

## Lenovo System x3550 M5 (Machine Type 8869) Product Guide (withdrawn product)

Designed in a compact, versatile 1U two-socket rack server, the Lenovo System x3550 M5 (E5-2600 v4) server (Machine Type 8869) fuels almost any workload in the software-defined data center from infrastructure to high-performance computing (HPC) to cloud or big data with leadership security, efficiency, and reliability features. With support for Intel Xeon processor E5-2600 v4 product family and faster, energy-efficient TruDDR4 memory, the System x3550 M5 delivers exceptional performance. Flexible and scalable internal storage configurations include up to 12x 2.5-inch or 4x 3.5-inch drives with a wide selection of drive sizes and types.

*Suggested use:* Database, virtualization and cloud computing, infrastructure security, systems management, enterprise applications, collaboration/email, streaming media, web, and HPC.

The following figure shows the System x3550 M5.



Figure 1. Lenovo System x3550 M5

### Did you know?

The System x3550 M5 incorporates energy smart features for minimized costs and efficient performance. Dual fan zones support operation in up to 40°C environments. 80 PLUS Titanium power supply units (PSUs) can deliver 96% efficiency at 50% load.

The System x3550 M5 has outstanding memory performance that is achieved by supporting two-RDIMM-per-channel configurations at speeds up to 12% faster than the Intel specification, while still maintaining world-class reliability.

The System x3550 M5 integrates leadership security and reliability. System x Trusted Platform Assurance, an exclusive set of System x features and practices, establishes a solid security foundation for your workloads. Enterprise-class data protection is provided with optional self-encrypting drives, and advanced diagnostic tools facilitate reduced downtime and costs.

## Key features

The System x3550 M5 is a cost- and density-balanced 1U, dual-socket business-critical server, offering improved performance and pay-as-you grow flexibility along with new features that improve server management capability. New, innovative, energy-smart design with powerful high-performance processors, a large capacity of high-performing DDR4 memory, and an improved feature set are ideal for business-critical applications and cloud deployments.

Combining balanced performance and flexibility, the System x3550 M5 is a great choice for small and medium businesses and 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 make it easy to deploy. Outstanding reliability, availability, and serviceability (RAS) and high-efficiency design improve your business environment and help save operational costs.

## Scalability and performance

The System x3550 M5 offers numerous features to boost performance, improve scalability, and reduce costs:

- Improves productivity by offering superior system performance with the Intel Xeon processor E5-2600 v4 product family with up to 22-core processors, up to 55 MB of cache, up to 2400 MHz memory speeds, and up to 9.6 GT/s QPI interconnect links.
  - Support for up to two processors, 44 cores, and 88 threads allows to maximize the concurrent execution of multithreaded applications.
  - Intelligent and adaptive system performance with energy efficient Intel Turbo Boost 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.

**Note:** Also available via CTO is the Intel Xeon processor E5-2600 v3 product family with up to 14-core processors, up to 35 MB of cache, up to 2133 MHz memory speeds, and up to 9.6 GT/s QPI interconnect links.

- Up to 2400 MHz memory speeds with two DIMMs per channel running at 2400 MHz to help maximize system performance.
- Up to 1.5 TB of memory capacity with 64 GB Load Reduced DIMMs (LRDIMMs)
- 12 Gbps serial-attached SCSI (SAS) internal storage connectivity doubles the data transfer rate compared to 6 Gb SAS solutions to maximize performance of storage I/O-intensive applications.
- Flexible and scalable internal storage configurations provide up to 92 TB of storage capacity with 7.68 TB 2.5-inch solid-state drives (SSDs) in a 1U rack form factor.
- The use of SSDs instead of or along with traditional spinning HDDs can significantly improve I/O performance. An SSD can support a significantly higher number of I/O operations per second (IOPS) than a typical HDD.
- The server has four integrated Gigabit Ethernet ports and optional 10 Gb Ethernet ports with mezzanine LOM (ML2) adapters.
- The server offers up to four PCI Express (PCIe) 3.0 I/O expansion slots in a dense 1U rack form factor.
- With Intel Integrated I/O Technology, the PCI Express 3.0 controller is integrated into the Intel Xeon processor E5-2600 v4 product family. This helps to dramatically reduce I/O latency and increase overall system performance.

## Availability and serviceability

The System x3550 M5 provides many features to simplify serviceability and increase system uptime:

- Tool-less cover removal provides easy access to upgrades and serviceable parts, such as processors, memory DIMMs, and adapter cards.
- The server offers hot-swap drives supporting RAID redundancy for data protection and greater system uptime.
- The server offers redundant hot-swap power supplies and hot-swap redundant fans to provide availability for business-critical applications.
- The new next-gen light path diagnostics LCD display panel simplifies servicing, speeds up problem resolution, and helps improve system availability.
- Proactive Platform Alerts (including PFA and SMART alerts): 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. Alerts can be surfaced through the system IMM to managers such as Lenovo XClarity Administrator, VMware vCenter, and Microsoft System Center. These proactive alerts let you take appropriate actions in advance of possible failure, thereby increasing server uptime and application availability.
- SSDs offer significantly better reliability than traditional mechanical HDDs for greater uptime.
- Built-in Integrated Management Module II (IMM2.1) continuously monitors system parameters, triggers alerts, and performs recovery actions in case of failure, to minimize downtime.
- Built-in diagnostics using Dynamic Systems Analysis (DSA) Preboot speed up troubleshooting to reduce service time.

## Manageability and security

Powerful systems management features simplify local and remote management of the System x3550 M5 and deliver enterprise-class data protection:

- The server includes an Integrated Management Module II (IMM2.1) to monitor server availability and perform remote management.
- An integrated industry-standard Unified Extensible Firmware Interface (UEFI) enables improved setup, configuration, and updates, and simplifies error handling.
- Lenovo XClarity Administrator offers comprehensive hardware management tools that help to increase uptime, reduce costs and improve productivity through advanced server management capabilities.
- An integrated Trusted Platform Module (TPM) supports the enablement of advanced cryptographic functionality, such as digital signatures and remote attestation.
- System x Trusted Platform Assurance, an exclusive set of System x security features and practices, establishes a solid security foundation for workloads by delivering firmware that is securely built, tested, digitally signed, and verified prior to execution.
- The server offers enterprise-class data protection with optional self-encrypting drives.
- Industry-standard AES NI support offers faster, stronger encryption.
- Intel Execute Disable Bit functionality can help prevent certain classes of malicious buffer overflow attacks when combined with a supporting operating system.
- Intel Trusted Execution Technology provides enhanced security through hardware-based resistance to malicious software attacks, allowing an application to run in its own isolated space, protected from all other software running on a system.

## Energy efficiency

The System x3550 M5 offers the following energy-efficiency features to save energy, reduce operational costs, increase energy availability, and contribute to a green environment:

- Energy-efficient planar components help lower operational costs.
- High-efficiency power supplies with 80 PLUS Platinum and Titanium certifications.
- Intel Intelligent Power Capability powers individual processor elements on and off as needed, to reduce power draw.
- Low-voltage Intel Xeon processors draw less energy to satisfy the demands of power and thermally constrained data centers and telecommunication environments.
- Low-voltage 1.2 V DDR4 memory DIMMs offer energy savings compared to 1.35 V and 1.5 V DDR3 DIMMs.
- The server uses hexagonal ventilation holes, a part of Calibrated Vecteded Cooling™ technology. Hexagonal holes can be grouped more densely than round holes, providing more efficient airflow through the system.
- Lenovo XClarity Energy Manager provide advanced data center power notification, analysis, and policy-based management to help achieve lower heat output and reduced cooling needs.

## Components and connectors

The following figure shows the front of the System x3550 M5 server with up to eight 2.5-inch drive bays and the Front IO cage Entry (default).

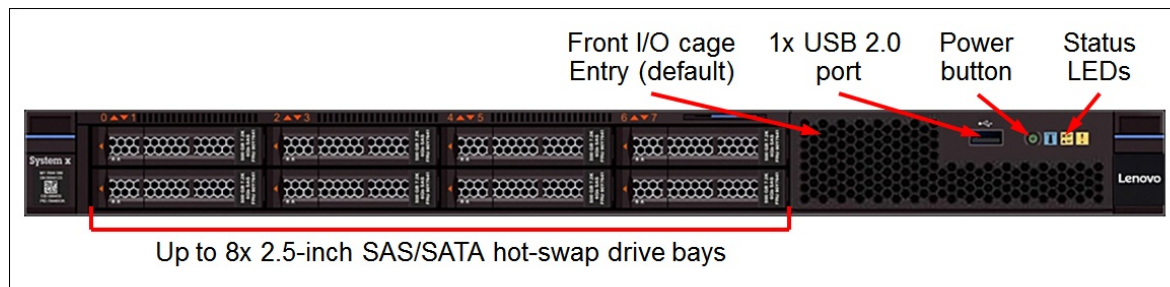


Figure 2. Front view of the System x3550 M5: 8x 2.5-inch drive bays; Front IO cage Entry (default)

The following figure shows the front of the System x3550 M5 server with up to eight 2.5-inch drive bays and the Front IO cage Standard (optional).

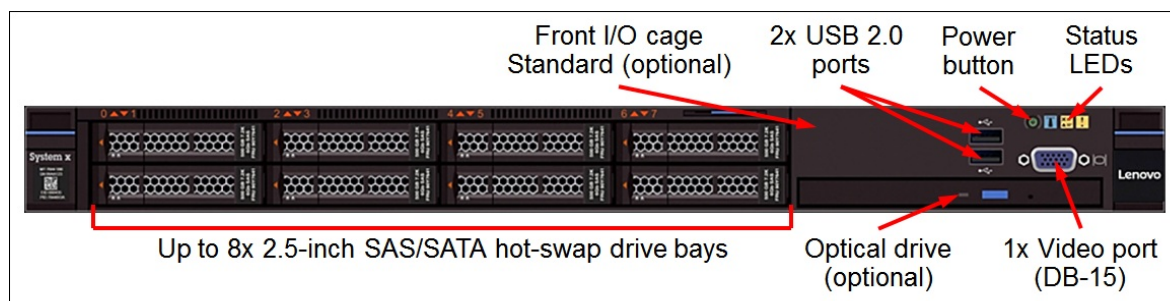


Figure 3. Front view of the System x3550 M5: 8x 2.5-inch drive bays; Front IO cage Standard (optional)

The following figure shows the front of the System x3550 M5 server with up to eight 2.5-inch drive bays and the Front IO cage Advanced (optional).

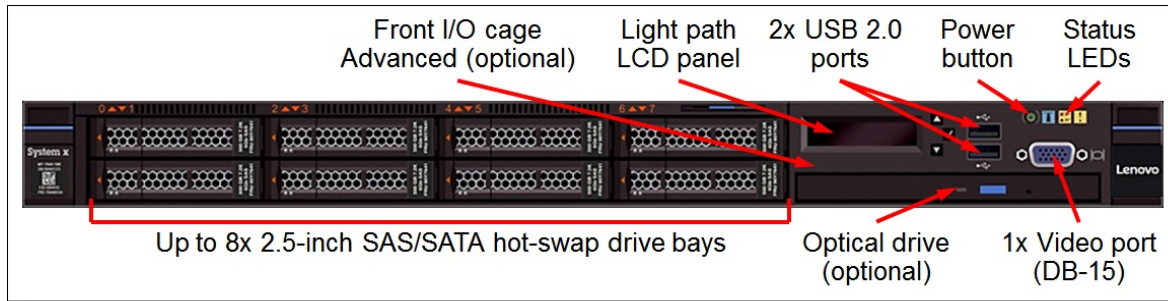


Figure 4. Front view of the System x3550 M5: 8x 2.5-inch drive bays; Front IO cage Advanced (optional)

The following figure shows the front of the System x3550 M5 server with ten 2.5-inch drive bays.

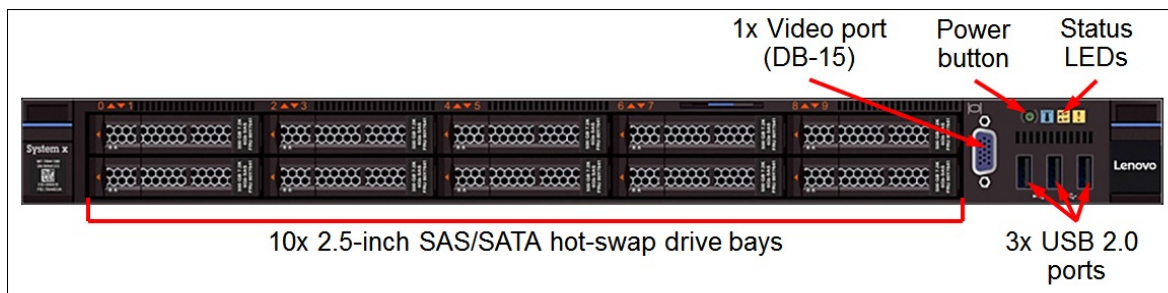


Figure 5. Front view of the System x3550 M5: 10x 2.5-inch drive bays

The following figure shows the front of the System x3550 M5 server with eight 2.5-inch SAS/SATA and two 2.5-inch PCIe drive bays.

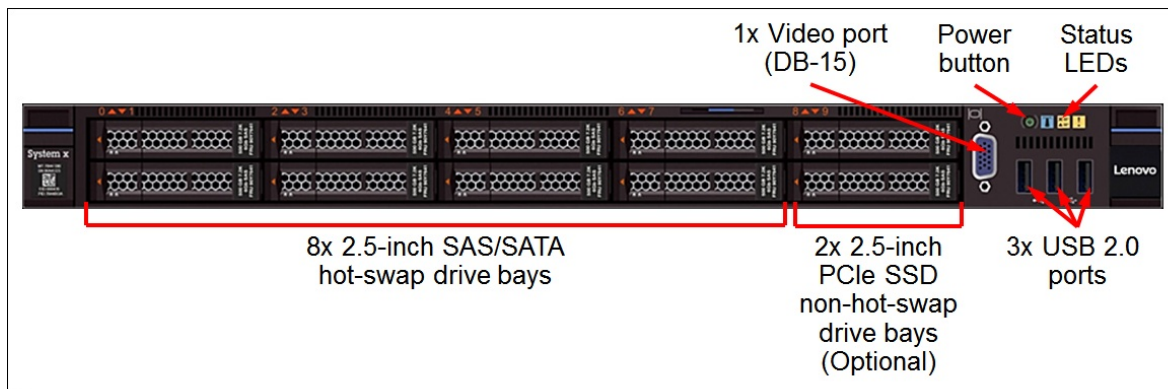


Figure 6. Front view of the System x3550 M5: 8x 2.5-inch SAS/SATA + 2x PCIe drive bays

The following figure shows the front of the System x3550 M5 server with four 3.5-inch drive bays.

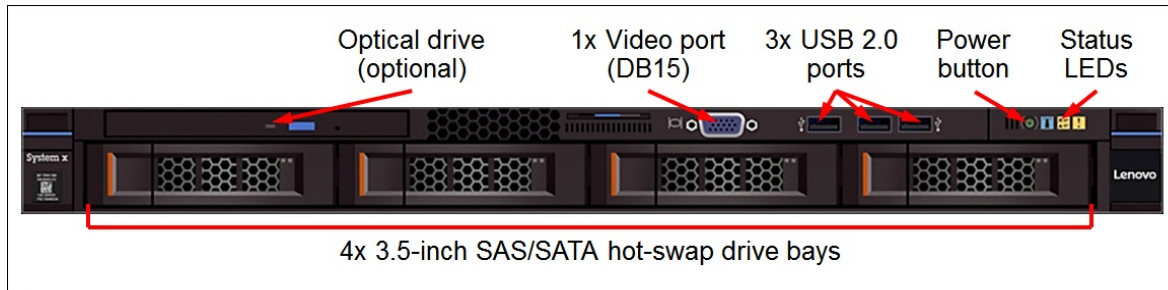


Figure 7. Front view of the System x3550 M5: 4x 3.5-inch drive bays

The following figure shows the rear of the System x3550 M5 server with three PCIe low profile slots.

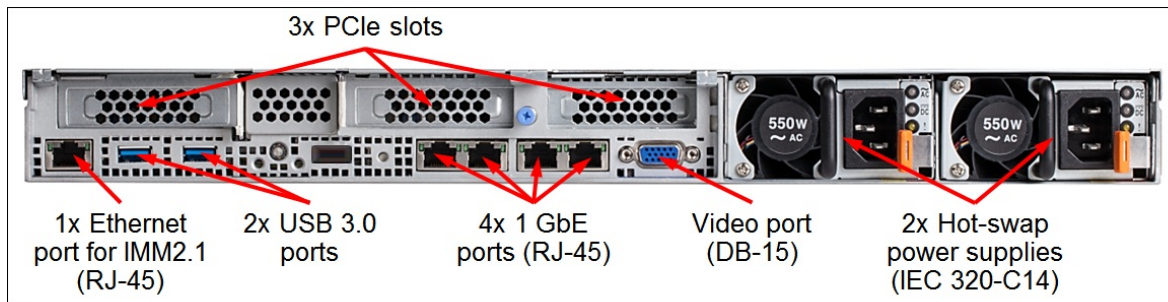


Figure 8. Rear view of the System x3550 M5



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

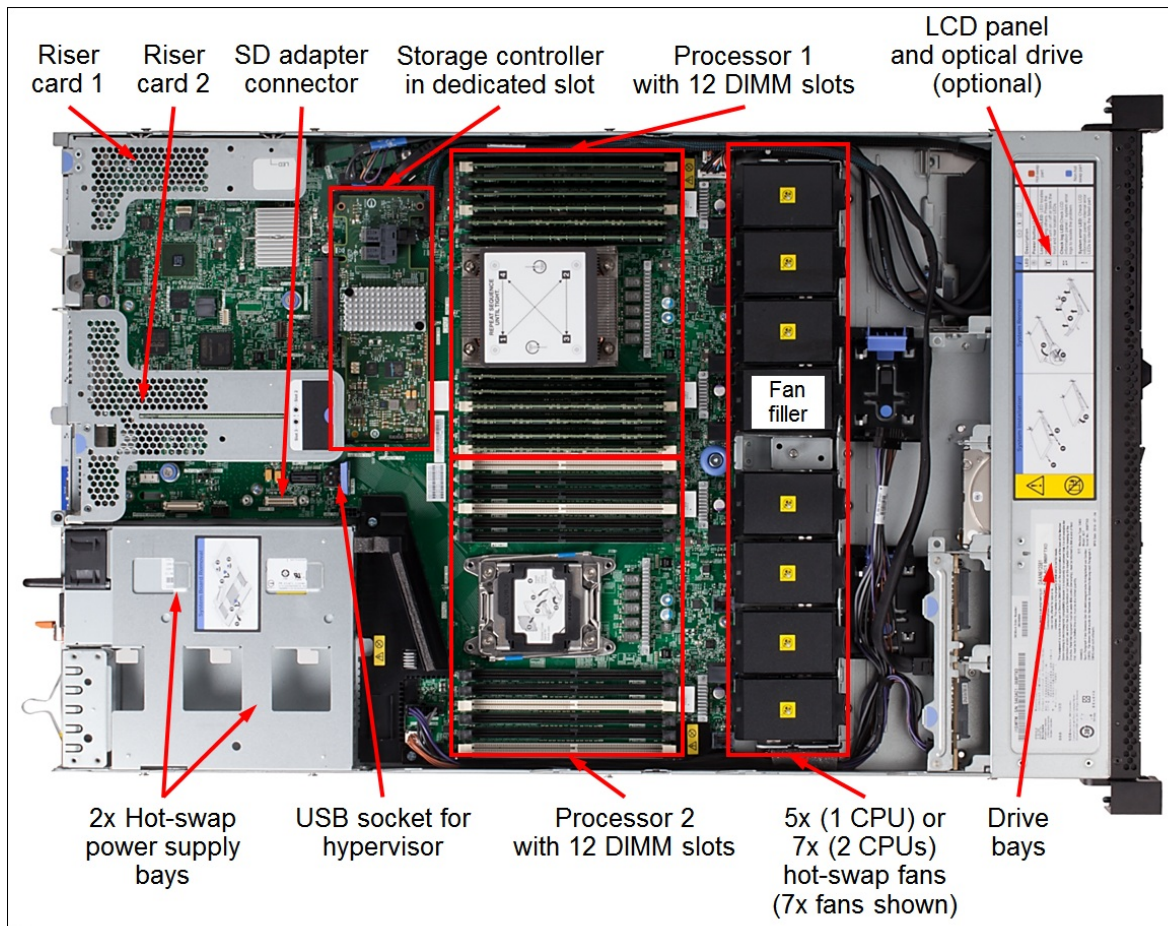


Figure 9. Internal view of the System x3550 M5

## System specifications

The following table lists the system specifications.

Table 1. System specifications

Attribute	Specification
Form factor	1U rack-mount (Machine Type 8869)
Processor	<ul style="list-style-type: none"> <li>● Up to two processors of the Intel Xeon processor E5-2600 v4 product family: <ul style="list-style-type: none"> <li>○ Up to 22 cores (2.4 GHz core speeds)</li> <li>○ Up to 3.5 GHz core speeds (4 cores)</li> <li>○ Two QPI links up to 9.6 GT/s each</li> <li>○ Up to 55 MB cache</li> <li>○ Up to 2400 MHz memory speed</li> </ul> </li> <li>● Up to two processors of the Intel Xeon processor E5-2600 v3 product family (CTO only): <ul style="list-style-type: none"> <li>○ Up to 14 cores with up to 2.6 GHz core speeds</li> <li>○ Two QPI links up to 9.6 GT/s each</li> <li>○ Up to 35 MB cache</li> <li>○ Up to 2133 MHz memory speed</li> </ul> </li> </ul>
Chipset	Intel C612.
Memory	Up to 24 DIMM sockets (12 DIMMs per processor; four memory channels per processor with three DIMMs per channel). Support for RDIMMs and LRDIMMs. Memory types cannot be intermixed. Memory speed up to 2400 MHz.
Memory maximums	<ul style="list-style-type: none"> <li>● With RDIMMs: Up to 768 GB with 24x 32 GB RDIMMs and two processors</li> <li>● With LRDIMMs: Up to 1.5 TB with 24x 64 GB LRDIMMs and two processors</li> </ul>
Memory protection	Error correction code (ECC), Chipkill (for x4-based memory DIMMs), memory mirroring, and memory rank sparing.
Drive bays	<ul style="list-style-type: none"> <li>● Up to 12x 2.5" SAS/SATA hot-swap drive bays: 10x 2.5" (front) + 2x 2.5" (rear)</li> <li>● 8x 2.5" SAS/SATA hot-swap (front) + 2x PCIe SSD non-hot-swap (front) drive bays</li> <li>● Up to 8x 2.5" SAS/SATA hot-swap drive bays: 4x 2.5" (front) + 4x 2.5" (front)</li> <li>● 4x 3.5" SAS/SATA hot-swap drive bays (front)</li> </ul>
Maximum internal storage	<ul style="list-style-type: none"> <li>● Up to 92 TB with 12x 7.68 TB 2.5" SAS SSDs</li> <li>● Up to 48 TB with 4x 12 TB 3.5" NL SAS or NL SATA HDDs</li> <li>● Up to 24 TB with 12x 2 TB 2.5" NL SATA HDDs</li> <li>● Up to 28.8 TB with 12x 2.4 TB 2.5" SAS HDDs</li> <li>● Up to 8 TB with 2x 4 TB NVMe PCIe SSDs</li> </ul> <p>Intermix of SAS, SATA, and PCIe drives is supported.</p>
Storage controller	<ul style="list-style-type: none"> <li>● 12 Gb SAS/6 Gb SATA RAID: RAID 0, 1, 10 with M1215 or M5210. Optional upgrade to RAID 5, 50 is available for M1215. Optional upgrade to RAID 5, 50 is available for M5210 (zero-cache; 1 GB non-backed cache; 1 GB, 2 GB, or 4 GB flash-backed cache). Optional upgrade to RAID 6, 60 is available for M5210 (requires a cache upgrade). Optional SSD Caching and Performance Accelerator upgrades are available for M5210.</li> <li>● 12 Gb SAS/6 Gb SATA non-RAID: N2215 HBA</li> </ul>
Optical drive bays	One, optional, for models with 4 or 8 drive bays (models with 10 drive bays do not support an internal optical drive). Support for DVD-ROM or Multiburner.
Tape drive bays	None. Support for an external backup unit.
Network interfaces	<ul style="list-style-type: none"> <li>● 4x Integrated RJ-45 Gigabit Ethernet 1000BASE-T ports (BCM5719).</li> <li>● 1x Optional Mezzanine LOM (ML2) slot for dual-port 10 GbE cards with SFP+ or RJ-45 connectors or quad-port GbE cards with RJ-45 connectors.</li> <li>● 1x RJ-45 10/100/1000 Mb Ethernet systems management port.</li> </ul>



Attribute	Specification
PCI Expansion slots	Up to four slots, depending on the riser cards installed. The slots are as follows: <ul style="list-style-type: none"> <li>Slot 1: PCIe 3.0 x16 or ML2; low profile, half-length (not present if the HDD Rear Kit is installed)</li> <li>Slot 2: PCIe 3.0 x16 or PCIe 3.0 x8; low profile or full-height, half-length (PCIe 3.0 x16 slot requires the second processor to be installed) (not present if the HDD Rear Kit is installed)</li> <li>Slot 3: PCIe 3.0 x16 or PCIe 3.0 x8; low profile, half-length</li> <li>Slot 4: PCIe 3.0 x8 (dedicated for an internal storage controller)</li> </ul>
Ports	<ul style="list-style-type: none"> <li>Front: <ul style="list-style-type: none"> <li>4x 3.5" and 10x 2.5" drive bay models: 3x USB 2.0 and 1x DB-15 video ports.</li> <li>8x 2.5" drive bay models: 1x USB 2.0 (standard); or 2x USB 2.0 and 1x VGA ports (optional).</li> </ul> </li> <li>Rear: 2x USB 3.0 and 1x VGA ports. Optional 1x DB-9 serial port.</li> <li>Internal: 1x USB 2.0 port (for embedded hypervisor), 1x SD Media Adapter slot (for embedded hypervisor)</li> </ul>
Cooling	Calibrated Vectored Cooling with up to seven redundant hot-swap system fans (five fans standard, two additional fans with the second processor or with the optional fan kit for models with one processor and with select adapters used); dual fan zones with N+1 fan redundancy; each fan has two motors.
Power supply	Up to two redundant hot-swap 550 W, 750 W, or 900 W (100-240V), or 1500 W (200-240V) High Efficiency Platinum AC power supplies, or 750 W (200-240V) High Efficiency Titanium AC power supplies, or 900 W High Efficiency -48 V DC power supplies.
Hot-swap parts	Hard drives, power supplies, and fans.
Systems management	Unified Extensible Firmware Interface (UEFI), Integrated Management Module II (IMM2.1) based on Renesas SH7758, Predictive Failure Analysis, light path diagnostics, Automatic Server Restart, ToolsCenter, XClarity Administrator, and XClarity Energy Manager. Optional IMM2.1 Advanced Upgrade for remote presence (graphics, keyboard and mouse, virtual media).
Security features	Power-on password, administrator's password, Trusted Platform Module (TPM) 1.2 or 2.0 (configurable UEFI setting). Optional lockable front bezel.
Video	Matrox G200eR2 with 16 MB memory integrated into the IMM2.1. Maximum resolution is 1600x1200 at 75 Hz with 16 M colors.
Operating systems	Microsoft Windows Server 2008 R2, 2012, 2012 R2, 2016, and 2019; Red Hat Enterprise Linux 6 (x64) and 7; SUSE Linux Enterprise Server 11 (x64) and 12; VMware vSphere (ESXi) 5.5, 6.0, 6.5, and 6.7.
Warranty	Three-year customer-replaceable unit and onsite limited warranty with 9x5/Next Business Day.
Service and support	Optional service upgrades are available through the Lenovo Services: 4-hour or 2-hour response time, 6 hours fix time, one-year or two-year warranty extension, software support for System x hardware and selected System x and third-party (Microsoft, Linux, VMware) software.
Dimensions	Height: 43 mm (1.7 in), width: 434 mm (17.1 in), depth: 734 mm (28.9 in)
Weight	Minimum configuration: 13.8 kg (30.4 lb), maximum: 19.3 kg (42.5 lb)

## Standard models

**Product availability:** The Lenovo System x3550 M5 (Machine Type 8869) server models are withdrawn and no longer available for ordering. For currently available 1U dual-socket rack-mount servers, refer to the following product guides:

- Lenovo ThinkSystem SR530 Server Product Guide  
<http://lenovopress.com/lp0639>
- Lenovo ThinkSystem SR570 Server Product Guide  
<http://lenovopress.com/lp0641>
- Lenovo ThinkSystem SR630 Server Product Guide  
<http://lenovopress.com/lp0643>

The following table lists the standard models of the System x3550 M5.

**Note:** Standard models of the x3550 M5 (E5-2600 v4) are not available in North America.

Table 2. Standard models

Model number*	Intel Xeon processor** (2 maximum)	Memory RDIMM#	RAID	Drive bays (std / max)	Drives	NIC	I/O slots (std / max)	Optical drive	LCD display	Power supply (std / max)§
Models announced March 2016										
8869A2x	1x E5-2603 v4 6C 1.7GHz 15MB 1866MHz 85W	1x 8GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 550W HS / 2
8869B2x	1x E5-2609 v4 8C 1.7GHz 20MB 1866MHz 85W	1x 8GB	M1215	4x 3.5" HS / 4	Open bay	4x GbE	2 / 4^	Option	None	1x 550W HS / 2
8869C2x	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 550W HS / 2
8869C4x	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M1215	4x 3.5" HS / 4	Open bay	4x GbE	2 / 4^	Option	None	1x 550W HS / 2
8869D2x	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	1x 16GB	M5210 1GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 550W HS / 2
8869F2x	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210 1GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 550W HS / 2
8869G2x	1x E5-2650 v4 12C 2.2GHz 30MB 2400MHz 105W	1x 16GB	M5210 1GB (F)	10x 2.5" HS / 12	Open bay	4x GbE	2 / 4^	None	None	1x 900W HS / 2
8869R2x	1x E5-2660 v4 14C 2.0GHz 35MB 2400MHz 105W	1x 16GB	M5210 2GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option	Included	1x 750W HS / 2
8869Q2x	1x E5-2667 v4 8C 3.2GHz 25MB 2400MHz 135W	1x 16GB	M5210 2GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option	Included	1x 750W HS / 2
8869L2x	1x E5-2690 v4 14C 2.6GHz 35MB 2400MHz 135W	1x 16GB	M5210 2GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 750W HS / 2***
8869N2x	1x E5-2697 v4 18C 2.3GHz 45MB 2400MHz 145W	1x 16GB	M5210 2GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option	Included	1x 900W HS / 2

\* x in the Model number represents a region-specific letter (for example, the EMEA model number is 8869A2G). Ask a Lenovo representative for specifics.

\*\* Processor detail: Processor quantity and model, cores, core speed, cache, memory speed, and thermal design power (TDP).

# Unless otherwise specified in a footnote, the DIMMs installed are x4 RDIMMs.

§ Unless otherwise specified in a footnote, the power supplies are 80 PLUS Platinum certified.

† An optional optical drive requires the front IO cage Standard (00MV367) or Advanced (00MV368).

‡ An optional LCD panel is included in the optional front IO cage Advanced (00MV368).

\*\*\* Titanium power supply; supports 200-240 V AC only.

^ Two I/O slots standard: The onboard PCIe 3.0 x8 slot 4 and low profile PCIe 3.0 x16 slot 1 on the Riser Card 1 (feature code A5AG).

The standard models of the System x3550 M5 that are listed in Table 2 are shipped with the following items:

- *Rack Installation Guide*
- *Electronic Publications Flyer*

- System x3550 M5 Slide Kit G4

**Notes:**

- Cable Management Arm (CMA) is not included; see [Rack installation](#) for ordering information.
- Power cables are not included; see [Power supplies and cables](#) for ordering information.

**TopSeller models**

**Product availability:** The Lenovo System x3550 M5 (Machine Type 8869) server models are withdrawn and no longer available for ordering. For currently available 1U dual-socket rack-mount servers, refer to the following product guides:

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<http://lenovopress.com/lp0639>
- Lenovo ThinkSystem SR570 Server Product Guide  
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- Lenovo ThinkSystem SR630 Server Product Guide  
<http://lenovopress.com/lp0643>

The following table lists the TopSeller models of the System x3550 M5.

**Note:** TopSeller models are region-specific; that is, each region may define their own server models, and not all server models are available in every region.

Table 3. TopSeller models

Model number	Intel Xeon processor* (2 maximum)	Memory RDIMM#	RAID	Drive bays (std / max)	Drives	NIC	I/O slots (std / max)	Optical drive	LCD display	Power supply (std / max)§
TopSeller - United States, Canada										
8869KAU	1x E5-2603 v4 6C 1.7GHz 15MB 1866MHz 85W	1x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KBU	1x E5-2603 v4 6C 1.7GHz 15MB 1866MHz 85W	1x 16GB	M1215	4x 3.5" HS / 4	Open bay	4x GbE	1 / 4	Option	None	1x 900W HS / 2
8869KCU	1x E5-2609 v4 8C 1.7GHz 20MB 1866MHz 85W	1x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KDU	1x E5-2609 v4 8C 1.7GHz 20MB 1866MHz 85W	1x 16GB	M1215	4x 3.5" HS / 4	Open bay	4x GbE	1 / 4	Option	None	1x 900W HS / 2
8869KXU	1x E5-2609 v4 8C 1.7GHz 20MB 1866MHz 85W	4x 16GB	M1215	4x 3.5" HS / 4	4x 1TB 7.2K	4x GbE	1 / 4	Option	None	2x 900W HS / 2
8869KZU	2x E5-2609 v4 8C 1.7GHz 20MB 1866MHz 85W	2x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	2x 900W HS / 2
8869KEU	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KFU	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M1215	4x 3.5" HS / 4	Open bay	4x GbE	1 / 4	Option	None	1x 900W HS / 2
8869K3U	2x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	2x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	2x 900W HS / 2
8869KGU	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KHU	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	1x 16GB	M5210	4x 3.5" HS / 4	Open bay	4x GbE	1 / 4	Option	None	1x 900W HS / 2
8869KYU	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	4x 16GB	M1215	4x 3.5" HS / 4	4x 1TB 7.2K	4x GbE	1 / 4	Option	None	2x 900W HS / 2

Model number	Intel Xeon processor* (2 maximum)	Memory RDIMM#	RAID	Drive bays (std / max)	Drives	NIC	I/O slots (std / max)	Optical drive	LCD display	Power supply (std / max)§
8869KQU	1x E5-2637 v4 4C 3.5GHz 15MB 2400MHz 135W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KJU	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KKU	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210	4x 3.5" HS / 4	Open bay	4x GbE	1 / 4	Option	None	1x 900W HS / 2
886916E	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210	10x 2.5" HS / 12	Open bay	4x GbE	1 / 4	None	None	1x 900W HS / 2
8869KUU	2x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	2x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	2x 900W HS / 2
8869KLU	1x E5-2650 v4 12C 2.2GHz 30MB 2400MHz 105W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
886916I	1x E5-2660 v4 14C 2.0GHz 35MB 2400MHz 105W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 900W HS / 2
8869KVU	2x E5-2660 v4 14C 2.0GHz 35MB 2400MHz 105W	2x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option	Option‡	2x 900W HS / 2
8869KRU	1x E5-2667 v4 8C 3.2GHz 25MB 2400MHz 135W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KNU	1x E5-2680 v4 14C 2.4GHz 35MB 2400MHz 120W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
886916B	1x E5-2680 v4 14C 2.4GHz 35MB 2400MHz 120W	1x 16GB	M5210	10x 2.5" HS / 12	Open bay	4x GbE	1 / 4	None	None	1x 900W HS / 2
8869KMU	1x E5-2690 v4 14C 2.6GHz 35MB 2400MHz 135W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KPU	1x E5-2690 v4 14C 2.6GHz 35MB 2400MHz 135W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
8869KWU	2x E5-2690 v4 14C 2.6GHz 35MB 2400MHz 135W	2x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option	Option‡	2x 900W HS / 2
8869KSU	1x E5-2697 v4 18C 2.3GHz 45MB 2400MHz 145W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
886916D	1x E5-2697 v4 18C 2.3GHz 45MB 2400MHz 145W	1x 16GB	M5210	10x 2.5" HS / 12	Open bay	4x GbE	1 / 4	None	None	1x 900W HS / 2
8869KTU	1x E5-2699 v4 22C 2.2GHz 55MB 2400MHz 145W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 900W HS / 2
TopSeller - Europe, Middle East and Africa										
8869ECG	1x E5-2603 v4 6C 1.7GHz 15MB 1866MHz 85W	1x 8GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869EDG	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869ETG	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M5210	10x 2.5" HS / 12	Open bay	4x GbE	1 / 4	None	None	1x 750W HS / 2
8869EFG	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869EJG	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 750W HS / 2
8869EAG	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M5210	4x 3.5" HS / 4	Open bay	4x GbE	1 / 4	Option	None	1x 750W HS / 2
8869ENG	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 8GB	M5210 1GB (F)	8x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option	Option‡	1x 550W HS / 2
8869E3G	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M5210 2GB (F)	8x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option	Option‡	1x 750W HS / 2

Model number	Intel Xeon processor* (2 maximum)	Memory RDIMM#	RAID	Drive bays (std / max)	Drives	NIC	I/O slots (std / max)	Optical drive	LCD display	Power supply (std / max)§
8869EEG	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	1x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869EGG	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869EKG	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 750W HS / 2
8869EQG	1x E5-2630 v4 10C 2.2GHz 25MB 2133MHz 85W	1x 16GB	M5210 2GB (F)	4x 2.5" HS / 8	2x 300GB 10K	4x GbE	1 / 4	Option†	Option‡	2x 750W HS / 2
8869EBG	1x E5-2630L v4 10C 1.8GHz 25MB 2133MHz 55W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869EHG	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869ELG	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 750W HS / 2
8869EPG	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210 2GB (F)	8x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 750W HS / 2
8869EUG	1x E5-2650 v4 12C 2.2GHz 30MB 2400MHz 105W	1x 16GB	M5210	10x 2.5" HS / 12	Open bay	4x GbE	1 / 4	None	None	1x 900W HS / 2
8869E2G	1x E5-2650 v4 12C 2.2GHz 30MB 2400MHz 105W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 550W HS / 2
8869EMG	1x E5-2650 v4 12C 2.2GHz 30MB 2400MHz 105W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 750W HS / 2
8869ERG	1x E5-2680 v4 14C 2.4GHz 35MB 2400MHz 120W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 750W HS / 2
8869EVG	1x E5-2690 v4 14C 2.6GHz 35MB 2400MHz 135W	1x 16GB	M5210	10x 2.5" HS / 12	Open bay	4x GbE	1 / 4	None	None	1x 900W HS / 2
8869ESG	1x E5-2690 v4 14C 2.6GHz 35MB 2400MHz 135W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	1 / 4	Option†	Option‡	1x 750W HS / 2
TopSeller - Japan										
8869EWJ	1x E5-2603 v4 6C 1.7GHz 15MB 1866MHz 85W	1x 8GB	M1215	4x 3.5" HS / 4	Open bay	4x GbE	2 / 4^	Option	None	1x 550W HS / 2
8869EXJ	1x E5-2603 v4 6C 1.7GHz 15MB 1866MHz 85W	1x 8GB	M5210 1GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option	Included	1x 550W HS / 2
8869EYJ	1x E5-2609 v4 8C 1.7GHz 20MB 1866MHz 85W	1x 8GB	M5210 1GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option	Included	1x 550W HS / 2
8869EZJ	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 8GB	M5210 1GB (F)	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option	Included	1x 550W HS / 2
TopSeller - Australia and New Zealand										
886916U	1x E5-2603 v4 6C 1.7GHz 15MB 1866MHz 85W	1x 8GB	M1215	4x 3.5" HS / 4	Open bay	4x GbE	2 / 4^	Option	None	1x 550W HS / 2
886916W	1x E5-2609 v4 8C 1.7GHz 20MB 1866MHz 85W	1x 16GB	M1215	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 750W HS / 2
886916X	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Option†	Option‡	1x 750W HS / 2
886916F**	1x E5-2620 v4 8C 2.1GHz 20MB 2133MHz 85W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Multi-burner	Included	1x 750W HS / 2
886916G**	1x E5-2640 v4 10C 2.4GHz 25MB 2133MHz 90W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Multi-burner	Included	1x 750W HS / 2
886916H**	1x E5-2650 v4 12C 2.2GHz 30MB 2400MHz 105W	1x 16GB	M5210	4x 2.5" HS / 8	Open bay	4x GbE	2 / 4^	Multi-burner	Included	1x 750W HS / 2



\* Processor detail: Processor quantity and model, cores, core speed, cache, memory speed, and thermal design power (TDP).

# Unless otherwise specified in a footnote, the DIMMs installed are x4 RDIMMs.

§ The power supplies are 80 PLUS Platinum certified.

† An optional optical drive requires the front IO cage Standard (00MV367) or Advanced (00MV368).

‡ An optional LCD panel is included in the optional front IO cage Advanced (00MV368).

^ Two I/O slots standard: The onboard PCIe 3.0 x8 slot 4 and low profile PCIe 3.0 x16 slot 1 on the Riser Card 1 (feature code A5AG).

\*\* The model ships with the SD Media Adapter (feature code A5TJ) installed and 1U cable management arm (feature code A5AL) included.

The TopSeller models of the System x3550 M5 that are listed in Table 3 are shipped with the following items:

- *Rack Installation Guide*
- *Electronic Publications Flyer*
- System x3550 M5 Slide Kit G4
- One or two 2.8 m IEC 320-C13 to C14 rack power cords (matches the quantity of power supplies)

**Note:** Cable Management Arm (CMA) is not included (see table footnotes for exceptions, if any); see [Rack installation](#) for ordering information.

## Processors

The System x3550 M5 supports up to two processors of the Intel Xeon processor E5-2600 v4 product family. Also, support for the Intel Xeon processor E5-2600 v3 product family is available via CTO only. The following tables list the specifications of the processors for the System x3550 M5.

Table 4. E5-2600 v4 specifications (HT = Hyper-Threading, TB = Turbo Boost, VT = Virtualization Technology)

Processor model	Core frequency (Base / TB Max)	Number of cores / threads	Cache	Max DDR4 frequency	QPI speed	TDP	HT	TB	VT-x	VT-d
E5-2603 v4	1.7 GHz	6 / 6	15 MB	1866 MHz	6.4 GT/s	85 W	No	No	Yes	Yes
E5-2608L v4	1.6 GHz	8 / 16	20 MB	1866 MHz	6.4 GT/s	50 W	Yes	No	Yes	Yes
E5-2609 v4	1.7 GHz	8 / 8	20 MB	1866 MHz	6.4 GT/s	85 W	No	No	Yes	Yes
E5-2618L v4	2.2 / 3.2 GHz	10 / 20	25 MB	2133 MHz	8.0 GT/s	75 W	Yes	Yes	Yes	Yes
E5-2620 v4	2.1 / 3 GHz	8 / 16	20 MB	2133 MHz	8.0 GT/s	85 W	Yes	Yes	Yes	Yes
E5-2623 v4	2.6 / 3.2 GHz	4 / 8	10 MB	2133 MHz	8.0 GT/s	85 W	Yes	Yes	Yes	Yes
E5-2628L v4	1.9 / 2.4 GHz	12 / 24	30 MB	2133 MHz	8.0 GT/s	75 W	Yes	Yes	Yes	Yes
E5-2630 v4	2.2 / 3.1 GHz	10 / 20	25 MB	2133 MHz	8.0 GT/s	85 W	Yes	Yes	Yes	Yes
E5-2630L v4	1.8 / 2.9 GHz	10 / 20	25 MB	2133 MHz	8.0 GT/s	55 W	Yes	Yes	Yes	Yes
E5-2637 v4	3.5 / 3.7 GHz	4 / 8	15 MB	2400 MHz	9.6 GT/s	135 W	Yes	Yes	Yes	Yes
E5-2640 v4	2.4 / 3.4 GHz	10 / 20	25 MB	2133 MHz	8.0 GT/s	90 W	Yes	Yes	Yes	Yes
E5-2643 v4	3.4 / 3.7 GHz	6 / 12	20 MB	2400 MHz	9.6 GT/s	135 W	Yes	Yes	Yes	Yes
E5-2648L v4	1.8 / 2.5 GHz	14 / 28	35 MB	2400 MHz	9.6 GT/s	75 W	Yes	Yes	Yes	Yes
E5-2650 v4	2.2 / 2.9 GHz	12 / 24	30 MB	2400 MHz	9.6 GT/s	105 W	Yes	Yes	Yes	Yes
E5-2650L v4	1.7 / 2.5 GHz	14 / 28	35 MB	2400 MHz	9.6 GT/s	65 W	Yes	Yes	Yes	Yes
E5-2658 v4	2.3 / 2.8 GHz	14 / 28	35 MB	2400 MHz	9.6 GT/s	105 W	Yes	Yes	Yes	Yes
E5-2660 v4	2 / 3.2 GHz	14 / 28	35 MB	2400 MHz	9.6 GT/s	105 W	Yes	Yes	Yes	Yes
E5-2667 v4	3.2 / 3.6 GHz	8 / 16	25 MB	2400 MHz	9.6 GT/s	135 W	Yes	Yes	Yes	Yes
E5-2680 v4	2.4 / 3.3 GHz	14 / 28	35 MB	2400 MHz	9.6 GT/s	120 W	Yes	Yes	Yes	Yes
E5-2683 v4	2.1 / 3 GHz	16 / 32	40 MB	2400 MHz	9.6 GT/s	120 W	Yes	Yes	Yes	Yes
E5-2690 v4	2.6 / 3.5 GHz	14 / 28	35 MB	2400 MHz	9.6 GT/s	135 W	Yes	Yes	Yes	Yes
E5-2695 v4	2.1 / 3.3 GHz	18 / 36	45 MB	2400 MHz	9.6 GT/s	120 W	Yes	Yes	Yes	Yes
E5-2697 v4	2.3 / 3.6 GHz	18 / 36	45 MB	2400 MHz	9.6 GT/s	145 W	Yes	Yes	Yes	Yes
E5-2697A v4	2.6 / 3.6 GHz	16 / 32	40 MB	2400 MHz	9.6 GT/s	145 W	Yes	Yes	Yes	Yes
E5-2698 v4	2.2 / 3.6 GHz	20 / 40	50 MB	2400 MHz	9.6 GT/s	135 W	Yes	Yes	Yes	Yes
E5-2699 v4	2.2 / 3.6 GHz	22 / 44	55 MB	2400 MHz	9.6 GT/s	145 W	Yes	Yes	Yes	Yes
E5-2699R v4	2.2 / 3.6 GHz	22 / 44	55 MB	2400 MHz	9.6 GT/s	145 W	Yes	Yes	Yes	Yes
E5-2699A v4	2.4 / 3.6 GHz	22 / 44	55 MB	2400 MHz	9.6 GT/s	145 W	Yes	Yes	Yes	Yes

Table 5. E5-2600 v3 specifications (HT = Hyper-Threading, TB = Turbo Boost, VT = Virtualization Technology)

Processor model	Core frequency (Base / TB Max)	Number of cores / threads	Cache	Max DDR4 frequency	QPI speed	TDP	HT	TB	VT-x	VT-d
E5-2603 v3	1.6 GHz	6 / 6	15 MB	1600 MHz	6.4 GT/s	85 W	No	No	Yes	Yes
E5-2609 v3	1.9 GHz	6 / 6	15 MB	1600 MHz	6.4 GT/s	85 W	No	No	Yes	Yes
E5-2620 v3	2.4 / 3.2 GHz	6 / 12	15 MB	1866 MHz	8 GT/s	85 W	Yes	Yes	Yes	Yes
E5-2630 v3	2.4 / 3.2 GHz	8 / 16	20 MB	1866 MHz	8 GT/s	85 W	Yes	Yes	Yes	Yes
E5-2640 v3	2.6 / 3.4 GHz	8 / 16	20 MB	1866 MHz	8 GT/s	90 W	Yes	Yes	Yes	Yes
E5-2650 v3	2.3 / 3 GHz	10 / 20	25 MB	2133 MHz	9.6 GT/s	105 W	Yes	Yes	Yes	Yes
E5-2660 v3	2.6 / 3.3 GHz	10 / 20	25 MB	2133 MHz	9.6 GT/s	105 W	Yes	Yes	Yes	Yes
E5-2670 v3	2.3 / 3.1 GHz	12 / 24	30 MB	2133 MHz	9.6 GT/s	120 W	Yes	Yes	Yes	Yes
E5-2680 v3	2.5 / 3.3 GHz	12 / 24	30 MB	2133 MHz	9.6 GT/s	120 W	Yes	Yes	Yes	Yes
E5-2690 v3	2.6 / 3.5 GHz	12 / 24	30 MB	2133 MHz	9.6 GT/s	135 W	Yes	Yes	Yes	Yes
E5-2695 v3	2.3 / 3.3 GHz	14 / 28	35 MB	2133 MHz	9.6 GT/s	120 W	Yes	Yes	Yes	Yes
E5-2697 v3	2.6 / 3.6 GHz	14 / 28	35 MB	2133 MHz	9.6 GT/s	145 W	Yes	Yes	Yes	Yes

For System x3550 M5 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 two system fans.

Table 6. Processor options

Description	Part number	Feature codes*
Intel Xeon Processor E5-2600 v4 product family		
Intel Xeon Processor E5-2603 v4 6C 1.7GHz 15MB Cache 1866MHz 85W	00YE893	ATLT / ATMH
Intel Xeon Processor E5-2608L v4 8C 1.6GHz 20MB Cache 1866MHz 50W	00YJ695	ATMC / ATN3
Intel Xeon Processor E5-2609 v4 8C 1.7GHz 20MB Cache 1866MHz 85W	00YE894	ATLU / ATMJ
Intel Xeon Processor E5-2618L v4 10C 2.2GHz 25MB Cache 2133MHz 75W	00YJ696	ATMD / ATN4
Intel Xeon Processor E5-2620 v4 8C 2.1GHz 20MB Cache 2133MHz 85W	00YE895	ATLV / ATMK
Intel Xeon Processor E5-2623 v4 4C 2.6GHz 10MB Cache 2133MHz 85W	00YJ694	ATMB / ATN2
Intel Xeon Processor E5-2628L v4 12C 1.9GHz 30MB Cache 2133MHz 75W	00YJ697	ATME / ATN5
Intel Xeon Processor E5-2630 v4 10C 2.2GHz 25MB Cache 2133MHz 85W	00YE896	ATLW / ATML
Intel Xeon Processor E5-2630L v4 10C 1.8GHz 25MB Cache 2133MHz 55W	00YJ693	ATMA / ATN1
Intel Xeon Processor E5-2637 v4 4C 3.5GHz 15MB Cache 2400MHz 135W	00YJ692	ATM9 / ATN0
Intel Xeon Processor E5-2640 v4 10C 2.4GHz 25MB Cache 2133MHz 90W	00YE897	ATLX / ATMM
Intel Xeon Processor E5-2643 v4 6C 3.4GHz 20MB Cache 2400MHz 135W	00YJ691	ATM8 / ATMZ
Intel Xeon Processor E5-2648L v4 14C 1.8GHz 35MB Cache 2400MHz 75W	00YJ698	ATMF / ATN6
Intel Xeon Processor E5-2650 v4 12C 2.2GHz 30MB Cache 2400MHz 105W	00YE898	ATLY / ATMN
Intel Xeon Processor E5-2650L v4 14C 1.7GHz 35MB Cache 2400MHz 65W	00YJ690	ATM7 / ATMY
Intel Xeon Processor E5-2658 v4 14C 2.3GHz 35MB Cache 2400MHz 105W	00YJ699	ATMG / ATN7
Intel Xeon Processor E5-2660 v4 14C 2.0GHz 35MB Cache 2400MHz 105W	00YJ101	ATM1 / ATMR
Intel Xeon Processor E5-2667 v4 8C 3.2GHz 25MB Cache 2400MHz 135W	00YJ102	ATM2 / ATMS
Intel Xeon Processor E5-2680 v4 14C 2.4GHz 35MB Cache 2400MHz 120W	00YJ686	ATM3 / ATMU
Intel Xeon Processor E5-2683 v4 16C 2.1GHz 40MB Cache 2400MHz 120W	00YJ689	ATM6 / ATMX
Intel Xeon Processor E5-2690 v4 14C 2.6GHz 35MB Cache 2400MHz 135W	00YE899	ATLZ / ATMP
Intel Xeon Processor E5-2695 v4 18C 2.1GHz 45MB Cache 2400MHz 120W	00YJ688	ATM5 / ATMW
Intel Xeon Processor E5-2697 v4 18C 2.3GHz 45MB Cache 2400MHz 145W	00YJ103	ATLS / ATMT
Intel Xeon Processor E5-2697A v4 16C 2.6GHz 40MB Cache 2400MHz 145W	01GT187	AUDX / AUDZ
Intel Xeon Processor E5-2698 v4 20C 2.2GHz 50MB Cache 2400MHz 135W	00YJ687	ATM4 / ATMV
Intel Xeon Processor E5-2699 v4 22C 2.2GHz 55MB Cache 2400MHz 145W	00YJ100	ATM0 / ATMQ
Intel Xeon Processor E5-2699R v4 22C 2.2GHz 55MB Cache 2400MHz 145W	01GT324	AVH8 / AVHG
Intel Xeon Processor E5-2699A v4 22C 2.4GHz 55MB Cache 2400MHz 145W	01GT325	AVH9 / AVHH
Intel Xeon Processor E5-2600 v3 product family		
Intel Xeon Processor E5-2603 v3 6C 1.6GHz 15MB 1600MHz 85W	00KA070	A5BF / A5BV
Intel Xeon Processor E5-2609 v3 6C 1.9GHz 15MB 1600MHz 85W	00KA071	A5BG / A5BW
Intel Xeon Processor E5-2620 v3 6C 2.4GHz 15MB 1866MHz 85W	00KA067	A5BC / A5BS
Intel Xeon Processor E5-2630 v3 8C 2.4GHz 20MB 1866MHz 85W	00KA068	A5BD / A5BT
Intel Xeon Processor E5-2640 v3 8C 2.6GHz 20MB 1866MHz 90W	00KA069	A5BE / A5BU
Intel Xeon Processor E5-2650 v3 10C 2.3GHz 25MB 2133MHz 105W	00KA072	A5BH / A5BX
Intel Xeon Processor E5-2660 v3 10C 2.6GHz 25MB 2133MHz 105W	00MU400	ASCL / ASCX
Intel Xeon Processor E5-2670 v3 12C 2.3GHz 30MB 2133MHz 120W	00KA074	A5BK / A5BZ

Description	Part number	Feature codes*
Intel Xeon Processor E5-2680 v3 12C 2.5GHz 30MB 2133MHz 120W	00KA075	A5BL / A5C0
Intel Xeon Processor E5-2690 v3 12C 2.6GHz 30MB 2133MHz 135W	00KA076	A5BM / A5C1
Intel Xeon Processor E5-2697 v3 14C 2.6GHz 35MB 2133MHz 145W	00MU404	ASCQ / ASD1

\* The first feature code is for the first processor; the second feature code is for the second processor.

## Memory

The System x3550 M5 supports TruDDR4 memory. 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 System x server to maximize performance and reliability.

TruDDR4 memory has a unique signature programmed into the DIMM, which enables System x servers to verify whether the memory installed is qualified and supported. Because TruDDR4 memory is authenticated, certain extended memory performance features can be enabled to extend performance over industry standards. From a service and support standpoint, System x memory automatically assumes the system's warranty, and service and support provided worldwide.

The server supports up to 12 DIMMs when one processor is installed and up to 24 DIMMs when two processors are installed. Each processor has four memory channels, and there are three DIMMs per channel.

The following rules apply when selecting the memory configuration:

- The server supports RDIMMs and LRDIMMs.
  - Mixing different types of memory (RDIMMs and LRDIMMs) is not supported.
  - All DIMMs in the server operate at the same speed, which is determined as the lowest value of:
    - Memory speed that is supported by the specific processor.
    - Memory speed for selected quantity of DIMMs per channel.
- Note:** Maximum memory speed can be achieved when Max performance mode is enabled in UEFI.

The following memory protection technologies are supported:

- ECC
- Chipkill (for x4-based memory DIMMs)
- Memory mirroring
- Memory rank sparing

Chipkill works only in independent channel mode (the default operational mode) and supports only x4-based memory DIMMs.

If memory mirroring is used, then DIMMs must be installed in pairs (a minimum of one pair per each processor), and both DIMMs in a pair must be identical in type and size.

If memory rank sparing is used, then a minimum of one quad-rank DIMM or two single-rank or dual-rank DIMMs must be installed per populated channel (the DIMMs do not need being identical). In rank sparing mode, one rank of a DIMM in each populated channel is reserved as spare memory. The size of a rank varies depending on the DIMMs installed.

Chipkill, memory mirroring, and memory rank sparing modes are mutually exclusive. Only one operational memory mode can be enabled on a server, and it is a system-wide setting.

System x engineering tested and validated system designs that support memory speeds beyond Intel memory specifications, which provides benefits for workloads that require memory speed and density.

System x TruDDR4 memory is fully supported up to the speeds that are shown in the following tables. Table cells highlighted with a gray background indicate when the DIMMs are allowed to operate at a higher speed than Intel specifications define.



Table 7. System x3550 M5 maximum memory speeds and capacities

DIMMs per channel	RDIMM		LR-DIMM	
	Memory bus speed	Maximum capacity*	Memory bus speed	Maximum capacity*
<b>Intel Xeon processor E5-2600 v4 product family</b>				
1 DPC	2400 MHz	256 GB (8x 32 GB)	2400 MHz	512 GB (8x 64 GB)
2 DPC	2400 MHz	512 GB (16x 32 GB)	2400 MHz	1,024 GB (16x 64 GB)
3 DPC	1866 MHz	768 GB (24x 32 GB)	2133 MHz	1,536 GB (24x 64 GB)
<b>Intel Xeon processor E5-2600 v3 product family</b>				
1 DPC	2133 MHz	256 GB (8x 32 GB)	2133 MHz	512 GB (8x 64 GB)
2 DPC	2133 MHz	512 GB (16x 32 GB)	2133 MHz	1,024 GB (16x 64 GB)
3 DPC	1866 MHz	768 GB (24x 32 GB)	1866 MHz	1,536 GB (24x 64 GB)

\* Maximum memory capacity is achieved with two processors installed. With one processor, the maximum memory capacity is a half of what is shown.

The following table lists memory options available for the System x3550 M5 server.

Table 8. Memory options

Description	Part number	Feature code	Maximum supported*
<b>RDIMMs - 2400 MHz</b>			
8GB TruDDR4 Memory (1Rx4, 1.2V) PC4-19200 CL17 2400MHz LP RDIMM	46W0821	ATC8	12 / 24
8GB TruDDR4 Memory (2Rx8, 1.2V) PC4-19200 CL17 2400MHz LP RDIMM	46W0825	ATC9	12 / 24
16GB TruDDR4 Memory (2Rx4, 1.2V) PC4-19200 CL17 2400MHz LP RDIMM	46W0829	ATCA	12 / 24
16GB TruDDR4 Memory (2Rx8, 1.2V) PC4-19200 CL17 2400MHz LP RDIMM	01KN301	AVP0	12 / 24**
32GB TruDDR4 Memory (2Rx4, 1.2V) PC4-19200 CL17 2400MHz LP RDIMM	46W0833	ATCB	12 / 24
<b>LRDIMMs - 2400 MHz</b>			
64GB TruDDR4 Memory (4Rx4, 1.2V) PC4-19200 PC4 2400MHz LP LRDIMM	46W0841	ATGG	12 / 24

\* One processor / two processors.

\*\* Not supported with the Intel Xeon processor E5-2600 v3 product family.

## Internal storage

The System x3550 M5 server supports the following internal drive bay configurations:

1. 4x 2.5-inch SAS/SATA hot-swap drive bay server models that can be upgraded to 8x 2.5-inch SAS/SATA hot-swap drive bays
2. 10x 2.5-inch SAS/SATA hot-swap drive bay server models that can be upgraded to the following drive bay configurations:
  - a. 12x 2.5-inch SAS/SATA hot-swap drive bays (10x front drive bays and 2x rear drive bays)
  - b. 8x 2.5-inch SAS/SATA hot-swap + 2x 2.5-inch PCIe SSD non-hot-swap drive bays
3. 4x 3.5-inch SAS/SATA hot-swap drive bay server models

The following figure shows the SAS/SATA drive bay configurations.

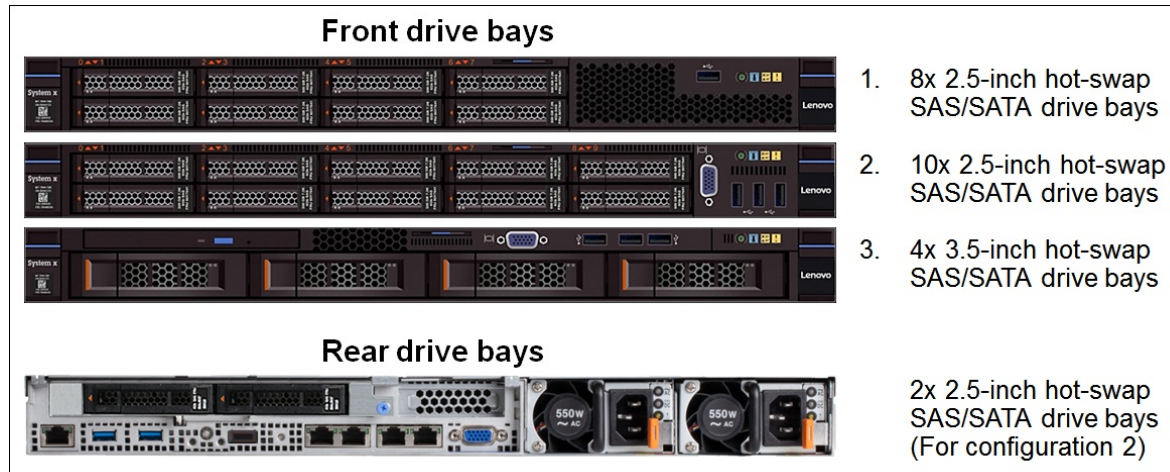


Figure 10. SAS/SATA drive bay configurations

The following figure shows the SAS/SATA and PCIe drive bay configurations.

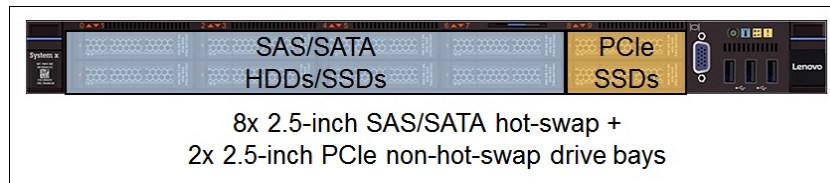


Figure 11. SAS/SATA and PCIe drive bay configurations

4x 3.5-inch drive bay models of the System x3550 M5 have one optical drive bay. For models with up to 8x 2.5-inch drive bays, the optional Front IO cage Standard or Advanced provides one optical drive bay, 2x USB 2.0 ports, and 1x DB-15 video port. In addition, the Front IO cage Advanced option includes a light path LCD panel.

The Front IO cage Standard and Advanced options are listed in the following table.

Table 9. Front IO cage options

Description	Part number	Feature code	Maximum supported
System x3550 M5 front IO cage Standard	00MV367	ATLJ	1
System x3550 M5 front IO cage Advanced	00MV368	ATLK	1

The following table shows the internal storage options available for the System x3550 M5 server.

Table 10. Internal storage options

Description	Part number	Feature code	Maximum supported
<b>Base drive kits</b>			
System x3550 M5 4x 2.5" HS HDD Kit	None*	A59W	1
System x3550 M5 4x 3.5" HS HDD Kit	None*	A5A4	1
System x3550 M5 10x 2.5" HS HDD Kit	None*	A5A0	1
System x3550 M5 NVMe PCIe SSD Upgrade Kit	00YL497	AU05	1

Upgrade drive kits (require the base drive kit)			
System x3550 M5 2x 2.5" HS HDD Rear Kit	00KA058	A5A2	1
System x3550 M5 4x 2.5" HS HDD Kit PLUS	00KA055	A59X	1

\* Available in standard or CTO models, or both.

Base drive kits are always factory installed in either standard or custom (CTO) models. Upgrade drive kits can be factory installed or can be installed as a field upgrade for supported standard or custom models.

The following table lists possible internal storage configurations.

Table 11. Internal storage configurations (FC=Feature Code, PN=Part Number)

Drive bay configuration	Storage controller*	Drive kits required
4x 2.5-inch SAS/SATA hot-swap (front)	1x RAID or HBA	Factory installed: <ul style="list-style-type: none"> <li>1x System x3550 M5 4x 2.5" HS HDD Kit (FC A59W)</li> </ul>
8x 2.5-inch SAS/SATA hot-swap (front)	1x RAID or HBA	Factory installed: <ul style="list-style-type: none"> <li>1x System x3550 M5 4x 2.5" HS HDD Kit (FC A59W); and</li> <li>1x System x3550 M5 4x 2.5" HS HDD Kit PLUS (FC A59X)</li> </ul> Field upgrade for the 4-drive bay model: <ul style="list-style-type: none"> <li>1x System x3550 M5 4x 2.5" HS HDD Kit PLUS (PN 00KA055)</li> </ul>
8x 2.5-inch SAS/SATA hot-swap (front) + 2x 2.5-inch PCIe SSD non-hot-swap (front)	1x RAID or HBA 1x PCIe Extender#	Factory installed: <ul style="list-style-type: none"> <li>1x System x3550 M5 NVMe PCIe SSD Upgrade Kit (FC AU05)**</li> </ul> Field upgrade for the 10-drive bay model: <ul style="list-style-type: none"> <li>1x System x3550 M5 NVMe PCIe SSD Upgrade Kit (PN 00YL497)**</li> </ul>
10x 2.5-inch SAS/SATA hot-swap (front)	1x RAID or HBA	Factory installed: <ul style="list-style-type: none"> <li>1x System x3550 M5 10x 2.5" HS HDD Kit (FC A5A0)</li> </ul>
10x 2.5-inch (front) + 2x 2.5-inch (rear) SAS/SATA hot-swap	1x RAID or HBA	Factory installed: <ul style="list-style-type: none"> <li>1x System x3550 M5 10x 2.5" HS HDD Kit (FC A5A0); and</li> <li>1x System x3550 M5 2x 2.5" HS HDD Rear Kit (FC A5A2)</li> </ul> Field upgrade for the 10-drive bay model: <ul style="list-style-type: none"> <li>1x System x3550 M5 2x 2.5" HS HDD Rear Kit (PN 00KA058)</li> </ul>
4x 3.5-inch SAS/SATA hot-swap	1x RAID or HBA	Factory installed: <ul style="list-style-type: none"> <li>1x System x3550 M5 4x 3.5" HS HDD Kit (FC A5A4)</li> </ul>

\* In the Storage controller column, RAID or HBA means any supported controller for internal storage: M1215, M5210, or N2215.

# PCIe Extender occupies a PCIe slot and is included in the NVMe PCIe SSD Upgrade Kit.

\*\* Requires the selection of a PCIe riser card 2. If 145 W processors (E5-2697 v4 and E5-2699 v4) are selected, the ambient temperature cannot exceed 35 °C (95 °F).

#### HDD Rear Kit configuration notes:

- The HDD Rear Kit (00KA058) is supported only for models with 10x 2.5-inch drive bays; the HDD Rear Kit is connected to the SAS expander on the 10-drive backplane.
- The HDD Rear Kit is installed in place of the PCIe slots 1 and 2 (see I/O expansion), and it includes a special riser that provides PCIe 3.0 x16 slot 3. No other riser cards can be used with the HDD Rear Kit.
- The HDD Rear Kit is not supported in the configurations with NVMe PCIe SSDs.
- 145 W and 135 W processors cannot be used when the HDD Rear Kit is installed.

## Controllers for internal storage

The following table lists the storage controllers and the additional options used for the internal storage of the System x3550 M5 server. The internal storage controllers are installed into a dedicated PCIe slot 4.

Table 12. RAID controllers and HBAs for internal storage

Description	Part number	Feature code	Maximum supported	I/O slots supported
<b>12 Gb SAS/SATA controllers</b>				
ServeRAID M5210 SAS/SATA Controller	46C9110	A3YZ	1	4
ServeRAID M1215 SAS/SATA Controller	46C9114	A45W	1	4
N2215 SAS/SATA HBA	47C8675	A3YY	1	4
<b>Hardware upgrades for the M5210 (per one controller)</b>				
ServeRAID M5200 Series 1GB Cache/RAID 5 Upgrade	47C8656	A3Z0	1	-
ServeRAID M5200 Series 1GB Flash/RAID 5 Upgrade	47C8660	A3Z1	1	-
ServeRAID M5200 Series 2GB Flash/RAID 5 Upgrade	47C8664	A3Z2	1	-
ServeRAID M5200 Series 4GB Flash/RAID 5 Upgrade	47C8668	A3Z3	1	-
<b>Features on Demand upgrades for the M5210 (system-wide)**</b>				
ServeRAID M5200 Series Zero Cache/RAID 5 Upgrade	47C8708	A3Z6	1	-
ServeRAID M5200 Series RAID 6 Upgrade	47C8706	A3Z5	1*	-
ServeRAID M5200 Series Performance Accelerator	47C8710	A3Z7	1*	-
ServeRAID M5200 Series SSD Caching Enabler	47C8712	A3Z8	1*	-
<b>Features on Demand upgrades for the M1215 (system-wide)***</b>				
ServeRAID M1200 Zero Cache/RAID 5 Upgrade	00AE930	A5H5	1	-
<b>PCIe extenders (for NVMe PCIe SSDs)</b>				
System x NVMe PCIe SSD Extender Adapter	00ML997	AS95	1	2

\* Requires cache memory upgrade (47C8656, 47C8660, 47C8664, or 47C8668).

\*\* One FoD upgrade enables the feature on all ServeRAID M5200 Series adapters (M5210, M5225) installed in the server.

\*\*\* One FoD upgrade enables the feature on all ServeRAID M1200 Series adapters (M1215) installed in the server.

The following table summarizes features of supported storage controllers.

Table 13. Storage controller features and specifications summary

Feature	M1215	M5210	N2215
Part number	46C9114	46C9110	47C8675
Form factor	PCIe low profile	PCIe low profile	PCIe low profile
Controller chip	LSI SAS3008	LSI SAS3108	LSI SAS3008
Host interface	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8
Port interface	12 Gbps SAS	12 Gbps SAS	12 Gbps SAS
Number of ports	8	8	8
Port connectors	2x Mini-SAS HD x4 (SFF-8643)	2x Mini-SAS HD x4 (SFF-8643)	2x Mini-SAS HD x4 (SFF-8643)
Drive interface	SAS, SATA	SAS, SATA	SAS, SATA
Drive type	HDD, SSD, SED	HDD, SSD, SED	HDD, SSD
Drive form factor	SFF, LFF	SFF, LFF	SFF, LFF
Maximum number of devices	32 (RAID); 64 (JBOD)	240	1024

Feature	M1215	M5210	N2215
RAID levels	0/1/10; Optional 5/50 (00AE930)	0/1/10; Optional 5/50 (RAID 5 FoD, 47C8708, or cache upgrades); Optional 6/60 (47C8706)	None
JBOD mode	Yes	Yes (without cache)	Yes
Cache	None	1 GB no backup (47C8656) 1 GB flash backup (47C8660) 2 GB flash backup (47C8664) 4 GB flash backup (47C8668)	None
SED support (SafeStore)	Yes (with RAID 5 FoD upgrade)	Yes (with RAID 5 FoD upgrade or any cache upgrade)	No
Performance Accelerator (FastPath)	No	Optional (47C8710)	No
SSD Caching (CacheCade Pro 2.0)	No	Optional (47C8712)	No

For more information, see the list of Product Guides in the RAID adapters category:  
<https://lenovopress.com/servers/options/raid>

The following table lists supported combinations of the storage controllers and drive types for the System x3550 M5 drive bay configurations.

Table 14. Storage controllers, drive types, and internal drive bays

Drive bays	Storage Controller	Drive type						
		SAS HDD	NL SAS HDD	NL SATA HDD	SAS SED	SAS SSD	SATA SSD	PCIe SSD
<b>Front drive bays</b>								
4/8/10x 2.5-inch SAS/SATA hot-swap (front)	M1215	Yes	Yes	Yes	Yes*	Yes	Yes	No
	M5210	Yes	Yes	Yes	Yes**	Yes	Yes	No
	N2215	Yes	Yes	Yes	No	Yes	Yes	No
4x 3.5-inch SAS/SATA hot-swap (front)	M1215	Yes	Yes	Yes	No	No	Yes	No
	M5210	Yes	Yes	Yes	No	No	Yes	No
	N2215	Yes	Yes	Yes	No	No	Yes	No
2x 2.5-inch PCIe SSD non-hot-swap (front)	PCIe SSD Extender	No	No	No	No	No	No	Yes
<b>Rear drive bays</b>								
2x 2.5-inch SAS/SATA hot-swap (rear)#	M1215	Yes	Yes	Yes	Yes*	Yes	Yes	No
	M5210	Yes	Yes	Yes	Yes**	Yes	Yes	No
	N2215	Yes	Yes	Yes	No	Yes	Yes	No

# Rear drives are connected to the SAS expander on the 10-drive backplane (supported only for 10x 2.5" front drive bay models).

\* SEDs are supported with the RAID 5 FoD upgrade (00AE930).

\*\* SEDs are supported with the RAID 5 FoD upgrade (47C8708) or any cache upgrade (47C8656, 47C8660, 47C8664, 47C8668).



## Drives for internal storage

The following tables list currently available drive options for internal storage of the System x3550 M5 server.

Table 15. Internal drive options: 2.5-inch hot-swap drives

Description	Part number	Feature code	Maximum supported
<b>2.5-inch hot-swap HDDs - 12 Gbps SAS</b>			
300GB 10K 12Gbps SAS 2.5" G3HS HDD	00WG685	AT89	12
300GB 15K 12Gbps SAS 2.5" G3HS HDD	00WG660	AT84	12
600GB 10K 12Gbps SAS 2.5" G3HS HDD	00WG690	AT8A	12
600GB 15K 12Gbps SAS 2.5" G3HS HDD	00WG665	AT85	12
900GB 10K 12Gbps SAS 2.5" G3HS HDD	00WG695	AT8B	12
900GB 15K 12Gbps SAS 2.5" G3HS 512e HDD	01GV035	AVKU	12*
1.2TB 10K 12Gbps SAS 2.5" G3HS HDD	00WG700	AT8C	12
1.8TB 10K 12Gbps SAS 2.5" G3HS 512e HDD	00NA271	ASBM	12
2.4TB 10K 12Gbps SAS 2.5" G3HS 512e HDD	01GV070	B0YT	12*
<b>2.5-inch hot-swap HDDs - 12 Gbps NL SAS</b>			
1TB 7.2K 12Gbps NL SAS 2.5" G3HS HDD	00NA491	AT7Z	12
2TB 7.2K 12Gbps NL SAS 2.5" G3HS HDD	00NA496	AT80	12
<b>2.5-inch hot-swap HDDs - 6 Gbps NL SATA</b>			
500GB 7.2K 6Gbps NL SATA 2.5" G3HS HDD	00AJ136	A4TW	12
1TB 7.2K 6Gbps NL SATA 2.5" G3HS HDD	00AJ141	A4TX	12
2TB 7.2K 6Gbps NL SATA 2.5" G3HS 512e HDD	00NA526	AT81	12
<b>2.5-inch hot-swap SEDs - 12 Gbps SAS</b>			
300GB 10K 12Gbps SAS 2.5" G3HS SED	00WG705	AT8D	12
600GB 10K 12Gbps SAS 2.5" G3HS SED	00WG710	AT8E	12
900GB 10K 12Gbps SAS 2.5" G3HS SED	00WG715	AT8F	12
1.2TB 10K 12Gbps SAS 2.5" G3HS SED	00WG720	AT8G	12
2.4TB 10K 12Gbps SAS 2.5" G3HS 512e FIPS 140-2 SED	01GV080	B0YW	12*
<b>2.5-inch hot-swap SEDs - 12 Gbps NL SAS</b>			
2TB 7.2K 12Gbps NL SAS 2.5" G3HS 512e FIPS 140-2 SED	01GR670	AUCF	12*
<b>2.5-inch hot-swap SSDs - Enterprise Performance (SS300) 12 Gbps SAS</b>			
400GB Enterprise Performance 12G SAS G3HS 2.5" SSD	01GV711	AVL0	12*
800GB Enterprise Performance 12G SAS G3HS 2.5" SSD	01GV716	AVL1	12*
1.6TB Enterprise Performance 12G SAS G3HS 2.5" SSD	01GV721	AVL2	12*
<b>2.5-inch hot-swap SSDs - Enterprise 12 Gbps SAS</b>			
200GB 12G SAS 2.5" MLC G3HS Enterprise SSD	00FN379	AS7C	12
400GB 12G SAS 2.5" MLC G3HS Enterprise SSD	00FN389	AS7E	12
800GB 12G SAS 2.5" MLC G3HS Enterprise SSD	00FN399	AS7G	12
1.6TB 12G SAS 2.5" MLC G3HS Enterprise SSD	00FN409	AS7J	12
<b>2.5-inch hot-swap SSDs - PM1635a Enterprise Mainstream 12 Gbps SAS</b>			
PM1635a 400GB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD	01GV761	AWEY	12*
PM1635a 800GB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD	01GV766	AWEZ	12*
PM1635a 1.6TB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD	01GV771	AWF0	12*

Description	Part number	Feature code	Maximum supported
2.5-inch hot-swap SSDs - Enterprise Mainstream 12 Gbps SAS			
800GB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD	00YC465	AT9N	12
2.5-inch hot-swap SSDs - Enterprise Capacity 12 Gbps SAS			
PM1633a 3.84TB Enterprise Capacity 12Gb SAS G3HS 2.5" SSD	01GR786	AVKV	12*
PM1633a 7.68TB Enterprise Capacity 12Gb SAS G3HS 2.5" SSD	01GR771	AUEJ	12*
2.5-inch non-hot-swap SSDs - P3700 Enterprise Performance PCIe 3.0 x4**			
Intel P3700 400GB NVMe 2.5" G3HS Enterprise Performance PCIe SSD	00YA818	AT7V	2
Intel P3700 800GB NVMe 2.5" G3HS Enterprise Performance PCIe SSD	00YA821	AT7W	2
2.5-inch hot-swap SSDs - 5100 Enterprise Mainstream 6 Gbps SATA			
5100 240GB Enterprise Mainstream SATA G3HS 2.5" SSD	01GV843	AXFV	12*
5100 480GB Enterprise Mainstream SATA G3HS 2.5" SSD	01GV848	AXFW	12*
5100 960GB Enterprise Mainstream SATA G3HS 2.5" SSD	01GV853	AXFX	12*
5100 1.92TB Enterprise Mainstream SATA G3HS 2.5" SSD	01GV858	AXFY	12*
5100 3.84TB Enterprise Mainstream SATA G3HS 2.5" SSD	01GV863	AXFZ	12*
2.5-inch hot-swap SSDs - S3610 Enterprise Mainstream 6 Gbps SATA			
Intel S3610 480GB Enterprise Mainstream SATA G3HS 2.5" SSD	00YK212	AU3C	12
Intel S3610 800GB Enterprise Mainstream SATA G3HS 2.5" SSD	00YK217	AU3D	12
Intel S3610 1.2TB Enterprise Mainstream SATA G3HS 2.5" SSD	00YK222	AU3E	12
2.5-inch hot-swap SSDs - S4600 Enterprise Mainstream 6 Gbps SATA			
Intel S4600 240GB Enterprise Mainstream SATA G3HS 2.5" SSD	4XB7A08499	B10A	12*
Intel S4600 480GB Enterprise Mainstream SATA G3HS 2.5" SSD	7SD7A05713	B10B	12*
Intel S4600 960GB Enterprise Mainstream SATA G3HS 2.5" SSD	7SD7A05712	B10C	12*
Intel S4600 1.92TB Enterprise Mainstream SATA G3HS 2.5" SSD	7SD7A05711	B10D	12*
2.5-inch non-hot-swap SSDs - P4600 Enterprise Mainstream PCIe 3.0 x4**			
Intel P4600 1.6TB NVMe 2.5" Enterprise Mainstream PCIe SSD	7SD7A05767	B11M	2*
Intel P4600 3.2TB NVMe 2.5" Enterprise Mainstream PCIe SSD	7SD7A05766	B11N	2*
2.5-inch non-hot-swap SSDs - PX04PMB Enterprise Mainstream PCIe 3.0 x4**			
960GB NVMe 2.5" Enterprise Mainstream PCIe SSD	00YK284	AVP1	2*
1.92TB NVMe 2.5" Enterprise Mainstream PCIe SSD	00YK285	AVP2	2*
2.5-inch non-hot-swap SSDs - PM963 Enterprise Mainstream PCIe 3.0 x4**			
PM963 1.92TB NVMe 2.5" Enterprise Value PCIe SSD	01GR660	AVPN	2*
PM963 3.84TB NVMe 2.5" Enterprise Value PCIe SSD	01GT715	AVPP	2*
2.5-inch hot-swap SSDs - 5100 Enterprise Entry 6 Gbps SATA			
5100 480GB Enterprise Entry SATA G3HS 2.5" SSD	01KR496	AXGL	12*
5100 960GB Enterprise Entry SATA G3HS 2.5" SSD	01KR501	AXGM	12*
5100 1.92TB Enterprise Entry SATA G3HS 2.5" SSD	01KR506	AXGN	12*
5100 3.84TB Enterprise Entry SATA G3HS 2.5" SSD	01KR511	AXGP	12*
2.5-inch hot-swap SSDs - Enterprise Entry 6 Gbps SATA			
1.92TB Enterprise Entry SATA G3HS 2.5" SSD	01GR711	AUE7	12
2.5-inch hot-swap SSDs - S3520 Enterprise Entry 6 Gbps SATA			
Intel S3520 240GB Enterprise Entry SATA G3HS 2.5" SSD	01GR726	AUEM	12
Intel S3520 480GB Enterprise Entry SATA G3HS 2.5" SSD	01GR731	AUEP	12

Description	Part number	Feature code	Maximum supported
Intel S3520 800GB Enterprise Entry SATA G3HS 2.5" SSD	01KR466	AXGB	12
Intel S3520 960GB Enterprise Entry SATA G3HS 2.5" SSD	01GR736	AUER	12
Intel S3520 1.2TB Enterprise Entry SATA G3HS 2.5" SSD	01GR802	AXGD	12
Intel S3520 1.6TB Enterprise Entry SATA G3HS 2.5" SSD	01GR817	AXGF	12
2.5-inch hot-swap SSDs - S4500 Enterprise Entry 6 Gbps SATA			
Intel S4500 240GB Enterprise Entry SATA G3HS 2.5" SSD	7SD7A05732	B0Z8	12*
Intel S4500 480GB Enterprise Entry SATA G3HS 2.5" SSD	7SD7A05731	B0Z9	12*
Intel S4500 960GB Enterprise Entry SATA G3HS 2.5" SSD	7SD7A05730	B0ZA	12*
Intel S4500 1.92TB Enterprise Entry SATA G3HS 2.5" SSD	4XB7A08493	B0ZB	12*
Intel S4500 3.84TB Enterprise Entry SATA G3HS 2.5" SSD	4XB7A08494	B0ZC	12*
2.5-inch hot-swap SSDs - PM863a Enterprise Entry 6 Gbps SATA			
PM863a 240GB Enterprise Entry SATA G3HS 2.5" SSD	01GR836	AVHP	12
PM863a 480GB Enterprise Entry SATA G3HS 2.5" SSD	01GR841	AVHQ	12
PM863a 960GB Enterprise Entry SATA G3HS 2.5" SSD	01GR846	AVHR	12
2.5-inch hot-swap SSDs - Enterprise Value 6 Gbps SATA			
480GB SATA 2.5" MLC G3HS Enterprise Value SSD	00AJ405	A579	12
800GB SATA 2.5" MLC G3HS Enterprise Value SSD	00AJ410	A57A	12
2.5-inch non-hot-swap SSDs - P4500 Enterprise Entry PCIe 3.0 x4**			
Intel P4500 1.0TB NVMe 2.5" Enterprise Entry PCIe SSD	7SD7A05774	B11F	2*
Intel P4500 2.0TB NVMe 2.5" Enterprise Entry PCIe SSD	7SD7A05773	B11G	2*
Intel P4500 4.0TB NVMe 2.5" Enterprise Entry PCIe SSD	4XB7A08539	B1JK	2*
2.5-inch non-hot-swap SSDs - P3600 Enterprise Value PCIe 3.0 x4**			
Intel P3600 400GB NVMe 2.5" G3HS Enterprise Value PCIe SSD	90Y3227	A5RW	2
Intel P3600 1.6TB NVMe 2.5" G3HS Enterprise Value PCIe SSD	90Y3233	A5RY	2
2.5-inch hot-swap SED SSDs - Enterprise Performance 12 Gbps SAS (SS300)			
400GB Enterprise Performance 12Gbps SAS G3HS 2.5" SSD FIPS	7SD7A05748	AXG5	12*
800GB Enterprise Performance 12Gbps SAS G3HS 2.5" SSD FIPS	7SD7A05747	AXG6	12*
1.6TB Enterprise Performance 12Gbps SAS G3HS 2.5" SSD FIPS	7SD7A05746	AXG7	12*
2.5-inch hot-swap SED SSDs - Enterprise 12 Gbps SAS			
HGST SSC+ 400GB 12Gb SAS FIPS SED 2.5" Enterprise G3HS SSD	01GR600	AUCC	12*
HGST SSC+ 800GB 12Gb SAS FIPS SED 2.5" Enterprise G3HS SSD	01GR605	AUCD	12*
HGST SSC+ 1.6TB 12Gb SAS FIPS SED 2.5" Enterprise G3HS SSD	01GR610	AUCE	12*

\* Not supported with the Intel Xeon processor E5-2600 v3 product family.

\*\* The NVMe PCIe SSDs are non-hot-swap when used in the System x3550 M5.

Table 16. Internal drive options: 3.5-inch hot-swap drives

Description	Part number	Feature code	Maximum supported
3.5-inch hot-swap HDDs - 12 Gbps SAS			
300GB 15K 12Gbps SAS 3.5" G2HS HDD (2.5" HDD with 3.5" tray)	00WG675	AT87	4
600GB 15K 12Gbps SAS 3.5" G2HS HDD (2.5" HDD with 3.5" tray)	00WG680	AT88	4
900GB 15K 12Gbps SAS 3.5" G2HS 512e HDD (2.5" HDD with 3.5" tray)	01GV040	AVL9	4*

Description	Part number	Feature code	Maximum supported
<b>3.5-inch hot-swap HDDs - 12 Gbps NL SAS</b>			
1TB 7.2K 12Gbps NL SAS 3.5" G2HS HDD	00YL702	ATYM	4
2TB 7.2K 12Gbps NL SAS 3.5" G2HS HDD	00YK000	ATYL	4
2TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e HDD	00FN188	A5VP	4
4TB 7.2K 12Gbps NL SAS 3.5" G2HS HDD	00YK005	ATYN	4
6TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e HDD	00FN228	A5VR	4
8TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e HDD	00WH121	ATRS	4
10TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e HDD	00YK336	AU7R	4
12TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e HDD	01GV055	B119	4*
<b>3.5-inch hot-swap HDDs - 6 Gbps NL SAS</b>			
2TB 7.2K 6Gbps NL SAS 3.5" G2HS HDD	90Y8572	A2U0	4
<b>3.5-inch hot-swap HDDs - 6 Gbps NL SATA</b>			
500GB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	81Y9786	A22Y	4
1TB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	81Y9790	A22P	4
2TB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	81Y9794	A22T	4
4TB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	49Y6002	A3W9	4
4TB 7.2K 6Gbps NL SATA 3.5" G2HS 512e HDD	00FN143	A5VH	4
6TB 7.2K 6Gbps NL SATA 3.5" G2HS 512e HDD	00FN173	A5VM	4
8TB 7.2K 6Gbps NL SATA 3.5" G2HS 512e HDD	00WH126	ATRT	4
10TB 7.2K 6Gbps NL SATA 3.5" G2HS 512e HDD	00YK341	AU7S	4
12TB 7.2K 6Gbps NL SATA 3.5" G2HS 512e HDD	01GV060	B11A	4*
<b>3.5-inch hot-swap SEDs - 12 Gbps NL SAS</b>			
2TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e FIPS 140-2 SED	01GR676	AUCM	4*
4TB 7.2K 12Gbps NL SAS 3.5" G2HS FIPS 140-2 SED	01GR682	AUCN	4*
6TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e FIPS 140-2 SED	01GR688	AUCP	4*
8TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e FIPS 140-2 SED	01GR694	AUCQ	4*
<b>3.5-inch hot-swap SSDs - Enterprise Performance 12 Gbps SAS (SS300)</b>			
400GB Enterprise Performance 12G SAS HS 3.5" SSD	01GV726	AVL3	4*
800GB Enterprise Performance 12G SAS HS 3.5" SSD	01GV731	AVL4	4*
1.6TB Enterprise Performance 12G SAS HS 3.5" SSD	01GV736	AVL5	4*
<b>3.5-inch hot-swap SSDs - Enterprise Capacity 12 Gbps SAS</b>			
PM1633a 3.84TB Enterprise Capacity 12Gb SAS HS 3.5" SSD	01GR791	AVKW	4*
<b>3.5-inch hot-swap SSDs - 5100 Enterprise Mainstream 6 Gbps SATA</b>			
5100 240GB Enterprise Mainstream SATA HS 3.5" SSD	01GV868	AXG0	4*
5100 480GB Enterprise Mainstream SATA HS 3.5" SSD	01GV873	AXG1	4*
5100 960GB Enterprise Mainstream SATA HS 3.5" SSD	01GV878	AXG2	4*
5100 1.92TB Enterprise Mainstream SATA HS 3.5" SSD	01GV883	AXG3	4*
5100 3.84TB Enterprise Mainstream SATA HS 3.5" SSD	01GV090	AXG4	4*
<b>3.5-inch hot-swap SSDs - S3610 Enterprise Mainstream 6 Gbps SATA</b>			
Intel S3610 480GB Enterprise Mainstream SATA HS 3.5" SSD	00YK237	AU3H	4
Intel S3610 800GB Enterprise Mainstream SATA HS 3.5" SSD	00YK242	AU3J	4
Intel S3610 1.2TB Enterprise Mainstream SATA HS 3.5" SSD	00YK247	AU3K	4

Description	Part number	Feature code	Maximum supported
<b>3.5-inch hot-swap SSDs (2.5" SSD in 3.5" drive tray) - S4600 Enterprise Mainstream 6 Gbps SATA</b>			
Intel S4600 240GB Enterprise Mainstream SATA HS 3.5" SSD	4XB7A08500	B10E	4*
Intel S4600 480GB Enterprise Mainstream SATA HS 3.5" SSD	7SD7A05710	B10F	4*
Intel S4600 960GB Enterprise Mainstream SATA HS 3.5" SSD	7SD7A05709	B10G	4*
Intel S4600 1.92TB Enterprise Mainstream SATA HS 3.5" SSD	7SD7A05708	B10H	4*
<b>3.5-inch hot-swap SSDs - 5100 Enterprise Entry 6 Gbps SATA</b>			
5100 480GB Enterprise Entry SATA HS 3.5" SSD	01KR516	AXGQ	4*
5100 960GB Enterprise Entry SATA HS 3.5" SSD	01KR521	AXGR	4*
5100 1.92TB Enterprise Entry SATA HS 3.5" SSD	01KR526	AXGS	4*
5100 3.84TB Enterprise Entry SATA HS 3.5" SSD	01KR531	AXGT	4*
<b>3.5-inch hot-swap SSDs - PM863a Enterprise Entry 6 Gbps SATA</b>			
PM863a 240GB Enterprise Entry SATA HS 3.5" SSD	01GR899	AVHS	4
PM863a 480GB Enterprise Entry SATA HS 3.5" SSD	01GR851	AVHT	4
PM863a 960GB Enterprise Entry SATA HS 3.5" SSD	01GR856	AVHU	4
<b>3.5-inch hot-swap SSDs - S3520 Enterprise Entry 6 Gbps SATA</b>			
Intel S3520 240GB Enterprise Entry SATA HS 3.5" SSD	01GR741	AUF0	4
Intel S3520 480GB Enterprise Entry SATA HS 3.5" SSD	01GR746	AUF1	4
Intel S3520 800GB Enterprise Entry SATA HS 3.5" SSD	01KR471	AXGC	4
Intel S3520 960GB Enterprise Entry SATA HS 3.5" SSD	01GR751	AUF2	4
Intel S3520 1.2TB Enterprise Entry SATA HS 3.5" SSD	01GR807	AXGE	4
Intel S3520 1.6TB Enterprise Entry SATA HS 3.5" SSD	01GR822	AXGG	4
<b>3.5-inch hot-swap SSDs (2.5" SSD in 3.5" drive tray) - S4500 Enterprise Entry 6 Gbps SATA</b>			
Intel S4500 240GB Enterprise Entry SATA HS 3.5" SSD	7SD7A05729	B0ZD	4*
Intel S4500 480GB Enterprise Entry SATA HS 3.5" SSD	7SD7A05728	B0ZE	4*
Intel S4500 960GB Enterprise Entry SATA HS 3.5" SSD	7SD7A05727	B0ZF	4*
Intel S4500 1.92TB Enterprise Entry SATA HS 3.5" SSD	4XB7A08495	B0ZG	4*
Intel S4500 3.84TB Enterprise Entry SATA HS 3.5" SSD	4XB7A08496	B0ZH	4*
<b>3.5-inch hot-swap SSDs - Enterprise Entry 6 Gbps SATA</b>			
1.92TB Enterprise Entry SATA HS 3.5" SSD	01GR721	AUE9	4
<b>3.5-inch hot-swap SSDs - Enterprise Value 6 Gbps SATA</b>			
480GB SATA 3.5" MLC HS Enterprise Value SSD	00AJ445	A57H	4
<b>3.5-inch hot-swap SED SSDs - Enterprise Performance 12 Gbps SAS (SS300)</b>			
400GB Enterprise Performance 12Gb SAS HS 3.5" SSD FIPS	7SD7A05745	AXG8	4*
800GB Enterprise Performance 12Gb SAS HS 3.5" SSD FIPS	7SD7A05744	AXG9	4*
1.6TB Enterprise Performance 12Gb SAS HS 3.5" SSD FIPS	7SD7A05743	AXGA	4*

\* Not supported with the Intel Xeon processor E5-2600 v3 product family.

## Optical drives

The System x3550 M5 server supports the optical drive options listed in the following table.

Table 17. Optical drives

Description	Part number	Feature code	Maximum supported
Ultraslim 9.5mm SATA DVD-ROM	00AM066	A5KG	1
Ultraslim 9.5mm SATA Multi Burner	00AM067	A5KH	1

### Configuration notes:

- Server models with 10x 2.5-inch drive bays on the front do not support an internal optical drive; a supported external optical drive can be used instead.
- Server models with up to 8x 2.5-inch drive bays require the Front IO cage Standard (00MV367) or Advanced (00MV368) for optical drive support.

Ultraslim 9.5mm SATA DVD-ROM (part number 00AM066) supports the following media and speeds for reading:

- CD-ROM 24X
- CD-DA (DAE) 24X
- CD-R 24X
- CD-RW 24X
- DVD-ROM 8X
- DVD-R 8X
- DVD+R 8X
- DVD-R DL 6X
- DVD+R DL 8X
- DVD-RW 8X
- DVD+RW 8X

Ultraslim 9.5mm SATA Multi Burner (part number 00AM067) supports the same media and speeds for reading as DVD-ROM (part number 00AM066). This drive also supports the following media and speeds for writing:

- CD-R 24X
- CD-RW 4X
- High-Speed CD-RW 10X
- Ultra Speed CD-RW 24X
- DVD-R 8X
- DVD+R 8X
- DVD-R DL 6X
- DVD+R DL 6X
- DVD-RW 6X
- DVD+RW 8X

## I/O expansion

The System x3550 M5 server supports up to four PCIe slots: one on the system planar that is dedicated for an internal storage controller and up to three with different riser cards installed into two riser sockets on the system planar (one riser socket supports the installation of one riser card).

The slot form factors are listed:

- Slot 1: PCIe 3.0 x16 or ML2; low profile, half-length (not present if the HDD Rear Kit is installed)
- Slot 2: PCIe 3.0 x16 or PCIe 3.0 x8; low profile or full-height, half-length (PCIe 3.0 x16 slot requires the second processor to be installed) (not present if the HDD Rear Kit is installed)
- Slot 3: PCIe 3.0 x16 or PCIe 3.0 x8; low profile, half-length
- Slot 4: PCIe 3.0 x8 (dedicated for an internal RAID controller)

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

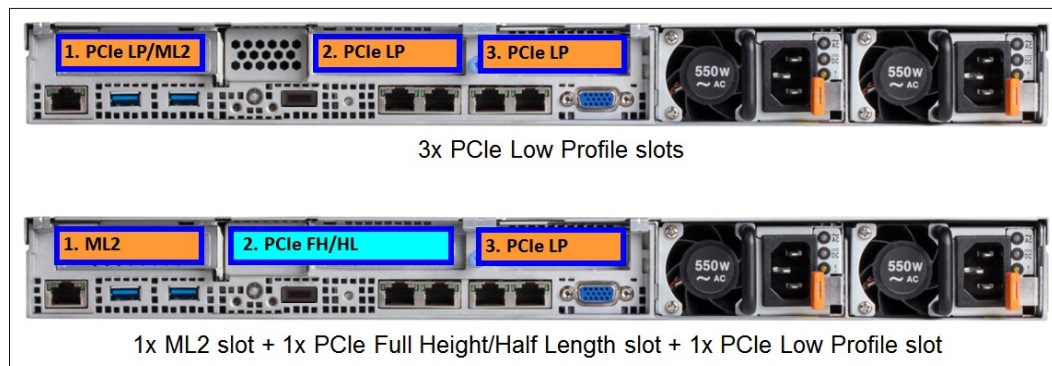


Figure 12. PCIe slot locations

Riser 1 supplies slot 1, and Riser 2 supplies slots 2 and 3. The slots that are available for use depend on the number of riser cards that are installed and whether the second processor is installed:

- One or two processors and no riser cards: Slot 4 is available for use
- One or two processors and one riser card in riser slot 1: Slots 1 and 4 are available for use
- One processor and one PCIe x16 riser card in riser slot 2: Slots 3 and 4 are available for use
- One processor and one PCIe x8 riser card in riser slot 2: Slots 2, 3 and 4 are available for use
- One processor and two riser cards: Slots 1, 3 and 4 are available for use
- Two processors and one riser card in riser slot 2: Slots 2, 3 and 4 are available for use
- Two processors and two riser cards: All slots (1, 2, 3, and 4) are available for use

All standard models have one riser card (Riser 1) installed, which provides one low profile PCIe x16 Gen 3 slot (riser option part number 00KA061). You can replace or add riser cards with the riser card options that are listed in the following table (or configure these riser cards to be factory-integrated using CTO).

Table 18. PCI riser card options

Description	Part number	Feature code	Maximum supported
<b>Riser 1 (supplies slots 1)</b>			
System x3550 M5 PCIe Riser 1 (1x LP x16 CPU0)	00KA061	A5AG	1
System x3550 M5 PCIe Riser 1 (1x ML2 x16 CPU0)	00KA063	A5AH	1
<b>Riser 2 (supplies slots 2 and 3)</b>			
System x3550 M5 PCIe Riser 2, 1 CPU (2xLP, LP x8 CPU0 + LP x8 CPU0)	00KA062	A5AC	1
System x3550 M5 PCIe Riser 2, 1-2 CPU (FHHL x16 CPU1 + LP x16 CPU0)	00YL429	A5AD	1
System x3550 M5 PCIe Riser 2, 1 CPU (FHHL x8 CPU0 +LP x8 CPU0)	None*	A5AE	1
System x3550 M5 PCIe Riser 2, 1-2 CPU (LP x16 CPU1 + LP x16 CPU0)	00KA066	A5AF	1

\* Only available via CTO or special bid.

**Configuration notes:**

- The 1 CPU Riser 2 options (feature codes A5AC and A5AE) are supported only in configurations with one processor. If two processors are selected, these options cannot be used.
- If the FHHL x16 Riser 2 option (feature code A5AD) is selected, the x16 Riser 1 option (feature code A5AG) cannot be used.
- If both ML2 Riser 1 (feature code A5AH) and FHHL x8 or x16 Riser 2 option (feature code A5AE or A5AD) are selected, one of the following ML2 network adapters is allowed for selection:
  - Broadcom NetXtreme II ML2 Dual Port 10GbaseT (part number 00D2026)
  - Broadcom NetXtreme II ML2 Dual Port 10GbE SFP+ (part number 00D2028)
  - Emulex VFA5 ML2 Dual Port 10GbE SFP+ Adapter (part number 00D1996)
  - Intel X540 ML2 Dual Port 10GbaseT Adapter (part number 00D1994)
  - Intel I350-T4 ML2 Quad Port GbE Adapter (part number 00D1998)
- If the FHHL x8 or x16 Riser 2 options (feature codes A5AD and A5AE) are selected, the Mellanox ConnectX-3 Pro ML2 2x40GbE/FDR VPI Adapter (part number 00FP650) cannot be used.
- The HDD Rear Kit (00KA058; see Internal storage) is installed in place of the PCIe slots 1 and 2; it includes a special riser that provides PCIe 3.0 x16 slot 3, and no other riser cards can be used.

The COM Port Bracket listed in the following table is used for mounting the external DB-9 serial port on the rear of the System x3550 M5. This option includes the bracket and the cable. The COM Port option is mounted in place of the PCIe slot 3, and only PCIe slots 1 and 2 remain available.

Table 19. Serial port

Description	Part number	Feature code	Maximum supported
COM Port Bracket	00KA161	A5AN	1



## Network adapters

The System x3550 M5 supports four integrated Gigabit Ethernet ports. The integrated network interface controller (NIC) has the following features:

- A Broadcom BCM5719 chip
- Four Gigabit Ethernet ports
- NIC Teaming (load balancing and failover)
- Ethernet features:
  - Compliant with 1 Gb Ethernet IEEE 802.3, 802.3u, and 802.3ab PHY specifications
  - Integrated PHY for 10/100/1000 Mbps for multispeed, full, and half-duplex auto-negotiation
  - Automatic MDI crossover
  - IEEE 802.3x-compliant flow control support
  - IEEE 1588 protocol and 802.1AS time synchronization implementation
  - IEEE802.3az - Energy Efficient Ethernet (EEE)
- I/O Virtualization features:
  - I/O Virtualization support for VMware NetQueue and Microsoft virtual machine queue (VMQ)
  - Function Level Reset (FLR)
  - IEEE 802.1q Virtual Local Area Network (VLAN) tagging support
- Stateless offload and performance features:
  - TCP, IP, and User Datagram Protocol (UDP) checksum offload
  - TCP segmentation offload (TCO)
  - Large Send Offload (LSO)
  - Receive Side Scaling (RSS) and Transmit Side Scaling (TSS)
  - Message Signal Interrupt (MSI) and Message Signal Interrupt Extension (MSI-X) support
  - Support for jumbo frames up to 9600 bytes

Optionally, the System x3550 M5 server supports ML2 adapters that are installed in the custom ML2 slot provided by the PCIe ML2 riser card (part number 00KA063). This slot supports adapters with either two or four 10 Gb ports or four Gigabit ports and supports direct connectivity to the IMM2.1 service processor for out-of-band systems management.

The following table lists additional supported network adapters.

Table 20. Network adapters

Description	Part number	Feature code	Maximum supported	I/O slots supported
<b>100 Gb Ethernet / EDR InfiniBand - PCIe</b>				
Mellanox ConnectX-4 1x100GbE/EDR IB QSFP28 VPI Adapter	00KH924	ASWQ	3*	1, 2, 3†
Mellanox ConnectX-4 2x100GbE/EDR IB QSFP28 VPI Adapter	00MM960	ATRP	3*	1, 2, 3†
<b>Intel Omni-Path PCIe adapters</b>				
Intel OPA 100 Series Single-port PCIe 3.0 x8 HFA	00WE023	AU0A	2*	2, 3
Intel OPA 100 Series Single-port PCIe 3.0 x16 HFA	00WE027	AU0B	2*	2, 3†
<b>40 Gb Ethernet / FDR InfiniBand - ML2</b>				
Mellanox ConnectX-3 Pro ML2 2x40GbE/FDR IB VPI QSFP+ Adapter	00FP650	A5RK	1*	1
<b>40 Gb Ethernet - PCIe</b>				
Mellanox ConnectX-4 Lx 1x40GbE QSFP+ Adapter	00MM950	ATRN	3*	1, 2, 3
<b>40 Gb Ethernet / EDR InfiniBand - PCIe</b>				
Mellanox ConnectX-3 2x40GbE/FDR IB VPI QSFP+ Adapter	00D9550	A3PN	3*	1, 2, 3
<b>25 Gb Ethernet - ML2</b>				
Mellanox ConnectX-4 Lx ML2 1x25GbE SFP28 Adapter	00MN990	ATZR	1*	1

Description	Part number	Feature code	Maximum supported	I/O slots supported
<b>25 Gb Ethernet - PCIe</b>				
Mellanox ConnectX-4 Lx 2x25GbE SFP28 Adapter	01GR250	AUAJ	3*	1, 2, 3
<b>10 Gb Ethernet - ML2</b>				
Broadcom NetXtreme II ML2 Dual Port 10GbaseT	00D2026	A40S	1	1
Broadcom NetXtreme II ML2 Dual Port 10GbE SFP+	00D2028	A40T	1*	1
Emulex VFA5.2 ML2 Dual Port 10GbE SFP+ Adapter	00AG560	AT7U	1*	1
Emulex VFA5 ML2 FCoE/iSCSI License (FoD) (Upgrade for 00AG560 - one per adapter)	00D8544	A4NZ	1	-
Emulex VFA5.2 ML2 2x10 GbE SFP+ Adapter and FCoE/iSCSI SW	01CV770	AU7Z	1*	1
Intel X540 ML2 Dual Port 10GbaseT Adapter	00D1994	A40P	1	1
Intel X710-DA2 ML2 2x10GbE SFP+ Adapter	00JY940	ATRH	1*	1
<b>10 Gb Ethernet - PCIe</b>				
Broadcom NetXtreme 2x10GbE BaseT Adapter	44T1370	A5GZ	3	1, 2, 3
Broadcom NetXtreme Dual Port 10GbE SFP+ Adapter	94Y5180	A4Z6	3*	1, 2, 3
Emulex VFA5 2x10 GbE SFP+ PCIe Adapter	00JY820	A5UT	3*	1, 2, 3
Emulex VFA5.2 2x10 GbE SFP+ PCIe Adapter	00AG570	AT7S	3*	1, 2, 3
Emulex VFA5 FCoE/iSCSI SW for PCIe Adapter (FoD) (Upgrade for 00JY820 and 00AG570 - one per adapter)	00JY824	A5UV	3	-
Emulex VFA5.2 2x10 GbE SFP+ Adapter and FCoE/iSCSI SW	00AG580	AT7T	3*	1, 2, 3
Intel X520 Dual Port 10GbE SFP+ Adapter	49Y7960	A2EC	3*	1, 2, 3
Intel X540-T2 Dual Port 10GBaseT Adapter	49Y7970	A2ED	3	1, 2, 3
Intel X550-T1 Single Port 10GBase-T Adapter	00MM850	ATRY	3‡	1, 2, 3
Intel X550-T2 Dual Port 10GBase-T Adapter	00MM860	ATPX	3	1, 2, 3
Intel X710-DA2 2x10GbE SFP+ Adapter	01DA900	AU2Y	3*	1, 2, 3
Intel X710-DA4 4x10Gb SFP+ Adapter	7XC7A05525	B0YL	1*	2^
Mellanox ConnectX-3 10 GbE Adapter	00D9690	A3PM	3*	1, 2, 3
<b>1 Gb Ethernet - ML2</b>				
Intel I350-T4 ML2 Quad Port GbE Adapter	00D1998	A40R	1	1
<b>1 Gb Ethernet - PCIe</b>				
Broadcom NetXtreme 2xGbE BaseT Adapter	42C1780	2995	3	1, 2, 3
Broadcom NetXtreme I Dual Port GbE Adapter	90Y9370	A2V4	3	1, 2, 3
Broadcom NetXtreme I Quad Port GbE Adapter	90Y9352	A2V3	3	1, 2, 3
Intel I350-F1 1xGbE Fiber Adapter	00AG500	A56K	3	1, 2, 3
Intel I350-T2 2xGbE BaseT Adapter	00AG510	A56L	3	1, 2, 3
Intel I350-T4 4xGbE BaseT Adapter	00AG520	A56M	3	1, 2, 3

† Supported only in the PCIe 3.0 x16 slots (PCIe x16 riser cards 00KA061, 00KA066, and feature A5AD).

\* The adapter comes without transceivers or cables; for ordering transceivers or cables, see the configuration notes below the table.

‡ Not supported with the Intel Xeon processor E5-2600 v3 product family.

^ Supported only in the full-height PCIe slot 2 supplied by one of the full-height PCIe riser cards (feature A5AD or A5AE).

**Configuration notes:**

- If the Intel X540 ML2 Dual Port 10GbaseT Adapter (00D1994) is used, the additional system fans might be required (see [Cooling](#) for details).
- ML2 network adapters are supported in the ML2 slot 1 supplied by the ML2 Riser Card (part number 00KA063).
- PCIe x16 Low Profile network adapters are supported in the full-height PCIe x16 slots supplied by the riser cards 1 and 2 (**Note:** Omni-Path adapters are not supported in the PCIe slot 1).
- PCIe x4 and x8 Low Profile network adapters are supported in the low profile and full-height PCIe x8 and x16 slots supplied by the riser cards 1 and 2.
- PCIe x8 full-height network adapters are supported in the full-height PCIe x8 or x16 slot supplied by the riser card 2.
- Some adapters require supported transceivers or DAC cables to be purchased for the adapter. For 1 GbE RJ-45 adapters, UTP Category 5e or 6 cables can be ordered from Lenovo. For 10 GbE RJ-45 adapters, UTP Category 6 cables can be ordered from Lenovo. 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.  
The following transceiver and cables can be purchased:
  - [UTP cables for 10 GbE and 1 GbE RJ-45 adapters](#)
  - [Transceivers and cables for 10 GbE SFP+ adapters](#)
  - [Transceivers and cables for 25 GbE SFP28 adapters](#)
  - [Transceivers and cables for 40 GbE QSFP+ adapters](#)
  - [Cables for Mellanox FDR InfiniBand QSFP adapters](#)
  - [Transceivers and cables for 100 GbE QSFP28 network adapters](#)
  - [Cables for Mellanox EDR InfiniBand QSFP28 adapters](#)
  - [Cables for Intel Omni-Path QSFP28 adapters](#)

The following table lists UTP cables for the 10 GbE and 1 GbE RJ-45 adapters.

Table 21. UTP cables for 10 GbE and 1 GbE RJ-45 adapters

Description	Part number	Feature code
UTP Category 6 cables (Blue) for 10 GbE and 1 GbE RJ-45 adapters		
10m Cat6 Blue Cable	90Y3721	A1MU
25m Cat6 Blue Cable	90Y3730	A1MX
UTP Category 6 cables (Green) for 10 GbE and 1 GbE RJ-45 adapters		
0.75m Cat6 Green Cable	00WE123	AVFW
1.0m Cat6 Green Cable	00WE127	AVFX
1.25m Cat6 Green Cable	00WE131	AVFY
1.5m Cat6 Green Cable	00WE135	AVFZ
3m Cat6 Green Cable	00WE139	AVG0
10m Cat6 Green Cable	90Y3718	A1MT
25m Cat6 Green Cable	90Y3727	A1MW
UTP Category 6 cables (Yellow) for 10 GbE and 1 GbE RJ-45 adapters		
10m Cat6 Yellow Cable	90Y3715	A1MS
25m Cat6 Yellow Cable	90Y3724	A1MV
UTP Category 5e cables (Blue) for 1 GbE RJ-45 adapters		
0.6m Blue Cat5e Cable	40K5679	3801
0.75m Blue Cat5e Cable	00WE111	AVFT
1.0m Blue Cat5e Cable	00WE115	AVFU

Description	Part number	Feature code
1.25m Blue Cat5e Cable	00WE119	AVFV
1.5m Blue Cat5e Cable	40K8785	3802
3m Blue Cat5e Cable	40K5581	3803
10m Blue Cat5e Cable	40K8927	3804
25m Blue Cat5e Cable	40K8930	3805
UTP Category 5e cables (Green) for 1 GbE RJ-45 adapters		
0.6m Green Cat5e Cable	40K5563	3796
0.75m Green Cat5e Cable	00WE099	AVFQ
1.0m Green Cat5e Cable	00WE103	AVFR
1.25m Green Cat5e Cable	00WE107	AVFS
1.5m Green Cat5e Cable	40K5643	3797
3m Green Cat5e Cable	40K5793	3798
10m Green Cat5e Cable	40K5794	3799
25m Green Cat5e Cable	40K8869	3800
UTP Category 5e cables (Yellow) for 1 GbE RJ-45 adapters		
0.6m Yellow Cat5e Cable	40K8933	3791
1.5m Yellow Cat5e Cable	40K8951	3792
3m Yellow Cat5e Cable	40K8957	3793
10m Yellow Cat5e Cable	40K8801	3794
25m Yellow Cat5e Cable	40K8807	3795

The following table lists transceivers and cables for the 10 GbE SFP+ adapters.

Table 22. Transceivers and cables for 10 GbE SFP+ adapters

Description	Part number	Feature code
10 GbE SFP+ SR transceivers for 10 GbE SFP+ adapters		
Lenovo 10GBASE-SR SFP+ Transceiver	46C3447	5053
Optical cables for 10 GbE SFP+ SR transceivers		
Lenovo 0.5m LC-LC OM3 MMF Cable	00MN499	ASR5
Lenovo 1m LC-LC OM3 MMF Cable	00MN502	ASR6
Lenovo 3m LC-LC OM3 MMF Cable	00MN505	ASR7
Lenovo 5m LC-LC OM3 MMF Cable	00MN508	ASR8
Lenovo 10m LC-LC OM3 MMF Cable	00MN511	ASR9
Lenovo 15m LC-LC OM3 MMF Cable	00MN514	ASRA
Lenovo 25m LC-LC OM3 MMF Cable	00MN517	ASRB
Lenovo 30m LC-LC OM3 MMF Cable	00MN520	ASRC
Passive SFP+ DAC cables for 10 GbE SFP+ adapters		
Lenovo 0.5m Passive SFP+ DAC Cable	00D6288	A3RG
Lenovo 1m Passive SFP+ DAC Cable	90Y9427	A1PH
Lenovo 1.5m Passive SFP+ DAC Cable	00AY764	A51N
Lenovo 2m Passive SFP+ DAC Cable	00AY765	A51P
Lenovo 3m Passive SFP+ DAC Cable	90Y9430	A1PJ
Lenovo 5m Passive SFP+ DAC Cable	90Y9433	A1PK

Description	Part number	Feature code
Lenovo 7m Passive SFP+ DAC Cable	00D6151	A3RH

The following table lists transceivers and cables for the 25 GbE SFP28 adapters.

Table 23. Transceivers and cables for 25 GbE SFP28 adapters

Description	Part number	Feature code
25 GbE SFP28 SR transceivers for 25 GbE SFP+ adapters		
Lenovo 25GBase-SR SFP28 Transceiver	7G17A03537	AV1B
Passive copper cables for 25 GbE SFP28 network adapters		
Lenovo 1m Passive 25G SFP28 DAC Cable	7Z57A03557	AV1W
Lenovo 3m Passive 25G SFP28 DAC Cable	7Z57A03558	AV1X
Lenovo 5m Passive 25G SFP28 DAC Cable	7Z57A03559	AV1Y

The following table lists transceivers and cables for the 40 GbE QSFP+ adapters.

Table 24. Transceivers and cables for 40 GbE QSFP+ adapters

Description	Part number	Feature code
40 GbE QSFP+ transceivers for 40 GbE network adapters		
Lenovo 40GBASE-SR4 QSFP+ Transceiver	49Y7884	A1DR
Optical cables for 40 GbE QSFP+ SR4 transceivers		
Lenovo 10m QSFP+ MPO-MPO OM3 MMF Cable	00VX003	AT2U
Lenovo 30m QSFP+ MPO-MPO OM3 MMF Cable	00VX005	AT2V
Passive copper cables for 40 GbE QSFP+ network adapters		
Lenovo 1m Passive QSFP+ DAC Cable	49Y7890	A1DP
Lenovo 3m Passive QSFP+ DAC Cable	49Y7891	A1DQ

The following table lists cables for the Mellanox FDR InfiniBand QSFP adapters.

Table 25. Cables for Mellanox FDR InfiniBand QSFP adapters

Description	Part number	Feature code
Passive copper cables for Mellanox FDR InfiniBand QSFP adapters		
0.75m Mellanox QSFP Passive DAC Cable	00KF002	ARZB
1m Mellanox QSFP Passive DAC Cable	00KF003	ARZC
1.25m Mellanox QSFP Passive DAC Cable	00KF004	ARZD
1.5m Mellanox QSFP Passive DAC Cable	00KF005	ARZE
3m Mellanox QSFP Passive DAC Cable	00KF006	ARZF
Active optical cables for Mellanox FDR InfiniBand QSFP adapters		
3m Mellanox IB FDR Active Optical Fiber Cable	00KF007	ARYC
5m Mellanox IB FDR Active Optical Fiber Cable	00KF008	ARYD
10m Mellanox IB FDR Active Optical Fiber Cable	00KF009	ARYE
15m Mellanox IB FDR Active Optical Fiber Cable	00KF010	ARYF
20m Mellanox IB FDR Active Optical Fiber Cable	00KF011	ARYG
30m Mellanox IB FDR Active Optical Fiber Cable	00KF012	ARYH

The following table lists transceivers and cables for the 100 GbE QSFP28 network adapters.

Table 26. Transceivers and cables for 100 GbE QSFP28 network adapters

Description	Part number	Feature code
100 GbE QSFP28 transceivers for 100 GbE QSFP28 network adapters		
Lenovo 100GBase-SR4 QSFP28 Transceiver	7G17A03539	AV1D
Optical cables for 100 GbE QSFP28 SR4 transceivers		
Lenovo 5m MPO-MPO OM4 MMF Cable	7Z57A03567	AV25
Lenovo 10m MPO-MPO OM4 MMF Cable	7Z57A03569	AV27
Lenovo 20m MPO-MPO OM4 MMF Cable	7Z57A03571	AV29
Optical breakout cables for 100 GbE QSFP28 SR4 transceivers		
Lenovo 1m MPO-MPO Breakout OM4 MMF Cable	7Z57A03573	AV2B
Lenovo 3m MPO-MPO Breakout OM4 MMF Cable	7Z57A03574	AV2C
Lenovo 5m MPO-MPO Breakout OM4 MMF Cable	7Z57A03575	AV2D
Passive copper cables for 100 GbE QSFP28 network adapters		
Lenovo 1m Passive 100G QSFP28 DAC Cable	7Z57A03561	AV1Z
Lenovo 3m Passive 100G QSFP28 DAC Cable	7Z57A03562	AV20
Lenovo 5m Passive 100G QSFP28 DAC Cable	7Z57A03563	AV21
Passive copper breakout cables for 100 GbE QSFP28 network adapters		
Lenovo 1m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable	7Z57A03564	AV22
Lenovo 3m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable	7Z57A03565	AV23
Lenovo 5m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable	7Z57A03566	AV24
Active optical cables for 100 GbE QSFP28 network adapters		
Lenovo 3m 100G QSFP28 Active Optical Cable	7Z57A03546	AV1L
Lenovo 5m 100G QSFP28 Active Optical Cable	7Z57A03547	AV1M
Lenovo 10m 100G QSFP28 Active Optical Cable	7Z57A03548	AV1N
Lenovo 15m 100G QSFP28 Active Optical Cable	7Z57A03549	AV1P
Lenovo 20m 100G QSFP28 Active Optical Cable	7Z57A03550	AV1Q

The following table lists cables for the Mellanox EDR InfiniBand QSFP28 adapters.

Table 27. Cables for Mellanox EDR InfiniBand QSFP28 adapters

Description	Part number	Feature code
Passive copper cables for Mellanox EDR InfiniBand QSFP28 adapters*		
0.5m Mellanox EDR IB Passive Copper QSFP28 Cable	00MP516	ASQT
0.75m Mellanox EDR IB Passive Copper QSFP28 Cable	00MP520	ASQU
1m Mellanox EDR IB Passive Copper QSFP28 Cable	00MP524	ASQV
1.25m Mellanox EDR IB Passive Copper QSFP28 Cable	00MP528	ASQW
1.5m Mellanox EDR IB Passive Copper QSFP28 Cable	00MP532	ASQX
2m Mellanox EDR IB Passive Copper QSFP28 Cable	00MP536	ASQY
3m Mellanox EDR IB Passive Copper QSFP28 Cable	00MP560	ASRM
Active optical cables for Mellanox EDR InfiniBand QSFP28 adapters*		
3m Mellanox EDR IB Active Optical QSFP28 Cable	00MP563	ASRN
5m Mellanox EDR IB Active Optical QSFP28 Cable	00MP540	ASQZ

Description	Part number	Feature code
10m Mellanox EDR IB Active Optical QSFP28 Cable	00MP544	ASR0
15m Mellanox EDR IB Active Optical QSFP28 Cable	00MP548	ASR1
20m Mellanox EDR IB Active Optical QSFP28 Cable	00MP552	ASR2
30m Mellanox EDR IB Active Optical QSFP28 Cable	00MP556	ASR3
50m Mellanox EDR IB Active Optical QSFP28 Cable	00MP566	ASRP

\* The Mellanox ConnectX-4 2x100GbE/EDR IB QSFP28 VPI Adapter (00MM960) supports only a subset of the EDR InfiniBand cables listed in the table: 00MP516, 00MP524, 00MP536, and 00MP544.

The following table lists cables for the Intel Omni-Path QSFP28 adapters.

Table 28. Cables for Intel Omni-Path QSFP28 adapters

Description	Part number	Feature code
Passive copper cables for Intel Omni-Path QSFP28 adapters		
0.5m Intel OPA 100 Series Passive Copper QSFP28 Cable	00WE031	AU0E
0.75m Intel OPA 100 Series Passive Copper QSFP28 Cable	00WE035	AU0F
1m Intel OPA 100 Series Passive Copper QSFP28 Cable	00WE039	AU0G
1.25m Intel OPA 100 Series Passive Copper QSFP28 Cable	00WE043	AU0H
1.5m Intel OPA 100 Series Passive Copper QSFP28 Cable	00WE047	AU0J
2m Intel OPA 100 Series Passive Copper QSFP28 Cable	00WE051	AU0K
3m Intel OPA 100 Series Passive Copper QSFP28 Cable	00WE055	AU0L
Active optical cables for Intel Omni-Path QSFP28 adapters		
5m Intel OPA 100 Series Active Optical QSFP28 Cable	00WE059	AU0M
10m Intel OPA 100 Series Active Optical QSFP28 Cable	00WE063	AU0N
15m Intel OPA 100 Series Active Optical QSFP28 Cable	00WE067	AU0P
20m Intel OPA 100 Series Active Optical QSFP28 Cable	00WE071	AU0Q

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

- Ethernet Adapters  
<http://lenovopress.com/servers/options/ethernet#rt=product-guide>
- InfiniBand / OPA Adapters  
<http://lenovopress.com/servers/options/infiniband#rt=product-guide>

## SAS adapters for external storage

The following table lists SAS RAID controllers and HBAs for external storage attachments that are supported by the System x3550 M5 server.

Table 29. SAS RAID adapters and HBAs for external storage

Description	Part number	Feature code	Maximum supported	I/O slots supported
12 Gbps SAS RAID adapters - PCIe				
ServeRAID M5225-2GB SAS/SATA Controller	00AE938	A5ND	3	1, 2, 3
Feature on Demand (FoD) upgrades for the M5225 (one per server)*				
ServeRAID M5200 Series RAID 6 Upgrade	47C8706	A3Z5	1*	-
ServeRAID M5200 Series Performance Accelerator	47C8710	A3Z7	1*	-
ServeRAID M5200 Series SSD Caching Enabler	47C8712	A3Z8	1*	-

Description	Part number	Feature code	Maximum supported	I/O slots supported
<b>12 Gbps SAS HBAs - PCIe</b>				
N2225 SAS/SATA HBA	00AE912	A5M0	3	1, 2, 3

\* One FoD upgrade for the M5225 activates the feature on all M5200 series controllers (M5210, M5225) installed in a server.

**Note:** SAS RAID controllers and HBAs for external storage are supported in low profile and full-high PCIe x8 and x16 slots supplied by the riser cards 1 and 2.

The following table summarizes features of supported HBAs.

Table 30. SAS RAID controller and HBA features and specifications summary (PN = Part number)

Feature	M5225-2GB	N2225
Part number	00AE938	00AE912
Form factor	Low profile	Low profile
Controller chip	LSI SAS3108	LSI SAS3008
Host interface	PCIe 3.0 x8	PCIe 3.0 x8
Port interface	12 Gbps SAS	12 Gbps SAS
Number of external ports	8	8
External port connectors	2x Mini-SAS HD (SFF-8644)	2x Mini-SAS HD (SFF-8644)
Drive interface	SAS, SATA	SAS, SATA
Drive type	HDD, SED, SSD	HDD, SSD
Maximum number of devices	240	1024
RAID levels	0/1/10/5/50; Optional 6/60 (PN 47C8706)	None
JBOD mode	No	Yes
Cache	2 GB (included)	None
Cache protection	Flash (included)	None
Performance Accelerator (FastPath)	Optional (PN 47C8710)	None
SSD Caching (CacheCade Pro 2.0)	Optional (PN 47C8712)	None

For more information about the ServeRAID M5225-2GB, see the Lenovo Press Product Guide:  
<http://lenovopress.com/tips1258>

For more information about SAS HBAs, see the list of Product Guides in the Host bus adapters category:  
<https://lenovopress.com/servers/options/hba>



## Fibre Channel host bus adapters

The following table lists Fibre Channel HBAs supported by the System x3550 M5 server.

Table 31. Fibre Channel HBAs

Description	Part number	Feature code	Maximum supported	I/O slots supported
<b>16 Gb Fibre Channel - PCIe</b>				
Emulex 16Gb Gen6 FC Single-port HBA	01CV830	ATZU	3	1, 2, 3
Emulex 16Gb FC Single-port HBA	81Y1655	A2W5	2	2, 3
Emulex 16Gb Gen6 FC Dual-port HBA	01CV840	ATZV	3	1, 2, 3
Emulex 16Gb FC Dual-port HBA	81Y1662	A2W6	2	2, 3
QLogic 16Gb Enhanced Gen5 FC Single-port HBA	01CV750	ATZB	3	1, 2, 3
QLogic 16Gb FC Single-port HBA	00Y3337	A3KW	3	1, 2, 3
QLogic 16Gb Enhanced Gen5 FC Dual-port HBA	01CV760	ATZC	3	1, 2, 3
QLogic 16Gb FC Dual-port HBA	00Y3341	A3KX	3	1, 2, 3
<b>8 Gb Fibre Channel - PCIe</b>				
Emulex 8Gb FC Single-port HBA	42D0485	3580	3	1, 2, 3
Emulex 8Gb FC Dual-port HBA	42D0494	3581	3	1, 2, 3
QLogic 8Gb FC Single-port HBA	42D0501	3578	3	1, 2, 3
QLogic 8Gb FC Dual-port HBA	42D0510	3579	3	1, 2, 3

For more information, see the list of Product Guides in the Host bus adapters category:

<https://lenovopress.com/servers/options/hba>

## GPU adapters

The System x3550 M5 server supports graphics processing units (GPUs) listed in the following table.

Table 32. GPU adapters

Description	Part number	Feature code	Maximum supported	I/O slots supported
NVIDIA Quadro K420	00YL370	ASPN	1	2
NVIDIA Quadro K620	00YL371	ASPP	1	2

### Configuration notes:

- The NVIDIA Quadro adapters are full-high adapters that are supported only in the PCIe slot 2.
- The FHHL x16 PCIe Riser 2 (feature code A5AD) and the second processor are required.
- The maximum memory that can be installed is 1 TB.

## Cooling

The System x3550 M5 server supports up to seven system fans that provide dual fan zones cooling with N+1 fan redundancy, and each system fan has two motors.

System x3550 M5 server models with one processor include five system fans, and server models with two processors include seven system fans. Additional system fans are required for models with one processor if any of the following adapters are present in the configuration:

- Intel X540 ML2 Dual Port 10GbaseT Adapter (part number 00D1994)
- io3 Enterprise Flash Adapters (part numbers 00AE995, 00AE998, 00JY001, and 00JY004)
- io3 Enterprise Mainstream Flash Adapters (part numbers 00YA800, 00YA803, 00YA806, and 00YA809)
- Enterprise Mainstream Flash Adapters (part numbers 00YK286 and 00YK287)
- P3700 NVMe Enterprise Performance Flash Adapters (part numbers 01GT711, 00YA812, and 00YA815)

The following table lists the additional system fan option for the System x3550 M5. The option contains two additional fans.

Table 33. Additional system fans

Description	Part number	Feature code	Maximum supported
x3550 M5 Fan Gen 2	00MV373	ATL1	1

## Power supplies and cables

The System x3550 M5 server supports up to two redundant power supplies, and is capable of N+N redundancy depending on the configuration. Standard models come with one power supply. The following table lists the power supplies.

Table 34. Power supplies

Description	Part number	Feature code	Maximum supported
System x 550W High Efficiency Platinum AC Power Supply	00KA094	A5AX	2
System x 750W High Efficiency Platinum AC Power Supply	00KA096	A5AY	2
System x 750W High Efficiency Titanium AC Power Supply (200-240V)	00KA097	A5AZ	2
System x 900W High Efficiency Platinum AC Power Supply	00KA098	A5B0	2
System x 900W High Efficiency -48 V DC Power Supply	00MV212	ASPR	2
System x 1500W High Efficiency Platinum AC Power Supply (200-240V)	00MV211	ASPQ	2

General power supply rules are as follows:

- Minimum of one and maximum of two power supplies per system
- If two are installed, power supplies must be identical

**Important:** The Standalone Solution Configuration Tool (SSCT) and Lenovo Data Center Advisor and Configurator Tool (DCACT) power supply selection rules allow a subset of possible configurations due to power restrictions. Configurations that cannot be built in SSCT or DCACT 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 System x Power Configurator: <https://support.lenovo.com/documents/LNVO-PWRCONF>

The System x3550 M5 servers ship with or without a power cord (model dependent). The 900 W AC power supply option ships with one 2.8m, 13A/125V-10A/250V, IEC 320-C13 to C14 rack power cable (feature code 6400), and the other hot-swap AC power supply options ship with one 2.8m, 10A/100-250V, IEC 320-C13 to C14 rack power cable (feature code 6311).

Line cords and rack power cables can be ordered, if needed (see the following table).

Table 35. Power cables

Description	Part number	Feature code
<b>Rack power cables</b>		
1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7937	6201
2.0m, 10A/125-250V, C13 to IEC 320-C14 Rack Power Cable	None*	6316
2.8m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	None*	6311
2.8m, 13A/125V-10A/250V, C13 to IEC 320-C14 Rack Power Cable	None*	6400
2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable	39Y7938	6204
4.3m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7932	6263
<b>Line cords</b>		
Argentina 10A/250V C13 to IRAM 2073 2.8m line cord	39Y7930	6222
Australia/NZ 10A/250V C13 to AS/NZ 3112 2.8m line cord	39Y7924	6211
Brazil 10A/125V C13 to 2P+Gnd 1.8m line cord	None*	6599
Brazil 10A/250V C13 to 2P+Gnd 1.8m line cord	None*	6364
Brazil 10A/125V C13 to NBR 6147 2.8m line cord	39Y7929	6223
Brazil 10A/250V C13 to NBR 14136 2.8m line cord	69Y1988	6532
China 10A/250V C13 to GB 2099.1 2.8m line cord	39Y7928	6210
Denmark 10A/250V C13 to DK2-5a 2.8m line cord	39Y7918	6213
Europe 10A/230V C13 to CEE7-VII 2.8m line cord	39Y7917	6212
Europe 10A/250V, C13 to IEC 309 2P+Gnd 2.8m line cord	None*	6377
Europe 10A/250V C13 to 2P+Gnd 4.3m line cord	None*	6374
India 10A/250V C13 to IS 6538 2.8m line cord	39Y7927	6269
Israel 10A/250V C13 to SI 32 2.8m line cord	39Y7920	6218
Italy 10A/250V C13 to CEI 23-16 2.8m line cord	39Y7921	6217
Japan 12A/125V C13 to JIS C-8303 2.8m line cord	46M2593	A1RE
Korea 12A/250V C13 to KETI 2.8m line cord	39Y7925	6219
South Africa 10A/250V C13 to SABS 164 2.8m line cord	39Y7922	6214
Switzerland 10A/250V C13 to SEV 1011-S24507 2.8m line cord	39Y7919	6216
Taiwan 10A/125V C13 to CNS 10917-3 1.8m line cord	None*	6526
Taiwan 10A/250V C13 to CNS 10917-3 2.8m line cord	00CG265	6317
Taiwan 15A/125V C13 to CNS 10917-3 2.8m line cord	00CG267	6386
United Kingdom 10A/250V C13 to BS 1363/A 2.8m line cord	39Y7923	6215
United States 10A/125V C13 to NEMA 5-15P 1.8m line cord	None*	6369
United States 10A/120V C13 to NEMA 5-15P 2.8m line cord	90Y3016	6313
United States 10A/125V C13 to NEMA 5-15P 4.3m line cord	39Y7931	6207
United States 10A/250V C13 to NEMA 6-15P 1.8m line cord	None*	6351
United States 10A/250V C13 to NEMA 6-15P 2.8m line cord	46M2592	A1RF

\* Available via Configure to Order (CTO).

**Configuration note:** If the 900 W AC power supplies (00KA098) in the System x3550 M5 server are connected to a low-voltage power source (100 - 125 V), the only supported power cables are those that are rated above 10A; cables that are rated at 10A are not supported.

## Integrated virtualization

The System x3550 M5 server supports VMware ESXi installed on a USB memory key or one or two SD cards in the SD Media Adapter. The USB memory key is installed in a USB socket inside the server. The SD Media Adapter is installed in a dedicated slot inside the server.

When only one SD card is installed in the SD Media Adapter, you can create up to 16 volumes, each of which is presented to UEFI as a bootable device. When two SD Media cards are inserted, volumes can be mirrored (RAID 1) across both cards, up to a total of eight mirrored volumes. The RAID functionality is handled internally by the SD Media Adapter.

The following table lists virtualization options.

Table 36. Virtualization options

Description	Part number	Feature code	Maximum supported
<b>USB memory key</b>			
USB Memory Key for VMware ESXi 5.1 Update 2	00ML233	ASN6	1
USB Memory Key for VMware ESXi 5.5 Update 2	00ML235	ASN7	1
USB Memory Key for VMware ESXi 5.5 Update 3B	00WH150	ATZG	1
USB Memory Key 4G for VMware ESXi 6.0 Update 1A	00WH138	ATRL	1
USB Memory Key for VMware ESXi 6.0 Update 2	00WH151	ATZH	1
USB Memory Key for VMware ESXi 6.5	None**	AVNW	1
Blank USB Memory Key 4G SLC for VMware ESXi Downloads	00WH140	ATRM	1
Blank USB Memory Key for VMware ESXi Downloads	41Y8298	A2G0	1
<b>SD Media Adapter and SD cards</b>			
SD Media Adapter (Option 00ML706 includes 2 blank 32GB SD cards)	00ML706*	A5TJ	1
Blank SD Media	00ML700	AS2V	2
RAID Adapter for SD Media w/ VMware ESXi 5.1 U2 (1 SD Media)	None**	ASCG	1
RAID Adapter for SD Media w/ VMware ESXi 5.1 U2 (2 SD Media, RAIDed)	None**	AS4B	1
RAID Adapter for SD Media w/ VMware ESXi 5.5 U2 (1 SD Media)	None**	ASCH	1
RAID Adapter for SD Media w/ VMware ESXi 5.5 U2 (2 SD Media, RAIDed)	None**	AS4C	1
RAID Adapter for SD Media w/ VMware ESXi 5.5 U3B (1 SD Media)	None**	ATZK	1
RAID Adapter for SD Media w/ VMware ESXi 5.5 U3B (2 SD Media, RAIDed)	None**	ATZJ	1
RAID Adapter for SD Media w/VMware ESXi 6.0 U1A (1 SD Media)	None**	ATSA	1
RAID Adapter for SD Media w/VMware ESXi 6.0 U1A (2 SD Media, RAIDed)	None**	ATS9	1
RAID Adapter for SD Media w/ VMware ESXi 6.0 U2 (1 SD Media)	None**	ATZM	1
RAID Adapter for SD Media w/ VMware ESXi 6.0 U2 (2 SD Media, RAIDed)	None**	ATZL	1
Lenovo SD Media RAID Adapter w/ VMware ESXi 6.0 U3 (1 SD)	None**	B17A	1
Lenovo SD Media RAID Adapter w/ VMware ESXi 6.0 U3 (2 SD, Raided)	None**	B179	1
Adapter for SD Media w/ VMware ESXi 6.5 (1 SD Media)	None**	AVNX	1
Adapter for SD Media w/ VMware ESXi 6.5 (2 SD Media, RAIDed)	None**	AVNY	1
Lenovo SD Media RAID Adapter w/ VMware ESXi 6.5 U1 (1 SD)	None**	B178	1
Lenovo SD Media RAID Adapter w/ VMware ESXi 6.5 U1 (2 SD, Raided)	None**	B177	1

\* Option 00ML706 includes two 32 GB SD cards; however, for CTO orders, feature code A5TJ does not include SD media and the 32 GB cards and VMware vSphere preload must be selected separately.

\*\* CTO only.

## Operating systems

The System x3550 M5 server supports the following operating systems:

- Microsoft:
  - Microsoft Windows Server, version 1803
  - Microsoft Windows Server, version 1709
  - Microsoft Windows Server 2019
  - Microsoft Windows Server 2016
  - Microsoft Windows Server 2012 R2
  - Microsoft Windows Server 2012
  - Microsoft Windows Server 2008 R2 SP1
- Red Hat:
  - Red Hat Enterprise Linux 7.6
  - Red Hat Enterprise Linux 7.5
  - Red Hat Enterprise Linux 7.4
  - Red Hat Enterprise Linux 7.3
  - Red Hat Enterprise Linux 7.2
  - Red Hat Enterprise Linux 6.10 Server x64 Edition
  - Red Hat Enterprise Linux 6.8 Server x64 Edition
  - Red Hat Enterprise Linux 6.7 Server x64 Edition
- SUSE:
  - SUSE Linux Enterprise Server 15
  - SUSE Linux Enterprise Server with Xen 15
  - SUSE Linux Enterprise Server 12 SP4
  - SUSE Linux Enterprise Server with Xen 12 SP4
  - SUSE Linux Enterprise Server 12 SP3
  - SUSE Linux Enterprise Server with Xen 12 SP3
  - SUSE Linux Enterprise Server 12 SP2
  - SUSE Linux Enterprise Server with Xen 12 SP2
  - SUSE Linux Enterprise Server 12 SP1
  - SUSE Linux Enterprise Server with Xen 12 SP1
  - SUSE Linux Enterprise Server 11 for AMD64/EM64T SP4
  - SUSE Linux Enterprise Server 11 with Xen for AMD64/EM64T SP4
- VMware:
  - VMware vSphere 6.7 (ESXi) Update 1
  - VMware vSphere 6.7 (ESXi)
  - VMware vSphere 6.5 (ESXi) Update 2
  - VMware vSphere 6.5 (ESXi) Update 1
  - VMware vSphere 6.5 (ESXi)
  - VMware vSphere 6.0 (ESXi) Update 3
  - VMware vSphere 6.0 (ESXi) Update 2
  - VMware vSphere 5.5 (ESXi) Update 3

For the latest information about the specific versions and service levels that are supported and any other prerequisites, see the Operating System Interoperability Guide:

<http://lenovopress.com/redposig>.

## Systems management

The System x3550 M5 supports the following systems management tools:

- Integrated Management Module 2.1
- Light path diagnostics
- Lenovo ToolsCenter
- Lenovo XClarity Administrator
- Lenovo XClarity Energy Manager

## Integrated Management Module 2.1

The System x3550 M5 server contains Integrated Management Module II (IMM2.1), which provides advanced service-processor control, monitoring, and an alerting function. If an environmental condition exceeds a threshold or if a system component fails, the IMM2.1 lights LEDs to help you diagnose the problem, records the error in the event log, and alerts you to the problem. Optionally, the IMM2.1 also provides a virtual presence capability for remote server management capabilities.

The IMM2.1 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)
- Web browser

The optional Integrated Management Module Advanced Upgrade is required to enable the remote presence and blue-screen capture features. The remote presence feature provides the following functions:

- Remotely viewing video with graphics resolutions up to 1600x1200 at 75 Hz with up to 23 bits per pixel
- Remotely accessing the server using the keyboard and mouse from a remote client
- Mapping the CD or DVD drive, diskette drive, and USB flash drive on a remote client, and mapping ISO and diskette image files as virtual drives that are available for use by the server
- Uploading a diskette image to the IMM memory and mapping it to the server as a virtual drive

The blue-screen capture feature captures the video display contents before the IMM2.1 restarts the server when the IMM2.1 detects an operating system hang condition. A system administrator can use the blue-screen capture to assist in determining the cause of the hang condition.

The following table lists the remote management option.

Table 37. Remote management option

Description	Part number	Feature code	Maximum supported
Integrated Management Module Advanced Upgrade	90Y3901	A1ML	1

## Light path diagnostics

All System x3550 M5 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 LED on the system board).

Models with 4x or 8x 2.5-inch drive bays support an optional next-gen light path LCD display panel. The LCD display enables you to have quick access to system status, firmware, network, and health information.

Models with 4x 3.5-inch or 10x 2.5-inch front drive bays do not support an LCD display panel.

The LCD panel can be configured via CTO or is included in the Front IO cage Advanced (see the following table).

Table 38. Light path diagnostics options

Description	Part number	Feature code	Maximum supported
System x3550 M5 front IO cage Advanced	00MV368*	ATLK**	1
System x Advanced LCD Light Path Kit	None**	ATYV	1

\* The option part number for the front IO cage Advanced (00MV368) includes the LCD display.

\*\* If configured via CTO, the LCD display (feature code ATYV) is *NOT* included in the front IO cage Advanced (feature code ATLK); both front IO cage Advanced (feature code ATLK) and LCD display (feature code ATYV) must be selected.

## Lenovo ToolsCenter

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

- **Lenovo ToolsCenter Suite**  
The ToolsCenter Suite tool is a consolidation of server management tools that helps simplify the management of System x servers. It provides functions to collect full system health information (including health status), configure system setting, update system firmware and drivers, and FoD mass activation key management for multiple endpoints.
- **Lenovo ServerGuide**  
The ServerGuide tool simplifies the process of configuring RAID and installing supported Microsoft Windows Server operating systems and device drivers on a System x server.
- **Lenovo UpdateXpress System Packs**  
The UpdateXpress System Packs (UXSPs) are integration-tested bundles that enable you to maintain your server firmware and device drivers up-to-date and help you avoid unnecessary server outages.
- **Lenovo Dynamic System Analysis**  
The Dynamic System Analysis (DSA) pre-boot or standalone diagnostics software speeds up troubleshooting tasks to reduce service time.

For more information and downloads, visit the ToolsCenter web page:

<http://support.lenovo.com/us/en/documents/LNVO-center>

## Lenovo XClarity Administrator

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

Lenovo XClarity Administrator is an optional software component for the System x3550 M5 which can be downloaded and used at no charge to discover and monitor the x3550 M5 and manage firmware upgrades for them.

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

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

Table 39. Lenovo XClarity software options

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

\* NA = North America; AP = Asia Pacific

\*\* EMEA = Europe, Middle East, Africa; LA = Latin America

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

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

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

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

In addition, Lenovo XClarity Administrator offers two software plug-in modules (Lenovo XClarity Integrators) at no charge (if software support is required, a Lenovo XClarity Pro software subscription license should be ordered):

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

Lenovo XClarity Integrators allow administrators to manage physical infrastructure from leading external virtualization management software tools from Microsoft and VMware. 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 System x M5, M6, and X6 rack servers and Flex System from the virtualization management tool
- Non-disruptive server maintenance in clustered environments that reduces workload downtime by dynamically migrating workloads from affected hosts during rolling server updates or reboots
- Greater service level uptime and assurance in clustered environments during unplanned hardware events by dynamically triggering workload migration from impacted hosts when impending hardware failures are predicted

For more information, refer to the Lenovo XClarity Administrator Product Guide:

<http://lenovopress.com/tips1200>

### **Lenovo XClarity Energy Manager**

Lenovo XClarity Energy Manager provides a stand-alone, web-based agent-less power management console that provides real time data and enables you to observe, plan and manage power and cooling for Lenovo System x and ThinkServer x86 servers. Using built-in intelligence, it identifies server power consumption trends and ideal power settings and performs cooling analysis so that you can define and optimize power-saving policies.

Lenovo XClarity Energy Manager offers the following capabilities:

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



Lenovo XClarity Energy Manager is an optional software component for the System x3550 M5 that is licensed on a per managed node basis, that is, each managed server requires a license.

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

Table 40. Lenovo XClarity Energy Manager software options

Description	Part number (NA, AP, Japan)*	Part number (EMEA, LA)**	Quantity
Lenovo XClarity Energy Manager, 1 Node w/ 1 Yr S&S	01DA225	01DA228	1
Lenovo XClarity Energy Manager, 5 Nodes w/ 1 Yr S&S	01DA226	01DA229	1
Lenovo XClarity Energy Manager, 50 Nodes w/ 1 Yr S&S	01DA227	01DA230	1

\* NA = North America; AP = Asia Pacific

\*\* EMEA = Europe, Middle East, Africa; LA = Latin America

## Security

The System x3550 M5 server offers the following security features:

- Power-on password
- Administrator's password
- Onboard Trusted Platform Module (TPM) version 1.2 or 2.0 (configurable UEFI system setting)
- Lockable front bezel (optional)
- Security Key Lifecycle Manager (SKLM) encryption key management for SEDs - FoD upgrade (optional)

The following table lists the security options that are available for the System x3550 M5 server.

Table 41. Security options

Description	Part number	Feature code	Maximum supported
Lockable front bezel			
System x3550 M5 Security Bezel	00KA162	A5AP	1
Security Key Lifecycle Manager - FoD (United States, Canada, Asia Pacific, and Japan)			
SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/1Yr S&S	00D9998	A5U1	1
SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/3Yr S&S	00D9999	AS6C	1
Security Key Lifecycle Manager - FoD (Latin America, Europe, Middle East, and Africa)			
SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/1Yr S&S	00FP648	A5U1	1
SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/3Yr S&S	00FP649	AS6C	1

## Rack installation

The following table lists the rack installation options that are available for the System x3550 M5 server.

Table 42. Rack installation options

Description	Part number	Feature code	Maximum supported
<b>4-post rail kits</b>			
System x3550 M5 Non-ball Bearing Slide	00MV369	ATL0	1
System x3550 M5 Slide Kit G4	00KA606	A5AK	1
System x Gen-II Universal Slides Kit	00KA500	A5FW	1
System x M5 Custom Rail Kit	00MW239	ATLQ	1
Tool-less Short Slide Rail Kit	4M17A07279	B2S1	1
<b>Cable management arm (CMA)</b>			
System x Enterprise 1U Cable Management Arm (CMA)	00KA607	A5AL	1*

\* The System x CMA requires the Slide Kit G4 (00KA606) or Universal Slides Kit (00KA500). The Custom Rail Kit (00MW239) is not supported with the CMA.

The following table summarizes the rail kit features and specifications.

Table 43. Rail kit features and specifications summary

Feature	System x3550 M5 Non-ball Bearing Slide Kit	System x3550 M5 Slide Kit G4	System x M5 Custom Rail Kit	Tool-less Short Slide Rail Kit	System x Gen-II Universal Slides Kit
Part number	00MV369	00KA606	00MW239	4M17A07279	00KA500
Rail type	Half-out slide (friction)	Full-out slide (ball bearing)	Half-out slide (friction)	Full-out slide (ball bearing)	Full-out slide (ball bearing)
Tool-less installation	Yes	Yes	Yes	Yes	No
CMA support	No	Yes	No	No	Yes
In-rack server maintenance	No	Yes	No	Yes	Yes
1U PDU support	Yes	Yes	Yes	Yes	Yes
0U PDU support	Limited**	Limited*	Limited**	Limited**	Limited*
Rack type	IBM and Lenovo 4-post, IEC standard-compliant				Any 4-post, IEC standard-compliant
Mounting holes	Square or round	Square or round	Square or round	Square or round	Square, round, or threaded
Mounting flange thickness	2 mm (0.08 in.) – 4 mm (0.16 in.)	2 mm (0.08 in.) – 3.3 mm (0.13 in.)	2 mm (0.08 in.) – 4 mm (0.16 in.)	2 mm (0.08 in.) – 3.3 mm (0.13 in.)	2 mm (0.08 in.) – 4.65 mm (0.18 in.)
Distance between front and rear mounting flanges	609.6 mm (24 in.) – 914.4 mm (36 in.)	617 mm (24.29 in.) – 812 mm (31.97 in.)	595 mm (23.43 in.) – 746 mm (29.37 in.)	609.6 mm (24 in.) – 863.6 mm (34 in.)	617 mm (24.29 in.) – 812 mm (31.97 in.)
Rail length***	728.1 mm (28.6 in.)	833.5 mm (32.81 in.)	755 mm (29.72 in.)	730 mm (28.74 in.)	836.8 mm (32.94 in.)

\* The rack 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.

\*\* 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.

**Note:** The System x3550 M5 Slide Kit G4 (00KA606) is included with the models that are listed in [Standard models](#) and [TopSeller models](#).

## Physical specifications

The System x3550 M5 server has the following dimensions and weight (approximate):

- Height: 43 mm (1.7 in)
- Width: 434 mm (17.1 in)
- Depth: 734 mm (28.9 in)
- Weight:
  - Minimum configuration: 13.8 kg (30.4 lb)
  - Maximum configuration: 19.3 kg (42.5 lb)

## Operating environment

The System x3550 M5 server is supported in the following environment:

- Air temperature:
  - Server on: 5 °C to 40 °C (41 °F to 104 °F); altitude: 0 to 950 m (3,117 ft); decrease the maximum system temperature by 1 °C for every 175-m increase in altitude above 950 m.
  - Server off: 5 °C to 45 °C (41 °F to 113 °F)
  - Maximum altitude: 3,050 m (10,000 ft), 5 °C to 28 °C (41 °F to 82 °F)
  - Shipment: -40 °C to +60 °C (-40 °F to 140 °F) at up to 10,700 m (35,105 ft)
- Humidity:
  - Server on: 8% to 85% (non-condensing), max dew point 24 °C, max rate of change 5 °C/hr
  - Server off: 8% to 85% (non-condensing), max dew point 27 °C
- Design to ASHRAE Class A3, ambient of 40 °C (104 °F), with relaxed support:
  - Supports cloud-like workload with no performance degradation acceptable (Turbo-Off).
  - Under no circumstance can any combination of worst case workload and configuration result in system shutdown or design exposure at 40 °C.
- Electrical:
  - Models with 1500 W AC Platinum power supplies:
    - 200 - 240 (nominal) V ac; 50 Hz or 60 Hz; 8.35 A
    - Input kilovolt-amperes (kVA) (approximately):
      - Minimum configuration: 0.14 kVA
      - Maximum configuration: 1.967 kVA
  - Models with 900 W AC Platinum power supplies:
    - 100 to 127 (nominal) V ac; 50 Hz or 60 Hz; 10.3 A
    - 200 to 240 (nominal) V ac; 50 Hz or 60 Hz; 5.0 A
    - Input kilovolt-amperes (kVA) (approximately):
      - Minimum configuration: 0.14 kVA
      - Maximum configuration: 1.194 kVA
  - Models with 750 W Platinum AC power supplies:
    - 100 to 127 (nominal) V ac; 50 Hz or 60 Hz; 8.6 A
    - 200 to 240 (nominal) V ac; 50 Hz or 60 Hz; 4.2 A
    - Input kilovolt-amperes (kVA) (approximately):
      - Minimum configuration: 0.14 kVA
      - Maximum configuration: 1.015 kVA
  - Models with 750 W Titanium AC power supplies:
    - 200 to 240 (nominal) V ac; 50 Hz or 60 Hz; 4.2 A
    - Input kilovolt-amperes (kVA) (approximately):
      - Minimum configuration: 0.14 kVA
      - Maximum configuration: 0.965 kVA
  - Models with 550 W AC power supplies:
    - 100 to 127 (nominal) V ac; 50 Hz or 60 Hz; 6.5 A
    - 200 to 240 (nominal) V ac; 50 Hz or 60 Hz; 3.3 A
    - Input kilovolt-amperes (kVA) (approximately):
      - Minimum configuration: 0.14 kVA
      - Maximum configuration: 0.732 kVA

- Models with -48Vdc 900 W power supplies:
    - -48 - -60 (nominal) V dc; 25.8 A
    - Input kilovolt-amperes (kVA) (approximately):
      - Minimum configuration: 0.14 kVA
      - Maximum configuration: 1.237 kVA
- BTU output:
  - Minimum configuration: 461 Btu/hr (135 watts)
  - Maximum configuration: 6667 Btu/hr (1954 watts)
- Acoustics:
  - 6.6 bels (operating)
  - 6.4 bels (idle)
- 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

## Warranty services and upgrades

The System x3550 M5 has a three-year customer-replaceable unit (CRU) and onsite (for field-replaceable units [FRUs] only) limited warranty with standard call center support during normal business hours and 9x5 Next Business Day Parts Delivered.

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

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

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

Also available are Lenovo Services warranty maintenance upgrades and post-warranty maintenance agreements, with a well-defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions.

Lenovo warranty service upgrade offerings are country-specific. Not all warranty service upgrades are available in every country. For information about Lenovo warranty service upgrade offerings that are available in your country or area, refer to the following resources:

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

In general, the following Lenovo warranty service upgrades are available:

- Warranty and maintenance service upgrades:
  - 3, 4, or 5 years of warranty service coverage
  - 1-year or 2-year post-warranty extensions
  - Foundation Service: 9x5 service coverage with next business day onsite response
  - Essential Service: 24x7 service coverage with 4-hour onsite response or 24-hour committed repair (available only in select countries)
  - Advanced Service: 24x7 service coverage with 2-hour onsite response or 6-hour committed repair (available only in select countries)
- Premier Support  
Premier Support service offers direct access to Lenovo's most advanced technicians for faster troubleshooting with single point of contact for end-to-end problem resolution and collaborative third-party software support.
- YourDrive YourData  
Lenovo's YourDrive YourData service is a multi-drive retention offering that ensures your data is always under your control, regardless of the number of drives that are installed in your Lenovo server. In the unlikely event of a drive failure, you retain possession of your drive while Lenovo replaces the failed drive part. Your data stays safely on your premises, in your hands. The YourDrive YourData service can be purchased in convenient bundles with Foundation, Essential, or Advanced Service upgrades and extensions.
- Enterprise Server Software Support  
Lenovo Enterprise Server Software Support can help you troubleshoot your entire server software stack. Choose support for server operating systems from Microsoft, Red Hat, SUSE, and VMware; Microsoft server applications; or both operating systems and applications. Support staff can help answer troubleshooting and diagnostic questions, address product compatibility and interoperability issues, isolate causes of problems, report defects to software vendors, and more.
- Basic Hardware Installation Services  
Lenovo experts can seamlessly manage the physical installation of your server, storage, or networking hardware. Working at a time convenient for you (business hours or off shift), the technician will unpack and inspect the systems on your site, install options, mount in a rack cabinet, connect to power and network, check and update firmware to the latest levels, verify operation, and dispose of the packaging, allowing your team to focus on other priorities.

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

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

## Regulatory compliance

The server conforms to the following regulations:

- FCC - Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 5, Class A
- UL/IEC 60950-1
- CSA C22.2 No. 60950-1
- NOM-019
- Argentina IEC60950-1
- Japan VCCI, Class A
- Australia/New Zealand AS/NZS CISPR 22, Class A; AS/NZS 60950.1
- China CCC GB4943.1, GB9254 Class A, GB17625.1
- India IS 13252 (Part 1)
- Taiwan BSMI CNS13438, Class A; CNS14336-1
- Korea KN22, Class A; KN24
- Russia, Belorussia and Kazakhstan, TR CU 020/2011 (for EMC) and TR CU 004/2011 (for safety)
- IEC 60950-1 (CB Certificate and CB Test Report)
- CE Mark (EN55022 Class A, EN60950-1, EN55024, EN61000-3-2, EN61000-3-3)
- CISPR 22, Class A
- TUV-GS (EN60950-1/IEC60950-1,EK1-ITB2000)
- RoHS Directive
- Energy Star 2.0

## External drive enclosures

The following tables list the SAS external drive enclosures that are offered by Lenovo that can be used with the System x3550 M5 for storage expansion.

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

<http://datacentersupport.lenovo.com>

Table 44. 6 Gbps SAS external drive enclosures

Description	Part number
Lenovo Storage E1012 LFF Disk Expansion Single SAS IO Module, Rail Kit, 9x5 NBD	64111B1
Lenovo Storage E1012 LFF Disk Expansion Dual SAS IO Module, Rail Kit, 9x5 NBD	64111B2
Lenovo Storage E1024 SFF Disk Expansion Single SAS IO Module, Rail Kit, 9x5 NBD	64111B3
Lenovo Storage E1024 SFF Disk Expansion Dual SAS IO Module, Rail Kit, 9x5 NBD	64111B4

Table 45. External drive enclosures

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

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

- Lenovo Storage E1012 and E1024  
<http://lenovopress.com/lp0043>
- Lenovo Storage D1212 and D1224  
<http://lenovopress.com/lp0512>
- Lenovo Storage D3284  
<http://lenovopress.com/lp0513>

## External storage systems

The following table lists the external storage systems that are currently offered by Lenovo that can be used with the System x3550 M5 in IT solutions.

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

<http://datacentersupport.lenovo.com>

Table 46. External storage systems: DE Series

Description	Part number	
	Worldwide	Japan
Lenovo ThinkSystem DE Series Storage (SAS connectivity)		
Lenovo ThinkSystem DE2000H SAS Hybrid Flash Array LFF	7Y70A000WW	7Y701003JP
Lenovo ThinkSystem DE2000H SAS Hybrid Flash Array SFF	7Y71A000WW	7Y711003JP
Lenovo ThinkSystem DE4000H SAS Hybrid Flash Array 4U60	7Y77A002WW	7Y771000JP
Lenovo ThinkSystem DE4000H SAS Hybrid Flash Array LFF	7Y74A000WW	7Y74A000JP
Lenovo ThinkSystem DE4000H SAS Hybrid Flash Array SFF	7Y75A000WW	7Y75A000JP
Lenovo ThinkSystem DE4000F SAS All Flash Array SFF	7Y76A000WW	7Y76A000JP
Lenovo ThinkSystem DE6000H SAS Hybrid Flash Array 4U60	7Y80A000WW	7Y801002JP
Lenovo ThinkSystem DE6000H SAS Hybrid Flash Array SFF	7Y78A000WW	7Y781002JP
Lenovo ThinkSystem DE6000F SAS All Flash Array SFF	7Y79A000WW	7Y79A000JP
Lenovo ThinkSystem DE Series Storage (iSCSI connectivity)		
Lenovo ThinkSystem DE2000H 10GBASE-T Hybrid Flash Array LFF	7Y70A003WW	7Y701001JP
Lenovo ThinkSystem DE2000H 10GBASE-T Hybrid Flash Array SFF	7Y71A002WW	7Y711005JP
Lenovo ThinkSystem DE2000H iSCSI Hybrid Flash Array LFF	7Y70A004WW	7Y701000JP
Lenovo ThinkSystem DE2000H iSCSI Hybrid Flash Array SFF	7Y71A003WW	7Y711006JP
Lenovo ThinkSystem DE4000H iSCSI Hybrid Flash Array 4U60	7Y77A000WW	7Y771002JP
Lenovo ThinkSystem DE4000H iSCSI Hybrid Flash Array LFF	7Y74A002WW	7Y74A002JP
Lenovo ThinkSystem DE4000H iSCSI Hybrid Flash Array SFF	7Y75A001WW	7Y75A001JP
Lenovo ThinkSystem DE4000F iSCSI All Flash Array SFF	7Y76A002WW	7Y76A002JP
Lenovo ThinkSystem DE6000H iSCSI Hybrid Flash Array 4U60	7Y80A002WW	7Y801000JP
Lenovo ThinkSystem DE6000H iSCSI Hybrid Flash Array SFF	7Y78A002WW	7Y781000JP
Lenovo ThinkSystem DE6000F iSCSI All Flash Array SFF	7Y79A002WW	7Y79A002JP
Lenovo ThinkSystem DE Series Storage (FC connectivity)		
Lenovo ThinkSystem DE2000H FC Hybrid Flash Array LFF	7Y70A002WW	7Y701002JP
Lenovo ThinkSystem DE2000H FC Hybrid Flash Array SFF	7Y71A001WW	7Y711004JP
Lenovo ThinkSystem DE4000H FC Hybrid Flash Array 4U60	7Y77A001WW	7Y771001JP

Description	Part number	
	Worldwide	Japan
Lenovo ThinkSystem DE4000H FC Hybrid Flash Array LFF	7Y74A001WW	7Y74A001JP
Lenovo ThinkSystem DE4000H FC Hybrid Flash Array SFF	7Y75A002WW	7Y75A002JP
Lenovo ThinkSystem DE4000F FC All Flash Array SFF	7Y76A001WW	7Y76A001JP
Lenovo ThinkSystem DE6000H FC Hybrid Flash Array 4U60	7Y80A001WW	7Y801001JP
Lenovo ThinkSystem DE6000H FC Hybrid Flash Array SFF	7Y78A001WW	7Y781001JP
Lenovo ThinkSystem DE6000F FC All Flash Array SFF	7Y79A001WW	7Y79A001JP

Table 47. External storage systems: DM Series

Description	Part number
Lenovo ThinkSystem DM Series Storage (iSCSI or FC connectivity)	
Lenovo ThinkSystem DM3000H Hybrid Storage Array (2U12 LFF, CTO only)	7Y42CTO1WW
Lenovo ThinkSystem DM3000H 48TB (12x 4TB HDDs) (Universal SFP+)	7Y420001EA*
Lenovo ThinkSystem DM3000H 48TB (12x 4TB HDDs) (10GBASE-T)	7Y420002EA*
Lenovo ThinkSystem DM5000H Hybrid Storage Array (2U24 SFF, CTO only)	7Y57CTO1WW
Lenovo ThinkSystem DM5000H 11.5TB (12x 960GB SSDs) (Universal SFP+)	7Y570001EA*
Lenovo ThinkSystem DM5000H 11.5TB (12x 960GB SSDs) (10GBASE-T)	7Y570002EA*
Lenovo ThinkSystem DM5000H 29TB (24x 1.2TB 10K HDDs) (Universal SFP+)	7Y570003EA*
Lenovo ThinkSystem DM5000H 29TB (24x 1.2TB 10K HDDs) (10GBASE-T)	7Y570004EA*
Lenovo ThinkSystem DM5000F Flash Storage Array (2U24 SFF, CTO only)	7Y41CTO1WW
Lenovo ThinkSystem DM7000H Hybrid Storage Array (3U, CTO only)	7Y56CTO1WW
Lenovo ThinkSystem DM7000F Flash Storage Array (3U, CTO only)	7Y40CTO1WW

\* Available only in EMEA.

Table 48. External storage systems: DS Series

Description	Part number		
	Worldwide	Japan	PRC
Lenovo ThinkSystem DS Series Storage (SAS connectivity)			
Lenovo ThinkSystem DS2200 LFF SAS Dual Controller Unit	4599A41	4599A4J	4599A4C
Lenovo ThinkSystem DS2200 SFF SAS Dual Controller Unit	4599A21	4599A2J	4599A2C
Lenovo ThinkSystem DS4200 LFF SAS Dual Controller Unit	4617A41	4617A4J	4617A4C
Lenovo ThinkSystem DS4200 SFF SAS Dual Controller Unit	4617A21	4617A2J	4617A2C
Lenovo ThinkSystem DS6200 SFF SAS Dual Controller Unit	4619A21	4619A2J	4619A2C
Lenovo ThinkSystem DS Series Storage (iSCSI or FC connectivity)			
Lenovo ThinkSystem DS2200 LFF FC/iSCSI Dual Controller Unit	4599A31	4599A3J	4599A3C
Lenovo ThinkSystem DS2200 SFF FC/iSCSI Dual Controller Unit	4599A11	4599A1J	4599A1C
Lenovo ThinkSystem DS4200 LFF FC/iSCSI Dual Controller Unit	4617A31	4617A3J	4617A3C
Lenovo ThinkSystem DS4200 SFF FC/iSCSI Dual Controller Unit	4617A11	4617A1J	4617A1C
Lenovo ThinkSystem DS6200 SFF FC/iSCSI Dual Controller Unit	4619A11	4619A1J	4619A1C
DS6200F 12x 400GB 10DWD SSDs, 1x 8Gb FC SFP, 512 Snapshots, Replication	4619A1F	4619J1F	4619C1F
DS6200F 12x 800GB 3DWD SSDs, 1x 8Gb FC SFP, 512 Snapshots, Replication	4619A2F	4619J2F	4619C2F
DS6200F 12x 1.6TB 3DWD SSDs, 1x 8Gb FC SFP, 512 Snapshots, Replication	4619A3F	4619J3F	4619C3F



Description	Part number		
	Worldwide	Japan	PRC
DS6200F 12x 3.84TB 1DWD SSDs, 1x 8Gb FC SFP, 512 Snapshots, Replication	4619A4F	4619J4F	4619C4F

Table 49. External storage systems: V Series and Storwize for Lenovo

Description	Part number
Lenovo Storage V Series (SAS [except V7000/V7000F], iSCSI, or FC connectivity)	
Lenovo Storage V3700 V2 LFF Control Enclosure	6535C1D
Lenovo Storage V3700 V2 SFF Control Enclosure	6535C2D
Lenovo Storage V3700 V2 XP LFF Control Enclosure	6535C3D
Lenovo Storage V3700 V2 XP SFF Control Enclosure	6535C4D
Lenovo Storage V5030 LFF Control Enclosure 3Yr S&S	6536C12
Lenovo Storage V5030 LFF Control Enclosure 5Yr S&S	6536C32
Lenovo Storage V5030 SFF Control Enclosure 3Yr S&S	6536C22
Lenovo Storage V5030 SFF Control Enclosure 5Yr S&S	6536C42
Lenovo Storage V5030F SFF Control Enclosure 3Yr S&S	6536B1F
Lenovo Storage V5030F SFF Control Enclosure 5Yr S&S	6536B2F
Lenovo Storage V7000 SFF Control Enclosure 3Yr S&S PRC	6538R11^
Lenovo Storage V7000 SFF Control Enclosure 5Yr S&S PRC	6538R21^
Lenovo Storage V7000F SFF Control Enclosure 3Yr S&S PRC	6538R1G^
Lenovo Storage V7000F SFF Control Enclosure 5Yr S&S PRC	6538R2G^
IBM Storwize for Lenovo (iSCSI or FC connectivity)	
IBM Storwize V7000 SFF Control Enclosure, 3YR SWMA	6195C32†
IBM Storwize V7000 SFF Control Enclosure, 3YR SWMA, LA	6195C3L‡
IBM Storwize V7000 SFF Control Enclosure, 5YR SWMA	6195C52†
IBM Storwize V7000 SFF Control Enclosure, 5YR SWMA, LA	6195C5L‡

^ Available only in PRC.

† Available worldwide except Latin America.

‡ Available only in Latin America.

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

- Lenovo DE Series, DM Series, DS Series, and V Series storage:  
<http://lenovopress.com/storage/san/lenovo#rt=product-guide>
- IBM Storwize for Lenovo storage:  
<http://lenovopress.com/storage/san/ibm#rt=product-guide>

## External backup units

The following table lists the external backup options that are offered by Lenovo that can be used with the System x3550 M5 in backup solutions.

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

<http://www.ibm.com/systems/support/storage/ssic>

Table 50. External backup options

Description	Part number
External RDX USB drives	
RDX External USB 3.0 Dock with 500GB Cartridge	00YD052
RDX External USB 3.0 Dock with 1TB Cartridge	00YD053
External SAS tape backup drives	
IBM TS2260 Tape Drive Model H6S	6160S6E
IBM TS2270 Tape Drive Model H7S	6160S7E
IBM TS2280 Tape Drive Model H8S	6160S8E
External SAS tape backup autoloaders	
IBM TS2900 Tape Autoloader w/LTO5 HH SAS	6171S5R
IBM TS2900 Tape Autoloader w/LTO6 HH SAS	6171S6R
IBM TS2900 Tape Autoloader w/LTO7 HH SAS	6171S7R
IBM TS2900 Tape Autoloader w/LTO8 HH SAS	6171S8R
External tape backup libraries	
IBM TS4300 3U Tape Library-Base Unit	6741A1F
SAS backup drives for TS4300 Tape Library	
LTO 6 HH SAS Drive	01KP934
LTO 7 HH SAS Drive	01KP937
LTO 8 HH SAS Drive	01KP953
Fibre Channel backup drives for TS4300 Tape Library	
LTO 6 FH Fibre Channel Drive	01KP935
LTO 6 HH Fibre Channel Drive	01KP933
LTO 7 FH Fibre Channel Drive	01KP938
LTO 7 HH Fibre Channel Drive	01KP936
LTO 8 FH Fibre Channel Drive	01KP954
LTO 8 HH Fibre Channel Drive	01KP952

For more information, see the list of Product Guides in the Backup units category:

<https://lenovopress.com/servers/options/backup>

## Ethernet LAN switches

The following table lists the Ethernet LAN switches that are offered by Lenovo that can be used with the System x3550 M5 server in IT solutions.

Table 51. Ethernet LAN switches

Description	Part number
<b>1 Gb Ethernet switches</b>	
Juniper EX2300-C PoE Switch	7165H1X
Juniper EX2300-24p PoE Switch	7165H2X
Lenovo ThinkSystem NE0152T RackSwitch (Rear to Front)	7Y810011WW
Lenovo ThinkSystem NE0152TO RackSwitch (Rear to Front, ONIE)	7Z320O11WW
Lenovo RackSwitch G7028 (Rear to Front)	7159BAX
Lenovo RackSwitch G7052 (Rear to Front)	7159CAX
Lenovo RackSwitch G8052 (Rear to Front)	7159G52
<b>10 Gb Ethernet switches</b>	
Lenovo ThinkSystem NE1032 RackSwitch (Rear to Front)	7159A1X
Lenovo ThinkSystem NE1032T RackSwitch (Rear to Front)	7159B1X
Lenovo ThinkSystem NE1072T RackSwitch (Rear to Front)	7159C1X
Lenovo RackSwitch G8124E (Rear to Front)	7159BR6
Lenovo RackSwitch G8272 (Rear to Front)	7159CRW
Lenovo RackSwitch G8296 (Rear to Front)	7159GR6
<b>25 Gb Ethernet switches</b>	
Lenovo ThinkSystem NE2572 RackSwitch (Rear to Front)	7159E1X
Lenovo ThinkSystem NE2572O RackSwitch (Rear to Front, ONIE)	7Z210O21WW
<b>100 Gb Ethernet switches</b>	
Lenovo ThinkSystem NE10032 RackSwitch (Rear to Front)	7159D1X
Lenovo ThinkSystem NE10032O RackSwitch (Rear to Front, ONIE)	7Z210O11WW

For more information, see the list of Product Guides in the Top-of-rack Switches category:

<http://lenovopress.com/servers/options/switches#rt=product-guide>

## Fibre Channel SAN switches

The following table lists currently available Fibre Channel SAN switches that are offered by Lenovo that can be used with the System x3550 M5 in IT solutions.

Table 52. Fibre Channel SAN switches

Description	Part number
<b>8 Gb FC</b>	
Lenovo B300, 8 ports licensed, 8x 8Gb SWL SFPs, 1 PS, Rail Kit, 3Yr FW	3873AR3
Lenovo B300, E_Port License, 8 ports licensed, 8x 8Gb SWL SFPs, 1 PS, Rail Kit, 1Yr FW	3873AR6
<b>16 Gb FC</b>	
Lenovo ThinkSystem DB610S, 8 ports licensed, 8x 16Gb SWL SFPs, 1 PS, Rail Kit, 1Yr FW	6559F2A
Lenovo ThinkSystem DB610S, ENT Bundle, 24 ports licensed, 24x 16Gb SWL SFPs, 1 PS, Rail Kit, 1Yr FW	6559F1A
Lenovo ThinkSystem DB610S, ENT Bundle, 24 ports licensed, 24x 16Gb SWL SFPs, 1 PS, Rail Kit, 3Yr FW	6559D1Y
Lenovo B6505, 12 ports licensed, 12x 16Gb SWL SFPs, 1 PS, Rail Kit, 1Yr FW	3873ER1
Lenovo B6510, 24 ports licensed, 24x 16Gb SWL SFPs, 2 PS, Rail Kit, 1Yr FW	3873IR1
Lenovo B6510, 24 ports licensed, 24x 16Gb SWL SFPs, 2 PS, Rail Kit, 3Yr FW	3873BR3
<b>32 Gb FC</b>	
Lenovo ThinkSystem DB610S, 8 ports licensed, No SFPs, 1 PS, Rail Kit, 1Yr FW	6559F3A
Lenovo ThinkSystem DB610S, 8 ports licensed, No SFPs, 1 PS, Rail Kit, 3Yr FW	6559D3Y
Lenovo ThinkSystem DB620S, 24 ports licensed, No SFPs, 2 PS, Rail Kit, 1Yr FW	6415G3A
Lenovo ThinkSystem DB620S, 24 ports licensed, 24x 32Gb SWL SFPs, 2 PS, Rail Kit, 1Yr FW	6415H11
Lenovo ThinkSystem DB620S, 24 ports licensed, 24x 32Gb SWL SFPs, 2 PS, Rail Kit, 3Yr FW	6415G11
Lenovo ThinkSystem DB620S, ENT Bundle, 48 ports licensed, 48x 32Gb SWL SFPs, 2 PS, Rail Kit, 1Yr FW	6415H2A
Lenovo ThinkSystem DB400D 32Gb FC Director, ENT. Feature set, 4 Blade slots, 8U, 1Yr FW	6684D2A
Lenovo ThinkSystem DB400D 32Gb FC Director, ENT. Feature set, 4 Blade slots, 8U, 3Yr FW	6684B2A
Lenovo ThinkSystem DB800D 32Gb FC Director, ENT. Feature set, 8 Blade slots, 14U, 1Yr FW	6682D1A

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

## Rack cabinets

The following table lists the rack cabinets that are offered by Lenovo that can be used in System x3550 M5 solutions.

Table 53. Rack cabinets

Description	Part number
25U S2 Standard Rack (1000 mm deep; 2 sidewall compartments)	93072RX
25U Static S2 Standard Rack (1000 mm deep; 2 sidewall compartments)	93072PX
42U S2 Standard Rack (1000 mm deep; 6 sidewall compartments)	93074RX
42U 1100mm Enterprise V2 Dynamic Rack (6 sidewall compartments)	93634PX
42U 1100mm Enterprise V2 Dynamic Expansion Rack (6 sidewall compartments)	93634EX
42U 1200mm Deep Dynamic Rack (6 sidewall compartments)	93604PX
42U 1200mm Deep Static Rack (6 sidewall compartments)	93614PX
42U Enterprise Rack (1105 mm deep; 4 sidewall compartments)	93084PX
42U Enterprise Expansion Rack (1105 mm deep; 4 sidewall compartments)	93084EX

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

## KVM switches and consoles

The following table lists the KVM switches and consoles that are offered by Lenovo that can be used in System x3550 M5 solutions.

Table 54. KVM switch and console options

Description	Part number
<b>Consoles</b>	
1U 18.5" Standard Console (without keyboard)	17238BX
<b>Console keyboards</b>	
Lenovo UltraNav Keyboard USB - US Eng	00MW310
Keyboard w/ Int. Pointing Device USB - Arabic 253 RoHS v2	46W6713
Keyboard w/ Int. Pointing Device USB - Belg/UK 120 RoHS v2	46W6714
Keyboard w/ Int. Pointing Device USB - Chinese/US 467 RoHS v2	46W6715
Keyboard w/ Int. Pointing Device USB - Czech 489 RoHS v2	46W6716
Keyboard w/ Int. Pointing Device USB - Danish 159 RoHS v2	46W6717
Keyboard w/ Int. Pointing Device USB - Dutch 143 RoHS v2	46W6718
Keyboard w/ Int. Pointing Device USB - French 189 RoHS v2	46W6719
Keyboard w/ Int. Pointing Device USB - Fr/Canada 445 RoHS v2	46W6720
Keyboard w/ Int. Pointing Device USB - German 129 RoHS v2	46W6721
Keyboard w/ Int. Pointing Device USB - Greek 219 RoHS v2	46W6722
Keyboard w/ Int. Pointing Device USB - Hebrew 212 RoHS v2	46W6723
Keyboard w/ Int. Pointing Device USB - Hungarian 208 RoHS v2	46W6724
Keyboard w/ Int. Pointing Device USB - Italian 141 RoHS v2	46W6725
Keyboard w/ Int. Pointing Device USB - Japanese 194 RoHS v2	46W6726
Keyboard w/ Int. Pointing Device USB - Korean 413 RoHS v2	46W6727

<b>Description</b>	<b>Part number</b>
Keyboard w/ Int. Pointing Device USB - LA Span 171 RoHS v2	46W6728
Keyboard w/ Int. Pointing Device USB - Norwegian 155 RoHS v2	46W6729
Keyboard w/ Int. Pointing Device USB - Polish 214 RoHS v2	46W6730
Keyboard w/ Int. Pointing Device USB - Portugese 163 RoHS v2	46W6731
Keyboard w/ Int. Pointing Device USB - Russian 441 RoHS v2	46W6732
Keyboard w/ Int. Pointing Device USB - Slovak 245 RoHS v2	46W6733
Keyboard w/ Int. Pointing Device USB - Spanish 172 RoHS v2	46W6734
Keyboard w/ Int. Pointing Device USB - Swed/Finn 153 RoHS v2	46W6735
Keyboard w/ Int. Pointing Device USB - Swiss F/G 150 RoHS v2	46W6736
Keyboard w/ Int. Pointing Device USB - Thai 191 RoHS v2	46W6737
Keyboard w/ Int. Pointing Device USB - Turkish 179 RoHS v2	46W6738
Keyboard w/ Int. Pointing Device USB - UK Eng 166 RoHS v2	46W6739
Keyboard w/ Int. Pointing Device USB - US Euro 103P RoHS v2	46W6740
Keyboard w/ Int. Pointing Device USB - Slovenian 234 RoHS v2	46W6741
<b>Console switches and cables - ThinkSystem Digital KVM</b>	
ThinkSystem Digital 2x1x16 KVM Switch (DVI video output port)	1754D1T
ThinkSystem VGA to DVI Conversion Cable	4X97A11108
ThinkSystem Single-USB Conversion Cable for Digital KVM	4X97A11109
ThinkSystem Dual-USB Conversion Cable for Digital KVM	4X97A11107
<b>Console switches and cables - ThinkSystem Analog KVM</b>	
ThinkSystem Analog 1x8 KVM Switch (DVI video output port)	1754A1T
ThinkSystem VGA to DVI Conversion Cable	4X97A11108
ThinkSystem USB Conversion Cable for Analog KVM	4X97A11106
<b>Console switches and cables - Global Console Managers</b>	
Global 2x2x16 Console Manager (GCM16) (VGA video output port)	1754D1X
Global 4x2x32 Console Manager (GCM32) (VGA video output port)	1754D2X
Virtual Media Conversion Option Gen2 (VCO2)	46M5383
Serial Conversion Option (SCO)	46M5382
<b>Console switches and cables - Local Console Managers</b>	
Local 1x8 Console Manager (LCM8) (VGA video output port)	1754A1X
Local 2x16 Console Manager (LCM16) (VGA video output port)	1754A2X
Virtual Media Conversion Option Gen2 (VCO2)	46M5383

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

## Power distribution units

The following table lists the power distribution units (PDUs) that are offered by Lenovo that can be used in System x3550 M5 solutions.

Table 55. Power distribution units

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

Description	Part number
DPI 60a Cord (IEC 309 2P+G)	40K9615
DPI 63a Cord (IEC 309 P+N+G)	40K9613
DPI Australian/NZ 3112 Line Cord (32A)	40K9617
DPI Korean 8305 Line Cord (30A)	40K9618

For more information, see the list of Product Guides in the Power infrastructure category:  
<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 that can be used in System x3550 M5 solutions.

Table 56. Uninterruptible power supply units

Description	Part number
Worldwide models	
RT1.5kVA 2U Rack or Tower UPS (100-125VAC) (8x NEMA5-15R 12A outlets)	55941AX
RT1.5kVA 2U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A outlets)	55941KX
RT2.2kVA 2U Rack or Tower UPS (100-125VAC) (8x NEMA 5-20R 16A outlets)	55942AX
RT2.2kVA 2U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 1x IEC 320 C19 16A outlets)	55942KX
RT3kVA 2U Rack or Tower UPS (100-125VAC) (6x NEMA 5-20R 16A, 1x NEMA L5-30R 24A outlets)	55943AX
RT3kVA 2U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 1x IEC 320 C19 16A outlets)	55943KX
RT5kVA 3U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 2x IEC 320 C19 16A outlets)	55945KX
RT6kVA 3U Rack or Tower UPS (200-240VAC) (8x IEC 320 C13 10A, 2x IEC 320 C19 16A outlets)	55946KX
RT8kVA 6U Rack or Tower UPS (200-240VAC) (4x IEC 320-C19 16A outlets)	55948KX
RT11kVA 6U Rack or Tower UPS (200-240VAC) (4x IEC 320-C19 16A outlets)	55949KX
RT8kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC) (4x IEC 320-C19 16A outlets)	55948PX
RT11kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC) (4x IEC 320-C19 16A outlets)	55949PX
ASEAN, HTK, INDIA, and PRC models	
ThinkSystem RT3kVA 2U Standard UPS (200-230VAC) (2x C13 10A, 2x GB 10A, 1x C19 16A outlets)	55943KT
ThinkSystem RT3kVA 2U Long Backup UPS (200-230VAC) (2x C13 10A, 2x GB 10A, 1x C19 16A outlets)	55943LT
ThinkSystem RT6kVA 5U UPS (200-230VAC) (2x C13 10A outlets, 1x Terminal Block output)	55946KT
ThinkSystem RT10kVA 5U UPS (200-230VAC) (2x C13 10A outlets, 1x Terminal Block output)	5594XKT

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



## Lenovo Financial Services

Lenovo Financial Services reinforces Lenovo's commitment to deliver pioneering products and services that are recognized for their quality, excellence, and trustworthiness. Lenovo Financial Services offers financing solutions and services that complement your technology solution anywhere in the world.

We are dedicated to delivering a positive finance experience for customers like you who want to maximize your purchase power by obtaining the technology you need today, protect against technology obsolescence, and preserve your capital for other uses.

We work with businesses, non-profit organizations, governments and educational institutions to finance their entire technology solution. We focus on making it easy to do business with us. Our highly experienced team of finance professionals operates in a work culture that emphasizes the importance of providing outstanding customer service. Our systems, processes and flexible policies support our goal of providing customers with a positive experience.

We finance your entire solution. Unlike others, we allow you to bundle everything you need from hardware and software to service contracts, installation costs, training fees, and sales tax. If you decide weeks or months later to add to your solution, we can consolidate everything into a single invoice.

Our Premier Client services provide large accounts with special handling services to ensure these complex transactions are serviced properly. As a premier client, you have a dedicated finance specialist who manages your account through its life, from first invoice through asset return or purchase. This specialist develops an in-depth understanding of your invoice and payment requirements. For you, this dedication provides a high-quality, easy, and positive financing experience.

For your region specific offers please ask your Lenovo sales representative or your technology provider about the use of Lenovo Financial Services. For more information, see the following Lenovo website:  
<http://www.lenovofs.com>

## Related publications and links

For more information, see these resources:

- Lenovo servers product page  
<http://www.lenovo.com/systems/servers>
- Lenovo Enterprise Solutions Configurator (LESC):  
<http://lesc.lenovo.com>
- ServerProven hardware compatibility page for the System x3550 M5  
<http://static.lenovo.com/us/en/serverproven/xseries/8869.shtml>
- *xREF: System x Reference*  
<http://lenovopress.com/xref>
- System x3550 M5 documentation  
<http://datacentersupport.lenovo.com/us/en/products/servers/system-x/system-x3550-m5/documentation>
- Lenovo Support - System x3550 M5  
<http://datacentersupport.lenovo.com/us/en/products/servers/system-x/system-x3550-m5>

## Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)

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