 512 GB | 6 / 12 | 16 GB, 32 GB |
| | 2 / 4 | 256 GB | 4 / 8 | 16 GB |
| | 2 / 4 | 512 GB | 4 / 8 | 16 GB, 32 GB |
| | 4 / 8 | 128 GB | 6 / 12 | 16 GB |
| | 4 / 8 | 256 GB | 6 / 12 | 16 GB, 32 GB |
| | 4 / 8 | 512 GB | 6 / 12 | 16 GB, 32 GB, 64 GB |
| | 6 / 12 | 128 GB | 6 / 12 | 16 GB |
| | 6 / 12 | 256 GB | 6 / 12 | 16 GB, 32 GB |
| | 6 / 12 | 512 GB | 6 / 12 | 16 GB, 32 GB, 64 GB |

* The supported exact quantity shown is with one processor / two processors.

**Configuration notes:**

- DCPMMs are supported only in the configurations with 8x 2.5-inch, 16x 2.5-inch, or 8x 3.5-inch drive bays.
- All DCPMMs in the server must be of the same capacity (the same part number or feature code).
- The RDIMMs or 3DS RDIMMs are required in the configurations with DCPMMs, and all RDIMMs or 3DS RDIMMs must be of the same type, rank, and capacity (the same part number or feature code).
- The DCPMMs cannot be mixed with the 8GB TruDDR4 2933 MHz RDIMM (4ZC7A08706).
- For Mixed Memory Mode, the volatile (Memory) portion of the total capacity of DCPMMs is configured in increments of 32 GB multiplied by the number of DCPMMs in the server, and the remaining capacity is allocated to the persistent (App Direct) portion. The ratio of the total capacity of RDIMMs or 3DS RDIMMs to the total capacity of the volatile portion of DCPMMs should be between 1 to 4 and 1 to 16.
- Server configurations with more than 1 TB of memory capacity per socket (including DCPMMs and RDIMMs or 3DS RDIMMs) require processors that support up to 2 TB (M-suffix) or 4.5 TB (L-suffix) per socket. Server configurations with more than 2 TB of memory capacity per socket (including DCPMMs and RDIMMs or 3DS RDIMMs) require processors that support up to 4.5 TB per socket (L-suffix).
- In the configurations with the processors of 200 W or 205 W TDP, or with Gold 6230N, 6240Y, 6244, or 6250 processors, the DCPMMs require two power supplies.
- Persistent memory is not supported in configurations with GPU adapters
- Persistent memory is not supported in configurations with flash storage adapters

For more information, refer to the Intel Optane DC Persistent Memory (DCPMM) Product Guide: http://lenovopress.com/LP1066

## Internal storage

Topics in this section:


- Configurations
- Backplanes
- Supported drive bay combinations
- Field upgrades
- M.2 drives
- SED encryption key management with SKLM


### Configurations

The SR650 server supports the following internal drive bay configurations:

1. Up to 16 SFF (front) and 2 LFF (rear) hot-swap drive bays:
   a. 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA
   b. 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA
   c. 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 2x 3.5" SAS/SATA
2. Up to 24 SFF (front) and 2 LFF (rear) hot-swap drive bays:
   a. 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA
   b. 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 8x 2.5" SAS/SATA + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA
   c. 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 8x 2.5" SAS/SATA + 2x 3.5" SAS/SATA
   d. 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay + 4x 2.5" SAS/SATA & 4x 2.5" AnyBay
   e. 16x 2.5" U.2 NVMe PCIe + 8x 2.5" SAS/SATA (factory-installed only)

f. 20x 2.5" U.2 NVMe PCIe

g. 24x 2.5" U.2 NVMe PCIe

3. Up to 10 LFF SAS/SATA hot-swap drive bays: 8x 3.5" SAS/SATA (front) + 2x 3.5" SAS/SATA (rear)
4. Up to 14 LFF hot-swap drive bays:
   a. 12x 3.5" SAS/SATA (front) + 2x 3.5" SAS/SATA (rear)
   b. 8x 3.5" SAS/SATA & 4x 3.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear)

In addition, the SR650 server models can be configured with one or two internal M.2 SATA SSDs. The server also supports configurations without drive bays.

The following figures show the internal drive bay configurations.

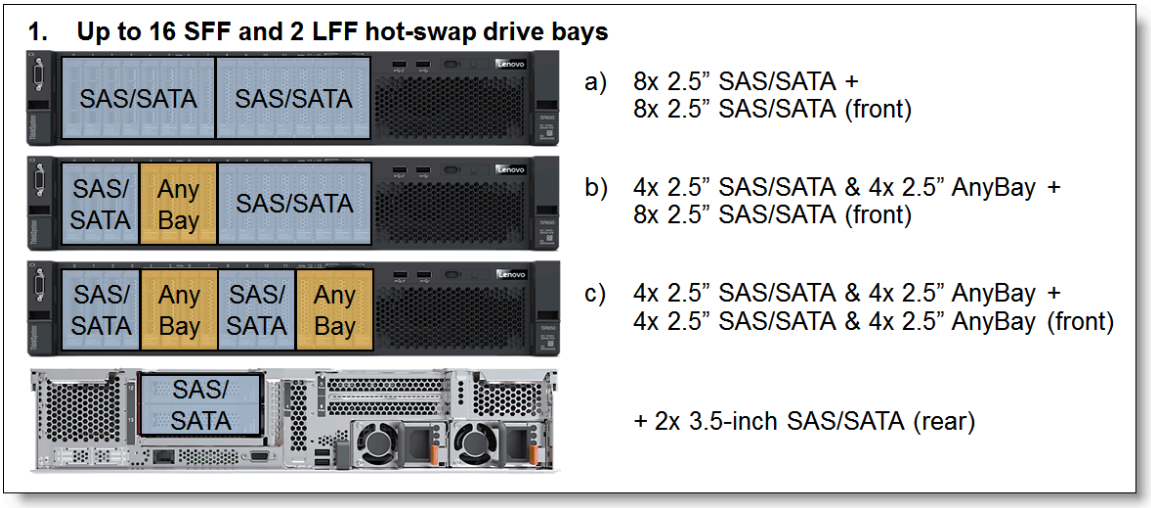



Figure 8. Drive bay configurations: 16x 2.5-inch chassis

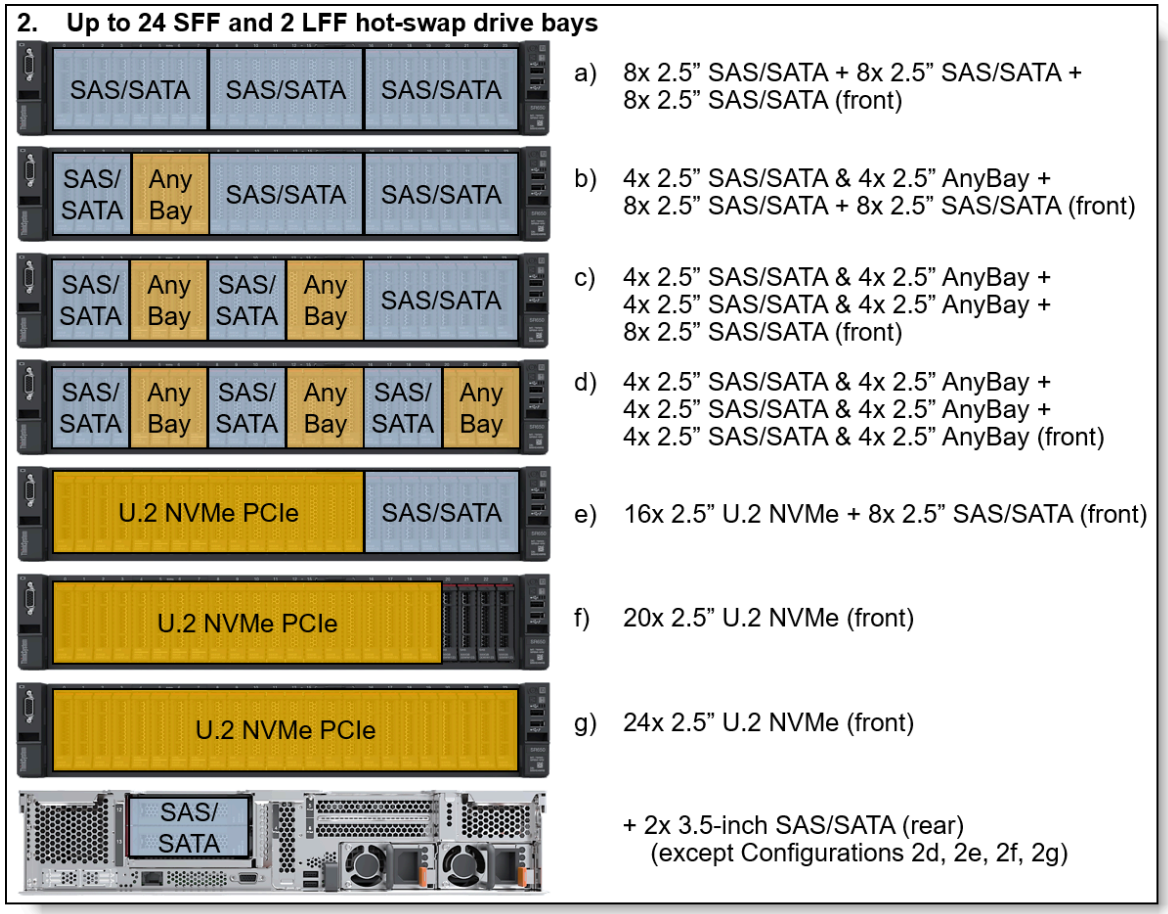



Figure 9. Drive bay configurations: 24x 2.5-inch chassis

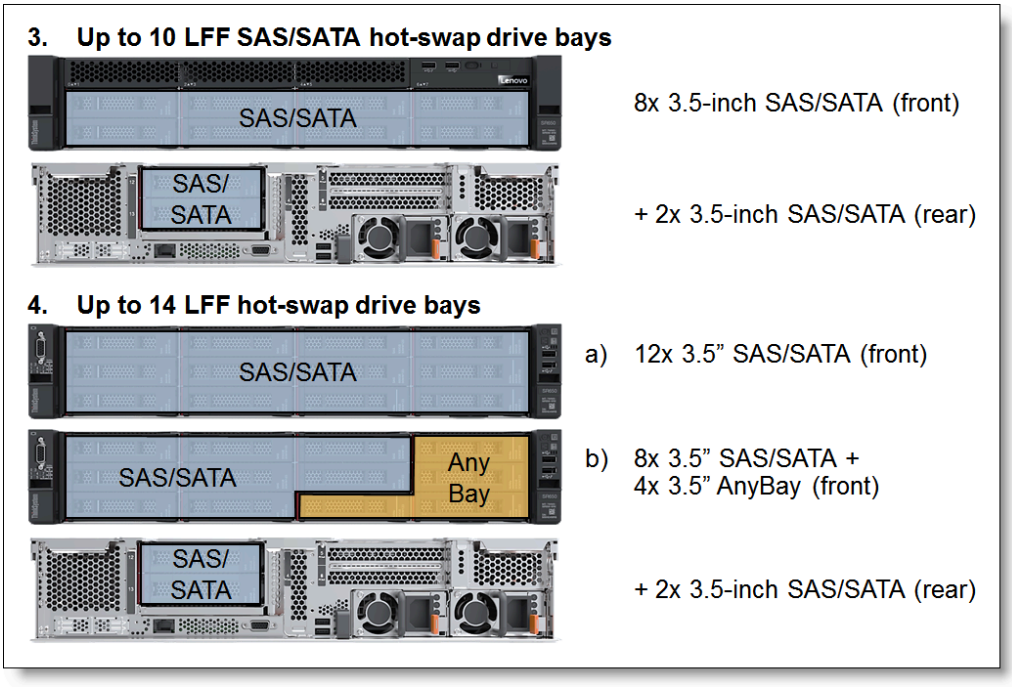



Figure 10. Drive bay configurations: 12x 3.5-inch chassis

### Backplanes

The following table lists the internal storage options for the server. For field upgrades, see the Field upgrades section.

Table 20. Backplanes for CTO orders

| Feature code | Description | Maximum quantity |
|---|---|---|
| 2.5-inch front drive backplanes | | |
| AURA | ThinkSystem 2U/Twr 2.5" SATA/SAS 8-Bay Backplane | 3 |
| AUR5 | ThinkSystem 2U/Twr 2.5" AnyBay 8-Bay Backplane | 3 |
| B4PC | ThinkSystem 2U 2.5" NVMe 8-Bay Backplane | 3 |
| 3.5-inch front drive backplanes | | |
| AUR6 | ThinkSystem 2U 3.5" SATA/SAS 8-Bay Backplane | 1 |
| AUR9 | ThinkSystem 2U 3.5" SATA/SAS 12-Bay Backplane | 1 |
| AUR8 | ThinkSystem 2U 3.5" AnyBay 12-Bay Backplane | 1 |
| 2x3.5-inch rear drive backplane kits (include two fans integrated into the drive bay assembly) | | |
| BMUW | ThinkSystem SR590/SR650 Rear HDD/SSD Kit v2 (for X30 and X350 adapters, with either 2.5" or 3.5" chassis) | 1 |
| AURZ | ThinkSystem SR590/SR650 Rear HDD/SSD Kit (for X30 and X350 adapters, with either 2.5" or 3.5" chassis) | 1 |
| BM7Q | ThinkSystem BRCM SR650 Rear 3.5" HDD Kit (for X40 adapters, 2.5" chassis only) | 1 |
| BMAQ | 2U Rear 3.5 HDD kit12X3.5 (for X40 adapters, 3.5" chassis only) | 1 |
| 2x3.5-inch rear drive backplane kits (do not include integrated fans; available in the PRC market only) | | |
| BMXJ | ThinkSystem SR590/SR650 Rear HDD Kit Without Fan v2 (for X30 and X350 adapters, with either 2.5" or 3.5" chassis) | 1 |
| BF6V | ThinkSystem SR590/SR650 Rear HDD Kit Without Fan (for X30 and X350 adapters, with either 2.5" or 3.5" chassis) | 1 |
| BM7R | ThinkSystem BRCM SR650 Rear 3.5" HDD Kit without Fan (for X40 adapters, 2.5" chassis only) | 1 |
| BMAP | Rear HDD kit wo fan 12X3.5 (for X40 adapters, 3.5" chassis only) | 1 |

**Configuration notes:**

- 24x 2.5-inch front drives are supported only on storage dense models that use the 24x 2.5" chassis (feature code AUVV).
- Processor TDP requirements:
  - Up to 3x 2.5" AnyBay 8-Bay Backplanes are supported in the server with the processors of up to 165 W TDP.
  - Up to 2x 2.5" AnyBay 8-Bay Backplane Kits are supported in the server with the processors of more than 165 W TDP.
- If 3x 2.5" AnyBay 8-Bay Backplane Kits are installed in the server, the Rear HDD kit cannot be installed.

- For models with 16/20/24x 2.5" U.2 NVMe PCIe drive bays (either factory-installed or upgraded in the field), the following conditions must be met:
  - Two processors with up to 165 W TDP installed.
  - No GPU adapters installed.
  - No PCIe flash adapters installed.
  - No PCIe adapters with more than 25 W TDP installed.
  - 1100 W or 1600 W power supplies installed.
  - Ambient temperature of up to 30 °C (86 °F).
  - The server performance might be impacted in case of a system fan failure.

  For additional configuration details, refer to the Controllers for internal storage and I/O expansion sections.
- The feature code for the 3.5" rear drive kit varies depending on which family of storage adapters (X30 or X40) is installed and which base chassis (2.5-inch or 3.5-inch) is selected.
- The 3.5" rear drive bay feature codes (BMUW, AURZ, BM7Q, BMAQ) include two additional fans integrated into the drive bay assembly. For customers in China only, additional feature codes are also selectable and these do not include the fans (BMXJ, BF6V, BM7R, BMAP). The "without fans" feature codes can be used under the following conditions:
  - Processor TDP cannot exceed 125 W
  - Ambient temperature up to 30 °C (86 °F)
  - The acoustic noise may increase
- The 3.5" rear drive kit is connected to a separate port on the internal storage controller.
- The 3.5" rear drive kit is installed in place of the PCIe Riser Card 1; PCIe slots 1, 2, and 3 are not present.
- Lenovo AnyBay allows a choice of drive interface types in the same drive bay: SAS drives, SATA drives, or NVMe PCIe drives.
- U.2 NVMe PCIe SSDs in the 8/16/24-drive bay configurations that contain four AnyBay drive bays require either the second processor (enables the onboard NVMe controller) or the 1610-4P NVMe Switch Adapter to be installed. The 1610-4P NVMe Switch Adapter is supported only in the configurations with one processor.
- Models with 12x 3.5-inch drive bays (8x SAS/SATA + 4x AnyBay) and an 8-port SAS RAID controller or HBA support only NVMe drives in the AnyBay drive bays.

### Supported drive bay combinations

The following tables list supported internal storage configurations with the SAS/SATA and AnyBay backplanes.

**Internal storage configurations tables convention:** The numbers in brackets (x or x+y or x+y+z) in the Storage controller column specify the quantity of drive bays connected to each of the controllers.

Table 21. Internal storage configurations: Up to 16 SFF front drive bays without rear drive bays

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | Storage controller type and quantity (OB=onboard) |
|---|---|---|---|---|
| | 8x2.5" SATA/ SAS | 8x2.5" Any Bay | 2x3.5" Rear HDD | |
| **16x 2.5" chassis (Feature code AUVX) or 24x 2.5" chassis (Feature code AUVV)** | | | | |
| 8x 2.5" SAS/SATA (front) | 1 | 0 | 0 | 1x RAID 8i or HBA 8i (8) |
| | | | | 1x RAID 16i/24i or HBA 16i (8) |

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | Storage controller type and quantity (OB=onboard) |
|---|---|---|---|---|
| | 8x2.5" SATA/ SAS | 8x2.5" Any Bay | 2x3.5" Rear HDD | |
| 4x 2.5" SAS/SATA (front) + 4x 2.5" AnyBay (front) | 0 | 1 | 0 | 1x RAID 8i or HBA 8i (8) + 1x OB or 1610-4P NVMe (4) |
| | | | | 1x RAID 16i/24i or HBA 16i (8) + 1x OB or 1610-4P NVMe (4) |
| 16x 2.5" SAS/SATA (front) | 2 | 0 | 0 | 1x RAID 16i/24i or HBA 16i (16) |
| | | | | 1x RAID 8i (8) + 1x HBA 8i (8) |
| | | | | 2x RAID 8i or 2x HBA 8i (8+8) |
| 12x 2.5" SAS/SATA (front) + 4x 2.5" AnyBay (front) | 1 | 1 | 0 | 1x RAID 16i/24i or HBA 16i (16) + 1x OB or 1610-4P NVMe (4) |
| 8x 2.5" SAS/SATA (front) + 8x 2.5" AnyBay (front) | 0 | 2 | 0 | 1x RAID 16i/24i or HBA 16i (16) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | 2x RAID 8i or HBA 8i (8+8) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | 1x RAID 16i (16) + 1x 1611-8P (8) |

Table 22. Internal storage configurations: Up to 16 SFF front and 2 LFF rear drive bays

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | Storage controller type and quantity (OB=onboard) |
|---|---|---|---|---|
| | 8x2.5" SATA/ SAS | 8x2.5" Any Bay | 2x3.5" Rear HDD | |
| **16x 2.5" chassis (Feature code AUVX) or 24x 2.5" chassis (Feature code AUVV)** | | | | |
| 8x 2.5" SAS/SATA (front) + 2x 3.5" SAS/SATA (rear) | 1 | 0 | 1 | 1x RAID 16i/24i or HBA 16i (10) |
| | | | | 1x RAID 8i (8) + 1x RAID 8i or HBA 8i (2) |
| | | | | 1x 430-8i HBA (8) + 1x RAID 530-8i (2) |
| | | | | 2x RAID 8i or HBA 8i (8+2) |
| 4x 2.5" SAS/SATA (front) + 4x 2.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear) | 0 | 1 | 1 | 1x RAID 8i or HBA 8i (8) + 1x OB/1610-4P NVMe (4) + 1x RAID 8i or HBA 8i (2) |
| | | | | 1x RAID 16i/24i or HBA 16i (10) + 1x OB/1610-4P NVMe (4) |
| 16x 2.5" SAS/SATA (front) + 2x 3.5" SAS/SATA (rear) | 2 | 0 | 1 | 1x RAID 16i or HBA 16i (16) + 1x RAID 8i or HBA 8i (2) |
| | | | | 1x RAID 930-24i (18) |
| | | | | 3x RAID 8i or HBA 16i (8+8+2) |
| 12x 2.5" SAS/SATA (front) + 4x 2.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear) | 1 | 1 | 1 | 1x RAID 16i or HBA 16i (16) + 1x OB/1610-4P NVMe (4) + 1x RAID 8i or HBA 8i (2) |
| | | | | 1x RAID 24i (18) + 1x OB/1610-4P NVMe (4) |
| 8x 2.5" SAS/SATA (front) + 8x 2.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear) | 0 | 2 | 1 | 1x RAID 16i or HBA 16i (16) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) + 1x RAID 8i or HBA 8i (2) |
| | | | | 1x RAID 24i (18) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | 2x RAID 8i or HBA 8i (8+8) + 1x Onboard NVMe (4) + 1x 1610-4P NVMe (4) + 1x RAID 8i or HBA 8i (2) |

Table 23. Internal storage configurations: Up to 24 SFF front drive bays without rear drive bays

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | | Storage controller type and quantity (OB=onboard) |
|---|---|---|---|---|---|
| | 8x2.5" SATA/ SAS | 8x2.5" Any Bay | 8x2.5" NVMe | 2x3.5" Rear HDD | |
| **24x 2.5" chassis (Feature code AUVV)** | | | | | |
| 24x 2.5" SAS/SATA (front) | 3 | 0 | 0 | 0 | 1x RAID 24i (24) |
| | | | | | 1x RAID 8i (8) + 1x RAID 16i (16) |
| | | | | | 3x RAID 8i or 3x HBA 8i (8+8+8) |
| 20x 2.5" SAS/SATA (front) + 4x 2.5" AnyBay (front) | 2 | 1 | 0 | 0 | 1x RAID 24i (24) + 1x OB/1610-4P NVMe (4) |
| | | | | | 1x RAID 8i (8) + 1x RAID 16i (16) + 1x OB/1610-4P NVMe (4) |
| | | | | | 3x RAID 8i or HBA 8i (8+8+8) + 1x Onboard/1610-4P NVMe (4) |

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | | Storage controller type and quantity (OB=onboard) |
|---|---|---|---|---|---|
| | 8x2.5" SATA/ SAS | 8x2.5" Any Bay | 8x2.5" NVMe | 2x3.5" Rear HDD | |
| 16x 2.5" SAS/SATA (front) + 8x 2.5" AnyBay (front) | 1 | 2 | 0 | 0 | 1x RAID 24i (24) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | | 3x RAID 8i (8+8+8) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | | 1x HBA 8i (8) + 1x HBA 16i (16) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | | 1x RAID 32i (24) + 1x 1611-8P (8) |
| | | | | | 1x RAID 16i (16) + 1x RAID 8i (8) + 1x 1611-8P (8) |
| 12x 2.5" SAS/SATA (front) + 12x 2.5" AnyBay (front) | 0 | 3 | 0 | 0 | 1x RAID 24i (24) + 1x OB NVMe (4) + 2x 1610-4P NVMe (4+4) |
| | | | | | 3x RAID 8i or HBA 8i (8+8+8) + 1x OB NVMe (4) + 2x 1610-4P NVMe (4+4) |
| | | | | | 1x HBA 8i (8) + 1x HBA 16i (16) + 1x OB NVMe (4) + 2x 1610-4P NVMe (4+4) |
| | | | | | 1x RAID 32i (24) + 1x OB NVMe (4) + 1x 1611-8P (8) |
| | | | | | 1x RAID 16i (16) + 1x RAID 8i (8) + 1x OB NVMe (4) + 1x 1611-8P (8) |
| 16x 2.5" U.2 NVMe (front) | 0 | 0 | 2 | 0 | 2x 810-4P NVMe (4+4) + 2x 1610-4P NVMe (4+4) |
| | | | | | 2x 1611-8P (8+8) |
| 16x 2.5" U.2 NVMe (front) + 8x 2.5" SAS/SATA (front) | 1 | 0 | 2 | 0 | 1x RAID/HBA 8i (8) + 2x 810-4P NVMe (4+4) + 2x 1610-4P NVMe (4+4) |
| | | | | | 1x RAID 8i (8) + 2x 1611-8P (8+8) |
| 20x 2.5" U.2 NVMe (front) | 0 | 0 | 3 | 0 | 1x Onboard NVMe (4) + 2x 810-4P NVMe (4+4) + 3x 1610-4P NVMe (4+4+4) |
| 24x 2.5" U.2 NVMe (front) | 0 | 0 | 3 | 0 | 4x 810-4P NVMe (4+4+4+4) + 1x 1610-8P NVMe (8) |
| | | | | | 3x 1611-8P (8+8+8) |

Table 24. Internal storage configurations: Up to 24 SFF front and 2 LFF rear drive bays

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | Storage controller type and quantity (OB=onboard) |
|---|---|---|---|---|
| | 8x2.5" SATA/ SAS | 8x2.5" Any Bay | 2x3.5" Rear HDD | |
| **24x 2.5" chassis (Feature code AUVV)** | | | | |
| 24x 2.5" SAS/SATA (front) + 2x 3.5" SAS/SATA (rear) | 3 | 0 | 1 | 1x RAID 24i (24) + 1x RAID 8i or HBA 8i (2) |
| | | | | 1x RAID 8i or HBA 8i (8) + 1x RAID 16i or HBA 16i (16) + 1x RAID 8i or HBA 8i (2) |
| | | | | 2x RAID 16i or HBA 16i (16+10) |
| | | | | 2x HBA 16i (8+2) + 1x HBA 16i (16) |
| | | | | 3x RAID 8i or HBA 8i (8+8+8) + 1x RAID 8i or HBA 8i(2) |

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | Storage controller type and quantity (OB=onboard) |
|---|---|---|---|---|
| | 8x2.5" SATA/ SAS | 8x2.5" Any Bay | 2x3.5" Rear HDD | |
| 20x 2.5" SAS/SATA (front) + 4x 2.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear) | 2 | 1 | 1 | 1x RAID 24i (24) + 1x OB/1610-4P NVMe (4) + 1x RAID 8i or HBA 8i (2) |
| | | | | 1x RAID 8i (8) + 1x RAID 16i (16) + 1x OB/1610-4P NVMe (4) + 1x RAID 8i or HBA 8i (2) |
| | | | | 2x RAID 16i or HBA 16i (16+10) + 1x OB/1610-4P NVMe (4) |
| | | | | 3x RAID 8i or HBA 8i (8+8+8) + 1x OB/1610-4P NVMe (4) + 1x RAID 8i or HBA 8i (2) |
| 16x 2.5" SAS/SATA (front) + 8x 2.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear) | 1 | 2 | 1 | 1x RAID 24i (24) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) + 1x RAID 8i (2) |
| | | | | 1x HBA 8i (8) + 1x HBA 16i (16) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) + 1x RAID 8i (2) |
| | | | | 2x RAID 16i (16+10) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | 2x HBA 8i (8+2) + 1x HBA 16i (16) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |
| | | | | 2x 16i HBA (16+10) + 1x OB NVMe (4) + 1x 1610-4P NVMe (4) |

Table 25. Internal storage configurations: Up to 12 LFF front and 2 LFF rear drive bays

| Hot-swap drive bay configuration | Backplane kit type and quantity | | | | Storage controller type and quantity |
|---|---|---|---|---|---|
| | 8x3.5" SATA/ SAS | 12x3.5" SATA/ SAS | 12x3.5" Any Bay | 2x3.5" Rear HDD | |
| **12x 3.5" chassis (Feature code AUVW)** | | | | | |
| 8x 3.5" SAS/SATA (front) | 1 | 0 | 0 | 0 | 1x RAID 16i (8) |
| | | | | | 1x RAID 8i or HBA 8i (8) |
| 8x 3.5" SAS/SATA (front) + 2x 3.5" SAS/SATA (rear) | 1 | 0 | 0 | 1 | 1x RAID 16i or HBA 16i (10) |
| | | | | | 1x RAID 8i or HBA 8i (8) + 1x RAID 8i or HBA 8i (2) |
| | | | | | 1x RAID 16i (8) + 1x RAID 8i (2) |
| | | | | | 2x RAID 8i or HBA 8i (8+2) |
| 12x 3.5" SAS/SATA (front) | 0 | 1 | 0 | 0 | 1x RAID 16i or HBA 16i (12) |
| 8x 3.5" SAS/SATA (front) + 4x 3.5" AnyBay (front) | 0 | 0 | 1 | 0 | 1x RAID 16i or HBA 16i (12) + 1x OB/1610-4P NVMe (4) |
| 8x 3.5" SAS/SATA (front) + 4x 3.5" AnyBay (NVMe only) (front)* | 0 | 0 | 1 | 0 | 1x RAID 8i or HBA 8i (8) + 1x OB/1610-4P NVMe (4) |
| 12x 3.5" SAS/SATA (front) + 2x 3.5". SAS/SATA (rear) | 0 | 1 | 0 | 1 | 1x RAID 16i or HBA 16i (14) |
| | | | | | 1x RAID 16i or HBA 16i (12) + 1x RAID 8i (2) |
| 8x 3.5" SAS/SATA (front) + 4x 3.5" AnyBay (front) + 2x 3.5" SAS/SATA (rear) | 0 | 0 | 1 | 1 | 1x RAID 16i or HBA 16i (14) + 1x OB/1610-4P NVMe (4) |

* Four NVMe SSDs are required in the 3.5" AnyBay configuration with an 8-port storage controller.

**12-drive AnyBay 3.5-inch configuration with expander (PRC only)**

In addition to the configurations described above, the SR650 server also supports internal storage configurations with the 3.5" AnyBay 12-Bay Backplane w/Expander to enable support for up to 12 SAS or

SATA drives with the 8-port RAID 530/730/930-8i controllers.

**China customers only:** Internal storage configurations with the 3.5" AnyBay 12-Bay Backplane w/Expander and 8-port RAID 530/730/930-8i controllers are available in PRC only.

The following table lists the 3.5" AnyBay 12-Bay Backplane w/Expander for the SR650 server.

Table 26. 3.5" AnyBay 12-Bay Backplane w/Expander

| Part number | Feature code | Description | Maximum quantity |
|---|---|---|---|
| None* | BD3Q | ThinkSystem SR650 3.5" AnyBay 12-Bay Backplane w/Expander | 1 |

* The backplane kit can be factory-installed in standard or custom (CTO or Special Bid) models, and it does not have an option part number assigned.

**Configuration notes:**

- The 3.5" AnyBay 12-Bay Backplane w/Expander provides 8x 3.5" SAS/SATA (front) + 4x 3.5" AnyBay (front) drive bays.
- The following 8-port RAID adapters are supported in the configurations with the 3.5" AnyBay 12-Bay Backplane w/Expander:
  - RAID 530-8i
  - RAID 730-8i 1GB
  - RAID 730-8i 2GB
  - RAID 930-8i 2GB
- The onboard NVMe interface provides 4x PCIe 3.0 x4 ports for JBOD (non-RAID) connectivity to NVMe PCIe SSDs in the AnyBay drive bays.

### Field upgrades

The following table lists the backplane options that can be installed as field upgrades.

**Use with X40 adapters**: These backplane kits in the table below include SAS/SATA cables for use with the onboard SATA controller or with RAID 930, 730, 530 adapters and 430 HBAs (collectively called X30 adapters). If you are adding or upgrading to RAID 940 adapters or 440 HBAs (collectively called X40 adapters), you will need to *also* order an X40 cable kit. See the Cable kits for 440 HBAs and RAID 940 adapters section for details.

**Use with the 1611-8P adapter**: AnyBay and NVMe backplane kits in the table below include NVMe cables for use with 1610-4P or 810-4P NVMe adapters. If you are adding or upgrading to the 1611-8P NVMe adapter, you will need to *also* order 1611-8P Cable Kit. See the Cable kit for the 1611-8P adapter section for details.

Table 27. Drive bay field upgrades

| Part number | Description | Maximum quantity |
|---|---|---|
| 2.5-inch front drive bays | | |
| 7XH7A06254 | ThinkSystem SR550/SR650 2.5" SATA/SAS 8-Bay Backplane Kit | 3 |
| 7XH7A06251 | ThinkSystem SR650 2.5" AnyBay 8-Bay Backplane Kit | 3 |
| 4XH7A09819 | ThinkSystem SR650 U.2 20-bays Upgrade Kit | 1 |
| 4XH7A08810 | ThinkSystem SR650 U.2 24-bays Upgrade Kit | 1 |
| 3.5-inch front drive bays | | |

| Part number | Description | Maximum quantity |
|---|---|---|
| 4XH7A08770 | ThinkSystem SR550/SR590/SR650 3.5" SATA/SAS 8-Bay Backplane Upgrade Kit | 1 |
| 4XH7A08771 | ThinkSystem SR550/SR590/SR650 3.5" SATA/SAS 12-Bay Backplane Upgrade Kit | 1 |
| 4XH7A08785 | ThinkSystem SR590/SR650 3.5" AnyBay 12-Bay Backplane Upgrade Kit | 1 |
| 2x3.5-inch rear drive bays | | |
| 4XH7A80453 | ThinkSystem SR590/SR650 Rear HDD/SSD Kit v2 | 1 |
| 7XH7A06253 | ThinkSystem SR590/SR650 Rear HDD/SSD Kit | 1 |
| 4XB7A64318 | ThinkSystem SR590/SR650 Rear HDD Kit Without Fan (PRC only) | 1 |

**Configuration notes:**

- The SAS/SATA and AnyBay backplane upgrade kits include drive backplanes and required SAS cables, NVMe cables, power cables, and drive bay fillers; storage controllers are not included.
- The 2.5" SATA/SAS 8-Bay Backplane Kit (7XH7A06254) adds 8x 2.5" SAS/SATA hot-swap drive bays to the previously configured models that are based on the 16x 2.5" chassis (feature code AUVX) or 24x 2.5" chassis (feature code AUVV) and support drive bay expansion capabilities (including models without drive bays).
- The 2.5" AnyBay 8-Bay Backplane Kit (7XH7A06251) adds 4x 2.5" SAS/SATA & 4x 2.5" AnyBay hot-swap drive bays to the previously configured models that are based on the 16x 2.5" chassis (feature code AUVX) or 24x 2.5" chassis (feature code AUVV) and support drive bay expansion capabilities (including models without drive bays).
- Processor TDP requirements:
  - Up to 3x 2.5" AnyBay 8-Bay Backplanes are supported in the server with the processors of up to 165 W TDP.
  - Up to 2x 2.5" AnyBay 8-Bay Backplane Kits are supported in the server with the processors of more than 165 W TDP.
- If 3x 2.5" AnyBay 8-Bay Backplane Kits are installed in the server, the Rear HDD kit cannot be installed.
- Models without any drive bays that are based on the 12x 3.5" chassis (feature code AUVW) include the Right EIA Latch with FIO (USB ports, status LEDs, and a power button). These models support adding drive bays by using the 3.5" 8-bay backplane kit (4XH7A08770), 3.5" 12-bay backplane kit (4XH7A08771), or 3.5" AnyBay 12-bay backplane kit (4XH7A08785).
- Previously configured models that are based on the 24x 2.5" chassis (feature code AUVV) can be upgraded to 20 or 24 U.2 NVMe PCIe drive bays by using the U.2 NVMe 20-Bay Backplane Upgrade Kit (4XH7A09819) or U.2 NVMe 24-Bay Backplane Upgrade Kit (4XH7A08810), respectively. Both kits include drive backplanes and required NVMe cables, power cables, drive bay fillers, and NVMe switch adapters. The U.2 NVMe 24-Bay Backplane Upgrade Kit also includes the x16/x8/x16 Riser Card 1 (4XH7A09902).
- For models with 16/20/24x 2.5" U.2 NVMe PCIe drive bays (either factory-installed or upgraded in the field), the following conditions must be met:
  - Two processors with up to 165 W TDP installed.
  - No GPU adapters installed.
  - No PCIe flash adapters installed.
  - No PCIe adapters with more than 25 W TDP installed.
  - 1100 W or 1600 W power supplies installed.
  - Ambient temperature of up to 30 °C (86 °F).
  - The server performance might be impacted in case of a system fan failure.

  **Note:** For additional configuration details, refer to the Controllers for internal storage and I/O expansion sections.
- The Rear drive bay kits (4XH7A80453 and 7XH7A06253) include two additional fans integrated into the drive bay assembly. For customers in China, the ThinkSystem SR590/SR650 Rear HDD Kit Without Fan (4XB7A64318) is also available and does not include the fans. The Rear HDD Kit Without Fan can be used under the following conditions:
  - Processor TDP cannot exceed 125 W
  - Ambient temperature up to 30 °C (86 °F)
  - The acoustic noise may increase
- The 3.5" Rear HDD/SSD Kit is connected to a separate port on the internal storage controller.
- The 3.5" Rear HDD/SSD Kit is installed in place of the PCIe Riser Card 1; PCIe slots 1, 2, and 3 are not present.
- U.2 NVMe PCIe SSDs in the 8/16/24-drive bay configurations that contain four AnyBay drive bays require either the second processor (enables the onboard NVMe controller) or the 1610-4P NVMe

Switch Adapter to be installed. The 1610-4P NVMe Switch Adapter is supported only in the configurations with one processor.

- Models with 12x 3.5-inch drive bays (8x SAS/SATA + 4x AnyBay) and an 8-port SAS RAID controller or HBA support only NVMe drives in the AnyBay drive bays.

**Cable kits for 440 HBAs and RAID 940 adapters**

The backplane kits listed in the Drive bay field upgrades table include cables for use with the onboard SATA controller or with RAID 930, 730, 530 adapters and 430 HBAs (collectively called X30 adapters). If you wish to use the backplane kits with RAID 940 adapters or 440 HBAs (collectively called X40 adapters), then you will also need to order an additional X40 cable kit to use instead of the cables in the backplane kit.

**Tip**: When adding an X40 adapter, you will order both the backplane kit and the relevant X40 cable kit, however the SAS/SATA data cable(s) in the backplane kit will not be used.

Table 28. Cable kits for 440 HBAs and RAID 940 adapters

| **Backplane kits with X30 cables** | | **X40 cable kits also needed (1 per backplane)** | |
|---|---|---|---|
| 7XH7A06254 | ThinkSystem SR550/SR650 2.5" SATA/SAS 8-Bay Backplane Kit | 4XH7A61097 | ThinkSystem SR550/SR590/SR650 2.5" SAS/SATA/AnyBay 8-Bay X40 RAID Cable Kit |
| 7XH7A06251 | ThinkSystem SR650 2.5" AnyBay 8-Bay Backplane Kit | 4XH7A61097 | ThinkSystem SR550/SR590/SR650 2.5" SAS/SATA/AnyBay 8-Bay X40 RAID Cable Kit |
| 4XH7A08770 | ThinkSystem SR550/SR590/SR650 3.5" SATA/SAS 8-Bay Backplane Upgrade Kit | 4XH7A61098 | ThinkSystem SR550/SR590/SR650 3.5" SAS/SATA 8-Bay X40 RAID Cable Kit |
| 4XH7A08771 | ThinkSystem SR550/SR590/SR650 3.5" SATA/SAS 12-Bay Backplane Upgrade Kit | 4XH7A61105 | ThinkSystem SR590/SR650 3.5" SAS/SATA/AnyBay 12-Bay X40 RAID Cable Kit |
| 4XH7A08785 | ThinkSystem SR590/SR650 3.5" AnyBay 12-Bay Backplane Upgrade Kit | 4XH7A61105 | ThinkSystem SR590/SR650 3.5" SAS/SATA/AnyBay 12-Bay X40 RAID Cable Kit |
| 4XH7A09819 | ThinkSystem SR650 U.2 20-bays Upgrade Kit | None | Not needed - NVMe only |
| 4XH7A08810 | ThinkSystem SR650 U.2 24-bays Upgrade Kit | None | Not needed - NVMe only |
| 7XH7A06253 | ThinkSystem SR590/SR650 Rear HDD/SSD Kit | 4XH7A61110 | ThinkSystem SR590/SR630/SR650 SAS/SATA 2-Bay Rear BP X40 RAID Cable Kit |
| 4XB7A64318 | ThinkSystem SR590/SR650 Rear HDD Kit Without Fan (PRC only) | 4XH7A61110 | ThinkSystem SR590/SR630/SR650 SAS/SATA 2-Bay Rear BP X40 RAID Cable Kit |

**Cable kit for the 1611-8P adapter**

The backplane kit part numbers listed in the Drive bay field upgrades table that include NVMe connections (that is, NVMe backplanes and AnyBay backplanes) only include cables for use with 1610-4P or 810-4P NVMe adapters. If you wish to use these backplane kits with the 1611-8P NVMe adapter, then you will *also* need to order an additional cable kit to use instead of the cables in the backplane kit.

**Tip**: When adding an 1611-8P adapter, you will order both the backplane kit and the 1611-8P cable kit, however the NVMe data cables in the backplane kit will not be used.

Table 29. Cable kit for 1611-8P adapter

| Part number | Description |
|---|---|
| 4X97A83642 | ThinkSystem SR650 1611-8P NVMe Switch Adapter Cable Kit |

### M.2 drives

The server supports one or two M.2 form-factor SATA drives for use as an operating system boot solution. With two M.2 drives configured, the drives are configured by default as a RAID-1 mirrored pair for redundancy.

The M.2 drives install into an M.2 adapter which in turn is installed in a dedicated slot on the system board. See the internal view of the server in the Components and connectors section for the location of the M.2 slot.

There are two M.2 adapters supported, as listed in the following table.

Table 30. M.2 components

| Part number | Feature code | Description | Maximum supported |
|---|---|---|---|
| 7Y37A01092 | AUMU | ThinkSystem M.2 Enablement Kit<br>(contains the Single M.2 Boot Adapter; supports 1 drive) | 1 |
| 7Y37A01093 | AUMV | ThinkSystem M.2 with Mirroring Enablement Kit<br>(contains the Dual M.2 Boot Adapter, supports 1 or 2 drives) | 1 |

Supported drives are listed in the Internal drive options section.

For details about M.2 components, see the *ThinkSystem M.2 Drives and M.2 Adapters* product guide: https://lenovopress.com/lp0769-thinksystem-m2-drives-adapters

### SED encryption key management with SKLM

The server supports self-encrypting drives (SEDs) as listed in the Internal drive options section. To effectively manage a large deployment of these drives in Lenovo servers, IBM Security Key Lifecycle Manager (SKLM) offers a centralized key management solution.

A Lenovo Feature on Demand (FoD) upgrade is used to enable this SKLM support in the management processor of the server. The following table lists the part numbers and feature codes for the upgrades.

Table 31. FoD upgrades for SKLM support

| Part number | Feature code | Description |
|---|---|---|
| Security Key Lifecycle Manager - FoD (United States, Canada, Asia Pacific, and Japan) | | |
| 00D9998 | A5U1 | SKLM for System x/ThinkSystem w/SEDs - FoD per Install with 1 year S&S |
| 00D9999 | AS6C | SKLM for System x/ThinkSystem w/SEDs - FoD per Install with 3 year S&S |
| Security Key Lifecycle Manager - FoD (Latin America, Europe, Middle East, and Africa) | | |
| 00FP648 | A5U1 | SKLM for System x/ThinkSystem w/SEDs - FoD per Install with 1 year S&S |
| 00FP649 | AS6C | SKLM for System x/ThinkSystem w/SEDs - FoD per Install with 3 year S&S |

The IBM Security Key Lifecycle Manager software is available from Lenovo using the ordering information listed in the following table.

Table 32. IBM Security Key Lifecycle Manager licenses

| Part number | Feature | Description |
|---|---|---|
| SKLM Basic Edition | | |
| 7S0A007FWW | S874 | IBM Security Key Lifecycle Manager Basic Edition Install License + SW Subscription & Support 12 Months |
| 7S0A008VWW | SDJR | IBM Security Key Lifecycle Manager Basic Edition Install License + SW Subscription & 3 Years Of Support |
| 7S0A008WWW | SDJS | IBM Security Key Lifecycle Manager Basic Edition Install License + SW Subscription & 4 Years Of Support |
| 7S0A008XWW | SDJT | IBM Security Key Lifecycle Manager Basic Edition Install License + SW Subscription & 5 Years Of Support |
| SKLM For Raw Decimal Terabyte Storage | | |
| 7S0A007HWW | S876 | IBM Security Key Lifecycle Manager For Raw Decimal Terabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months |
| 7S0A008YWW | SDJU | IBM Security Key Lifecycle Manager For Raw Decimal Terabyte Storage Resource Value Unit License + SW Subscription & 3 Years Of Support |
| 7S0A008ZWW | SDJV | IBM Security Key Lifecycle Manager For Raw Decimal Terabyte Storage Resource Value Unit License + SW Subscription & 4 Years Of Support |
| 7S0A0090WW | SDJW | IBM Security Key Lifecycle Manager For Raw Decimal Terabyte Storage Resource Value Unit License + SW Subscription & 5 Years Of Support |
| SKLM For Raw Decimal Petabyte Storage | | |
| 7S0A007KWW | S878 | IBM Security Key Lifecycle Manager For Raw Decimal Petabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months |
| 7S0A0091WW | SDJX | IBM Security Key Lifecycle Manager For Raw Decimal Petabyte Storage Resource Value Unit License + SW Subscription & 3 Years Of Support |
| 7S0A0092WW | SDJY | IBM Security Key Lifecycle Manager For Raw Decimal Petabyte Storage Resource Value Unit License + SW Subscription & 4 Years Of Support |
| 7S0A0093WW | SDJZ | IBM Security Key Lifecycle Manager For Raw Decimal Petabyte Storage Resource Value Unit License + SW Subscription & 5 Years Of Support |
| SKLM For Usable Decimal Terabyte Storage | | |
| 7S0A007MWW | S87A | IBM Security Key Lifecycle Manager For Usable Decimal Terabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months |
| 7S0A0094WW | SDK0 | IBM Security Key Lifecycle Manager For Usable Decimal Terabyte Storage Resource Value Unit License + SW Subscription & 3 Years In Support |
| 7S0A0095WW | SDK1 | IBM Security Key Lifecycle Manager For Usable Decimal Terabyte Storage Resource Value Unit License + SW Subscription & 4 Years In Support |
| 7S0A0096WW | SDK2 | IBM Security Key Lifecycle Manager For Usable Decimal Terabyte Storage Resource Value Unit License + SW Subscription & 5 Years In Support |
| SKLM For Usable Decimal Petabyte Storage | | |
| 7S0A007PWW | S87C | IBM Security Key Lifecycle Manager For Usable Decimal Petabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months |
| 7S0A0097WW | SDK3 | IBM Security Key Lifecycle Manager For Usable Decimal Petabyte Storage Resource Value Unit License + SW Subscription & 3 Years Of Support |
| 7S0A0098WW | SDK4 | IBM Security Key Lifecycle Manager For Usable Decimal Petabyte Storage Resource Value Unit License + SW Subscription & 4 Years Of Support |
| 7S0A0099WW | SDK5 | IBM Security Key Lifecycle Manager For Usable Decimal Petabyte Storage Resource Value Unit License + SW Subscription & 5 Years Of Support |

## Controllers for internal storage

The following table lists the storage controllers and options for internal storage of the SR650 server.

**Onboard SATA**: The SR650 does not offer onboard SATA

Table 33. RAID controllers and HBAs for internal storage

| Part number | Feature code | Description | Maximum quantity | Slots supported |
|---|---|---|---|---|
| 12 Gb SAS/SATA RAID controllers - 8-port adapters | | | | |
| 7Y37A01082 | AUNG | ThinkSystem RAID 530-8i PCIe 12Gb Adapter | 2 | 7,4,2,3,1,5,6 |
| 4Y37A78834 | BMFT | ThinkSystem RAID 540-8i PCIe Gen4 12Gb Adapter | 2 | 4,2,3,1,5,6 |
| 4Y37A72482 | BJHK | ThinkSystem RAID 5350-8i PCIe 12Gb Adapter | 3 | 4,2,3,1,5,6 |
| 7Y37A01083 | AUNH | ThinkSystem RAID 730-8i 1GB Cache PCIe 12Gb Adapter | 3 | 7,4,2,3,1,5,6 |
| 4Y37A09722 | B4RQ | ThinkSystem RAID 730-8i 2GB Flash PCIe 12Gb Adapter | 3 | 7,4,2,3,1,5,6 |
| 7Y37A01084 | AUNJ | ThinkSystem RAID 930-8i 2GB Flash PCIe 12Gb Adapter | 3 | 7,4,2,3,1,5,6 |
| 4Y37A72483 | BJHL | ThinkSystem RAID 9350-8i 2GB Flash PCIe 12Gb Adapter | 3 | 4,2,3,1,5,6 |
| 4Y37A09728 | B8NY | ThinkSystem RAID 940-8i 4GB Flash PCIe Gen4 12Gb Adapter | 3 | 4,2,3,1,5,6 |
| 12 Gb SAS/SATA RAID controllers - 16-port adapters | | | | |
| 4Y37A09727 | B6CE | ThinkSystem RAID 530-16i PCIe 12Gb Adapter | 2 | 7,4,2,3,1,5,6 |
| 4Y37A78835 | BNAX | ThinkSystem RAID 540-16i PCIe Gen4 12Gb Adapter | 2 | 4,2,3,1,5,6 |
| 7Y37A01085 | AUNK | ThinkSystem RAID 930-16i 4GB Flash PCIe 12Gb Adapter | 2 | 7,4,2,3,1,5,6 |
| 4Y37A72485 | BJHN | ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter | 2 | 4,2,3,1,5,6 |
| 4Y37A09721 | B31E | ThinkSystem RAID 930-16i 8GB Flash PCIe 12Gb Adapter | 2 | 7,4,2,3,1,5,6 |
| 4Y37A78600 | BM35 | ThinkSystem RAID 940-16i 4GB Flash PCIe Gen4 12Gb Adapter | 2 | 4,2,3,1,5,6 |
| 4Y37A09730 | B8NZ | ThinkSystem RAID 940-16i 8GB Flash PCIe Gen4 12Gb Adapter | 2 | 4,2,3,1,5,6 |
| 12 Gb SAS/SATA RAID controllers - 24 and 32-port adapters | | | | |
| 7Y37A01086 | AUV1 | ThinkSystem RAID 930-24i 4GB Flash PCIe 12Gb Adapter | 1 | 1,2,3,5,6 |
| 4Y37A09733 | B8P8 | ThinkSystem RAID 940-32i 8GB Flash PCIe Gen4 12Gb Adapter | 1 | 1,2,3,5,6 |
| 12 Gb SAS/SATA non-RAID HBAs | | | | |
| 7Y37A01088 | AUNL | ThinkSystem 430-8i SAS/SATA 12Gb HBA | 4 | 7,4,2,3,1,5,6 |
| 4Y37A72480 | BJHH | ThinkSystem 4350-8i SAS/SATA 12Gb HBA | 4 | 4,2,3,1,5,6 |
| 4Y37A78601 | BM51 | ThinkSystem 440-8i SAS/SATA PCIe Gen4 12Gb HBA | 4 | 4,2,3,1,5,6 |
| 7Y37A01089 | AUNM | ThinkSystem 430-16i SAS/SATA 12Gb HBA | 2 | 7,4,2,3,1,5,6 |
| 4Y37A72481 | BJHJ | ThinkSystem 4350-16i SAS/SATA 12Gb HBA | 2 | 4,2,3,1,5,6 |
| 4Y37A78602 | BM50 | ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA | 2 | 4,2,3,1,5,6 |
| NVMe PCIe interfaces | | | | |
| None | B9X7 | Intel VROC (VMD NVMe RAID) Intel SSD Only (Standard) | 1 | Not applicable |
| 4L47A39164 | B96G | Intel VROC (VMD NVMe RAID) Premium (license upgrade - to enable RAID support for non-Intel NVMe SSDs) | 1 | Not applicable |
| 4Y37A09737 | B8P5 | ThinkSystem 1611-8P PCIe Gen4 Switch Adapter | 3 | 1, 5, 6 |
| None* | B22D | ThinkSystem 810-4P NVMe Switch Adapter | 4 | 2, 4, 7, 6 |
| 7Y37A01081 | AUV2 | ThinkSystem 1610-4P NVMe Switch Adapter | 3 | 1, 5, 6 |
| None^ | B4PA | ThinkSystem 1610-8P NVMe Switch Adapter | 1 | 1 |

* The 810-4P NVMe adapter can be factory-installed, or it is included in the 20-drive and 24-drive U.2 NVMe upgrade kits for field upgrades.

^ The 1610-8P NVMe adapter can be factory-installed, or it is included in the 24-drive NVMe upgrade kit for field upgrades.

For a comparison of the functions of the supported storage adapters, see the ThinkSystem RAID Adapter and HBA Reference:
https://lenovopress.com/lp1288-thinksystem-raid-adapter-and-hba-reference#sr650-support=SR650

For more information about the server configurations with 16/20/24x 2.5-inch U.2 NVMe PCIe drive bays, refer to the *NVMe-Rich Configurations of the ThinkSystem SR650* article, http://lenovopress.com/LP0904

**Configuration notes:**

- Low profile SAS RAID controllers and HBAs for internal storage are supported in the PCIe x8 slots on the system board and full-high PCIe x8 and x16 slots supplied by the riser card 1. Full-height SAS RAID controllers for internal storage (RAID 930-24i) are supported in the full-height PCIe x8 and x16 slots supplied by the riser card 1.
- If the RAID 930-24i controller is used in the configurations with 24 front drives and 2 rear drives, the RAID 930-24i controller that connects the front drive bays must be installed in the PCIe slot 5, and the RAID 530-8i controller or 430-8i HBA that connects the rear drive bays must be installed in the onboard PCIe slot 7.
- Either RAID 530-8i or RAID 730-8i 1GB controllers can be used in the server, but not both types.
- The RAID 730-8i 2GB controller cannot be used in the server configurations with the RAID 930-8i or RAID 730-8i 1GB controllers.
- The RAID 730-8i 1GB controller does not support the 3.5" Rear HDD Kit.
- Configurations using onboard NVMe and NVMe switch adapters support RAID using Intel VROC NVMe RAID as described in the Intel VROC onboard RAID section.
- In the configurations with 2.5-inch AnyBay drive bays, the 1610-4P NVMe Switch Adapter is supported in the full-height PCIe x16 slots supplied by the riser cards 1 and 2.
    - In the configurations with one processor, the 1610-4P NVMe Switch Adapter provides 4x PCIe 3.0 x4 ports for connectivity to U.2 NVMe PCIe SSDs in four AnyBay drive bays, and it is supported in the PCIe x16 slot 1 supplied by the x16/x8 Riser Card 1 (the 1610-4P NVMe Switch Adapter has a PCIe 3.0 x16 host interface).
    - In the configurations with two processors, the onboard NVMe interface and up to two 1610-4P NVMe Switch Adapters provide 4x PCIe 3.0 x4 ports each for connectivity to U.2 NVMe PCIe SSDs in the AnyBay drive bays. Two 1610-4P NVMe Switch Adapters are supported in the PCIe x16 slots 1 and 5 or 1 and 6 only.
- Configurations with 16x 2.5-inch U.2 NVMe PCIe drive bays use the following interfaces and adapters for balanced connectivity to up to 16x U.2 NVMe PCIe SSDs (up to eight SSDs per processor) without oversubscription:
    - The onboard NVMe interface (Processor 2) that provides four PCIe 3.0 x4 ports for connections to four SSDs without oversubscription.
    - Two 810-4P NVMe Switch adapters installed in the PCIe x8 Slots 4 and 7 (Processor 1) that provide two PCIe 3.0 x4 ports each for connections to four SSDs (two SSDs per 810-4P) without oversubscription.
    - Two 1610-4P NVMe Switch adapters installed in the PCIe x16 Slot 1 (Processor 1) and PCIe x16 Slot 6 (Processor 2) that provide four PCIe 3.0 x4 ports each for connections to eight SSDs (four SSDs per 1610-4P) without oversubscription.
    - If the additional 8-bay SAS/SATA backplane is installed, it is connected to a supported internal storage controller installed in the PCIe x8 slot 3.
- Configurations with 20x 2.5-inch U.2 NVMe PCIe drive bays use the following interfaces and adapters for connectivity to up to 20x U.2 NVMe PCIe SSDs (up to eight SSDs per Processor 1, and up to 12 SSDs per Processor 2) without oversubscription:

    - The onboard NVMe interface (Processor 2) that provides four PCIe 3.0 x4 ports for connections to four SSDs without oversubscription.
    - Two 810-4P NVMe Switch adapters installed in the PCIe x8 Slots 4 and 7 (Processor 1) that provide two PCIe 3.0 x4 ports each for connections to four SSDs (two SSDs per 810-4P) without oversubscription.
    - Three 1610-4P NVMe Switch adapters installed in the PCIe x16 Slot 1 (Processor 1) and PCIe x16 Slots 5 and 6 (Processor 2) that provide four PCIe 3.0 x4 ports each for connections to twelve SSDs (four SSDs per 1610-4P) without oversubscription.
- Configurations with 24x 2.5-inch U.2 NVMe PCIe drive bays use the following interfaces and adapters for balanced connectivity to up to 24x U.2 NVMe PCIe SSDs (up to 12 SSDs per processor) with 2:1 oversubscription:
    - One 1610-8P NVMe Switch Adapter installed in the PCIe x16 Slot 1 (Processor 2) that provides eight PCIe 3.0 x4 ports for connections to eight SSDs with 2:1 oversubscription.
    - Four 810-4P NVMe Switch adapters installed in the PCIe x8 Slots 2, 4, and 7 (Processor 1) and PCIe x16 Slot 6 (Processor 2) that provide four PCIe 3.0 x4 ports each for connections to 16 SSDs (four SSDs per 810-4P) with 2:1 oversubscription.
- In the configurations without GPU installed, the total quantity of the RAID 730, RAID 930, RAID 9350 and RAID 940 controllers with supercaps must not exceed 4 (up to 4 supercapacitors can be mounted in the server).
- In the configurations with GPU installed, the total quantity of the RAID 730, RAID 930, RAID 9350 and RAID 940 controllers with supercaps must not exceed 3 (up to 3 supercapacitors can be mounted in the server).
- **E810 Ethernet and X350 RAID/HBAs**: The use of both an Intel E810 network adapter and an X350 HBA/RAID adapter (9350, 5350 and 4350) is supported, however E810 firmware CVL4.3 or later is required. For details, see Support Tip HT513226.

### Intel VROC onboard RAID

Intel VROC (Virtual RAID on CPU) is a feature of the Intel processor that enables Integrated RAID support.

On the SR650, Intel VROC provides RAID functions for the onboard NVMe controller (Intel VROC NVMe RAID).

VROC NVMe RAID offers RAID support for any NVMe drives directly connected to the ports on the server's system board or via adapters such as NVMe retimers or NVMe switch adapters. On the SR650, RAID levels implemented are based on the VROC feature selected as indicated in the following table. RAID 1 is limited to 2 drives per array, and RAID 10 is limited to 4 drives per array. Hot-spare functionality is also supported.

**Performance tip**: For best performance with VROC NVMe RAID, the drives in an array should all be connected to the same processor. Spanning processors is possible however performance will be unpredictable and should be evaluated based on your workload.

The SR650 supports the VROC NVMe RAID offerings listed in the following table. The VROC Intel SSD Only offering only supports RAID on Intel branded NVMe SSDs; non-Intel branded NVMe SSDs cannot be configured in a RAID array.

Table 34. Intel VROC NVMe RAID ordering information and feature support

| Part number | Feature code | Description | Intel NVMe SSDs | Non-Intel NVMe SSDs | RAID 0 | RAID 1 | RAID 10 | RAID 5 |
|---|---|---|---|---|---|---|---|---|
| CTO only | B9X7 | Intel VROC (VMD NVMe RAID) Intel SSD Only | Yes | No | Yes | Yes | Yes | Yes |

| Part number | Feature code | Description | Intel NVMe SSDs | Non-Intel NVMe SSDs | RAID 0 | RAID 1 | RAID 10 | RAID 5 |
|---|---|---|---|---|---|---|---|---|
| 4L47A39164 | B96G | Intel VROC (VMD NVMe RAID) Premium | Yes | Yes | Yes | Yes | Yes | Yes |

Configuration notes:

- If a feature code is ordered in a CTO build, the VROC functionality is enabled in the factory. For field upgrades, order a part number and it will be fulfilled as a Feature on Demand (FoD) license which can then be activated via the XCC management processor user interface.
- Intel VROC (VMD NVMe RAID) Intel SSD Only (feature B9X7) is only supported on Intel-branded SSDs; it is not supported with Solidigm or any other brand of SSDs. Consult the specific drive product guides for details.
- SED functionality is not supported with VROC NVMe RAID

**Virtualization support:** Virtualization support for Intel VROC is as follows:

- **VROC (VMD) NVMe RAID**: VROC (VMD) NVMe RAID is supported by ESXi, KVM, Xen, and Hyper-V. ESXi support is limited to RAID 1 only; other RAID levels are not supported. Windows and Linux OSes support VROC RAID NVMe, both for host boot functions and for guest OS function, and RAID-0, 1, 5, and 10 are supported. On ESXi, VROC is supported with both boot and data drives.

## Internal drive options

The following tables list the drive options for internal 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 24 Gb SAS SSDs
- 2.5-inch hot-swap 12 Gb SAS SSDs
- 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 24 Gb SAS SSDs
- 3.5-inch hot-swap 12 Gb SAS SSDs
- 3.5-inch hot-swap 6 Gb SATA SSDs
- 3.5-inch hot-swap PCIe 4.0 NVMe SSDs
- 3.5-inch hot-swap PCIe 3.0 NVMe 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.

**SED support**: The tables include a column to indicate which drives support SED encryption. The encryption functionality can be disabled if needed. Note: Not all SED-enabled drives have "SED" in the description.

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

Table 35. 2.5-inch hot-swap 12 Gb SAS HDDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch hot-swap HDDs - 12 Gb SAS 15K** | | | | |
| 7XB7A00021 | AULV | ThinkSystem 2.5" 300GB 15K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00022 | AULW | ThinkSystem 2.5" 600GB 15K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00023 | AULX | ThinkSystem 2.5" 900GB 15K SAS 12Gb Hot Swap 512e HDD | No | 24 |
| **2.5-inch hot-swap HDDs - 12 Gb SAS 10K** | | | | |
| 7XB7A00024 | AULY | ThinkSystem 2.5" 300GB 10K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00025 | AULZ | ThinkSystem 2.5" 600GB 10K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00026 | AUM0 | ThinkSystem 2.5" 900GB 10K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00027 | AUM1 | ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00028 | AUM2 | ThinkSystem 2.5" 1.8TB 10K SAS 12Gb Hot Swap 512e HDD | No | 24 |
| 7XB7A00069 | B0YS | ThinkSystem 2.5" 2.4TB 10K SAS 12Gb Hot Swap 512e HDD | No | 24 |
| **2.5-inch hot-swap HDDs - 12 Gb NL SAS** | | | | |
| 7XB7A00034 | AUM6 | ThinkSystem 2.5" 1TB 7.2K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00035 | AUM7 | ThinkSystem 2.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD | No | 24 |
| **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 | Support | 24 |
| 7XB7A00031 | AUM5 | ThinkSystem 2.5" 600GB 10K SAS 12Gb Hot Swap 512n HDD SED | Support | 24 |
| 7XB7A00033 | B0YX | ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD SED | Support | 24 |
| 7XB7A00070 | B0YV | ThinkSystem 2.5" 2.4TB 10K SAS 12Gb Hot Swap 512e HDD FIPS | Support | 24 |
| **2.5-inch hot-swap SED HDDs - 12 Gb NL SAS** | | | | |
| 7XB7A00064 | B0YM | ThinkSystem 2.5" 2TB 7.2K SAS 12Gb Hot Swap 512e HDD FIPS | Support | 24 |

Table 36. 2.5-inch hot-swap 6 Gb SATA HDDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch hot-swap HDDs - 6 Gb NL SATA** | | | | |
| 7XB7A00036 | AUUE | ThinkSystem 2.5" 1TB 7.2K SATA 6Gb Hot Swap 512n HDD | No | 24 |
| 7XB7A00037 | AUUJ | ThinkSystem 2.5" 2TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 24 |

Table 37. 2.5-inch hot-swap 24 Gb SAS SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch hot-swap SSDs - 24 Gb SAS - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A80340 | BNW8 | ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80341 | BNW9 | ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80342 | BNW6 | ThinkSystem 2.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80343 | BP3K | ThinkSystem 2.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD | Support | 24 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch hot-swap SSDs - 24 Gb SAS - Read Intensive/Entry/Capacity (<3 DWPD)** | | | | |
| 4XB7A80318 | BNWC | ThinkSystem 2.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80319 | BNWE | ThinkSystem 2.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80320 | BNWF | ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80321 | BP3E | ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80322 | BP3J | ThinkSystem 2.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD | Support | 24 |
| 4XB7A80323 | BP3D | ThinkSystem 2.5" PM1653 30.72TB Read Intensive SAS 24Gb HS SSD | Support | 24 |

Table 38. 2.5-inch hot-swap 12 Gb SAS SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch hot-swap SSDs - 12 Gb SAS - Write Intensive/Performance (10+ DWPD)** | | | | |
| 4XB7A83214 | BR10 | ThinkSystem 2.5" Nytro 3750 400GB Write Intensive SAS 12Gb HS SSD | Support | 24 |
| 4XB7A83215 | BR0Z | ThinkSystem 2.5" Nytro 3750 800GB Write Intensive SAS 12Gb HS SSD | Support | 24 |
| 4XB7A83216 | BR0Y | ThinkSystem 2.5" Nytro 3750 1.6TB Write Intensive SAS 12Gb HS SSD | Support | 24 |
| 4XB7A83217 | BR0X | ThinkSystem 2.5" Nytro 3750 3.2TB Write Intensive SAS 12Gb HS SSD | Support | 24 |
| 4XB7A70006 | BG07 | ThinkSystem 2.5" Nytro 3732 400GB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A70005 | BG06 | ThinkSystem 2.5" Nytro 3732 800GB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A70007 | BFZZ | ThinkSystem 2.5" Nytro 3732 800GB Performance SAS 12Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A70004 | BG05 | ThinkSystem 2.5" Nytro 3732 1.6TB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A70003 | BG04 | ThinkSystem 2.5" Nytro 3732 3.2TB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A10219 | B4Y4 | ThinkSystem 2.5" SS530 400GB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A10230 | B4Y5 | ThinkSystem 2.5" SS530 800GB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A10231 | B4Y6 | ThinkSystem 2.5" SS530 1.6TB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A10232 | B4Y7 | ThinkSystem 2.5" SS530 3.2TB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00124 | AUMG | ThinkSystem 2.5" HUSMM32 400GB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00125 | AUMH | ThinkSystem 2.5" HUSMM32 800GB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00126 | AVRB | ThinkSystem 2.5" HUSMM32 1.6TB Performance SAS 12Gb Hot Swap SSD | No | 24 |
| 7SD7A05754 | B11P | ThinkSystem 2.5" HUSMM32 400GB Performance SAS 12Gb Hot Swap SSD FIPS | Support | 24 |
| 7SD7A05753 | B11Q | ThinkSystem 2.5" HUSMM32 800GB Performance SAS 12Gb Hot Swap SSD FIPS | Support | 24 |
| 7SD7A05752 | B11R | ThinkSystem 2.5" HUSMM32 1.6TB Performance SAS 12Gb Hot Swap SSD FIPS | Support | 24 |
| **2.5-inch hot-swap SSDs - 12 Gb SAS - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A17062 | B8HU | ThinkSystem 2.5" PM1645a 800GB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A17063 | B8J4 | ThinkSystem 2.5" PM1645a 1.6TB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A17064 | B8JD | ThinkSystem 2.5" PM1645a 3.2TB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A17065 | B8JA | ThinkSystem 2.5" PM1645a 6.4TB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A13653 | B4A0 | ThinkSystem 2.5" PM1645 800GB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A13654 | B4A1 | ThinkSystem 2.5" PM1645 1.6TB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A13655 | B4A2 | ThinkSystem 2.5" PM1645 3.2TB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00117 | AUMC | ThinkSystem 2.5" PM1635a 400GB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00118 | AUMD | ThinkSystem 2.5" PM1635a 800GB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00119 | AVRG | ThinkSystem 2.5" PM1635a 1.6TB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00120 | AVRJ | ThinkSystem 2.5" PM1635a 3.2TB Mainstream SAS 12Gb Hot Swap SSD | No | 24 |
| **2.5-inch hot-swap SSDs - 12 Gb SAS - Read Intensive/Entry/Capacity (<3 DWPD)** | | | | |
| 4XB7A38175 | B91A | ThinkSystem 2.5" PM1643a 960GB Entry SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A38176 | B91B | ThinkSystem 2.5" PM1643a 1.92TB Entry SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A17054 | B91C | ThinkSystem 2.5" PM1643a 3.84TB Entry SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A17055 | B91D | ThinkSystem 2.5" PM1643a 7.68TB Entry SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A17056 | BC4R | ThinkSystem 2.5" PM1643a 15.36TB Entry SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A17168 | B6TL | ThinkSystem 2.5" PM1643 960GB Entry SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A13645 | B4A7 | ThinkSystem 2.5" PM1643 3.84TB Capacity SAS 12Gb Hot Swap SSD | No | 24 |
| 4XB7A13646 | B4A6 | ThinkSystem 2.5" PM1643 7.68TB Capacity SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00121 | AUMK | ThinkSystem 2.5" PM1633a 3.84TB Capacity SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00122 | AUML | ThinkSystem 2.5" PM1633a 7.68TB Capacity SAS 12Gb Hot Swap SSD | No | 24 |
| 7N47A00123 | B116 | ThinkSystem 2.5" PM1633a 15.36TB Capacity SAS 12Gb Hot Swap SSD | No | 24 |

Table 39. 2.5-inch hot-swap 6 Gb SATA SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch hot-swap SSDs - 6 Gb SATA - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A82289 | BQ21 | ThinkSystem 2.5" 5400 MAX 480GB Mixed Use SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82290 | BQ24 | ThinkSystem 2.5" 5400 MAX 960GB Mixed Use SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82291 | BQ22 | ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82292 | BQ23 | ThinkSystem 2.5" 5400 MAX 3.84TB Mixed Use SATA 6Gb HS SSD | Support | 24 |
| 4XB7A17125 | BA7Q | ThinkSystem 2.5" S4620 480GB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A17126 | BA4T | ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A17127 | BA4U | ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A17128 | BK7L | ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A17087 | B8J1 | ThinkSystem 2.5" 5300 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A17088 | B8HY | ThinkSystem 2.5" 5300 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A17089 | B8J6 | ThinkSystem 2.5" 5300 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A13972 | BNEW | ThinkSystem 2.5" 5300 960GB  Mainstream SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A17090 | B8JE | ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38193 | B93K | ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A17091 | B8J7 | ThinkSystem 2.5" 5300 3.84TB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A64222 | BEMB | ThinkSystem 2.5" 5300 3.84TB Mainstream SATA 6Gb Hot Swap SSD SED | Support | 24 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A13633 | B49L | ThinkSystem 2.5" S4610 240GB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A13634 | B49M | ThinkSystem 2.5" S4610 480GB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A13635 | B49N | ThinkSystem 2.5" S4610 960GB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A13636 | B49P | ThinkSystem 2.5" S4610 1.92TB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A13637 | B49Q | ThinkSystem 2.5" S4610 3.84TB Mixed Use SATA 6Gb HS SSD | No | 24 |
| 4XB7A10237 | B488 | ThinkSystem 2.5" 5200 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10238 | B489 | ThinkSystem 2.5" 5200 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10239 | B48A | ThinkSystem 2.5" 5200 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A14062 | B6K1 | ThinkSystem 2.5" 5200 960GB Mainstream SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A10240 | B48B | ThinkSystem 2.5" 5200 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A14063 | B6K0 | ThinkSystem 2.5" 5200 1.92TB Mainstream SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A13981 | B93J | ThinkSystem 2.5" 5200 (Max) 1.92TB Mainstream SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A10241 | B48C | ThinkSystem 2.5" 5200 3.84TB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A13982 | B81X | ThinkSystem 2.5" 5200 3.84TB Mainstream SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 7SD7A05723 | B0ZP | ThinkSystem 2.5" Intel S4600 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05722 | B0ZQ | ThinkSystem 2.5" Intel S4600 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05721 | B0ZR | ThinkSystem 2.5" Intel S4600 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05720 | B0ZS | ThinkSystem 2.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05765 | B10W | ThinkSystem 2.5" 5100 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05764 | B10X | ThinkSystem 2.5" 5100 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05763 | B10Y | ThinkSystem 2.5" 5100 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05762 | B10Z | ThinkSystem 2.5" 5100 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05761 | B110 | ThinkSystem 2.5" 5100 3.84TB Mainstream SATA 6Gb Hot Swap SSD | No | 24 |
| **2.5-inch hot-swap SSDs - 6 Gb SATA - Read Intensive/Entry (<3 DWPD)** | | | | |
| 4XB7A82258 | BQ1Q | ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82259 | BQ1P | ThinkSystem 2.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82260 | BQ1R | ThinkSystem 2.5" 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82261 | BQ1X | ThinkSystem 2.5" 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82262 | BQ1S | ThinkSystem 2.5" 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD | Support | 24 |
| 4XB7A82263 | BQ1T | ThinkSystem 2.5" 5400 PRO 7.68TB Read Intensive SATA 6Gb HS SSD | Support | 24 |
| 4XB7A72438 | BM8B | ThinkSystem 2.5" PM893 480GB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A72439 | BM8A | ThinkSystem 2.5" PM893 960GB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A72440 | BM89 | ThinkSystem 2.5" PM893 1.92TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A72441 | BM88 | ThinkSystem 2.5" PM893 3.84TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A72442 | BM87 | ThinkSystem 2.5" PM893 7.68TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A17072 | B99D | ThinkSystem 2.5" S4520 240GB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A17101 | BA7G | ThinkSystem 2.5" S4520 480GB Read Intensive SATA 6Gb HS SSD | No | 24 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A17102 | BA7H | ThinkSystem 2.5" S4520 960GB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A17103 | BA7J | ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A17104 | BK77 | ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A17105 | BK78 | ThinkSystem 2.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A38271 | BCTC | ThinkSystem 2.5" Multi Vendor 240GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38272 | BCTD | ThinkSystem 2.5" Multi Vendor 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38273 | BCTE | ThinkSystem 2.5" Multi Vendor 960GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38274 | BCTF | ThinkSystem 2.5" Multi Vendor 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38275 | BCTG | ThinkSystem 2.5" Multi Vendor 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A17075 | B8HV | ThinkSystem 2.5" 5300 240GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A17076 | B8JM | ThinkSystem 2.5" 5300 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A17077 | B8HP | ThinkSystem 2.5" 5300 960GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38141 | BE29 | ThinkSystem 2.5" 5300 960GB Entry SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A17078 | B8J5 | ThinkSystem 2.5" 5300 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A17079 | B8JP | ThinkSystem 2.5" 5300 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38191 | B93L | ThinkSystem 2.5" 5300 3.84TB Entry SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A17080 | B8J2 | ThinkSystem 2.5" 5300 7.68TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A38192 | B93M | ThinkSystem 2.5" 5300 7.68TB Entry SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A38185 | B9AC | ThinkSystem 2.5" 5210 960GB Entry SATA 6Gb Hot Swap QLC SSD | No | 24 |
| 4XB7A38144 | B7EW | ThinkSystem 2.5" 5210 1.92TB Entry SATA 6Gb Hot Swap QLC SSD | No | 24 |
| 4XB7A38145 | B7EX | ThinkSystem 2.5" 5210 3.84TB Entry SATA 6Gb Hot Swap QLC SSD | No | 24 |
| 4XB7A38146 | B7EY | ThinkSystem 2.5" 5210 7.68TB Entry SATA 6Gb Hot Swap QLC SSD | No | 24 |
| 4XB7A10247 | B498 | ThinkSystem 2.5" S4510 240GB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A10248 | B499 | ThinkSystem 2.5" S4510 480GB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A10249 | B49A | ThinkSystem 2.5" S4510 960GB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A13622 | B49B | ThinkSystem 2.5" S4510 1.92TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A13623 | B49C | ThinkSystem 2.5" S4510 3.84TB Read Intensive SATA 6Gb HS SSD | No | 24 |
| 4XB7A10195 | B34H | ThinkSystem 2.5" PM883 240GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10196 | B34J | ThinkSystem 2.5" PM883 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10197 | B34K | ThinkSystem 2.5" PM883 960GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10198 | B34L | ThinkSystem 2.5" PM883 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10199 | B34M | ThinkSystem 2.5" PM883 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10200 | B4D2 | ThinkSystem 2.5" PM883 7.68TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05742 | B0YY | ThinkSystem 2.5" Intel S4500 240GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05741 | B0YZ | ThinkSystem 2.5" Intel S4500 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05740 | B0Z0 | ThinkSystem 2.5" Intel S4500 960GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05739 | B0Z1 | ThinkSystem 2.5" Intel S4500 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7SD7A05738 | B0Z2 | ThinkSystem 2.5" Intel S4500 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7N47A00111 | AUUQ | ThinkSystem 2.5" PM863a 240GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7N47A00112 | AUM9 | ThinkSystem 2.5" PM863a 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7N47A00113 | AVCZ | ThinkSystem 2.5" PM863a 960GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7N47A00114 | AVRC | ThinkSystem 2.5" PM863a 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10153 | B2X2 | ThinkSystem 2.5" 5200 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A13966 | B4G8 | ThinkSystem 2.5" 5200 480GB Entry SATA 6Gb Hot Swap SSD SED | Support | 24 |
| 4XB7A10154 | B2X3 | ThinkSystem 2.5" 5200 960GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10155 | B2X4 | ThinkSystem 2.5" 5200 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10156 | B2X5 | ThinkSystem 2.5" 5200 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A10157 | B2X6 | ThinkSystem 2.5" 5200 7.68TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A08502 | B10N | ThinkSystem 2.5" 5100 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A08503 | B10P | ThinkSystem 2.5" 5100 960GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A08504 | B10Q | ThinkSystem 2.5" 5100 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 4XB7A08505 | B10R | ThinkSystem 2.5" 5100 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7N47A00099 | AUM8 | ThinkSystem 2.5" Intel S3520 240GB Entry SATA 6Gb Hot Swap SSD | No | 24 |
| 7N47A00100 | AUUZ | ThinkSystem 2.5" Intel S3520 480GB Entry SATA 6Gb Hot Swap SSD | No | 24 |

Table 40. 2.5-inch hot-swap PCIe 4.0 NVMe SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch SSDs - U.2 PCIe 4.0 NVMe - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A17129 | BNEG | ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A17130 | BNEH | ThinkSystem 2.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A17133 | BNEZ | ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A17152 | BCFV | ThinkSystem 2.5" U.2 P5600 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | No | 24 |
| 4XB7A17153 | BCFR | ThinkSystem 2.5" U.2 P5600 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | No | 24 |
| 4XB7A17154 | BCFS | ThinkSystem 2.5" U.2 P5600 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | No | 24 |
| **2.5-inch SSDs - U.3 PCIe 4.0 NVMe - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A79639 | BNF1 | ThinkSystem 2.5" U.3 7450 MAX 800GB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A13967 | BNEJ | ThinkSystem 2.5" U.3 7450 MAX 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A13970 | BNEY | ThinkSystem 2.5" U.3 7450 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A13971 | BNEL | ThinkSystem 2.5" U.3 7450 MAX 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A64175 | BE03 | ThinkSystem U.3 Kioxia CM6-V 800GB Mainstream NVMe PCIe 4.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A17112 | B96Z | ThinkSystem U.3 Kioxia CM6-V 1.6TB Mainstream NVMe PCIe4.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A17113 | B96T | ThinkSystem U.3 Kioxia CM6-V 3.2TB Mainstream NVMe PCIe4.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A17114 | B96P | ThinkSystem U.3 Kioxia CM6-V 6.4TB Mainstream NVMe PCIe4.0 x4 Hot Swap SSD | No | 24 |
| **2.5-inch SSDs - U.2 PCIe 4.0 NVMe - Read Intensive/Entry (<3 DWPD)** | | | | |
| 4XB7A13941 | BMGD | ThinkSystem 2.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A13942 | BMGE | ThinkSystem 2.5" U.2 P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A13943 | BNEF | ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A13631 | BNEQ | ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A17145 | BCFT | ThinkSystem 2.5" U.2 P5500 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | No | 24 |
| 4XB7A17146 | BCFW | ThinkSystem 2.5" U.2 P5500 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | No | 24 |
| 4XB7A17147 | BCFU | ThinkSystem 2.5" U.2 P5500 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | No | 24 |
| 4XB7A38197 | BC4Z | ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A38257 | BE2A | ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD SED | Support | 24 |
| 4XB7A38283 | BE2E | ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A38258 | BE2B | ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD SED | Support | 24 |
| 4XB7A38284 | BE2F | ThinkSystem U.2 PM1733 15.36TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD | No | 24 |
| **2.5-inch SSDs - U.3 PCIe 4.0 NVMe - Read Intensive/Entry (<3 DWPD)** | | | | |
| 4XB7A81951 | BPKX | ThinkSystem 2.5" U.3 PM1733a 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A81952 | BPKY | ThinkSystem 2.5" U.3 PM1733a 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A81953 | BPKZ | ThinkSystem 2.5" U.3 PM1733a 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A81954 | BPL0 | ThinkSystem 2.5" U.3 PM1733a 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A79646 | BNF3 | ThinkSystem 2.5" U.3 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A79647 | BNF2 | ThinkSystem 2.5" U.3 7450 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A79648 | BNF5 | ThinkSystem 2.5" U.3 7450 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A79649 | BNF4 | ThinkSystem 2.5" U.3 7450 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A83097 | BQAV | ThinkSystem 2.5" U.3 7450 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | Support | 24 |
| 4XB7A64141 | BE2G | ThinkSystem U.3 Kioxia CM6-R 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A38269 | BE2C | ThinkSystem U.3 Kioxia CM6-R 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD SED | Support | 24 |
| 4XB7A64142 | BE2H | ThinkSystem U.3 Kioxia CM6-R 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A38270 | BE2D | ThinkSystem U.3 Kioxia CM6-R 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD SED | Support | 24 |

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

Table 41. 2.5-inch hot-swap PCIe 3.0 NVMe SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **2.5-inch SSDs - U.2 PCIe 3.0 NVMe - Write Intensive/Performance (10+ DWPD)** | | | | |
| 7N47A00081 | AUMJ | ThinkSystem 2.5" U.2 P4800X 375GB Write Intensive NVMe PCIe 3.0 x4 HS SSD | No | 24 |
| 7N47A00083 | B2ZJ | ThinkSystem 2.5" U.2 P4800X 750GB Write Intensive NVMe PCIe 3.0 x4 HS SSD | No | 24 |
| 7XB7A05923 | AWG6 | ThinkSystem U.2 PX04PMB 800GB Performance NVMe PCIe 3.0 x4 Hot Swap SSD | No | 12* |
| 7XB7A05922 | AWG7 | ThinkSystem U.2 PX04PMB 1.6TB Performance NVMe PCIe 3.0 x4 Hot Swap SSD | No | 12* |
| **2.5-inch SSDs - U.2 PCIe 3.0 NVMe - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A13936 | B589 | ThinkSystem U.2 Intel P4610 1.6TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A13937 | B58A | ThinkSystem U.2 Intel P4610 3.2TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A13938 | B58B | ThinkSystem U.2 Intel P4610 6.4TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A08516 | B21W | ThinkSystem U.2 Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A08517 | B21X | ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A08518 | B21Y | ThinkSystem U.2 Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A08519 | B2XJ | ThinkSystem U.2 Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 24 |
| 7N47A00095 | AUUY | ThinkSystem U.2 PX04PMB 960GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 12* |
| 7N47A00096 | AUMF | ThinkSystem U.2 PX04PMB 1.92TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 12* |
| 7SD7A05772 | B11J | ThinkSystem U.2 Intel P4600 1.6TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 7SD7A05771 | B11K | ThinkSystem U.2 Intel P4600 3.2TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 7SD7A05770 | B11L | ThinkSystem U.2 Intel P4600 6.4TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 12* |
| **2.5-inch SSDs - U.2 PCIe 3.0 NVMe - Read Intensive/Entry (<3 DWPD)** | | | | |
| 4XB7A14060 | B6K4 | ThinkSystem U.2 CM5-R 3.84TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD SED | Support | 24 |
| 4XB7A10202 | B58F | ThinkSystem U.2 Intel P4510 1.0TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A10204 | B58G | ThinkSystem 2.5" U.2 P4510 2.0TB Read Intensive NVMe PCIe 3.0 x4 HS SSD | No | 24 |
| 4XB7A10205 | B58H | ThinkSystem U.2 Intel P4510 4.0TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A08513 | B58J | ThinkSystem U.2 Intel P4510 8.0TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A10175 | B34N | ThinkSystem U.2 PM983 1.92TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 24 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A10176 | B34P | ThinkSystem U.2 PM983 3.84TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 24 |
| 4XB7A10177 | B4D3 | ThinkSystem U.2 PM983 7.68TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 7N47A00984 | AUV0 | ThinkSystem U.2 PM963 1.92TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 12* |
| 7N47A00985 | AUUU | ThinkSystem U.2 PM963 3.84TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 12* |
| 7SD7A05779 | B11C | ThinkSystem U.2 Intel P4500 1.0TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 7SD7A05778 | B11D | ThinkSystem U.2 Intel P4500 2.0TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |
| 7SD7A05777 | B11E | ThinkSystem U.2 Intel P4500 4.0TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 24 |

* Not supported in the configurations with 16/20/24x 2.5" U.2 NVMe PCIe drive bays.

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

Table 42. 3.5-inch hot-swap 12 Gb SAS HDDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **3.5-inch hot-swap HDDs - 12 Gb SAS 10K** | | | | |
| 7XB7A00063 | B1JJ | ThinkSystem 3.5" 300GB 10K SAS 12Gb Hot Swap 512n HDD | No | 14 |
| 4XB7A77004 | BK12 | ThinkSystem 3.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD | No | 14 |
| **3.5-inch hot-swap HDDs - 12 Gb SAS 15K** | | | | |
| 7XB7A00038 | AUU2 | ThinkSystem 3.5" 300GB 15K SAS 12Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00039 | AUU3 | ThinkSystem 3.5" 600GB 15K SAS 12Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00040 | AUUC | ThinkSystem 3.5" 900GB 15K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| **3.5-inch hot-swap HDDs - 12 Gb NL SAS** | | | | |
| 7XB7A00041 | AUU4 | ThinkSystem 3.5" 1TB 7.2K SAS 12Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00042 | AUU5 | ThinkSystem 3.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00043 | AUU6 | ThinkSystem 3.5" 4TB 7.2K SAS 12Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00044 | AUU7 | ThinkSystem 3.5" 6TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| 7XB7A00045 | B0YR | ThinkSystem 3.5" 8TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| 7XB7A00046 | AUUG | ThinkSystem 3.5" 10TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| 7XB7A00067 | B117 | ThinkSystem 3.5" 12TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A13906 | B496 | ThinkSystem 3.5" 14TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A13911 | B7EZ | ThinkSystem 3.5" 16TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A38266 | BCFP | ThinkSystem 3.5" 18TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A80353 | BPKU | ThinkSystem 3.5" 20TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 14 |
| **3.5-inch hot-swap SED HDDs - 12 Gb NL SAS** | | | | |
| 7XB7A00065 | B0YN | ThinkSystem 3.5" 2TB 7.2K SAS 12Gb Hot Swap 512e HDD FIPS | Support | 14 |
| 7XB7A00047 | AUUH | ThinkSystem 3.5" 4TB 7.2K SAS 12Gb Hot Swap 512n HDD FIPS | Support | 14 |
| 7XB7A00048 | B0YP | ThinkSystem 3.5" 6TB 7.2K SAS 12Gb Hot Swap 512e HDD FIPS | Support | 14 |
| 7XB7A00066 | B0YQ | ThinkSystem 3.5" 8TB 7.2K SAS 12Gb Hot Swap 512e HDD FIPS | Support | 14 |

Table 43. 3.5-inch hot-swap 6 Gb SATA HDDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **3.5-inch hot-swap HDDs - 6 Gb NL SATA** | | | | |
| 7XB7A00049 | AUUF | ThinkSystem 3.5" 1TB 7.2K SATA 6Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00050 | AUUD | ThinkSystem 3.5" 2TB 7.2K SATA 6Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00051 | AUU8 | ThinkSystem 3.5" 4TB 7.2K SATA 6Gb Hot Swap 512n HDD | No | 14 |
| 7XB7A00052 | AUUA | ThinkSystem 3.5" 6TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |
| 7XB7A00053 | AUU9 | ThinkSystem 3.5" 8TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |
| 7XB7A00054 | AUUB | ThinkSystem 3.5" 10TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |
| 7XB7A00068 | B118 | ThinkSystem 3.5" 12TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A13907 | B497 | ThinkSystem 3.5" 14TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A13914 | B7F0 | ThinkSystem 3.5" 16TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A38130 | BCFH | ThinkSystem 3.5" 18TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |
| 4XB7A80354 | BPKV | ThinkSystem 3.5" 20TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 14 |

Table 44. 3.5-inch hot-swap 24 Gb SAS SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **3.5-inch hot-swap SSDs - 24 Gb SAS - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A80344 | BNW7 | ThinkSystem 3.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD | Support | 14 |
| 4XB7A80345 | BNWA | ThinkSystem 3.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD | Support | 14 |
| 4XB7A80346 | BNWB | ThinkSystem 3.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD | Support | 14 |
| 4XB7A80347 | BP3G | ThinkSystem 3.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD | Support | 14 |
| **3.5-inch hot-swap SSDs - 24 Gb SAS - Read Intensive/Entry/Capacity (<3 DWPD)** | | | | |
| 4XB7A80324 | BNWD | ThinkSystem 3.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD | Support | 14 |
| 4XB7A80325 | BNWG | ThinkSystem 3.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD | Support | 14 |
| 4XB7A80326 | BNWH | ThinkSystem 3.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD | Support | 14 |
| 4XB7A80327 | BP3F | ThinkSystem 3.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD | Support | 14 |
| 4XB7A80328 | BP3H | ThinkSystem 3.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD | Support | 14 |

Table 45. 3.5-inch hot-swap 12 Gb SAS SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **3.5-inch hot-swap SSDs - 12 Gb SAS - Write Intensive/Performance (10+ DWPD)** | | | | |
| 4XB7A83219 | BR0V | ThinkSystem 3.5" Nytro 3750 800GB Write Intensive SAS 12Gb HS SSD | Support | 14 |
| 4XB7A83220 | BR0U | ThinkSystem 3.5" Nytro 3750 1.6TB Write Intensive SAS 12Gb HS SSD | Support | 14 |
| 4XB7A83221 | BR0T | ThinkSystem 3.5" Nytro 3750 3.2TB Write Intensive SAS 12Gb HS SSD | Support | 14 |
| 4XB7A70011 | BG03 | ThinkSystem 3.5" Nytro 3732 400GB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A70010 | BG02 | ThinkSystem 3.5" Nytro 3732 800GB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A70009 | BG01 | ThinkSystem 3.5" Nytro 3732 1.6TB Performance SAS 12Gb Hot Swap SSD | No | 14 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A70008 | BG00 | ThinkSystem 3.5" Nytro 3732 3.2TB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A10234 | B4Y8 | ThinkSystem 3.5" SS530 800GB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A10235 | B4Y9 | ThinkSystem 3.5" SS530 1.6TB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A10236 | B4YA | ThinkSystem 3.5" SS530 3.2TB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 7N47A00997 | B16Z | ThinkSystem 3.5" HUSMM32 400GB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 7N47A00998 | B170 | ThinkSystem 3.5" HUSMM32 800GB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 7N47A00999 | B171 | ThinkSystem 3.5" HUSMM32 1.6TB Performance SAS 12Gb Hot Swap SSD | No | 14 |
| 7SD7A05751 | B11S | ThinkSystem 3.5" HUSMM32 400GB Performance SAS 12Gb Hot Swap SSD FIPS | Support | 14 |
| 7SD7A05750 | B11T | ThinkSystem 3.5" HUSMM32 800GB Performance SAS 12Gb Hot Swap SSD FIPS | Support | 14 |
| 7SD7A05749 | B11U | ThinkSystem 3.5" HUSMM32 1.6TB Performance SAS 12Gb Hot Swap SSD FIPS | Support | 14 |
| **3.5-inch hot-swap SSDs - 12 Gb SAS - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A17066 | B8HT | ThinkSystem 3.5" PM1645a 800GB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A17043 | B8JN | ThinkSystem 3.5" PM1645a 1.6TB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A17067 | B8JK | ThinkSystem 3.5" PM1645a 3.2TB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A17068 | B8JG | ThinkSystem 3.5" PM1645a 6.4TB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A13657 | B4A3 | ThinkSystem 3.5" PM1645 800GB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A13658 | B4A4 | ThinkSystem 3.5" PM1645 1.6TB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A13659 | B4A5 | ThinkSystem 3.5" PM1645 3.2TB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A10188 | B2XD | ThinkSystem 3.5" PM1635a 800GB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A10187 | B2XE | ThinkSystem 3.5" PM1635a 1.6TB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A10189 | B2XL | ThinkSystem 3.5" PM1635a 3.2TB Mainstream SAS 12Gb Hot Swap SSD | No | 14 |
| **3.5-inch hot-swap SSDs - 12 Gb SAS - Read Intensive/Entry/Capacity (<3 DWPD)** | | | | |
| 4XB7A17058 | B91E | ThinkSystem 3.5" PM1643a 3.84TB Entry SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A17059 | BEVK | ThinkSystem 3.5" PM1643a 7.68TB Entry SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A13649 | B4A8 | ThinkSystem 3.5" PM1643 3.84TB Capacity SAS 12Gb Hot Swap SSD | No | 14 |
| 4XB7A10173 | B2XC | ThinkSystem 3.5" PM1633a 3.84TB Capacity SAS 12Gb Hot Swap SSD | No | 14 |

Table 46. 3.5-inch hot-swap 6 Gb SATA SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **3.5-inch hot-swap SSDs - 6 Gb SATA - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A17137 | BA4W | ThinkSystem 3.5" S4620 480GB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A17138 | BA4X | ThinkSystem 3.5" S4620 960GB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A17139 | BA4Y | ThinkSystem 3.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A17140 | BK7P | ThinkSystem 3.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A17096 | B8JL | ThinkSystem 3.5" 5300 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17097 | B8JF | ThinkSystem 3.5" 5300 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17098 | B8J0 | ThinkSystem 3.5" 5300 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A17099 | B8HR | ThinkSystem 3.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17100 | B8HX | ThinkSystem 3.5" 5300 3.84TB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A13639 | B49R | ThinkSystem 3.5" S4610 240GB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A13640 | B49S | ThinkSystem 3.5" S4610 480GB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A13641 | B49T | ThinkSystem 3.5" S4610 960GB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A13642 | B49U | ThinkSystem 3.5" S4610 1.92TB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A13643 | B49V | ThinkSystem 3.5" S4610 3.84TB Mixed Use SATA 6Gb HS SSD | No | 14 |
| 4XB7A10242 | B48D | ThinkSystem 3.5" 5200 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10243 | B48E | ThinkSystem 3.5" 5200 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10244 | B48F | ThinkSystem 3.5" 5200 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10245 | B48G | ThinkSystem 3.5" 5200 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10246 | B48H | ThinkSystem 3.5" 5200 3.84TB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05718 | B0ZT | ThinkSystem 3.5" Intel S4600 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05717 | B0ZU | ThinkSystem 3.5" Intel S4600 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05716 | B0ZV | ThinkSystem 3.5" Intel S4600 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05715 | B109 | ThinkSystem 3.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05760 | B111 | ThinkSystem 3.5" 5100 240GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05759 | B112 | ThinkSystem 3.5" 5100 480GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05758 | B113 | ThinkSystem 3.5" 5100 960GB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05757 | B114 | ThinkSystem 3.5" 5100 1.92TB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05756 | B115 | ThinkSystem 3.5" 5100 3.84TB Mainstream SATA 6Gb Hot Swap SSD | No | 14 |
| **3.5-inch hot-swap SSDs - 6 Gb SATA - Read Intensive/Entry (<3 DWPD)** | | | | |
| 4XB7A88456 | BW3S | ThinkSystem 3.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD | Support | 14 |
| 4XB7A17118 | BA7K | ThinkSystem 3.5" S4520 240GB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A17119 | BA7L | ThinkSystem 3.5" S4520 480GB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A17120 | BA7M | ThinkSystem 3.5" S4520 960GB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A17121 | BA7N | ThinkSystem 3.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A17122 | BK7F | ThinkSystem 3.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A17123 | BK7G | ThinkSystem 3.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A38276 | BCTH | ThinkSystem 3.5" Multi Vendor 240GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A38277 | BCTJ | ThinkSystem 3.5" Multi Vendor 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A38278 | BCTK | ThinkSystem 3.5" Multi Vendor 960GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A38279 | BCTL | ThinkSystem 3.5" Multi Vendor 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A38281 | BCTM | ThinkSystem 3.5" Multi Vendor 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17081 | B8JB | ThinkSystem 3.5" 5300 240GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17082 | B8J9 | ThinkSystem 3.5" 5300 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17083 | B8JC | ThinkSystem 3.5" 5300 960GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17084 | B8HZ | ThinkSystem 3.5" 5300 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17085 | B8HQ | ThinkSystem 3.5" 5300 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17086 | B8J3 | ThinkSystem 3.5" 5300 7.68TB Entry SATA 6Gb Hot Swap SSD | No | 14 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A13625 | B49D | ThinkSystem 3.5" S4510 240GB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A13626 | B49E | ThinkSystem 3.5" S4510 480GB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A13627 | B49F | ThinkSystem 3.5" S4510 960GB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A13628 | B49G | ThinkSystem 3.5" S4510 1.92TB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A13629 | B49H | ThinkSystem 3.5" S4510 3.84TB Read Intensive SATA 6Gb HS SSD | No | 14 |
| 4XB7A17176 | B6TM | ThinkSystem 3.5" PM883 240GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17177 | B6TN | ThinkSystem 3.5" PM883 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17178 | B6TP | ThinkSystem 3.5" PM883 960GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17179 | B6JY | ThinkSystem 3.5" PM883 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A17180 | B6JZ | ThinkSystem 3.5" PM883 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7N47A00115 | AUUS | ThinkSystem 3.5" PM863a 240GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7N47A00116 | AUUN | ThinkSystem 3.5" PM863a 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7N47A00106 | AUUT | ThinkSystem 3.5" Intel S3520 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7N47A00105 | AUUW | ThinkSystem 3.5" Intel S3520 240GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05737 | B0Z3 | ThinkSystem 3.5" Intel S4500 240GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05736 | B0Z4 | ThinkSystem 3.5" Intel S4500 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05735 | B0Z5 | ThinkSystem 3.5" Intel S4500 960GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05734 | B0Z6 | ThinkSystem 3.5" Intel S4500 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 7SD7A05733 | B0Z7 | ThinkSystem 3.5" Intel S4500 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10158 | B2X7 | ThinkSystem 3.5" 5200 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10159 | B2X8 | ThinkSystem 3.5" 5200 960GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10160 | B2X9 | ThinkSystem 3.5" 5200 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10161 | B2XA | ThinkSystem 3.5" 5200 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A10162 | B2XB | ThinkSystem 3.5" 5200 7.68TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A08506 | B10S | ThinkSystem 3.5" 5100 480GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A08507 | B10T | ThinkSystem 3.5" 5100 960GB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A08508 | B10U | ThinkSystem 3.5" 5100 1.92TB Entry SATA 6Gb Hot Swap SSD | No | 14 |
| 4XB7A08509 | B10V | ThinkSystem 3.5" 5100 3.84TB Entry SATA 6Gb Hot Swap SSD | No | 14 |

Table 47. 3.5-inch hot-swap PCIe 4.0 NVMe SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **3.5-inch SSDs - U.2 PCIe 4.0 NVMe - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A17141 | BNEK | ThinkSystem 3.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 4 |
| 4XB7A17143 | BNEM | ThinkSystem 3.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 4 |
| 4XB7A17144 | BNEN | ThinkSystem 3.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | Support | 4 |
| 4XB7A17155 | BCFM | ThinkSystem 3.5" U.2 P5600 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | No | 4 |
| 4XB7A17156 | BCFJ | ThinkSystem 3.5" U.2 P5600 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | No | 4 |
| 4XB7A17157 | BCFQ | ThinkSystem 3.5" U.2 P5600 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | No | 4 |
| **3.5-inch SSDs - U.3 PCIe 4.0 NVMe - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A64176 | BE04 | ThinkSystem 3.5" Kioxia CM6-V 800GB Mainstream NVMe PCIe 4.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A17115 | B96V | ThinkSystem 3.5" Kioxia CM6-V 1.6TB Mainstream NVMe PCIe4.0 x4 Hot Swap SSD | No | 4 |

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| 4XB7A17116 | B96K | ThinkSystem 3.5" Kioxia CM6-V 3.2TB Mainstream NVMe PCIe4.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A17117 | B96W | ThinkSystem 3.5" Kioxia CM6-V 6.4TB Mainstream NVMe PCIe4.0 x4 Hot Swap SSD | No | 4 |

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

Table 48. 3.5-inch hot-swap PCIe 3.0 NVMe SSDs

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **3.5-inch SSDs - U.2 PCIe 3.0 NVMe - Mixed Use/Mainstream (3-5 DWPD)** | | | | |
| 4XB7A13944 | B58C | ThinkSystem 3.5" Intel P4610 1.6TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A13945 | B58D | ThinkSystem 3.5" Intel P4610 3.2TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A13946 | B58E | ThinkSystem 3.5" Intel P4610 6.4TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A08532 | B21Z | ThinkSystem 3.5" Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A08533 | B220 | ThinkSystem 3.5" Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A08534 | B221 | ThinkSystem 3.5" Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A08535 | B2XK | ThinkSystem 3.5" Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A08528 | B2XF | ThinkSystem 3.5" Intel P4600 1.6TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A08529 | B2XG | ThinkSystem 3.5" Intel P4600 3.2TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A08530 | B2XH | ThinkSystem 3.5" Intel P4600 6.4TB Mainstream NVMe PCIe3.0 x4 Hot Swap SSD | No | 4 |
| 7N47A00982 | AUUM | ThinkSystem 3.5" PX04PMB 960GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| **3.5-inch SSDs - U.2 PCIe 3.0 NVMe - Read Intensive/Entry (<3 DWPD)** | | | | |
| 4XB7A10178 | B34Q | ThinkSystem 3.5" PM983 1.92TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A10179 | B34R | ThinkSystem 3.5" PM983 3.84TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| 4XB7A10180 | B4D4 | ThinkSystem 3.5" PM983 7.68TB Entry NVMe PCIe3.0 x4 Hot Swap SSD | No | 4 |
| 7N47A00987 | AUUX | ThinkSystem 3.5" PM963 1.92TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |
| 7N47A00988 | AUVZ | ThinkSystem 3.5" PM963 3.84TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD | No | 4 |

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

Table 49. M.2 SATA drives

| Part number | Feature code | Description | SED support | Max Qty |
|---|---|---|---|---|
| **M.2 SSDs - 6 Gb SATA - Read Intensive/Entry (<3 DWPD)** | | | | |
| 4XB7A90105 | BXMK | ThinkSystem M.2 ER2 240GB Read Intensive SATA 6Gb NHS SSD (China only) | Support | 2* |
| 4XB7A90106 | BXMJ | ThinkSystem M.2 ER2 480GB Read Intensive SATA 6Gb NHS SSD (China only) | Support | 2* |
| 4XB7A82286 | BQ1Z | ThinkSystem M.2 5400 PRO 240GB Read Intensive SATA 6Gb NHS SSD | Support | 2* |
| 4XB7A82287 | BQ1Y | ThinkSystem M.2 5400 PRO 480GB Read Intensive SATA 6Gb NHS SSD | Support | 2* |
| 7N47A00129 | AUUL | ThinkSystem M.2 32GB SATA 6Gbps Non-Hot Swap SSD | No | 2 |
| 7N47A00130 | AUUV | ThinkSystem M.2 128GB SATA 6Gbps Non-Hot Swap SSD | No | 2 |
| 4XB7A14049 | B5S4 | ThinkSystem M.2 5100 240GB SATA 6Gbps Non-Hot Swap SSD | No | 2* |
| 7SD7A05703 | B11V | ThinkSystem M.2 5100 480GB SATA 6Gbps Non-Hot Swap SSD | No | 2* |
| 4XB7A17071 | B8HS | ThinkSystem M.2 5300 240GB SATA 6Gbps Non-Hot Swap SSD | No | 2* |
| 4XB7A17073 | B919 | ThinkSystem M.2 5300 480GB SATA 6Gbps Non-Hot Swap SSD | No | 2* |

* The 5100, 5300, 5400 M.2 or ER2 drives may require the SSD Thermal Kit, 4XH7A08791. See the Cooling section for details.

### USB flash drive

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

Table 50. USB memory key

| Part number | Feature | Description |
|---|---|---|
| 4X77A08621 | B8NV | ThinkSystem 32GB USB Flash Drive |

## Optical drives

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

Table 51. 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 SR650 server supports one LOM card slot and up to seven PCIe slots: one slot on the system planar that is dedicated to an internal storage controller, one regular PCIe slot on the system planar, and up to five PCIe slots with different riser cards installed into two riser sockets on the system planar (one riser socket supports installation of one riser card).

The slot form factors are as follows:

- LOM card slot

- Slot 1: PCIe 3.0 x16 or PCIe 3.0 x8; full-height, half-length (PCIe x16 slot can be single- or double-wide)
- Slot 2: PCIe 3.0 x8; full-height, half-length (not present if Slot 1 is PCIe x16 double-wide or Slot 3 is ML2 x16)
- Slot 3: PCIe 3.0 x8, or PCIe 3.0 x16, or ML2 x8, or ML2 x16; full-height, half-length
- Slot 4: PCIe 3.0 x8; low profile (vertical slot on system planar)
- Slot 5: PCIe 3.0 x16; full-height, half-length
- Slot 6: PCIe 3.0 x16; full-height, half-length
- Slot 7: PCIe 3.0 x8 (for an internal storage controller)

**Configuration notes:**

- Slots 5 and 6 require the second processor to be installed.
- Single-wide PCIe 3.0 x16 Slot 1 requires the second processor to be installed.
- The following configurations require the single-wide PCIe 3.0 x16 Slot 1:
  - 24 NVMe PCIe drive bays.
  - Two double-wide GPUs and one PCIe x16 adapter.
- Slots 1 - 3 are not present if the Rear HDD Kit is installed.
- Slots 1, 5, and 6 can be enabled for full-length PCIe adapters (such as GPU adapters):
  - Factory-installed GPUs: When a GPU adapter is selected, all required parts are derived.
  - Factory-enabled full-length support (no adapters included): Select the feature code B3RY, and all required parts will be derived based on the number of processors and PCIe riser cards selected.
  - Field upgrades: Refer to Cooling for upgrade kit requirements.

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

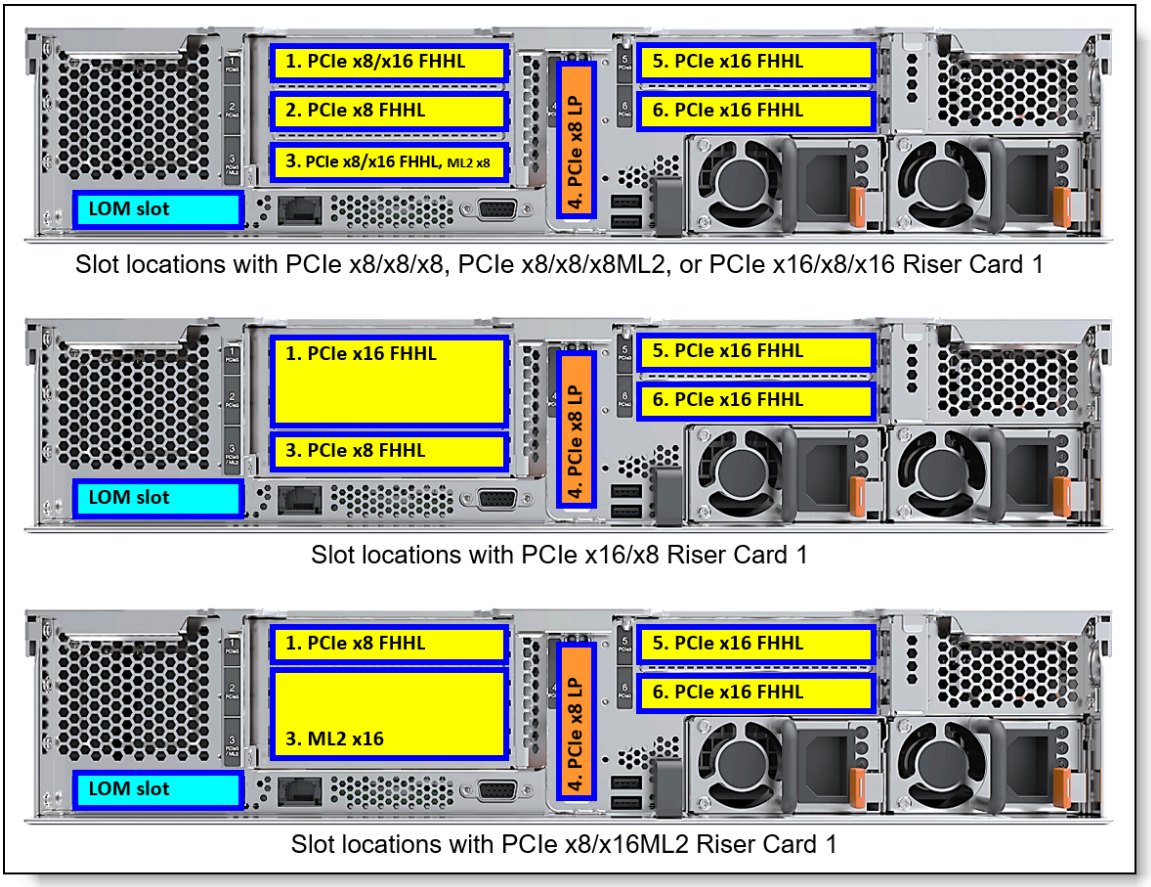



Figure 11. Slot locations

Riser 1 supplies slots 1, 2, and 3, and Riser 2 supplies slots 5 and 6. The slots that are available for use depend on the number of riser cards that are installed and whether the second processor is installed, as shown in the following table.

Table 52. Slots available for use

| | | Slots available for use | |
|---|---|---|---|
| **Riser Card 1** | **Riser Card 2** | **Processor 1** | **Processor 2** |
| None | None | LOM, 4, 7 | - |
| None | PCIe x16/x16 | LOM, 4, 7 | 5, 6 |
| PCIe x8/x8/x8 or<br>PCIe x8/x8/x8ML2 | None | LOM, 1, 2, 3, 4, 7 | - |
| PCIe x16/x8 or<br>PCIe x8/x16ML2 | None | LOM, 1, 3, 4, 7 | - |
| PCIe x8/x8/x8 or<br>PCIe x8/x8/x8ML2 | PCIe x16/x16 | LOM, 1, 2, 3, 4, 7 | 5, 6 |
| PCIe x16/x8 or<br>PCIe x8/x16ML2 | PCIe x16/x16 | LOM, 1, 3, 4, 7 | 5, 6 |
| PCIe x16/x8/x16 | PCIe x16/x16 | LOM, 2, 3, 4, 7 | 1, 5, 6 |

The following table lists available PCIe riser card options.

Table 53. PCIe riser cards and miscellaneous options

| **Part number** | **Feature code** | **Description** | **Maximum quantity** |
|---|---|---|---|
| x8 Riser Card 1 options (Riser card 1 supplies slots 1, 2, and 3) | | | |
| 7XH7A02677 | AUR4 | ThinkSystem 2U x8/x8/x8 PCIe FH Riser 1 | 1 |
| 7XH7A02680 | AUR7 | ThinkSystem 2U x8/x8/x8ML2 PCIe FH Riser 1 | 1 |
| 4XH7A09902 | B4PB | ThinkSystem SR650 x16/x8/x16 PCIe FH Riser 1 | 1 |
| x16 Riser Card 1 options (Riser card 1 supplies slots 1 and 3) | | | |
| 7XH7A02678 | AUR3 | ThinkSystem 2U x16/x8 PCIe FH Riser 1 | 1 |
| 7XH7A02681 | AURB | ThinkSystem SR650 x8/x16ML2 PCIe FH Riser 1 Kit | 1 |
| Riser Card 2 option (Riser card 2 supplies slots 5 and 6) | | | |
| 4TA7A70026 | None | ThinkSystem SR650 x16/x8(or x16) PCIe FH Riser 2 Kit V2 | 1 |
| 7XH7A02679 | AURC | ThinkSystem SR550/SR650 (x16/x8)/(x16/x16) PCIe FH Riser 2 Kit | 1 |
| Serial port upgrade kit | | | |
| 4Z17A80446 | BMNJ | ThinkSystem COM Port Upgrade Kit v2 | 1 |
| 7Z17A02577 | AUSL | ThinkSystem COM Port Upgrade Kit | 1 |

**Configuration notes:**

- If the PCIe x16/x8/x16 Riser Card (4XH7A09902) is installed, the onboard NVMe interface cannot be used for connections to U.2 NVMe or AnyBay drive bays.
- In the configurations with 16x 2.5-inch U.2 NVMe PCIe drive bays, the PCIe 3.0 x8 Slot 3 and PCIe 3.0 x16 Slot 5 are available, and the remaining slots are occupied by the NVMe switch adapters.
  **Note:** If the additional 8-bay SAS/SATA backplane is installed, only the PCIe 3.0 x16 Slot 5 is available (the PCIe 3.0 x8 Slot 3 is occupied by an internal storage controller).
- In the configurations with 20x 2.5-inch U.2 NVMe PCIe drive bays, the PCIe 3.0 x8 Slot 3 is available, and the remaining slots are occupied by the NVMe switch adapters.

- In the configurations with 24x 2.5-inch U.2 NVMe PCIe drive bays, the PCIe 3.0 x16 Slots 3 and 5 are available, and the remaining slots are occupied by the NVMe switch adapters.
- For field upgrades to add an NVIDIA A-Series GPU (A100, A6000, A30, A16, A10, A2), the use of Riser 2 V2 riser kit (4TA7A70026) is required when the GPU is to be installed in slot 5. The older Riser 2 kit (7XH7A02679, now withdrawn) is not supported with the A100. For CTO orders, feature code BF9Y will be used for the correct Riser 2 bracket.
- The COM Port Upgrade Kit, part number 7Z17A02577, is used for mounting the external serial port on the rear of the SR650 server, and it includes the bracket and the cable. The COM Port option is mounted in place of one of the PCIe slots 1 - 6, and that PCIe slot cannot be used.

## Network adapters

The SR650 server supports up to four onboard network ports with optional LOM cards that use the Intel Ethernet Connection X722 1/10 GbE technology integrated into the Intel C624 Platform Controller Hub (PCH). The server also supports ML2 adapters that are installed in the custom ML2 slot provided by an ML2 riser card. The LOM cards and ML2 network adapters support direct connectivity to the XClarity Controller via the Network Controller Sideband Interface (NSCI) for out-of-band systems management.

The integrated Intel Ethernet Connection X722 has the following features:

- Four 1/10 Gb Ethernet capable ports (no 10/100 Mb Ethernet support)
- NIC Teaming (load balancing and failover)
- Data Center Bridging
- iWARP (RDMA over IP)
- VMDq and SR-IOV virtualization (10 Gb speeds only, 4 PFs, 128 VFs per device)
- IEEE 802.1q Virtual Local Area Networks (VLANs)
- NVGRE, VXLAN, IPinGRE, and MACinUDP network virtualization
- IEEE 802.1Qbg Edge Virtual Bridging
- TCP, IP, and UDP checksum offload
- Large Send Offload (LSO) and Generic Send Offload (GSO)
- Receive Side Scaling (RSS) for TCP and UDP traffic
- Jumbo frames up to 9.5 Kbytes

The following table lists the network adapters that are supported with the SR650 server.

Table 54. Network adapters

| Part number | Feature code | Description | Max qty# | I/O slots supported |
|---|---|---|---|---|
| LOM cards - 1 Gb Ethernet | | | | |
| 7ZT7A00544 | AUKG | ThinkSystem 1Gb 2-port RJ45 LOM | 1 | LOM slot |
| 7ZT7A00545 | AUKH | ThinkSystem 1Gb 4-port RJ45 LOM | 1 | LOM slot |
| LOM cards - 10 Gb Ethernet | | | | |
| 7ZT7A00548 | AUKL | ThinkSystem 10Gb 2-port Base-T LOM | 1 | LOM slot |
| 7ZT7A00546 | AUKJ | ThinkSystem 10Gb 2-port SFP+ LOM | 1* | LOM slot |
| 7ZT7A00549 | AUKM | ThinkSystem 10Gb 4-port Base-T LOM | 1 | LOM slot |
| 7ZT7A00547 | AUKK | ThinkSystem 10Gb 4-port SFP+ LOM | 1* | LOM slot |
| ML2 adapters - 10 Gb Ethernet | | | | |
| 7ZT7A00497 | AUKQ | Broadcom NX-E ML2 10Gb 2-Port Base-T Ethernet Adapter | 1 | 3 (ML2) |
| 00AG560 | AT7U | Emulex VFA5.2 ML2 Dual Port 10GbE SFP+ Adapter | 1* | 3 (ML2) |
| 01CV770 | AU7Z | Emulex VFA5.2 ML2 2x10 GbE SFP+ Adapter and FCoE/iSCSI SW | 1* | 3 (ML2) |
| 00JY940 | ATRH | Intel X710-DA2 ML2 2x10GbE SFP+ Adapter | 1* | 3 (ML2) |

| Part number | Feature code | Description | Max qty# | I/O slots supported |
|---|---|---|---|---|
| ML2 adapters - 25 Gb Ethernet | | | | |
| 00MN990 | ATZR | Mellanox ConnectX-4 Lx 10/25GbE SFP28 1-port ML2 Ethernet Adapter | 1* | 3 (ML2) |
| 7ZT7A00507 | AUKU | Mellanox ConnectX-4 Lx 10/25GbE SFP28 2-port ML2 Ethernet Adapter | 1* | 3 (ML2) |
| ML2 adapters - FDR InfiniBand | | | | |
| 7ZT7A00501 | AUKR | Mellanox ConnectX-3 Pro ML2 FDR 2-Port QSFP VPI Adapter | 1* | 3 (ML2) |
| PCIe Low Profile adapters - 1 Gb Ethernet | | | | |
| 7ZT7A00482 | AUZX | Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00484 | AUZV | Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00533 | AUZZ | ThinkSystem I350-F1 PCIe 1Gb 1-Port SFP Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00534 | AUZY | ThinkSystem I350-T2 PCIe 1Gb 2-Port RJ45 Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00535 | AUZW | ThinkSystem I350-T4 PCIe 1Gb 4-Port RJ45 Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XC7A62589§ | BE8A§ | SiNEAD I350-C4 PCIe 1Gb 4-Port RJ45 Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| PCIe Low Profile adapters - 10 Gb Ethernet | | | | |
| 7ZT7A00496 | AUKP | Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 00AG570 | AT7S | Emulex VFA5.2 2x10 GbE SFP+ PCIe Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 00AG580 | AT7T | Emulex VFA5.2 2x10 GbE SFP+ Adapter and FCoE/iSCSI SW | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 00MM860 | ATPX | Intel X550-T2 Dual Port 10GBase-T Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00537 | AUKX | Intel X710-DA2 PCIe 10Gb 2-Port SFP+ Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A79699 | BMXB | ThinkSystem Intel X710-T4L 10GBase-T 4-Port PCIe Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XC7A08225 | B31G | QLogic QL41134 PCIe 10Gb 4-Port Base-T Ethernet Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| PCIe Full Height adapters - 10 Gb Ethernet | | | | |
| 7ZT7A00493 | AUKN | Emulex OCe14104B-NX PCIe 10Gb 4-Port SFP+ Ethernet Adapter | 3 / 5* | 2, 6, 3, 5, 1 |
| PCIe Low Profile adapters - 25 Gb Ethernet | | | | |
| 7ZT7A00505 | AUKS | Broadcom 57412 10/25GbE SFP28 1-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A08238 | B5T0 | Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A08316 | BD49 | Broadcom 57454 10/25GbE SFP28 4-port PCIe Ethernet Adapter V2 | 1 / 3* | 1, 6, 5, 3 |
| 4XC7A08295 | BCD6 | Intel E810-DA2 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 7XC7A05523 | B0WY | Intel XXV710-DA2 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A08270 | B652 | Marvell QL41232 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 01GR250 | AUAJ | Mellanox ConnectX-4 Lx 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A62574 | BEAP | Mellanox ConnectX-5 EN 10/25GbE SFP28 2-port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A16683 | B5XZ | Mellanox Innova-2 ConnectX-5 FPGA 25GbE 2-port Adapter | 1 / 3* | 1, 5, 6† |
| 4XC7A62580 | BE4U | Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A08228 | B21R | QLogic QL41262 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A62581 | BHE2 | Solarflare X2522-Plus 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| PCIe Low Profile adapters - 40 Gb Ethernet | | | | |
| 00MM950 | ATRN | Mellanox ConnectX-4 Lx 1x40GbE QSFP+ Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 4XC7A08229 | B31C | Mellanox ConnectX-5 Ex 25/40GbE 2-port Low-Latency Adapter | 1 / 3*^ | 1, 5, 6† |

| Part number | Feature code | Description | Max qty# | I/O slots supported |
|---|---|---|---|---|
| PCIe Low Profile adapters - FDR InfiniBand | | | | |
| 7XC7A05524 | B0WX | Mellanox ConnectX-4 PCIe FDR 1-Port QSFP VPI Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00500 | AUVG | Mellanox ConnectX-4 PCIe FDR 2-Port QSFP VPI Adapter | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| PCIe x16 Low Profile adapters - 100 Gb Ethernet | | | | |
| 00KH924 | ASWQ | Mellanox ConnectX-4 1x100GbE/EDR IB QSFP28 VPI Adapter | 1 / 3* | 1, 5, 6† |
| 00MM960 | ATRP | Mellanox ConnectX-4 2x100GbE/EDR IB QSFP28 VPI Adapter | 1 / 3* | 1, 5, 6† |
| 4XC7A08248 | B8PP | Mellanox ConnectX-6 Dx 100GbE QSFP56 2-port PCIe Ethernet Adapter | 1 / 3* | 1, 5, 6† |
| 4XC7A76757 | BLC2 | ThinkSystem Xilinx Alveo U50 Data Center Accelerator Adapter | 1 / 2* | 1, 5¤ |
| PCIe x16 Low Profile adapters - 100 Gb Ethernet / HDR100 InfiniBand | | | | |
| 4C57A14177 | B4R9 | ThinkSystem Mellanox ConnectX-6 HDR100/100GbE QSFP56 1-port PCIe VPI Adapter | 1 / 2* | 1, 6, 5, 3† |
| 4C57A14178 | B4RA | ThinkSystem Mellanox ConnectX-6 HDR100/100GbE QSFP56 2-port PCIe VPI Adapter | 1 / 2* | 1, 6, 5, 3† |
| PCIe x16 Low Profile adapters - 200 Gb Ethernet / HDR InfiniBand | | | | |
| 4C57A15326 | B4RC | ThinkSystem Mellanox ConnectX-6 HDR/200GbE QSFP56 1-port PCIe 4 VPI Adapter | 1 / 1* | 1†‡ |
| 4C57A14179 | B4RB | Mellanox HDR/200GbE 2x PCIe Aux Kit | 1 / 1* | 5, 6†‡ |
| PCIe Low Profile adapters - Omni-Path | | | | |
| 00WE023 | AU0A | Intel OPA 100 Series Single-port PCIe 3.0 x8 HFA | 4 / 6* | 4, 2, 6, 3, 5, 1 |
| 00WE027 | AU0B | Intel OPA 100 Series Single-port PCIe 3.0 x16 HFA | 1 / 3* | 1, 5, 6† |

# The maximum quantity shown is with one processor / two processors (this does not apply to LOM cards and ML2 adapters).
* The adapter comes without transceivers or cables; for ordering transceivers or cables, see the product guide for the adapter.
† The adapter is supported in the PCIe x16 slots supplied by the riser cards 1 and 2.
^ The 25 GbE connectivity requires the optional Mellanox QSA 100G to 25G Cable Adapter (4G17A10853) (one per port); the supported cables include 25 GbE passive DAC and active optical cables (25 GbE transceivers not supported)
‡ The ConnectX-6 HDR adapter is supported only in the configurations with two processors, and it requires the HDR/200GbE 2x PCIe Aux Kit.
§ The SiNEAD I350-C4 adapter is only available for customers in Mainland China (PRC). Not supported installed with Intel I350 adapters.
¤ When the Xilinx Alveo U50 is installed in slot 5, slot 6 should be left empty; When the Xilinx Alveo U50 is installed in slot 1, slot 2 should be left empty and slot 3 can only be occupied by adapters of less than 25W power consumption.

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

**Configuration notes:**

- ML2 network adapters are supported in the ML2 x8 slot 3 supplied by the x8/x8/x8ML2 Riser Card 1 (7XH7A02680).
- PCIe full-height network adapters are supported in the full-height PCIe x8 and x16 slots supplied by the riser cards 1 and 2.
- PCIe x16 Low Profile network adapters are supported in the full-height PCIe x16 slots supplied by the riser cards 1 and 2.

- PCIe x8 or x4 Low Profile network adapters are supported in the low profile PCIe x8 slot 4 on the system board and full-height PCIe x8 and x16 slots supplied by the riser cards 1 and 2.
- The Mellanox HDR and HDR100 InfiniBand QSFP56 adapters are supported only in the configurations with up to 16x 2.5-inch or 8x 3.5-inch drive bays and only with an ambient temperature of up to 35 °C (95 °F). Not supported in 12x 3.5-inch or 24x 2.5-inch configurations.
- In the configurations with two double-wide GPU adapters and a PCIe x16 adapter, the following adapters are supported in the PCIe 3.0 x16 slot 3 supplied by the PCIe x16/x8/x16 Riser Card (4XH7A09902):
    - Mellanox ConnectX-4 1x100GbE/EDR IB QSFP28 VPI Adapter (00KH924)
    - Mellanox ConnectX-4 2x100GbE/EDR IB QSFP28 VPI Adapter (00MM960)
    - Mellanox ConnectX-5 Ex 25/40GbE 2-port Low-Latency Adapter (4XC7A08229)
    - Intel OPA 100 Series Single-port PCIe 3.0 x16 HFA (00WE027)
- Supported transceivers or DAC cables should be purchased for the SFP+, SFP28, QSFP+, and QSFP28 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. See the product guide for the adapter for the list of supported transceivers and cables.
- **E810 Ethernet and X350 RAID/HBAs**: The use of both an Intel E810 network adapter and an X350 HBA/RAID adapter (9350, 5350 and 4350) is supported, however E810 firmware CVL4.3 or later is required. For details, see Support Tip HT513226.

## SAS adapters for external storage

The following table lists SAS RAID controllers and HBAs for external storage attachments that are supported by the SR650 server.

Table 55. SAS RAID adapters and HBAs for external storage

| Part number | Feature code | Description | Maximum quantity* | I/O slots supported |
|---|---|---|---|---|
| 12 Gbps SAS RAID adapters | | | | |
| 7Y37A01087 | AUNQ | ThinkSystem RAID 930-8e 4GB Flash PCIe 12Gb Adapter | 4 / 4 | 4, 2, 3, 1, 5 |
| 4Y37A78836 | BNWJ | ThinkSystem RAID 940-8e 4GB Flash PCIe Gen4 12Gb Adapter | 4 / 4 | 4, 2, 3, 1, 5 |
| 12 Gbps SAS HBAs | | | | |
| 7Y37A01090 | AUNR | ThinkSystem 430-8e SAS/SATA 12Gb HBA | 4 / 5 | 4, 2, 3, 1, 5 |
| 7Y37A01091 | AUNN | ThinkSystem 430-16e SAS/SATA 12Gb HBA | 4 / 5 | 4, 2, 3, 1, 5 |
| 4Y37A78837 | BNWK | ThinkSystem 440-8e SAS/SATA PCIe Gen4 12Gb HBA | 4 / 5 | 4, 2, 3, 1, 5 |
| 4Y37A09724 | B8P7 | ThinkSystem 440-16e SAS/SATA PCIe Gen4 12Gb HBA | 4 / 5 | 4, 2, 3, 1, 5 |

* The maximum quantity shown is with one processor / two processors.

For a comparison of the functions of the supported storage adapters, see the ThinkSystem RAID Adapter and HBA Reference:
https://lenovopress.com/lp1288#sr650-support=SR650&internal-or-external-ports=External

**Configuration notes:**

- Low profile SAS RAID controllers and HBAs for external storage are supported in the low profile PCIe x8 slot 4 on the system board and full-high PCIe x8 and x16 slots supplied by the riser cards 1 and 2 (except slot 6).
- In the configurations without GPU installed, the total quantity of the RAID 730-8i 2GB, RAID 930-8i, RAID 930-16i, RAID 930-24i, and RAID 940-8e, and RAID 930-8e controllers in a supported combination in the server must not exceed 4 (up to 4 supercapacitors can be mounted in the server).
- In the configurations with GPU installed, the total quantity of the RAID 730-8i 2GB, RAID 930-8i, RAID 930-16i, RAID 930-24i, RAID 940-8e, and RAID 930-8e controllers in a supported combination in the server must not exceed 3 (up to 3 supercapacitors can be mounted in the server).

**Mixing storage adapter families**: The following HBA/RAID adapter combinations are supported:

- X30 external adapters with other X30 adapters (internal or external)
- X40 external adapters with other X40 adapters (internal or external)
- X40 external adapters with X350 internal adapters

The following HBA/RAID adapter combinations are *not* supported:

- X30 adapters (internal or external) with X40 adapters (internal or external)
- X30 adapters (internal or external) with X350 internal adapters

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 SR650 server.

Table 56. Fibre Channel HBAs

| Part number | Feature code | Description | Maximum quantity* | I/O slots supported |
|---|---|---|---|---|
| 64 Gb Fibre Channel - PCIe | | | | |
| 4XC7A77485 | BLC1 | ThinkSystem Emulex LPe36002 64Gb 2-port PCIe Fibre Channel Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 32 Gb Fibre Channel - PCIe | | | | |
| 4XC7A76525 | BJ3H | ThinkSystem Emulex LPe35002 32Gb 2-port PCIe Fibre Channel Adapter V2 | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XC7A76498 | BJ3G | ThinkSystem Emulex LPe35000 32Gb 1-port PCIe Fibre Channel Adapter v2 | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XC7A08250 | B5SX | Emulex LPe35000 32Gb 1-port PCIe Fibre Channel Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XC7A08251 | B5SY | Emulex LPe35002 32Gb 2-port PCIe Fibre Channel Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00517 | AUNT | Emulex LPe32000-M2-L PCIe 32Gb 1-Port SFP+ FC HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00519 | AUNV | Emulex LPe32002-M2-L PCIe 32Gb 2-Port SFP+ FC HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00516 | AUNS | QLogic QLE2740 PCIe 32Gb 1-Port SFP+ FC HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7ZT7A00518 | AUNU | QLogic QLE2742 PCIe 32Gb 2-Port SFP+ FC HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 16 Gb Fibre Channel - PCIe | | | | |
| 01CV830 | ATZU | Emulex 16Gb Gen6 FC Single-port HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 01CV840 | ATZV | Emulex 16Gb Gen6 FC Dual-port HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 01CV750 | ATZB | QLogic 16Gb Enhanced Gen5 FC Single-port HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 01CV760 | ATZC | QLogic 16Gb Enhanced Gen5 FC Dual-port HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 8 Gb Fibre Channel - PCIe (available only in PRC and AP) | | | | |
| 4XC7A08220 | B0WZ | Emulex LPe12000-M8-L PCIe 8Gb 1-Port SFP+ FC HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XC7A08221 | B0X0 | Emulex LPe12002-M8-L PCIe 8Gb 2-Port SFP+ FC HBA | 4 / 6 | 4, 2, 6, 3, 5, 1 |

* The maximum quantity shown is with one processor / two processors.

**Configuration note:** FC HBAs are supported in the low profile PCIe x8 slot 4 on the system board and full-high PCIe x8 and x16 slots supplied by the riser cards 1 and 2.

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

## Flash storage adapters

The SR650 server supports the flash storage adapters listed in the following table.

Table 57. Flash storage adapters

| Part number | Feature code | Description | Maximum quantity* | I/O slots supported |
|---|---|---|---|---|
| Performance Flash Adapters - PX04PMC | | | | |
| 7XB7A05925 | AWG8 | PX04PMC 1.6TB Performance NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7XB7A05924 | AWG9 | PX04PMC 3.2TB Performance NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| Mainstream Flash Adapters - PM1735 | | | | |
| 4XB7A14075 | B8JH | ThinkSystem HHHL PM1735 1.6TB Mainstream NVMe PCIe4.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XB7A14076 | B8HW | ThinkSystem HHHL PM1735 3.2TB Mainstream NVMe PCIe4.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XB7A14077 | B96M | ThinkSystem HHHL PM1735 6.4TB Mainstream NVMe PCIe4.0 x8 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| Mainstream Flash Adapters - CM5-V | | | | |
| 4XB7A38234 | BCGJ | CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XB7A38237 | BCGK | CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XB7A38240 | BCGL | CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| Mainstream Flash Adapters - CM5-V | | | | |
| 4XB7A08520 | B32L | CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XB7A08521 | B32M | CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 4XB7A08522 | B32N | CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| Mainstream Flash Adapters - P4600 | | | | |
| 7SD7A05769 | B11X | Intel P4600 2.0TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7SD7A05768 | B11Y | Intel P4600 4.0TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| Mainstream Flash Adapters - PX04PMC | | | | |
| 7N47A00097 | AUUP | PX04PMC 1.92TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7N47A00098 | AUVY | PX04PMC 3.84TB Mainstream NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| Entry Flash Adapters - P4500 | | | | |
| 7SD7A05776 | B11Z | Intel P4500 4.0TB Entry NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |
| 7SD7A05775 | B120 | Intel P4500 8.0TB Entry NVMe PCIe 3.0 x4 Flash Adapter | 4 / 6 | 4, 2, 6, 3, 5, 1 |

* The maximum quantity shown is with one processor / two processors.

**Configuration notes:**

- Flash storage adapters are supported in the low profile PCIe x8 slot on the system board and full-high PCIe x8 and x16 slots supplied by the riser cards 1 and 2.
- Flash storage adapters are supported only in the environments with an ambient temperature of up to 35 °C (95 °F).
- Flash storage adapters are supported only with processors of up to 165 W TDP.
- Flash storage adapters are not supported with persistent memory

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

## GPU adapters

The SR650 server supports graphics processing units (GPUs) listed in the following table.

Table 58. GPU adapters

| Part number | Feature code | Description | Maximum quantity* | I/O slots supported |
|---|---|---|---|---|
| Single-wide PCIe x16 GPU adapters | | | | |
| 4X67A71311 | BFTZ | ThinkSystem NVIDIA A10 24GB PCIe Gen4 Passive GPU | 1 / 4 | 1, 5, 6, 2 |
| CTO only | BQZS | ThinkSystem NVIDIA A10 24GB PCIe Gen4 Passive GPU w/o CEC | 1 / 4 | 1, 5, 6, 2 |
| 4X67A81547 | BP05 | ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU | 3 / 5 | 1, 2, 3, 5, 6 |
| CTO only | BQZT | ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU w/o CEC | 3 / 5 | 1, 2, 3, 5, 6 |
| 4X67A14926 | B4YB | ThinkSystem NVIDIA Tesla T4 16GB PCIe Passive GPU | 3 / 5§ | 1, 2, 3, 5, 6 |
| 4X67A14934 | B6CG | ThinkSystem NVIDIA Quadro RTX 4000 8GB PCIe Active GPU | 1 / 3 | 1, 5, 6 |
| 4X67A11584 | B31D | ThinkSystem NVIDIA Quadro P620 2GB PCIe Active GPU | 1 / 3 | 1, 5, 6 |
| 4X67A11524 | B32D | ThinkSystem NVIDIA Tesla V100 FHHL 16GB PCIe GPU | 1 / 3 | 1, 5, 6 |
| 7C57A02892 | B227 | ThinkSystem NVIDIA Tesla P4 8GB PCIe Passive GPU | 1 / 5§ | 1, 5, 6, 2, 3 |
| 4V17A10255 | B225 | ThinkSystem NVIDIA Quadro P4000 8GB PCIe Active GPU | 1 / 3 | 1, 5, 6 |
| 7C57A02894 | B226 | ThinkSystem NVIDIA Quadro P600 2GB PCIe Active GPU | 1 / 3 | 1, 5, 6 |
| Double-wide PCIe x16 GPU adapters | | | | |
| 4X67A76715 | BLK1 | ThinkSystem NVIDIA A100 80GB PCIe Gen4 Passive GPU | 1 / 2 | 1, 5 |
| CTO only | BQZP | ThinkSystem NVIDIA A100 80GB PCIe Gen4 Passive GPU w/o CEC | 1 / 2 | 1, 5 |
| 4X67A86324 | BUGD | ThinkSystem NVIDIA A800 80GB PCIe Gen4 Passive GPU | 1 / 2 | 1, 5 |
| 4X67A13135† | BEL5 | ThinkSystem NVIDIA A100 40GB PCIe Gen4 Passive GPU | 1 / 2 | 1, 5 |
| 4X67A76581 | BJHG | ThinkSystem NVIDIA A30 24GB PCIe Gen4 Passive GPU | 1 / 2 | 1, 5 |
| CTO only | BQZR | ThinkSystem NVIDIA A30 24GB PCIe Gen4 Passive GPU w/o CEC | 1 / 2 | 1, 5 |
| 4X67A76727 | BNFE | ThinkSystem NVIDIA A16 64GB Gen4 PCIe Passive GPU | 1 / 2 | 1, 5 |
| CTO only | BQZU | ThinkSystem NVIDIA A16 64GB Gen4 PCIe Passive GPU w/o CEC | 1 / 2 | 1, 5 |
| 4X67A13124 | BB2E | ThinkSystem NVIDIA Tesla V100S 32GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 4C57A09498 | B1JY | ThinkSystem NVIDIA Tesla V100 16GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 4X67A12088 | B34S | ThinkSystem NVIDIA Tesla V100 32GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 4X67A71310 | BFT0 | ThinkSystem NVIDIA Quadro RTX A6000 48GB PCIe Active GPU | 1 / 2 | 1, 5 |
| 4X67A65441‡ | BCGR | ThinkSystem NVIDIA Quadro RTX 8000 48GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 4X67A13125‡ | BB2D | ThinkSystem NVIDIA Quadro RTX 6000 24GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 4X67A17267 | B6CH | ThinkSystem NVIDIA Quadro RTX 5000 16GB PCIe Active GPU | 1 / 2 | 1, 5 |
| 7C57A02897 | B228 | ThinkSystem AMD Radeon Instinct MI25 16GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 4C57A09497 | B32P | ThinkSystem AMD Radeon Pro V340 32GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 7C57A02895 | B2V5 | ThinkSystem NVIDIA Quadro P6000 24GB GPU, PCIe (active) | 1 / 2 | 1, 5 |
| 7C57A02891 | B15V | ThinkSystem NVIDIA Tesla M10 32GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 00KG655 | B13J | NVIDIA Tesla M60 GPU, PCIe (Passive) | 1 / 2 | 1, 5 |
| 7C57A02888 | B15U | ThinkSystem NVIDIA Tesla P40 24GB PCIe Passive GPU | 1 / 2 | 1, 5 |
| 7X67A00068 | B13H | NVIDIA Tesla P100 16GB PCIe Passive GPU | 1 / 2 | 1, 5 |

* The maximum quantity shown is with one processor / two processors.
† The NVIDIA A100 requires UEFI firmware 2.80 or later, and XClarity Controller firmware 5.40 or higher.
‡ The RTX 6000 and RTX 8000 GPUs are only available via Special Bid.

§ SR650 with 1st Gen Xeon processors supports up to 4x NVIDIA T4 GPUs or 2x NVIDIA P4 GPUs
**Configuration notes:**

- Some NVIDIA A Series GPUs are available as two feature codes, one with a CEC chip and one without a CEC chip (ones without the CEC chip have "w/o CEC" in the name). The CEC is a secondary Hardware Root of Trust (RoT) module that provides an additional layer of security, which can be used by customers who have high regulatory requirements or high security standards. NVIDIA uses a multi-layered security model and hence the protection offered by the primary Root of Trust embedded in the GPU is expected to be sufficient for most customers. The CEC defeatured products still offer Secure Boot, Secure Firmware Update, Firmware Rollback Protection, and In-Band Firmware Update Disable. Specifically, without the CEC chip, the GPU does not support Key Revocation or Firmware Attestation. CEC and non-CEC GPUs of the same type of GPU can be mixed in field upgrades.
- All GPU adapters in the server must be of the same model; mixing different GPU adapter models is not supported.
- NVIDIA A2 and T4 and P4 are PCIe x16 adapters, however in the SR650, the GPUs are also supported in PCIe riser x8 slots with x16 physical connectors. Note, however, that a x8 host connection may result in a performance decrease of approximately 5%.
- For field upgrades to add an NVIDIA A-Series GPU (A100, A6000, A30, A16, A10, A2), the use of Riser 2 V2 riser kit (4TA7A70026) is required when the GPU is to be installed in slot 5. The older Riser 2 kit (7XH7A02679, now withdrawn) is not supported with the A100. For CTO orders, feature code BF9Y will be used for the correct Riser 2 bracket.
- The T4 GPU adapters are supported only in the specific I/O slots, as follows:
    - 1x T4 GPU adapter (one or two processors):
        - PCIe 3.0 x16 Slot 1 on the x16/x8 Riser Card 1 (7XH7A02678); or
        - PCIe 3.0 x8 Slot 1 on the x8/x8/x8 Riser Card 1 (7XH7A02677).
    - 2x T4 GPU adapters:
        - One processor: PCIe 3.0 x8 Slots 1 and 2 on the x8/x8/x8 Riser Card 1 (7XH7A02677).
        - Two processors:
            - PCIe 3.0 x16 or x8 Slot 1 on one of the following riser cards:
                - PCIe 3.0 x16 Slot 1 on the x16/x8 Riser Card 1 (7XH7A02678); or
                - PCIe 3.0 x8 Slot 1 on the x8/x8/x8 Riser Card 1 (7XH7A02677).
            - PCIe 3.0 x16 Slot 5 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).
        - **Note:** Slot 6 must remain unoccupied in the configurations with two T4 GPU adapters.
    - 3x T4 GPU adapters:
        - One processor: PCIe 3.0 x8 Slots 1, 2, and 3 on the x8/x8/x8 Riser Card 1 (7XH7A02677).
        - Two processors:
            - PCIe 3.0 x16 or x8 Slot 1 on one of the following riser cards:
                - PCIe 3.0 x16 Slot 1 on the x16/x8 Riser Card 1 (7XH7A02678); or
                - PCIe 3.0 x8 Slot 1 on the x8/x8/x8 Riser Card 1 (7XH7A02677).
            - PCIe 3.0 x16 Slots 5 and 6 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).
    - 4x T4 GPU adapters (require two processors):
        - PCIe 3.0 x8 or x16 Slot 1 and PCIe 3.0 x8 Slot 2 on one of the following riser cards:
            - x8/x8/x8 Riser Card 1 (7XH7A02677); or
            - x16/x8/x16 Riser Card 1 (4XH7A09902).
        - PCIe 3.0 x16 Slots 5 and 6 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).
    - 5x T4 GPU adapters (require two processors) (2nd Gen Xeon processors only):
        - PCIe 3.0 x8 or x16 Slots 1 and 3, and PCIe 3.0 x8 Slot 2 on one of the following riser cards:
            - x8/x8/x8 Riser Card 1 (7XH7A02677); or
            - x16/x8/x16 Riser Card 1 (4XH7A09902).
        - PCIe 3.0 x16 Slots 5 and 6 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).
- The P4 GPU adapters are supported only in the specific I/O slots, as follows:

    - 1x P4 GPU adapter: PCIe 3.0 x16 Slot 1 on the x16/x8 Riser Card 1 (7XH7A02678).
    - 2x P4 GPU adapters:
        - PCIe 3.0 x16 Slot 1 on the x16/x8 Riser Card 1 (7XH7A02678).
        - PCIe 3.0 x16 Slot 5 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).

          **Note:** Slot 6 must remain unoccupied in the configurations with P4 GPU adapters.
    - 3x P4 GPU adapters:
        - PCIe 3.0 x16 Slot 1 on the x16/x8 Riser Card 1 (7XH7A02678).
        - PCIe 3.0 x16 Slots 5 and 6 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).
    - 4x P4 GPU adapters:
        - PCIe 3.0 x8 or x16 Slot 1 and PCIe 3.0 x8 Slot 2 on one of the following riser cards:
            - x8/x8/x8 Riser Card 1 (7XH7A02677); or
            - x8/x8/ML2 Riser Card 1 (7XH7A02680); or
            - x16/x8/x16 Riser Card 1 (4XH7A09902).
        - PCIe 3.0 x16 Slots 5 and 6 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).
    - 5x P4 GPU adapters:
        - PCIe 3.0 x8 or x16 Slots 1 and 3, and PCIe 3.0 x8 Slot 2 on one of the following riser cards:
            - x8/x8/x8 Riser Card 1 (7XH7A02677); or
            - x16/x8/x16 Riser Card 1 (4XH7A09902).
        - PCIe 3.0 x16 Slots 5 and 6 on the x16/x16 Riser Card 2 (4TA7A70026 or 7XH7A02679).
- The GPU adapters are supported with the following drive bay configurations:
    - Processors of up to 150 W TDP:
        - 8x or 16x 2.5-inch SAS/SATA & AnyBay drive bays (support for up to 4x or 8x NVMe SSDs).
        - 8x 3.5-inch SAS/SATA drive bays.
    - Processors of more than 150 W and up to 205 W TDP with up to four T4 GPU adapters, or processors of more than 150 W and up to 165 W TDP:
        - 8x 2.5-inch SAS/SATA drive bays (no support for NVMe SSDs) in the environments with the ambient temperature of up to 30 °C (86 °F).
    - **Note:** The P4, P600, P620, P4000, P6000, V100 FHHL, and V340 GPU adapters are supported only with the processors of up to 150 W TDP.
- If a double-wide GPU adapter is installed in the PCIe slot 5, the PCIe slot 6 cannot be used.
- The P600 and P620 GPU adapters do not require any thermal kits. The GPU adapters other than P600 or P620 may require one of the optional GPU Thermal Kits (see Cooling for details).
- GPU adapters are supported with the 1100 W or 1600 W power supplies. Some configurations also support a GPU adapter with 750 W power supplies installed.
- GPU adapters (except V100 FHHL and T4 GPU adapters) are supported only in the ASHRAE A2 environments (up to 35 °C [95 °F]); the V100 FHHL and T4 GPU adapters are supported only in the environments with the ambient temperature of up to 30 °C (86 °F).
- Configurations with two double-wide GPU adapters and a PCIe x16 adapter are supported only in the environments with the ambient temperature of up to 30 °C (86 °F), and with SAS/SATA drive bays only (no AnyBay or U.2 NVMe support).
- If the GPU adapters are installed, the server performance might be impacted in case of a system fan failure.
- The GPU adapters are not supported with the T-suffix processors.
- The GPU adapters are not supported with the persistent memory modules.
- The GPU adapters are not supported with the PCIe flash storage adapters.
- The GPU adapters are not supported with the Rear HDD Kit.
- The maximum server memory that can be installed with the NVIDIA Tesla M10 or M60 GPU is 1 TB.

### Auxiliary power cables

For CTO orders, the necessary GPU auxiliary power cable is derived by the configurator.

For field upgrades, some Lenovo GPU adapter options come with the necessary power cables for internal cabling. For all others, you will need to order the cable separately using the SR650 GPU cable kit. Details in the following table.

Table 59. SR650 GPU cable kit option

| Part number | Description |
|---|---|
| 4XH7A08794 | ThinkSystem SR650 GPU Cable Kit<br>• SBB7A00293 - 300mm PCIe 6pin (2x3) + PCIe 8pin (2x4)<br>  ◦ For use with NVIDIA M10, RTX 5000, P6000 and AMD MI25<br>  ◦ Also included in Lenovo GPU option part numbers<br>• SBB7A00299 - 300mm 8pin (2x4) cable<br>  ◦ For use with NVIDIA V100S, V100, P40, RTX 8000, A100, RTX 6000, RTX A6000, A16<br>  ◦ Also included in Lenovo GPU option part numbers for V100S, V100, P40, and RTX 8000<br>• SBB7A05971 - 300mm 2x 8pin (2x4) cable<br>  ◦ For use with NVIDIA V100 FHHL, RTX 4000, A10<br>• SBB7A05946 - 300mm 2x PCIe 6pin (2x3)<br>  ◦ For use with NVIDIA P4000 |

## Cooling

The SR650 server supports up to six hot-swap single-rotor system fans that provide N+1 cooling redundancy: Models with one processor ship with five system fans, and models with two processors ship with six system fans.

In the case of a system fan failure, performance might be impacted with any of the following server configurations:

- Gen 2 processors with 200 W or 205 W TDP, or Gold 6230N, 6240Y, 6244, or 6250 are installed.
- Gen 1 processors Intel Xeon 6137, 6144, 6146, 6154, 8168, 8180, and 8180M are installed.
- Persistent memory modules are installed.
- GPU adapters are installed.
- 16/20/24x 2.5" U.2 NVMe PCIe drive bays at the ambient temperature of more than 30 °C (86 °F).

The following table shows additional cooling options.

Table 60. Cooling options

| Part number | Feature code | Description | Maximum quantity |
|---|---|---|---|
| 4F17A12349 | AUSG | ThinkSystem SR650 Fan Option Kit (for 2nd Gen processors only; 1st Gen processor options include a fan) | 1 |
| 4XH7A08791 | B31F | ThinkSystem SR650/SR550/SR590 M.2 Thermal Kit | 1 |
| 7XH7A05897 | None | ThinkSystem SR650 GPU Thermal Kit | 1 |
| 7XH7A05899 | AURU | ThinkSystem SR650 2nd GPU Upgrade Kit | 1 |
| 7XH7A05898 | None | ThinkSystem SR650 GPU 1U Heatsink Option Kit | 1 |
| 4XH7A08776 | B26L | ThinkSystem SR650 P4 GPU Additional Air Duct Upgrade Kit | 2 |
| 4XH7A08792 | B37F | ThinkSystem SR650 V100 FHHL Air Duct Companion Kit | 2 |

**Configuration notes:**

- The installation of a 2nd processor requires an extra cooling fan be installed. For CTO orders, fans are derived by the configurator. For field upgrades, 1st Gen processor option part numbers include this fan however 2nd Gen processor options do not included the fan and it must be ordered separately using SR650 Fan Option Kit (4F17A12349).
- The ThinkSystem SR650/SR550/SR590 M.2 Thermal Kit (4XH7A08791) is required when at least one M.2 5100, 5300, or 5400 SSD is installed in the server; however, the SSD Thermal Kit is not required in the server configurations with the GPU Thermal Kit (7XH7A05897) (factory-installed or field upgrade). If required, the M.2 SSD Thermal Kit is derived by the configurator for initial server configurations, or it should be purchased for M.2 5100, 5300 or 5400 SSDs for field upgrades.
- The P600 and P620 GPU adapters do not require any thermal kits.
- The full-length PCIe adapters and GPU adapters other than P600 or P620 require one of the following thermal kits depending on the configuration:
    - The GPU Thermal Kit (7XH7A05897) is required when adding GPUs or full-length PCIe adapters to the SR650 server models without factory-installed GPUs or factory-enabled full-length support. The kit provides support for up to three GPUs or full-length adapters in the PCIe x16 slots 1, 5, and 6, and it contains an air duct, two low-profile heatsinks, and two full-length card holders.
    - The 2nd GPU Upgrade Kit (7XH7A05899) is required when adding more GPUs or full-length adapters to the SR650 server models with one riser card and the factory-enabled full-length support or factory-installed GPUs. The kit provides support for the additional GPUs or full-length adapters, and it contains a full-length card holder (the second riser card is not included in the kit).
    - The GPU 1U Heatsink Option Kit (7XH7A05898) is required when adding the second processor to the SR650 server models with one processor and the factory-enabled full-length support or factory-installed GPUs. The kit contains a low-profile heatsink for the second processor option.
- The P4 GPU adapters might require the following quantities of the P4 GPU Additional Air Duct Upgrade Kit (4XH7A08776) in addition to one of the thermal kits described above:
    - 1x or 3x P4 GPU adapters: 1x Additional Air Duct Upgrade Kit.
    - 2x P4 GPU adapters: 2x Additional Air Duct Upgrade Kits.
    - 4x or 5x P4 GPU adapters: No Additional Air Duct Upgrade Kits are required.
- The V100 FHHL GPU adapters require the following quantities of the V100 FHHL Air Duct Companion Kit (4XH7A08792) in addition to one of the thermal kits described above:
    - 1x V100 FHHL GPU adapter: 1x Air Duct Companion Kit.
    - 2x or 3x V100 FHHL GPU adapters: 2x Air Duct Companion Kits.

## Power supplies

The SR650 server supports up to two redundant power supplies and is capable of N+N redundancy depending on the configuration. A second power supply can be added to the models that come with one power supply.

The following table lists the power supply options.

Table 61. Power supplies

| Part number | Feature code | Description | Maximum quantity |
|---|---|---|---|
| 7N67A00882 | AVWC | ThinkSystem 550W (230V/115V) Platinum Hot-Swap Power Supply | 2 |
| 7N67A00883 | AVWD | ThinkSystem 750W (230/115V) Platinum Hot-Swap Power Supply | 2 |
| 7N67A00884 | AVWE | ThinkSystem 750W (230V) Titanium Hot-Swap Power Supply | 2 |
| 4P57A82020 | BR1Y | ThinkSystem V1 750W (230Vac) Titanium Hot Swap Power Supply | 2 |
| 7N67A00885 | AVWF | ThinkSystem 1100W (230V/115V) Platinum Hot-Swap Power Supply | 2 |
| 7N67A00886 | AVWG | ThinkSystem 1600W (230V) Platinum Hot-Swap Power Supply | 2 |
| 4P57A15363‡ | B4Z5‡ | ThinkSystem 1100W -48V DC Power Supply | 2 |

‡ Special bid only

Power supply options do not include a line cord. For server configurations, the inclusion of a power cord is model dependent. Configure-to-order models can be configured without power cords if desired.

**Configuration notes:**

- Minimum of 1 and maximum of 2 power supplies per system.
- If 2 are installed, power supplies must be identical.
- AC power supplies support AC (Worldwide) and HVDC (PRC only) power sources
- AC power supplies have a C14 connector. The -48V DC power supply has a Positronic PLB3W3M1000/AA connector.

**Important:** The Standalone Solution Configuration Tool (SSCT) and Lenovo Data Center Solution Configurator (DCSC) power supply selection rules allow a subset of possible configurations due to power restrictions. Configurations that cannot be built in SSCT or DCSC due to power restrictions may still be supported. To verify support and ensure that the right power supply is chosen for optimal performance, you should always validate your server configuration using the latest version of the Lenovo Capacity Planner: http://datacentersupport.lenovo.com/us/en/solutions/lnvo-lcp

### Power cords (C13 connectors)

Line cords and rack power cables with C13 connectors can be ordered as listed in the following table.

**115V customers**: If you plan to use the 1100W power supply with a low-range (100-127V) power source, select a power cable that is rated above 10A. Power cables that are rated at 10A or below are not supported with low-range power.

Table 62. Power cords

| Part number | Feature code | Description |
|---|---|---|
| Rack cables - C13 to C14 | | |
| CTO only | BPHZ | 0.5m, 10A/100-250V, C13 to C14 Jumper Cord |
| 00Y3043 | A4VP | 1.0m, 10A/100-250V, C13 to C14 Jumper Cord |
| 4L67A08367 | B0N5 | 1.0m, 13A/100-250V, C13 to C14 Jumper Cord |
| 39Y7937 | 6201 | 1.5m, 10A/100-250V, C13 to C14 Jumper Cord |
| 4L67A08368 | B0N6 | 1.5m, 13A/100-250V, C13 to C14 Jumper Cord |
| 4L67A08365 | B0N4 | 2.0m, 10A/100-250V, C13 to C14 Jumper Cord |
| 4L67A08369 | 6570 | 2.0m, 13A/100-250V, C13 to C14 Jumper Cord |
| 4L67A08366 | 6311 | 2.8m, 10A/100-250V, C13 to C14 Jumper Cord |

| Part number | Feature code | Description |
|---|---|---|
| 4L67A08370 | 6400 | 2.8m, 13A/100-250V, C13 to C14 Jumper Cord |
| 39Y7932 | 6263 | 4.3m, 10A/100-250V, C13 to C14 Jumper Cord |
| 4L67A08371 | 6583 | 4.3m, 13A/100-250V, C13 to C14 Rack Power Cable |
| Rack cables for India - C13 to C14 | | |
| 4L67B10326 | CC6R | 2.0m, 10A/100-250V, C13 to C14 Jumper Cord (India) |
| 4L67B10327 | CC6S | 2.8m, 10A/100-250V, C13 to C14 Jumper Cord (India) |
| 4L67B10328 | CC6T | 4.3m, 10A/100-250V, C13 to C14 Jumper Cord (India) |
| Rack cables - C13 to C14 (Y-cable) | | |
| 00Y3046 | A4VQ | 1.345m, 2X C13 to C14 Jumper Cord, Rack Power Cable |
| 00Y3047 | A4VR | 2.054m, 2X C13 to C14 Jumper Cord, Rack Power Cable |
| Rack cables - C13 to C20 | | |
| 39Y7938 | 6204 | 2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable |
| Rack cables - C13 to C20 (Y-cable) | | |
| 47C2491 | A3SW | 1.2m, 16A/100-250V, 2 Short C13s to Short C20 Rack Power Cable |
| 47C2492 | A3SX | 2.5m, 16A/100-250V, 2 Long C13s to Short C20 Rack Power Cable |
| 47C2493 | A3SY | 2.8m, 16A/100-250V, 2 Short C13s to Long C20 Rack Power Cable |
| 47C2494 | A3SZ | 4.1m, 16A/100-250V, 2 Long C13s to Long C20 Rack Power Cable |
| Line cords | | |
| 39Y7930 | 6222 | 2.8m, 10A/250V, C13 to IRAM 2073 (Argentina) Line Cord |
| 81Y2384 | 6492 | 4.3m 10A/220V, C13 to IRAM 2073 (Argentina) Line Cord |
| 39Y7924 | 6211 | 2.8m, 10A/250V, C13 to AS/NZ 3112 (Australia/NZ) Line Cord |
| 81Y2383 | 6574 | 4.3m, 10A/230V, C13 to AS/NZS 3112 (Aus/NZ) Line Cord |
| 69Y1988 | 6532 | 2.8m, 10A/250V, C13 to NBR 14136 (Brazil) Line Cord |
| 81Y2387 | 6404 | 4.3m, 10A/250V, C13 - 2P+Gnd (Brazil) Line Cord |
| 39Y7928 | 6210 | 2.8m, 10A/220V, C13 to GB 2099.1 (China) Line Cord |
| 81Y2378 | 6580 | 4.3m, 10A/220V, C13 to GB 2099.1 (China) Line Cord |
| 39Y7918 | 6213 | 2.8m, 10A/250V, C13 to DK2-5a (Denmark) Line Cord |
| 81Y2382 | 6575 | 4.3m, 10A/230V, C13 to DK2-5a (Denmark) Line Cord |
| 39Y7917 | 6212 | 2.8m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord |
| 81Y2376 | 6572 | 4.3m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord |
| 39Y7927 | 6269 | 2.8m, 10A/250V, C13(2P+Gnd) (India) Line Cord |
| 81Y2386 | 6567 | 4.3m, 10A/240V, C13 to IS 6538 (India) Line Cord |
| 39Y7920 | 6218 | 2.8m, 10A/250V, C13 to SI 32 (Israel) Line Cord |
| 81Y2381 | 6579 | 4.3m, 10A/230V, C13 to SI 32 (Israel) Line Cord |
| 39Y7921 | 6217 | 2.8m, 220-240V, C13 to CEI 23-16 (Italy/Chile) Line Cord |
| 81Y2380 | 6493 | 4.3m, 10A/230V, C13 to CEI 23-16 (Italy/Chile) Line Cord |
| 46M2593 | A1RE | 2.8m, 12A/125V, C13 to JIS C-8303 (Japan) Line Cord |
| 4L67A08362 | 6495 | 4.3m, 12A/200V, C13 to JIS C-8303 (Japan) Line Cord |
| 39Y7926 | 6335 | 4.3m, 12A/100V, C13 to JIS C-8303 (Japan) Line Cord |
| 39Y7922 | 6214 | 2.8m, 10A/250V, C13 to SABS 164 (S Africa) Line Cord |
| 81Y2379 | 6576 | 4.3m, 10A/230V, C13 to SABS 164 (South Africa) Line Cord |
| 39Y7925 | 6219 | 2.8m, 220-240V, C13 to KETI (S Korea) Line Cord |
| 81Y2385 | 6494 | 4.3m, 12A/220V, C13 to KSC 8305 (S. Korea) Line Cord |

| Part number | Feature code | Description |
|---|---|---|
| 39Y7919 | 6216 | 2.8m, 10A/250V, C13 to SEV 1011-S24507 (Swiss) Line Cord |
| 81Y2390 | 6578 | 4.3m, 10A/230V, C13 to SEV 1011-S24507 (Sws) Line Cord |
| 23R7158 | 6386 | 2.8m, 10A/125V, C13 to CNS 10917-3 (Taiwan) Line Cord |
| 81Y2375 | 6317 | 2.8m, 10A/240V, C13 to CNS 10917-3 (Taiwan) Line Cord |
| 81Y2374 | 6402 | 2.8m, 13A/125V, C13 to CNS 60799 (Taiwan) Line Cord |
| 4L67A08363 | AX8B | 4.3m, 10A 125V, C13 to CNS 10917 (Taiwan) Line Cord |
| 81Y2389 | 6531 | 4.3m, 10A/250V, C13 to 76 CNS 10917-3 (Taiwan) Line Cord |
| 81Y2388 | 6530 | 4.3m, 13A/125V, C13 to CNS 10917 (Taiwan) Line Cord |
| 39Y7923 | 6215 | 2.8m, 10A/250V, C13 to BS 1363/A (UK) Line Cord |
| 81Y2377 | 6577 | 4.3m, 10A/230V, C13 to BS 1363/A (UK) Line Cord |
| 90Y3016 | 6313 | 2.8m, 10A/120V, C13 to NEMA 5-15P (US) Line Cord |
| 46M2592 | A1RF | 2.8m, 10A/250V, C13 to NEMA 6-15P Line Cord |
| 00WH545 | 6401 | 2.8m, 13A/120V, C13 to NEMA 5-15P (US) Line Cord |
| 4L67A08359 | 6370 | 4.3m, 10A/125V, C13 to NEMA 5-15P (US) Line Cord |
| 4L67A08361 | 6373 | 4.3m, 10A/250V, C13 to NEMA 6-15P (US) Line Cord |
| 4L67A08360 | AX8A | 4.3m, 13A/120V, C13 to NEMA 5-15P (US) Line Cord |

For the -48V DC Power Supply, the following power cable is supported.

Table 63. -48V DC power cable

| Part number | Feature code | Description |
|---|---|---|
| CTO only | B93F | ThinkSystem 2.5m,DC Cable |

## Systems management

The SR650 supports the following systems management tools:

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

### Lenovo XClarity Controller

The SR650 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 SR650 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.

The following table lists the XClarity Controller FoD upgrades.

Table 64. 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.

### Light path diagnostics

All SR650 server models include basic light path diagnostics, which provides the system LEDs on the front of the server (see Components and connectors) and the LEDs near the monitored components (for example, the DIMM error LEDs on the system board).

### Lenovo XClarity Provisioning Manager

Lenovo XClarity Provisioning Manager (LXPM) is a UEFI-based application embedded in ThinkSystem servers and accessible via the F1 key during system boot.

LXPM provides the following functions:

- Graphical UEFI Setup
- System inventory information and VPD update
- System firmware updates (UEFI and XCC)
- RAID setup wizard
- OS installation wizard (including unattended OS installation)
- Diagnostics functions

### 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 Essentials OneCLI

  OneCLI is a collection of server management tools that uses 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 settings, and update system firmware and drivers.

- Lenovo 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 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 Administrator is a centralized resource management solution designed to reduce complexity, speed response, and enhance the availability of Lenovo systems and solutions. It provides agent-free hardware management for ThinkSystem servers. The administration dashboard is based on HTML 5 and allows fast location of resources so tasks can be run quickly.

Because Lenovo XClarity Administrator does not require any agent software to be installed on the managed endpoints, there are no CPU cycles spent on agent execution, and no memory is used, which means that up to 1GB of RAM and 1 - 2% CPU usage is saved, compared to a typical managed system where an agent is required.

Lenovo XClarity Administrator is an optional software component for the SR650. The software can be downloaded and used at no charge to discover and monitor the SR650 and to manage firmware upgrades.

If software support is required for Lenovo XClarity Administrator, or premium features such as configuration management and operating system deployment are required, 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 Lenovo XClarity software license options.

Table 65. Lenovo XClarity Pro ordering information

| Part number | Feature code | Description |
|---|---|---|
| 00MT201 | 1339 | Lenovo XClarity Pro, per Managed Endpoint w/1 Yr SW S&S |
| 00MT202 | 1340 | Lenovo XClarity Pro, per Managed Endpoint w/3 Yr SW S&S |
| 00MT203 | 1341 | Lenovo XClarity Pro, per Managed Endpoint w/5 Yr SW S&S |
| 7S0X000HWW | SAYV | Lenovo XClarity Pro, per Managed Endpoint w/6 Yr SW S&S |
| 7S0X000JWW | SAYW | Lenovo XClarity Pro, per Managed Endpoint w/7 Yr SW S&S |

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

- Auto-discovery and monitoring of Lenovo 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 140-3 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 also offers software plug-in modules, Lenovo XClarity Integrators, to manage physical infrastructure from leading external virtualization management software tools including those from Microsoft and VMware.

These integrators are offered at no charge, however if software support is required, a Lenovo XClarity Pro software subscription license should be ordered.

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 about all the available Lenovo XClarity Integrators, see the Lenovo XClarity Administrator Product Guide: https://lenovopress.com/tips1200-lenovo-xclarity-administrator

### Lenovo XClarity Energy Manager

Lenovo XClarity Energy Manager (LXEM) is a power and temperature management solution for data centers. It is an agent-free, web-based console that enables you to monitor and manage power consumption and temperature in your data center through the management console. It enables server density and data center capacity to be increased through the use of power capping.

LXEM is a licensed product. A single-node LXEM license is included with the XClarity Controller Enterprise upgrade as described in the Remote Management section. If your server does not have the XCC Enterprise upgrade, Energy Manager licenses can be ordered as shown in the following table.

Table 66. Lenovo XClarity Energy Manager

| Part number | Description |
|---|---|
| 4L40E51621 | Lenovo XClarity Energy Manager Node License (1 license needed per server) |

For more information about XClarity Energy Manager, see the following resources:

- Lenovo Support page:
  https://datacentersupport.lenovo.com/us/en/solutions/lnvo-lxem
- User Guide for XClarity Energy Manager:
  https://pubs.lenovo.com/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 ThinkSystem SR650 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)
- Trusted Cryptographic Module (TCM) (optional; PRC only)
- Nationz Trusted Platform Module v2.0 (optional; PRC only)
- Lockable front bezel (optional)
- Self-encrypting drives (SEDs) with support for enterprise key managers - see the SED encryption key management section
- 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 ThinkSystem SR650 server.

Table 67. Security options

| Part number | Feature code | Description | Maximum quantity |
|---|---|---|---|
| Lockable front bezel | | | |
| 7Z17A02580 | AURX | ThinkSystem 2U Security Bezel | 1 |
| Trusted Cryptographic Module (PRC only) | | | |
| None* | AVKE | ThinkSystem Trusted Cryptographic Module | 1 |
| Trusted Platform Module (PRC only) | | | |
| None* | B22N | ThinkSystem Nationz Trusted Platform Module v2.0 | 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 TCM for enhanced security, to keep user data safe, and to erase confidential data completely from a drive.

Lenovo Business Vantage provides the following features:

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

### Intel Transparent Supply Chain

Add a layer of protection in your data center and have peace of mind that the server hardware you bring into it is safe authentic and with documented, testable, and provable origin.

Lenovo has one of the world’s best supply chains, as ranked by Gartner Group, backed by extensive and mature supply chain security programs that exceed industry norms and US Government standards. Now we are the first Tier 1 manufacturer to offer Intel® Transparent Supply Chain in partnership with Intel, offering you an unprecedented degree of supply chain transparency and assurance.

To enable Intel Transparent Supply Chain for the Intel-based servers in your order, add the following feature code in the DCSC configurator, under the Security tab.

Table 68. Intel Transparent Supply Chain ordering information

| Feature code | Description |
|---|---|
| BB0P | Intel Transparent Supply Chain |

For more information on this offering, see the paper *Introduction to Intel Transparent Supply Chain on Lenovo ThinkSystem Servers*, available from https://lenovopress.com/lp1434-introduction-to-intel-transparent-supply-chain-on-thinksystem-servers.

## Rack installation

The following table lists the rack installation options that are available for the ThinkSystem SR650 server.

Table 69. Rack installation options

| Part number | Feature code | Description | Maximum quantity |
|---|---|---|---|
| 4-post rail kits | | | |
| 7M27A05702 | AXCA | ThinkSystem Tool-less Slide Rail | 1 |
| 7M27A05700 | AXCH | ThinkSystem Tool-less Slide Rail Kit with 2U CMA | 1 |
| 4M17A07274 | AXFN | ThinkSystem Screw-in Slide Rail | 1 |
| 4M17A07280 | B0TD | ThinkSystem Screw-in Slide Rail Kit with 2U CMA | 1 |
| | AXFM | ThinkSystem Tool-less Friction Rail | 1 |
| 4M17A07273 | BK7W | ThinkSystem Toolless Friction Rail v2 | 1 |
| Cable management arm (CMA) upgrade | | | |
| 7M27A05698 | None^ | ThinkSystem 2U CMA Upgrade Kit for Tool-less Slide Rail | 1* |
| 4M17A07275 | AXFU | ThinkSystem 2U CMA Upgrade Kit for Screw-in Slide Rail | 1** |
| Front VGA port | | | |
| 4XH7A83033 | BMNL | ThinkSystem SR550/SR590/SR650 EIA Latch w/ VGA Upgrade Kit v2 | 1 |
| 7Z17A02578 | AUS8 | ThinkSystem 2U EIA Latch w/ VGA Upgrade Kit | 1 |

^ Field upgrade only.
* The CMA Upgrade Kit for Tool-less Slide Rail is supported with the Tool-less Slide Rail (7M27A05702) only.
** The CMA Upgrade Kit for Screw-in Slide Rail is supported with the Screw-in Slide Rail (4M17A07274) only.

The following table summarizes the rail kit features and specifications.

Table 70. Rail kit features and specifications summary

| Feature | Tool-less Slide Rail | | Screw-in Slide Rail | | Tool-less Friction Rail |
|---|---|---|---|---|---|
| | Without CMA | With CMA | Without CMA | With CMA | |
| Part number | 7M27A05702 | 7M27A05700 | 4M17A07274 | 4M17A07280 | 4M17A07273 |
| CMA | 7M27A05698 | Included | 4M17A07275 | Included | No support |
| Rail length | 730 mm (28.74 in.) | 807 mm (31.8 in.) | 836.8 mm (32.9 in.) | 836.8 mm (32.9 in.) | 728.1 mm (28.7 in.) |
| Rail type | Full-out slide (ball bearing) | | Full-out slide (ball bearing) | | Half-out slide (friction) |
| Tool-less installation | Yes | | No | | Yes |
| In-rack server maintenance | Yes | | Yes | | No |
| 1U PDU support | Yes | | Yes | | Yes |

| Feature | Tool-less Slide Rail | | Screw-in Slide Rail | | Tool-less Friction Rail |
|---|---|---|---|---|---|
| | Without CMA | With CMA | Without CMA | With CMA | |
| 0U PDU support | Limited* | | Limited* | | Limited** |
| Rack type | IBM and Lenovo 4-post, IEC standard-compliant | | IBM and Lenovo 4-post, IEC standard-compliant | | IBM and Lenovo 4-post, IEC standard-compliant |
| Mounting holes | Square or round | | Square, round, or threaded | | Square or round |
| 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.) | | 609.6 mm (24 in.) – 812.8 mm (32 in.) | | 609.6 mm (24 in.) – 863.6 mm (34 in.) |

* If a 0U PDU is used, the rack cabinet must be at least 1100 mm (43.31 in.) deep if no CMA is used, or at least 1200 mm (47.24 in.) deep if a CMA is used.
** If a 0U PDU used, the rack must be at least 1000 mm (39.37 in.) deep.
^ Measured when mounted on the rack, from the front surface of the front mounting flange to the rear most point of the rail.

## Operating system support

The SR650 server with 2nd Gen Intel Xeon SP processors supports the following operating systems:

- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022
- Red Hat Enterprise Linux 7.6
- Red Hat Enterprise Linux 7.7
- Red Hat Enterprise Linux 7.8
- Red Hat Enterprise Linux 7.9
- Red Hat Enterprise Linux 8.0
- Red Hat Enterprise Linux 8.1
- Red Hat Enterprise Linux 8.2
- Red Hat Enterprise Linux 8.3
- Red Hat Enterprise Linux 8.4
- Red Hat Enterprise Linux 8.5
- Red Hat Enterprise Linux 8.6
- Red Hat Enterprise Linux 8.7
- Red Hat Enterprise Linux 8.8
- Red Hat Enterprise Linux 8.9
- Red Hat Enterprise Linux 8.10
- Red Hat Enterprise Linux 9.0
- Red Hat Enterprise Linux 9.1
- Red Hat Enterprise Linux 9.2
- Red Hat Enterprise Linux 9.3
- SUSE Linux Enterprise Server 12 SP4
- SUSE Linux Enterprise Server 12 SP5
- SUSE Linux Enterprise Server 12 Xen SP4
- SUSE Linux Enterprise Server 12 Xen SP5
- SUSE Linux Enterprise Server 15
- SUSE Linux Enterprise Server 15 SP1
- SUSE Linux Enterprise Server 15 SP2
- SUSE Linux Enterprise Server 15 SP3
- SUSE Linux Enterprise Server 15 SP4
- SUSE Linux Enterprise Server 15 SP5
- SUSE Linux Enterprise Server 15 Xen
- SUSE Linux Enterprise Server 15 Xen SP1
- SUSE Linux Enterprise Server 15 Xen SP2
- SUSE Linux Enterprise Server 15 Xen SP3
- SUSE Linux Enterprise Server 15 Xen SP4

- SUSE Linux Enterprise Server 15 Xen SP5
- Ubuntu 22.04 LTS 64-bit
- VMware ESXi 6.5 U2
- VMware ESXi 6.5 U3
- VMware ESXi 6.7 U1
- VMware ESXi 6.7 U2
- VMware ESXi 6.7 U3
- VMware ESXi 7.0
- VMware ESXi 7.0 U1
- VMware ESXi 7.0 U2
- VMware ESXi 7.0 U3
- VMware ESXi 8.0
- VMware ESXi 8.0 U1
- VMware ESXi 8.0 U2
- VMware ESXi 8.0 U3

The SR650 server with 1st Gen Intel Xeon SP processors supports the following operating systems:

- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022
- Microsoft Windows Server, version 1709
- Microsoft Windows Server, version 1803
- Red Hat Enterprise Linux 6.9 x64
- Red Hat Enterprise Linux 6.10 x64
- Red Hat Enterprise Linux 7.3
- Red Hat Enterprise Linux 7.4
- Red Hat Enterprise Linux 7.5
- Red Hat Enterprise Linux 7.6
- Red Hat Enterprise Linux 7.7
- Red Hat Enterprise Linux 7.8
- Red Hat Enterprise Linux 7.9
- Red Hat Enterprise Linux 8.0
- Red Hat Enterprise Linux 8.1
- Red Hat Enterprise Linux 8.2
- Red Hat Enterprise Linux 8.3
- Red Hat Enterprise Linux 8.4
- Red Hat Enterprise Linux 8.5
- Red Hat Enterprise Linux 8.6
- Red Hat Enterprise Linux 8.7
- Red Hat Enterprise Linux 8.8
- Red Hat Enterprise Linux 9.0
- Red Hat Enterprise Linux 9.1
- Red Hat Enterprise Linux 9.2
- SUSE Linux Enterprise Server 11 Xen x64 SP4
- SUSE Linux Enterprise Server 11 x64 SP4
- SUSE Linux Enterprise Server 12 SP2
- SUSE Linux Enterprise Server 12 SP3
- SUSE Linux Enterprise Server 12 SP4
- SUSE Linux Enterprise Server 12 SP5
- SUSE Linux Enterprise Server 12 Xen SP2
- SUSE Linux Enterprise Server 12 Xen SP3
- SUSE Linux Enterprise Server 12 Xen SP4
- SUSE Linux Enterprise Server 12 Xen SP5
- SUSE Linux Enterprise Server 15
- SUSE Linux Enterprise Server 15 SP1
- SUSE Linux Enterprise Server 15 SP2

- SUSE Linux Enterprise Server 15 SP3
- SUSE Linux Enterprise Server 15 SP4
- SUSE Linux Enterprise Server 15 SP5
- SUSE Linux Enterprise Server 15 Xen
- SUSE Linux Enterprise Server 15 Xen SP1
- SUSE Linux Enterprise Server 15 Xen SP2
- SUSE Linux Enterprise Server 15 Xen SP3
- SUSE Linux Enterprise Server 15 Xen SP4
- SUSE Linux Enterprise Server 15 Xen SP5
- Ubuntu 22.04 LTS 64-bit
- VMware ESXi 6.0 U3
- VMware ESXi 6.5
- VMware ESXi 6.5 U1
- VMware ESXi 6.5 U2
- VMware ESXi 6.5 U3
- VMware ESXi 6.7
- VMware ESXi 6.7 U1
- VMware ESXi 6.7 U2
- VMware ESXi 6.7 U3
- VMware ESXi 7.0
- VMware ESXi 7.0 U1
- VMware ESXi 7.0 U2
- VMware ESXi 7.0 U3
- VMware ESXi 8.0
- VMware ESXi 8.0 U1
- VMware ESXi 8.0 U2
- VMware ESXi 8.0 U3

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=sr650-7x05-7x06-sp-gen-2

For configure-to-order configurations, the server can be preloaded with VMware ESXi installed on M.2 cards. Ordering information is listed in the following table.

Table 71. VMware ESXi preload

| Part number | Feature code | Description |
|---|---|---|
| CTO only | B3VW | VMware ESXi 6.5 U2 (Factory Installed) |
| CTO only | B6U0 | VMware ESXi 6.5 U3 (factory installed) |
| CTO only | B3VX | VMware ESXi 6.7 (Factory Installed) |
| CTO only | B4XA | VMware ESXi 6.7 U1 (Factory Installed) |
| CTO only | B6U1 | VMware ESXi 6.7 U2 (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) |
| CTO only | BMEY | VMware ESXi 7.0 U3 (Factory Installed) |
| CTO only | BMT5 | VMware ESXi 8.0 (Factory Installed) |
| CTO only | BQ8S | VMware ESXi 8.0 U1 (Factory Installed) |
| CTO only | BYC7 | VMware ESXi 8.0 U2 (Factory Installed) |

## Physical and electrical specifications

The SR650 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: 445 mm (17.5 inches)
- Height: 87 mm (3.4 inches)
- Depth: 764 mm (30.1 inches)

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

Table 72. 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 |
| 445 mm | $X_c$ = Width, to the outer most chassis body feature |
| 87 mm | $Y_a$ = Height, from the bottom of chassis to the top of the chassis |
| 698 mm | $Z_a$ = Depth, from the rack flange mating surface to the rearmost I/O port surface |
| 730 mm | $Z_b$ = Depth, from the rack flange mating surface to the rearmost feature of the chassis body |
| 730 mm | $Z_c$ = Depth, from the rack flange mating surface to the rearmost feature such as power supply handle |
| 34 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 |

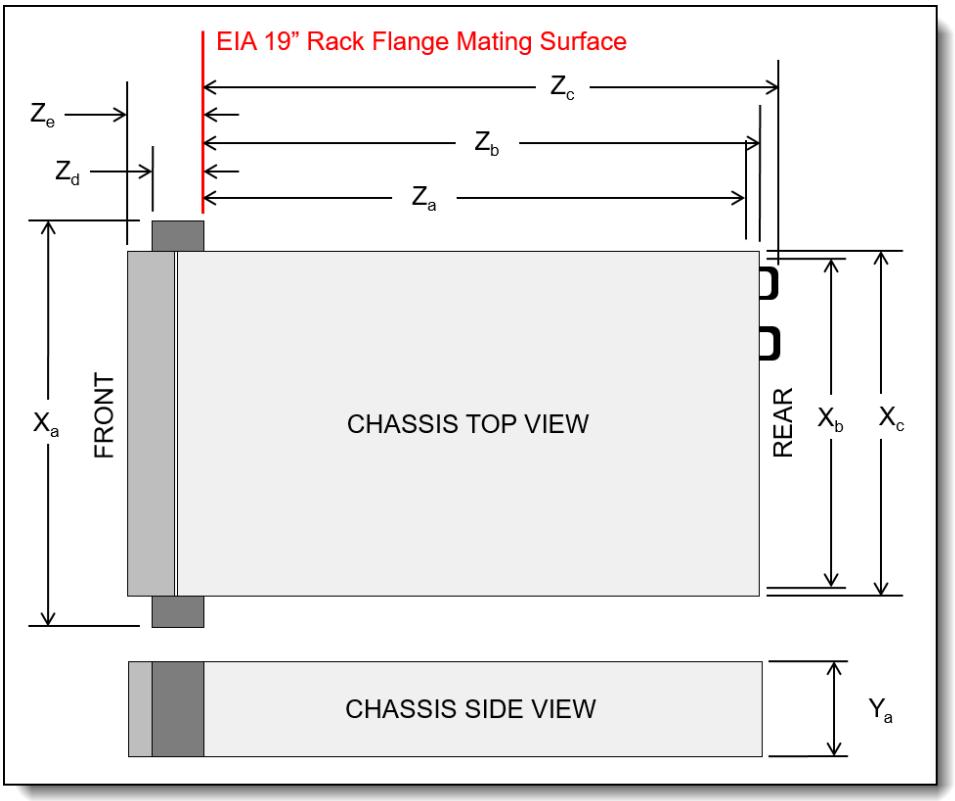



Figure 12. Server dimensions

The shipping (cardboard packaging) dimensions of the SR650 are as follows:

- Width: 592 mm (23.3 inches)
- Height: 282 mm (11.1 inches)
- Depth: 992 mm (39.1 inches)

The server has the following weight:

- Minimum configuration: 19 kg (41.9 lb)
- Maximum configuration: 32 kg (70.5 lb)

Electrical specifications for AC power supplies:

- 100 - 127 (nominal) V AC; 50 Hz / 60 Hz
- 200 - 240 (nominal) V AC; 50 Hz / 60 Hz
- 180 - 300 V DC (HVDC; supported in PRC only)

**Power load and inlet current**

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 73. Rated system power, inlet current, and system heat output

| Power supply | Source voltage | Maximum power load per system (two power supplies) | Rated current per inlet | System heat output |
|---|---|---|---|---|
| 550 W Platinum | 100 - 127 V AC | 722 W | 6.2 A | 2463 BTU/hour |
| | 200 - 240 V AC | 704 W | 3 A | 2402 BTU/hour |
| | 180 - 300 V DC | 702 W | 2.5 A | 2395 BTU/hour |
| 750 W Platinum | 100 - 127 V AC | 984 W | 8.4 A | 3357 BTU/hour |
| | 200 - 240 V AC | 958 W | 4.1 A | 3269 BTU/hour |
| | 180 - 300 V DC | 958 W | 3.5 A | 3269 BTU/hour |
| 750 W Titanium | 200 - 240 V AC | 949 W | 4.1 A | 3238 BTU/hour |
| | 180 - 300 V DC | 948 W | 3.5 A | 3235 BTU/hour |
| 1100 W Platinum | 100 - 127 V AC | 1382 W | 12 A | 4715 BTU/hour |
| | 200 - 240 V AC | 1408 W | 6 A | 4804 BTU/hour |
| | 180 - 300 V DC | 1408 W | 5.1 A | 4804 BTU/hour |
| 1600 W Platinum | 200 - 240 V AC | 2068 W | 8.7 A | 7056 BTU/hour |
| | 180 - 300 V DC | 2024 W | 7.3 A | 6906 BTU/hour |

## Operating environment

The SR650 server complies with ASHRAE class A2 specifications. The server performance might be impacted when the operating temperature is outside the ASHRAE A2 specifications. Depending on the hardware configuration, some server models comply with ASHRAE class A3 and class A4 specifications.

To comply with ASHRAE class A3 and class A4 specifications, the server models must meet the following hardware configuration requirements at the same time:

- Two power supplies installed
- NVMe drives not installed
- M.2 5100 or 5300 SSDs not installed
- QLogic QL41134 PCIe 10Gb 4-Port Base-T Ethernet Adapter not installed
- Mellanox ConnectX-6 and Innova-2 FPGA adapters not installed
- PCIe flash adapters not installed
- Persistent memory modules not installed
- Graphic processing units (GPUs) not installed
- Processors with TDP more than or equal to 150 W, or Gold 6230N processors not installed

**Temperature and humidity**

The SR650 server is supported in the following environment:

- Air temperature:
  - Operating:
    - ASHRAE Class A4: 5 °C - 45 °C (41 °F - 113 °F); for altitudes above 900 m (2,953 ft), decrease the maximum ambient temperature by 1 °C for every 125-m (410-ft) increase in altitude
    - 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: 3,050 m (10,000 ft)
- Humidity:
  - Operating:
    - ASHRAE Class A4: 8% - 90% (non-condensing); maximum dew point: 24 °C (75 °F)
    - 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)

**Acoustical noise emissions**

The server has the following acoustic noise emissions declaration:

- Minimum configuration:
  - Operating: 5.1 bels
  - Idle: 4.9 bels
- Maximum configuration:
  - Operating: 6.2 bels
  - Idle: 6.1 bels

Notes:

- These sound levels were measured in controlled acoustical environments according to procedures specified by ISO7779 and are reported in accordance with ISO 9296.
- The declared acoustic sound levels are based on the configurations, which may change slightly depending on configuration/conditions, for example high-power processors and GPUs, and high-power network adapters.
  - Min config: 1x 85W CPU, 2x 16GB RDIMM, 1x SAS HDD, PHY 4x1G RJ45, 1x 550W PSU

    - Max config: 2x 145W CPU, 24x 64GB RDIMM, 24x SAS HDD, PHY 4x10G SFP+, 24i Raid, 2x 1100W PSU
- Government regulations (such as those prescribed by OSHA or European Community Directives) may govern noise level exposure in the workplace and may apply to you and your server installation. The actual sound pressure levels in your installation depend upon a variety of factors, including the number of racks in the installation; the size, materials, and configuration of the room; the noise levels from other equipment; the room ambient temperature, and employee's location in relation to the equipment. Further, compliance with such government regulations depends on a variety of additional factors, including the duration of employees' exposure and whether employees wear hearing protection. Lenovo recommends that you consult with qualified experts in this field to determine whether you are in compliance with the applicable regulations.

**Shock and vibration**

The server has the following vibration and shock limits:

- 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:
        - 12 kg - 22 kg: 50 G for 152 in./sec velocity change across 6 surfaces
        - 23 kg - 31 kg: 35 G for 152 in./sec velocity change across 6 surfaces

**Particulate contamination**

Airborne particulates (including metal flakes or particles) and reactive gases acting alone or in combination with other environmental factors such as humidity or temperature might damage the system that might cause the system to malfunction or stop working altogether.

The following specifications indicate the limits of particulates that the system can tolerate:

- Reactive gases:
    - The copper reactivity level shall be less than 200 Angstroms per month (Å/month)
    - The silver reactivity level shall be less than 200 Å/month
- Airborne particulates:
    - The room air should be continuously filtered with MERV 8 filters.
    - Air entering a data center should be filtered with MERV 11 or preferably MERV 13 filters.
    - The deliquescent relative humidity of the particulate contamination should be more than 60% RH
    - Environment must be free of zinc whiskers

For additional information, see the Specifications section of the documentation for the server, available from the Lenovo Documents site, https://pubs.lenovo.com/

## Warranty upgrades and post-warranty support

The SR650 server has a one-year (7X05) or three-year (Machine Type 7X06) warranty.

Our global network of regional support centers offers consistent, local-language support enabling you to vary response times and level of service* to match the criticality of your support needs:

- **Standard Next Business Day** – Best choice for non-essential systems requiring simple maintenance.
- **Premier Next Business Day** – Best choice for essential systems requiring technical expertise from senior-level Lenovo engineers.
- **Premier 24x7 4-Hour Response** – Best choice for systems where maximum uptime is critical.
- **Premier Enhanced Storage Support 24x7 4-Hour Response** – Best choice for storage systems where maximum uptime is critical.

For more information, consult the brochure Lenovo Operational Support Services for Data Centers Services.

* Some service levels may not be available in all markets. Contact your sales representative for more information.

## Services

Lenovo Data Center Services empower you at every stage of your IT lifecycle. From expert advisory and strategic planning to seamless deployment and ongoing support, we ensure your infrastructure is built for success. Our comprehensive services accelerate time to value, minimize downtime, and free your IT staff to focus on driving innovation and business growth.

**Note**: Some service options may not be available in all markets or regions. For more information, go to https://lenovolocator.com/. For information about Lenovo service upgrade offerings that are available in your region, contact your local Lenovo sales representative or business partner.

In this section:


- Lenovo Advisory Services
- Lenovo Plan & Design Services
- Lenovo Deployment, Migration, and Configuration Services
- Lenovo Support Services
- Lenovo Managed Services
- Lenovo Sustainability Services


### Lenovo Advisory Services

Lenovo Advisory Services simplify the planning process, enabling customers to build future-proofed strategies in as little as six weeks. Consultants provide guidance on projects including VM migration, storage, backup and recovery, and cost management to accelerate time to value, improve cost efficiency, and build a flexibly scalable foundation.

- **Assessment Services**

  An Assessment helps solve your IT challenges through an onsite, multi-day session with a Lenovo technology expert. We perform 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 like yours, no matter how large or small, get a better return on your IT investment and overcome challenges in the ever-changing technology landscape.

- **Design Services**

  Professional Services consultants perform infrastructure design and implementation planning to support your 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.

### Lenovo Plan & Design Services

Unlock faster time to market with our tailored, strategic design workshops to align solution approaches with your business goals and technical requirements. Leverage our deep solution expertise and end-to-end delivery partnership to meet your goals efficiently and effectively.

### Lenovo Deployment, Migration, and Configuration Services

Optimize your IT operations by shifting labor-intensive functions to Lenovo's skilled technicians for seamless on-site or remote deployment, configuration, and migration. Enjoy peace of mind, faster time to value, and comprehensive knowledge sharing with your IT staff, backed by our best-practice methodology.

- **Deployment Services for Storage and ThinkAgile**

  A comprehensive range of remote and onsite options tailored specifically for your business needs to ensure your storage and ThinkAgile hardware are fully operational from the start.

- **Hardware Installation Services**

  A full-range, comprehensive setup for your hardware, including unpacking, inspecting, and positioning components to ensure your equipment is operational and error-free for the most seamless and efficient installation experience, so you can quickly benefit from your investments.

- **DM/DG File Migration Services**

  Take the burden of file migration from your IT's shoulders. Our experts will align your requirements and business objectives to the migration plans while coordinating with your team to plan and safely execute the data migration to your storage platforms.

- **DM/DG/DE Health Check Services**

  Our experts perform proactive checks of your Firmware and system health to ensure your machines are operating at peak and optimal efficiency to maximize up-time, avoid system failures, ensure the security of IT solutions and simplify maintenance.

- **Factory Integrated Services**

  A suite of value-added offerings provided during the manufacturing phase of a server or storage system that reduces time to value. These services aim at improving your hardware deployment experience and enhance the quality of a standard configuration before it arrives at your facility.

### Lenovo Support Services

In addition to response time options for hardware parts, repairs, and labor, Lenovo offers a wide array of additional support services to ensure your business is positioned for success and longevity. Our goal is to reduce your capital outlays, mitigate your IT risks, and accelerate your time to productivity.

- **Premier Support for Data Centers**

  Your direct line to the solution that promises the best, most comprehensive level of support to help you fully unlock the potential of your data center.

- **Premier Enhanced Storage Support (PESS)**

  Gain all the benefits of Premier Support for Data Centers, adding dedicated storage specialists and resources to elevate your storage support experience to the next level.

- **Committed Service Repair (CSR)**

  Our commitment to ensuring the fastest, most seamless resolution times for mission-critical systems that require immediate attention to ensure minimal downtime and risk for your business. This service is only available for machines under the Premier 4-Hour Response SLA.

- **Multivendor Support Services (MVS)**

  Your single point of accountability for resolution support across vast range of leading Server, Storage, and Networking OEMs, allowing you to manage all your supported infrastructure devices seamlessly from a single source.

- **Keep Your Drive (KYD)**

  Protect sensitive data and maintain compliance with corporate retention and disposal policies to ensure your data is always under your control, regardless of the number of drives that are installed in your Lenovo server.

- **Technical Account Manager (TAM)**

  Your single point of contact to expedite service requests, provide status updates, and furnish reports to track incidents over time, ensuring smooth operations and optimized performance as your business grows.

- **Enterprise Software Support (ESS)**

  Gain comprehensive, single-source, and global support for a wide range of server operating systems and Microsoft server applications.

For more information, consult the brochure Lenovo Operational Support Services for Data Centers.

### Lenovo Managed Services

Achieve peak efficiency, high security, and minimal disruption with Lenovo's always-on Managed Services. Our real-time monitoring, 24x7 incident response, and problem resolution ensure your infrastructure operates seamlessly. With quarterly health checks for ongoing optimization and innovation, Lenovo's remote active monitoring boosts end-user experience and productivity by keeping your data center's hardware performing at its best.

Lenovo Managed Services provides continuous 24x7 remote monitoring (plus 24x7 call center availability) and proactive management of your 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 & OS device driver levels, and software as needed. We'll also maintain records of latest patches, critical updates, and firmware levels, to ensure you systems are providing business value through optimized performance.

### Lenovo Sustainability Services

- **Asset Recovery Services**

  Lenovo Asset Recovery Services (ARS) provides a secure, seamless solution for managing end-of-life IT assets, ensuring data is safely sanitized while contributing to a more circular IT lifecycle. By maximizing the reuse or responsible recycling of devices, ARS helps businesses meet sustainability goals while recovering potential value from their retired equipment. For more information, see the Asset Recovery Services offering page.

- **CO2 Offset Services**

  Lenovo's CO2 Offset Services offer a simple and transparent way for businesses to take tangible action on their IT footprint. By integrating CO2 offsets directly into device purchases, customers can easily support verified climate projects and track their contributions, making meaningful progress toward their sustainability goals without added complexity.

- **Lenovo Certified Refurbished**

  Lenovo Certified Refurbished offers a cost-effective way to support IT circularity without compromising on quality and performance. Each device undergoes rigorous testing and certification, ensuring reliable performance and extending its lifecycle. With Lenovo's trusted certification, you gain peace of mind while making a more sustainable IT choice.

## Lenovo TruScale

Lenovo TruScale XaaS is your set of flexible IT services that makes everything easier. Streamline IT procurement, simplify infrastructure and device management, and pay only for what you use – so your business is free to grow and go anywhere.

Lenovo TruScale is  the unified solution that gives you simplified access to:

- The industry's broadest portfolio – from pocket to cloud – all delivered as a service
- A single-contract framework for full visibility and accountability
- The global scale to rapidly and securely build teams from anywhere
- Flexible fixed and metered pay-as-you-go models with minimal upfront cost
- The growth-driving combination of hardware, software, infrastructure, and solutions – all from one single provider with one point of accountability.

For information about Lenovo TruScale offerings that are available in your region, contact your local Lenovo sales representative or business partner.

## Regulatory compliance

The ThinkSystem SR650 server conforms to the following regulations:

- United States: FCC Part 15, Class A; UL 60950-1
- Canada: ICES-003/NMB-03, Class A; CAN/CSA-C22.2 60950-1
- Mexico: NOM-19
- Argentina: IEC60950-1
- European Union: CE Mark (EN55022 Class A, IEC/EN60950-1, EN55024, EN61000-3-2, EN61000-3-3)
- Germany: TUV-GS (IEC/EN 60950-1, EK1-ITB2000)
- Russia, Kazakhstan, Belarus: EAC (TR CU 004/2011, TR CU 020/2011)
- China: CCC GB4943.1, GB9254 Class A, GB17625.1
- India: BIS
- Japan: VCCI, Class A
- Taiwan: BSMI CNS13438, Class A; CNS14336-1
- Korea: KN22, Class A; KN24
- Australia/New Zealand: AS/NZS CISPR 22 Class A
- Reduction of Hazardous Substances (ROHS)
- Energy Star 3.0 (excluding configurations with Bronze 3204, Gold 5222, or Platinum 8256 processors)

**Note:** For more information on the Energy Star 3.0 certification, refer to the *Energy Star 3.0 Certifications for ThinkSystem Servers* publication:
http://lenovopress.com/lp1230

## External drive enclosures

The server supports attachment to external drive enclosures using a RAID controller with external ports or a SAS host bus adapter. Adapters supported by the server are listed in the SAS adapters for external storage section.

**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 74. External drive enclosures

| Model | Description |
|---|---|
| 4587HC1 | Lenovo Storage D1212 Disk Expansion Enclosure (2U enclosure with 12x LFF drive bays) |
| 4587HC2 | Lenovo Storage D1224 Disk Expansion Enclosure (2U enclosure with 24x SFF drive bays) |
| 6413HC1 | Lenovo Storage D3284 High Density Expansion Enclosure (5U enclosure with 84x LFF drive bays) |
| 7DAHCTO1WW | Lenovo ThinkSystem D4390 Direct Attached Storage (4U enclosure with 90x LFF drive bays) |

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

- Lenovo Storage D1212 and D1224
  http://lenovopress.lenovo.com/lp0512
- Lenovo Storage D3284
  http://lenovopress.lenovo.com/lp0513
- Lenovo ThinkSystem D4390
  https://lenovopress.lenovo.com/lp1681

## External storage systems

Lenovo offers the ThinkSystem DE Series, ThinkSystem DG Series, ThinkSystem DM Series and ThinkSystem DS Series external storage systems for high-performance storage. See the DE Series, DG Series and DM Series product guides for specific controller models, expansion enclosures and configuration options:

- ThinkSystem DE Series Storage
  https://lenovopress.com/storage/thinksystem/de-series#rt=product-guide
- ThinkSystem DS Series Storage
  https://lenovopress.lenovo.com/storage/thinksystem/ds-series
- ThinkSystem DM Series Storage
  https://lenovopress.com/storage/thinksystem/dm-series#rt=product-guide
- ThinkSystem DG Series Storage
  https://lenovopress.com/storage/thinksystem/dg-series#rt=product-guide

## External backup units

The following table lists the external backup options that are offered by Lenovo.

Table 75. External backup options

| Part number | Description |
|---|---|
| External RDX USB drives | |
| 4T27A10725 | ThinkSystem RDX External USB 3.0 Dock |
| External SAS tape backup drives | |
| 6160S6E | IBM TS2260 Tape Drive Model H6S |
| 6160S7E | IBM TS2270 Tape Drive Model H7S |
| 6160S8E | IBM TS2280 Tape Drive Model H8S |
| 6160S9E | IBM TS2290 Tape Drive Model H9S |
| External SAS tape backup autoloaders | |
| 6171S6R | IBM TS2900 Tape Autoloader w/LTO6 HH SAS |
| 6171S7R | IBM TS2900 Tape Autoloader w/LTO7 HH SAS |

| Part number | Description |
|---|---|
| 6171S8R | IBM TS2900 Tape Autoloader w/LTO8 HH SAS |
| 6171S9R | IBM TS2900 Tape Autoloader w/LTO9 HH SAS |
| External tape backup libraries | |
| 6741A1F | IBM TS4300 3U Tape Library Base Unit |
| 6741B1F | IBM TS4300 3U Tape Library Base Unit - Max 48U |
| 6741A3F | TS4300 Tape Library Expansion Unit |
| 6741B3F | IBM TS4300 3U Tape Library Expansion Unit - Max 48U |
| SAS backup drives for TS4300 Tape Library | |
| 01KP934 | LTO 6 HH SAS Drive |
| 01KP937 | LTO 7 HH SAS Drive |
| 01KP953 | LTO 8 HH SAS Drive |
| 02JH836 | LTO 9 HH SAS Drive |
| Full High 8 Gb Fibre Channel for TS4300 | |
| 01KP938 | LTO 7 FH Fibre Channel Drive |
| 01KP954 | LTO 8 FH Fibre Channel Drive |
| 02JH837 | LTO 9 FH Fibre Channel Drive |
| Half High 8 Gb Fibre Channel for TS4300 | |
| 01KP936 | LTO 7 HH Fibre Channel Drive |
| 01KP952 | LTO 8 HH Fibre Channel Drive |
| 02JH835 | LTO 9 HH Fibre Channel Drive |
| Half High 6 Gb SAS for TS4300 | |
| 01KP937 | LTO 7 HH SAS Drive |
| 01KP953 | LTO 8 HH SAS Drive |
| 02JH836 | LTO 9 HH SAS Drive |

For more information, see the list of Product Guides in the Backup units category:
https://lenovopress.com/servers/options/backup

## Fibre Channel SAN switches

Lenovo offers the ThinkSystem DB Series of Fibre Channel SAN switches for high-performance storage expansion. See the DB Series product guides for models and configuration options:

- ThinkSystem DB Series SAN Switches:
  https://lenovopress.com/storage/switches/rack#rt=product-guide

## Rack cabinets

The following table lists the supported rack cabinets.

Table 76. Rack cabinets

| Model | Description |
|---|---|
| 7D6DA007WW | ThinkSystem 42U Onyx Primary Heavy Duty Rack Cabinet (1200mm) |
| 7D6DA008WW | ThinkSystem 42U Pearl Primary Heavy Duty Rack Cabinet (1200mm) |
| 7D6EA009WW | ThinkSystem 48U Onyx Primary Heavy Duty Rack Cabinet (1200mm) |
| 7D6EA00AWW | ThinkSystem 48U Pearl Primary Heavy Duty Rack Cabinet (1200mm) |
| 1410O42 | Lenovo EveryScale 42U Onyx Heavy Duty Rack Cabinet |
| 1410P42 | Lenovo EveryScale 42U Pearl Heavy Duty Rack Cabinet |
| 1410O48 | Lenovo EveryScale 48U Onyx Heavy Duty Rack Cabinet |
| 1410P48 | Lenovo EveryScale 48U Pearl Heavy Duty Rack Cabinet |
| 93072RX | 25U Standard Rack (1000mm) |
| 93072PX | 25U Static S2 Standard Rack (1000mm) |
| 93074RX | 42U Standard Rack (1000mm) |
| 93604PX | 42U 1200mm Deep Dynamic Rack |
| 93614PX | 42U 1200mm Deep Static Rack |
| 93634PX | 42U 1100mm Dynamic Rack |
| 93634EX | 42U 1100mm Dynamic Expansion Rack |
| 93084PX | 42U Enterprise Rack |
| 93084EX | 42U Enterprise Expansion 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 supported KVM consoles.

Table 77. KVM console

| Part number | Description |
|---|---|
| Consoles | |
| 4XF7A84188 | ThinkSystem 18.5" LCD console (with US English keyboard) |
| 4XF7A73009 | ThinkSystem 18.5" LCD console (with US English keyboard) |
| 17238BX | 1U 18.5" Standard Console (without keyboard - see the next table) |

The following table lists the keyboards supported with the 1U 18.5" Standard Console (now withdrawn).

**Note**: These keyboards are not supported with the ThinkSystem 18.5" LCD Console.

Table 78. Keyboards for 1U 18.5" Standard Console

| Part number | Description |
|---|---|
| 7ZB7A05469 | ThinkSystem Keyboard w/ Int.Pointing Device USB - Arabic 253 RoHS v2 |
| 7ZB7A05468 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Belg/UK 120 RoHS v2 |
| 7ZB7A05206 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Czech 489 RoHS v2 |
| 7ZB7A05207 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Danish 159 RoHS v2 |
| 7ZB7A05208 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Dutch 143 RoHS v2 |
| 7ZB7A05210 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Fr/Canada 445 RoHS v2 |
| 7ZB7A05209 | ThinkSystem Keyboard w/ Int. Pointing Device USB - French 189 RoHS v2 |
| 7ZB7A05211 | ThinkSystem Keyboard w/ Int. Pointing Device USB - German 129 RoHS v2 |
| 7ZB7A05212 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Greek 219 RoHS v2 |
| 7ZB7A05213 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Hebrew 212 RoHS v2 |
| 7ZB7A05214 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Hungarian 208 RoHS v2 |
| 7ZB7A05215 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Italian 141 RoHS v2 |
| 7ZB7A05216 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Japanese 194 RoHS v2 |
| 7ZB7A05217 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Korean 413 RoHS v2 |
| 7ZB7A05218 | ThinkSystem Keyboard w/ Int. Pointing Device USB - LA Span 171 RoHS v2 |
| 7ZB7A05219 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Norwegian 155 RoHS v2 |
| 7ZB7A05220 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Polish 214 RoHS v2 |
| 7ZB7A05221 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Portugese 163 RoHS v2 |
| 7ZB7A05222 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Russian 441 RoHS v2 |
| 7ZB7A05223 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Slovak 245 RoHS v2 |
| 7ZB7A05231 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Slovenian 234 RoHS v2 |
| 7ZB7A05224 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Spanish 172 RoHS v2 |
| 7ZB7A05225 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Swed/Finn 153 RoHS v2 |
| 7ZB7A05226 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Swiss F/G 150 RoHS v2 |
| 7ZB7A05227 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Thai 191 RoHS v2 |
| 7ZB7A05467 | ThinkSystem Keyboard with Int. Pointing Device USB - Trad Chinese/US 467 RoHS v2 |
| 7ZB7A05228 | ThinkSystem Keyboard w/ Int. Pointing Device USB - Turkish 179 RoHS v2 |
| 7ZB7A05229 | ThinkSystem Keyboard w/ Int. Pointing Device USB - UK Eng 166 RoHS v2 |
| 7ZB7A05470 | ThinkSystem Keyboard w/ Int. Pointing Device USB - US Eng 103P RoHS v2 |
| 7ZB7A05230 | ThinkSystem Keyboard w/ Int. Pointing Device USB - US Euro 103P RoHS v2 |

The following table lists the available KVM switches and the options that are supported with them.

Table 79. KVM switches and options

| Part number | Description |
|---|---|
| KVM Console switches | |
| 1754D1T | ThinkSystem Digital 2x1x16 KVM Switch (DVI video output port) |
| 1754A1T | ThinkSystem Analog 1x8 KVM Switch (DVI video output port) |
| 1754D2X | Global 4x2x32 Console Manager (GCM32) |
| 1754D1X | Global 2x2x16 Console Manager (GCM16) |
| 1754A2X | Local 2x16 Console Manager (LCM16) |
| 1754A1X | Local 1x8 Console Manager (LCM8) |
| Cables for ThinkSystem Digital and Analog KVM Console switches | |

| Part number | Description |
|---|---|
| 4X97A11108 | ThinkSystem VGA to DVI Conversion Cable |
| 4X97A11109 | ThinkSystem Single-USB Conversion Cable for Digital KVM |
| 4X97A11107 | ThinkSystem Dual-USB Conversion Cable for Digital KVM |
| 4X97A11106 | ThinkSystem USB Conversion Cable for Analog KVM |
| Cables for GCM and LCM Console switches | |
| 43V6147 | Single Cable USB Conversion Option (UCO) |
| 39M2895 | USB Conversion Option Pack |
| 46M5383 | Virtual Media Conversion Option Gen2 (VCO2) |
| 46M5382 | Serial Conversion Option (SCO) |

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

## Power distribution units

The following table lists the power distribution units (PDUs) that are offered by Lenovo.

Table 80. Power distribution units

| Part number | Feature code | Description | ANZ | ASEAN | Brazil | EET | MEA | RUCIS | WE | HTK | INDIA | JAPAN | LA | NA | PRC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0U Basic PDUs** | | | | | | | | | | | | | | | |
| 4PU7A93176 | C0QH | 0U 36 C13 and 6 C19 Basic 32A 1 Phase PDU v2 | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |
| 4PU7A93169 | C0DA | 0U 36 C13 and 6 C19 Basic 32A 1 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |
| 4PU7A93177 | C0QJ | 0U 24 C13/C15 and 24 C13/C15/C19 Basic 32A 3 Phase WYE PDU v2 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 4PU7A93170 | CBVF | 0U 24 C13/C15 and 24 C13/C15/C19 Basic 32A 3 Phase WYE PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 00YJ776 | ATZY | 0U 36 C13/6 C19 24A 1 Phase PDU | N | Y | Y | N | N | N | N | N | N | Y | Y | Y | N |
| 00YJ779 | ATZX | 0U 21 C13/12 C19 48A 3 Phase PDU | N | N | Y | N | N | N | Y | N | N | Y | Y | Y | N |
| 00YJ777 | ATZZ | 0U 36 C13/6 C19 32A 1 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | N | Y | Y |
| 00YJ778 | AU00 | 0U 21 C13/12 C19 32A 3 Phase PDU | Y | Y | N | Y | Y | Y | Y | Y | Y | N | N | Y | Y |
| **0U Switched and Monitored PDUs** | | | | | | | | | | | | | | | |
| 4PU7B08148 | CD15 | 0U 3 C13 and 18 C19 Monitored 48A 3 Phase WYE PDU | N | N | N | N | N | N | N | N | N | N | N | Y | N |
| 4PU7B08149 | CD16 | 0U 3 C13 and 18 C19 Monitored 63A 3 Phase WYE PDU | N | N | N | Y | N | N | Y | N | N | N | N | N | N |
| 4PU7A93181 | C0QN | 0U 21 C13/C15 and 21 C13/C15/C19 Switched and Monitored 48A 3 Phase Delta PDU v2 (60A derated) | N | Y | N | N | N | N | N | Y | N | Y | N | Y | N |
| 4PU7A93174 | CBVJ | 0U 21 C13/C15 and 21 C13/C15/C19 Switched and Monitored 60A 3 Phase Delta PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 4PU7A93178 | C0QK | 0U 20 C13 and 4 C19 Switched and Monitored 32A 1 Phase PDU v2 | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |
| 4PU7A93171 | C0D8 | 0U 20 C13 and 4 C19 Switched and Monitored 32A 1 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |
| 4PU7A93182 | C0QP | 0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 63A 3 Phase WYE PDU v2 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

| Part number | Feature code | Description | ANZ | ASEAN | Brazil | EET | MEA | RUCIS | WE | HTK | INDIA | JAPAN | LA | NA | PRC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4PU7A93175 | C0CS | 0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 63A 3 Phase WYE PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |
| 4PU7A93180 | C0QM | 0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 32A 3 Phase WYE PDU v2 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 4PU7A93173 | CBVH | 0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 32A 3 Phase WYE PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 4PU7A93179 | C0QL | 0U 16 C13/C15 and 16 C13/C15/C19 Switched and Monitored 24A 1 Phase PDU v2 (30A derated) | N | Y | N | N | N | N | N | Y | N | Y | Y | Y | N |
| 4PU7A93172 | CBVG | 0U 16 C13/C15 and 16 C13/C15/C19 Switched and Monitored 30A 1 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 00YJ783 | AU04 | 0U 12 C13/12 C19 Switched and Monitored 48A 3 Phase PDU | N | N | Y | N | N | N | Y | N | N | Y | Y | Y | N |
| 00YJ781 | AU03 | 0U 20 C13/4 C19 Switched and Monitored 24A 1 Phase PDU | N | N | Y | N | Y | N | Y | N | N | Y | Y | Y | N |
| 00YJ782 | AU02 | 0U 18 C13/6 C19 Switched and Monitored 32A 3 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | N | Y |
| 00YJ780 | AU01 | 0U 20 C13/4 C19 Switched and Monitored 32A 1 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | N | Y |
| **1U Basic PDUs** | | | | | | | | | | | | | | | |
| 4PU7B12339 | CE6L | 1U Basic 16A 1 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |
| **1U Switched and Monitored PDUs** | | | | | | | | | | | | | | | |
| 4PU7A90808 | C0D4 | 1U 18 C19/C13 Switched and monitored 48A 3P WYE PDU V2 ETL | N | N | N | N | N | N | N | Y | N | Y | Y | Y | N |
| 4PU7A81117 | BNDV | 1U 18 C19/C13 switched and monitored 48A 3P WYE PDU - ETL | N | N | N | N | N | N | N | N | N | N | N | Y | N |
| 4PU7A90809 | C0DE | 1U 18 C19/C13 Switched and monitored 48A 3P WYE PDU V2 CE | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y |
| 4PU7A81118 | BNDW | 1U 18 C19/C13 switched and monitored 48A 3P WYE PDU – CE | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y |
| 4PU7A90810 | C0DD | 1U 18 C19/C13 Switched and monitored 80A 3P Delta PDU V2 | N | N | N | N | N | N | N | Y | N | Y | Y | Y | N |
| 4PU7A77467 | BLC4 | 1U 18 C19/C13 Switched and Monitored 80A 3P Delta PDU | N | N | N | N | N | N | N | N | N | Y | N | Y | N |
| 4PU7A90811 | C0DC | 1U 12 C19/C13 Switched and monitored 32A 3P WYE PDU V2 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 4PU7A77468 | BLC5 | 1U 12 C19/C13 switched and monitored 32A 3P WYE PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 4PU7A90812 | C0DB | 1U 12 C19/C13 Switched and monitored 60A 3P Delta PDU V2 | N | N | N | N | N | N | N | Y | N | Y | Y | Y | N |
| 4PU7A77469 | BLC6 | 1U 12 C19/C13 switched and monitored 60A 3P Delta PDU | N | N | N | N | N | N | N | N | N | N | N | Y | N |
| 46M4002 | 5896 | 1U 9 C19/3 C13 Switched and Monitored DPI PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 46M4004 | 5894 | 1U 12 C13 Switched and Monitored DPI PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 46M4003 | 5897 | 1U 9 C19/3 C13 Switched and Monitored 60A 3 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 46M4005 | 5895 | 1U 12 C13 Switched and Monitored 60A 3 Phase PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

| Part number | Feature code | Description | ANZ | ASEAN | Brazil | EET | MEA | RUCIS | WE | HTK | INDIA | JAPAN | LA | NA | PRC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1U C13 Enterprise PDUs (12x IEC 320 C13 outlets)** | | | | | | | | | | | | | | | |
| 39M2816 | 6030 | DPI C13 PDU+ | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 39Y8941 | 6010 | Enterprise C13 PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **1U C19 Enterprise PDUs (6x IEC 320 C19 outlets)** | | | | | | | | | | | | | | | |
| 39Y8948 | 6060 | Enterprise C19 PDU | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 39Y8923 | 6061 | Enterprise C19 3 phase PDU (60a) | N | N | Y | N | N | N | Y | N | N | N | Y | Y | N |
| **1U Front-end PDUs (3x IEC 320 C19 outlets)** | | | | | | | | | | | | | | | |
| 39Y8938 | 6002 | DPI 30amp/125V Front-end PDU with NEMA L5-30P | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 39Y8939 | 6003 | DPI 30amp/250V Front-end PDU with NEMA L6-30P | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 39Y8934 | 6005 | DPI 32amp/250V Front-end PDU with IEC 309 2P+Gnd | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 39Y8940 | 6004 | DPI 60amp/250V Front-end PDU with IEC 309 2P+Gnd connector | Y | N | Y | Y | Y | Y | Y | N | N | Y | Y | Y | N |
| 39Y8935 | 6006 | DPI 63amp/250V Front-end PDU with IEC 309 2P+Gnd connector | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **1U NEMA PDUs (6x NEMA 5-15R outlets)** | | | | | | | | | | | | | | | |
| 39Y8905 | 5900 | DPI 100-127v PDU with Fixed Nema L5-15P line cord | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| **Line cords for 1U PDUs that ship without a line cord** | | | | | | | | | | | | | | | |
| 40K9611 | 6504 | 4.3m, 32A/380-415V, EPDU/IEC 309 3P+N+G 3ph wye (non-US) Line Cord | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 40K9612 | 6502 | 4.3m, 32A/230V, EPDU to IEC 309 P+N+G (non-US) Line Cord | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 40K9613 | 6503 | 4.3m, 63A/230V, EPDU to IEC 309 P+N+G (non-US) Line Cord | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 40K9614 | 6500 | 4.3m, 30A/208V, EPDU to NEMA L6-30P (US) Line Cord | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 40K9615 | 6501 | 4.3m, 60A/208V, EPDU to IEC 309 2P+G (US) Line Cord | N | N | Y | N | N | N | Y | N | N | Y | Y | Y | N |
| 40K9617 | 6505 | 4.3m, 32A/230V, Souriau UTG to AS/NZS 3112 (Aus/NZ) Line Cord | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 40K9618 | 6506 | 4.3m, 32A/250V, Souriau UTG Female to KSC 8305 (S. Korea) Line Cord | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

For more information, see the Lenovo Press documents in the PDU category:
https://lenovopress.com/servers/options/pdu

## Uninterruptible power supply units

The following table lists the uninterruptible power supply (UPS) units that are offered by Lenovo.

Table 81. Uninterruptible power supply units

| Part number | Description |
|---|---|
| Rack-mounted or tower UPS units - 100-125VAC | |
| 7DD5A001WW | RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC) |
| 55941AX | RT1.5kVA 2U Rack or Tower UPS (100-125VAC) |
| 55942AX | RT2.2kVA 2U Rack or Tower UPS (100-125VAC) |
| 7DD5A003WW | RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC) |
| 55943AX | RT3kVA 2U Rack or Tower UPS (100-125VAC) |
| Rack-mounted or tower UPS units - 200-240VAC | |
| 7DD5A002WW | RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC) |
| 55941KX | RT1.5kVA 2U Rack or Tower UPS (200-240VAC) |
| 55942KX | RT2.2kVA 2U Rack or Tower UPS (200-240VAC) |
| 7DD5A005WW | RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC) |
| 55943KX | RT3kVA 2U Rack or Tower UPS (200-240VAC) |
| 7DD5A007WW | RT5kVA 3U Rack or Tower UPS-G2 (200-240VAC) |
| 55945KX | RT5kVA 3U Rack or Tower UPS (200-240VAC) |
| 7DD5A008WW | RT6kVA 3U Rack or Tower UPS-G2 (200-240VAC) |
| 55946KX | RT6kVA 3U Rack or Tower UPS (200-240VAC) |
| 55948KX | RT8kVA 6U Rack or Tower UPS (200-240VAC) |
| 7DD5A00AWW | RT11kVA 6U Rack or Tower UPS-G2 (200-240VAC) |
| 55949KX | RT11kVA 6U Rack or Tower UPS (200-240VAC) |
| 55943KT† | ThinkSystem RT3kVA 2U Standard UPS (200-230VAC) (2x C13 10A, 2x GB 10A, 1x C19 16A outlets) |
| 55943LT† | ThinkSystem RT3kVA 2U Long Backup UPS (200-230VAC) (2x C13 10A, 2x GB 10A, 1x C19 16A outlets) |
| 55946KT† | ThinkSystem RT6kVA 5U UPS (200-230VAC) (2x C13 10A outlets, 1x Terminal Block output) |
| 5594XKT† | ThinkSystem RT10kVA 5U UPS (200-230VAC) (2x C13 10A outlets, 1x Terminal Block output) |
| Rack-mounted or tower UPS units - 380-415VAC | |
| 55948PX | RT8kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC) |
| 55949PX | RT11kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC) |

† Only available in China and the Asia Pacific market.

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

## Lenovo Financial Services

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- **100% Solution Financing**

  Financing your entire solution including hardware, software, and services, ensures more predictability in your project planning with fixed, manageable payments and low monthly payments.

- **Device as a Service (DaaS)**

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- **24/7 Asset management**

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- **Fair Market Value (FMV) and $1 Purchase Option Leases**

  Maximize your purchasing power with our lowest cost option. An FMV lease offers lower monthly payments than loans or lease-to-own financing. Think of an FMV lease as a rental. You have the flexibility at the end of the lease term to return the equipment, continue leasing it, or purchase it for the fair market value. In a $1 Out Purchase Option lease, you own the equipment. It is a good option when you are confident you will use the equipment for an extended period beyond the finance term. Both lease types have merits depending on your needs. We can help you determine which option will best meet your technological and budgetary goals.

Ask your Lenovo Financial Services representative about this promotion and how to submit a credit application. For the majority of credit applicants, we have enough information to deliver an instant decision and send a notification within minutes.

## Seller training courses

The following sales training courses are offered for employees and partners (login required). Courses are listed in date order.

1. **ISG Smarter Tools, Faster Deals and Better Outcomes**
   2026-02-27 | 40 minutes | Employees and Partners

   In this 40-minute video, we review several tools and programs from Lenovo ISG to help our Partners' Data Center selling efforts: Smarter Tools / Faster Deals / Better Outcomes. We cover Top Choice Express, our premier program for supply optimized solutions. We next demonstrated DCSC, the Data Center Solution Configurator, Compete Tool for comparisons with our competition, and XClarity One, the next evolution of our XClarity Systems Management tool.

   Tags: DataCenter Products

   Published: 2026-02-27
   Length: 40 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: FEB2426

2. **ThinkSystem Rackmount and Tower Servers powered by AMD**
   2026-02-23 | 25 minutes | Employees and Partners

   This course presents the key products and features of the ThinkSystem Rackmount and Tower server family powered by AMD processors. It describes customer benefits and will help you recognize when a specific product should be selected.

   By the end of this course, you should be able to:
   - Identify products and features within the family
   - Describe customer benefits offered by this family
   - Recognize when a specific product should be selected

   Last updated: 2/24/2026

   Tags: Server, ThinkSystem

   Published: 2026-02-23
   Length: 25 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: SXXW1216r11

3. **OneIQ Overview and Demo**
   2026-02-10 | 35 minutes | Employees and Partners

   In this 35-minute video, Peter Grant, Head of Customer Experience for OneIQ, presents and overview and demo of OneIQ for Lenovo Partners.

   Tags: Sales Tools

   Published: 2026-02-10
   Length: 35 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: ONEIQ101
4. **Family Portfolio: ThinkSystem Rack and Tower Servers Powered by Intel**
   2026-02-04 | 25 minutes | Employees and Partners

   This course is designed to give Lenovo sales and partner representatives a foundation of the ThinkSystem Intel Rackmount and Tower server family.
   After completing this course, you will be able to:
   - Identify products within this ThinkSystem server family
   - Describe features of this family
   - Recognize when a specific product should be selected

   Tags: Server, ThinkSystem

   Published: 2026-02-04
   Length: 25 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: SXXW1204r15
5. **FY26Q4 Solutions Launch Tech World Quick Hit**
   2026-01-16 | 10 minutes | Employees and Partners

   This Quick Hit focuses on Lenovo's announcement of a family of servers specifically configured for AI inferencing. These servers are proven and optimized, featuring GPUs, CPUs, and memory combinations designed to deliver the highest inferencing performance.

   Tags: Artificial Intelligence (AI), Server, Storage, ThinkEdge, ThinkSystem

   Published: 2026-01-16
   Length: 10 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: DAIQ100

6. **ThinkSystem Rack & Tower Server Primer - Module 2**
   2025-12-17 | 45 minutes | Employees Only

   This course builds on the foundational concepts from the prework modules, helping Client Managers deepen their understanding of ThinkSystem Rack and Tower Servers and apply that knowledge to confidently initiate value-driven customer conversations. Please Note: The videos in this course are taken from the Module 2 live session led by Tikiri Wandregala.

   By the end of this course, you will be able to:

   - Demonstrate the ability to initiate a data center discussion with a customer.
   - Analyze and evaluate potential data center opportunities.
   - Apply criteria to effectively qualify an opportunity.
   - Locate and differentiate key resources and contacts.

   Tags: DataCenter Products, ThinkSystem

   Published: 2025-12-17
   Length: 45 minutes

   **Start the training:**
   Employee link: Grow@Lenovo

   Course code: DSRTB101
7. **Partner Technical Webinar - Mainstream CPUs**
   2025-09-29 | 40 minutes | Employees and Partners

   In this 40-minute replay, Brad Violand, Lenovo ISG Category team, reviewed the strategy to optimize the CPU portfolio and ensuing changes to DCSC planned for October 1, 2025.

   Tags: Server

   Published: 2025-09-29
   Length: 40 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: SEP2625
8. **Partner Technical Webinar - ISG Portfolio - Wayne's World**
   2025-09-25 | 60 minutes | Employees and Partners

   In this 60-minute replay, Wayne Pecht, Lenovo Channel SA, shared his extensive experience and unique approach to the ISG Portfolio "Wayne's World for Lenovo ISG"!

   Tags: Channel, Technical Sales

   Published: 2025-09-25
   Length: 60 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: SEP1925

9. **Partner Technical Webinar - OneIQ Demo**
   2025-09-08 | 60 minutes | Employees and Partners

   In this 60-minute replay, Joe Allen, Lenovo Senior Solution Architect for LETS, demonstrated the OneIQ tool. He showed how the collector is dispatched, how the data can be viewed, and how you build solutions based on the collected data.

   Tags: Server, ThinkSystem

   Published: 2025-09-08
   Length: 60 minutes

   **Start the training:**
   Employee link: Grow@Lenovo
   Partner link: Lenovo 360 Learning Center

   Course code: SEP0525

10. **Think AI Weekly: ISG & SSG Better Together: Uniting AI Solutions & Services for Smarter Outcomes**
    2025-08-01 | 55 minutes | Employees Only

    View this session to hear from our speakers Allen Holmes, AI Technologist, ISG and Balaji Subramaniam, AI Regional Leader-Americas, SSG.

    Topics include:

    • An overview of ISG & SSG AI CoE Offerings with Customer Case Studies
    • The Enterprise AI Deal Engagement Flow with ISG and SSG
    • How sellers can leverage this partnership to differentiate with Enterprise clients.
    • NEW COURSE: From Inception to Execution: Evolution of an AI Deal

    Tags: Artificial Intelligence (AI), Sales, Services, Technology Solutions, TruScale Infrastructure as a Service

    Published: 2025-08-01
    Length: 55 minutes

    **Start the training:**
    Employee link: Grow@Lenovo

    Course code: DTAIW145

11. **VTT-HPC: Explaining HPC Benchmarking: Processes, Standards and Best Practices**
2025-07-30 | 87 minutes | Employees Only

Please join us as Eric Michel, HPC & AI Performance Team Coordinator and Kevin Dean, Sr Manager, HPC Performance, Projection & Operations speak with us about HPC Benchmarking.

Topics will include:

• Why sellers need to request benchmarks
• How to request benchmarks
• How the team performs a benchmark
• The performance database
• Demonstration of the tool

Tags: Advanced Data Center, High Performance Computing (HPC), Technical Sales

Published: 2025-07-30
Length: 87 minutes

**Start the training:**
Employee link: Grow@Lenovo

Course code: DVHPC224

12. **Family Portfolio: Server Component Options**
2025-07-21 | 20 minutes | Employees and Partners

This course covers opportunities that are available to upsell server components. By upselling the correct components, you can increase the size and revenue of the original sale.
After completing this course, you should be able to:
• Identify the opportunities for an upsell
• Recognize when specific products should be discussed
• Emphasize how a product benefits the customer
• Identify keywords that indicate upsell opportunities

Tags: Server, Storage

Published: 2025-07-21
Length: 20 minutes

**Start the training:**
Employee link: Grow@Lenovo
Partner link: Lenovo 360 Learning Center

Course code: SXXW1109r2

13. **ThinkSystem Rack and Tower Introduction for ISO Client Managers**
2025-06-16 | 20 minutes | Employees Only

In this course, you will learn about Lenovo's Data Center Portfolio, its ThinkSystem Family and the key features of the Rack and Tower servers. It will equip you with foundational knowledge which you can then expand upon by participating in the facilitated session of the curriculum.

Tags: Server, ThinkSystem

Published: 2025-06-16
Length: 20 minutes

**Start the training:**
Employee link: Grow@Lenovo

Course code: DSRTO101r2_JP

14. **Lenovo Data Center Product Portfolio**
2025-06-11 | 20 minutes | Employees and Partners

This course introduces the Lenovo data center portfolio, and covers servers, storage, storage networking, and software-defined infrastructure products. After completing this course about Lenovo data center products, you will be able to identify product types within each data center family, describe Lenovo innovations that this product family or category uses, and recognize when a specific product should be selected.

Course objectives:
1.Identify product types within each data center family
2.Describe the features of the product family or category
3.Recognize when a specific product should be selected

Tags: Advanced DataCenter, DataCenter Products, Server, ThinkAgile, ThinkEdge, ThinkSystem

Published: 2025-06-11
Length: 20 minutes

**Start the training:**
Employee link: Grow@Lenovo
Partner link: Lenovo 360 Learning Center

Course code: SXXW1110r8

15. **VTT HPC: AI and the Impact on the Environment**
    2025-06-11 | 58 minutes | Employees Only

    Please join us as Matthew Ziegler, Director of Lenovo Neptune and Sustainability speaks with us about AI and the Impact on the Environment.

    Topics will include:

    - Why is ESG essential for your customer?
    - How to find and read an eco declaration
    - What is a product carbon footprint?
    - Demo of the Lenovo Capacity Planner

    Tags: Advanced DataCenter, Artificial Intelligence (AI), Environmental Social Governance (ESG), High-Performance Computing (HPC), Server

    Published: 2025-06-11
    Length: 58 minutes

    **Start the training:**
    Employee link: Grow@Lenovo

    Course code: DVHPC223

16. **Partner Technical Webinar - RTX Pro 6000**
    2025-05-22 | 60 minutes | Employees and Partners

    In this 60-minute replay, Allen Bourgoyne, Product Marketing for NVIDIA, presented the newly announced RTX Pro 6000 Blackwell Server Edition GPU.

    Tags: Artificial Intelligence (AI)

    Published: 2025-05-22
    Length: 60 minutes

    **Start the training:**
    Employee link: Grow@Lenovo
    Partner link: Lenovo 360 Learning Center

    Course code: MAY1525

17. **Partner Technical Webinar - DCSC Improvements - MAY0225**
2025-05-05 | 60 minutes | Employees and Partners

In this 60-minute replay, new improvements to DCSC were reviewed. Joe Allen, Lenovo NA LETS, presented the new PCI wizard and discussed RAID adapters. Ryan Tuttle, Lenovo NA LETS presented Spreadsheet import, Autocorrect and Expanded selections on by default. Joe Murphy, Lenovo NA LETS closed out with review of Error Message improvements and location of ThinkAgile MX and VX in the DCSC menus.

Tags: Technical Sales

Published: 2025-05-05
Length: 60 minutes

**Start the training:**
Employee link: Grow@Lenovo
Partner link: Lenovo 360 Learning Center

Course code: MAY0225

18. **Family Portfolio: Storage Controller Options**
2025-03-03 | 25 minutes | Employees and Partners

This course covers the storage controller options available for use in Lenovo servers. The classes of storage controller are discussed, along with a discussion of where they are used, and which to choose.

After completing this course, you will be able to:
• Describe the classes of storage controllers
• Discuss where each controller class is used
• Describe the available options in each controller class

Tags: Sales, Storage

Published: 2025-03-03
Length: 25 minutes

**Start the training:**
Employee link: Grow@Lenovo
Partner link: Lenovo 360 Learning Center

Course code: SXXW1111r2

19. **ThinkSystem Rack and Tower Introduction for ISO Client Managers**
2024-12-10 | 20 minutes | Employees Only

In this course, you will learn about Lenovo's Data Center Portfolio, its ThinkSystem Family and the key features of the Rack and Tower servers. It will equip you with foundational knowledge which you can then expand upon by participating in the facilitated session of the curriculum.

Course Objectives:
• By the end of this course, you should be able to:
• Identify Lenovo's main data center brands.
• Describe the key components of the ThinkSystem Family servers.
• Differentiate between the Rack and Tower servers of the ThinkSystem Family.
• Understand the value Rack and Tower servers can provide to customers.

Tags: Server, ThinkSystem

Published: 2024-12-10
Length: 20 minutes

**Start the training:**
Employee link: Grow@Lenovo

Course code: DSRTO101r2

20. **Virtual Facilitated Session - ThinkSystem Rack and Tower Primer for ISO Client Managers - HISTORICAL**
2024-10-31 | 90 minutes | Employees Only

In this Virtual Instructor-Led Training Session, ISO Client Managers will be able to build on the knowledge gained in Module 1 (eLearning) of the ThinkSystem Rack and Tower Server Primer for ISO Client Managers curriculum.

IMPORTANT! Module 1 (eLearning) must be completed to be eligible to participate in this session. Please note that places are subject to availability. If you are selected, you will receive the invite to this session via email.

Tags: Sales, Server, ThinkSystem

Published: 2024-10-31
Length: 90 minutes

**Start the training:**
Employee link: Grow@Lenovo

Course code: DSRTO102

21. **SAP Webinar for Lenovo Sellers: Lenovo Portfolio Update for SAP Landscapes**
2024-06-04 | 60 minutes | Employees Only

Join Mark Kelly, Advisory IT Architect with the Lenovo Global SAP Center of Competence as he discusses:
•Challenges in the SAP environment
•Lenovo On-premise Solutions for SAP
•Lenovo support resources for SAP solutions

Tags: SAP, ThinkAgile, ThinkEdge, ThinkSystem

Published: 2024-06-04
Length: 60 minutes

**Start the training:**
Employee link: Grow@Lenovo

Course code: DSAPF101

## Related publications and links

For more information, see these resources:

- ThinkSystem SR650 product page
https://www.lenovo.com/us/en/data-center/servers/racks/ThinkSystem-SR650/p/77XX7SRSR65
- Datasheet for the ThinkSystem SR650:
https://lenovopress.com/ds0032-lenovo-thinksystem-sr650
- 3D Interactive Tour of the ThinkSystem SR650:
https://lenovopress.com/lp0673-3d-tour-thinksystem-sr650
- Walkthrough Video for the ThinkSystem SR650:
https://lenovopress.com/lp0700-thinksystem-sr650-server-video-walkthrough
- User Manuals for the ThinkSystem SR650:
https://pubs.lenovo.com/sr650/
    - Quick Start Guide
    - Setup Guide
    - Rack Installation Guides
    - Maintenance Manual
    - Messages and Codes Reference
    - UEFI Manual
- Lenovo Data Center Support Downloads - ThinkSystem SR650:
http://datacentersupport.lenovo.com/products/servers/thinksystem/sr650/7x05/downloads
http://datacentersupport.lenovo.com/products/servers/thinksystem/sr650/7x06/downloads
- Lenovo Hardware Installation & Removal Videos on the ThinkSystem SR650:
    - YouTube: https://www.youtube.com/playlist?list=PLYV5R7hVcs-A25P7vBoGa_wn7D7XTgDS_
    - Youku: https://list.youku.com/albumlist/show/id_50483444
- Lenovo Data Center Solution Configurator (DCSC):
http://dcsc.lenovo.com

## Related product families

Product families related to this document are the following:

- 2-Socket Rack Servers
- ThinkSystem SR650 Server

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