

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

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).

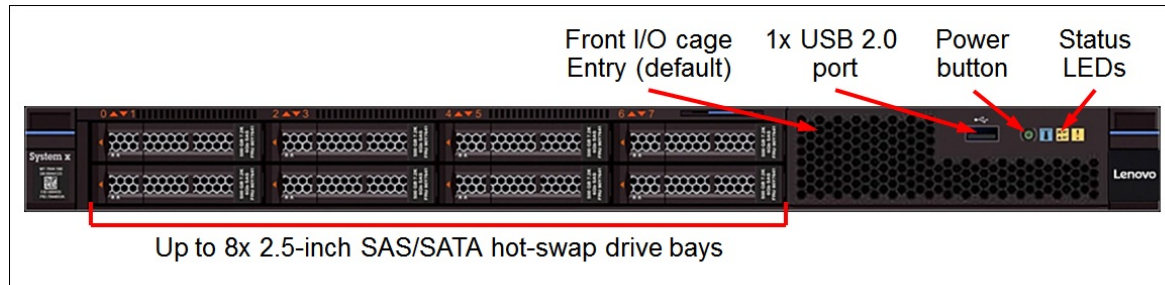


Figure 2. Front view of the System x3550 M5: 8x 2.5-inch drive bays; Front IO cage Entry (default)

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).

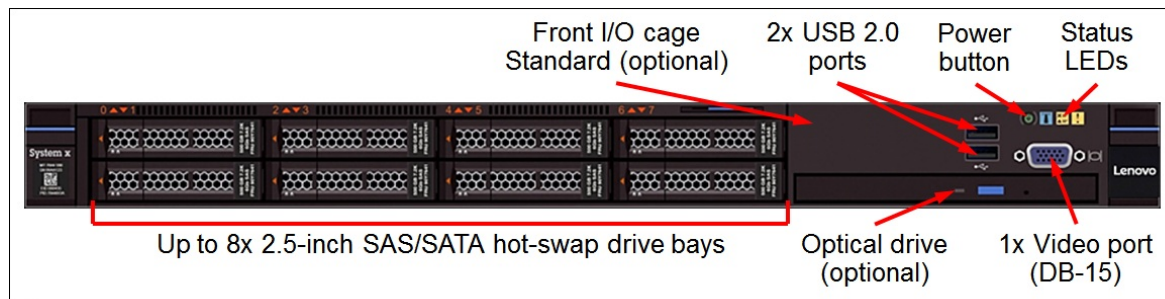


Figure 3. Front view of the System x3550 M5: 8x 2.5-inch drive bays; Front IO cage Standard (optional)

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).

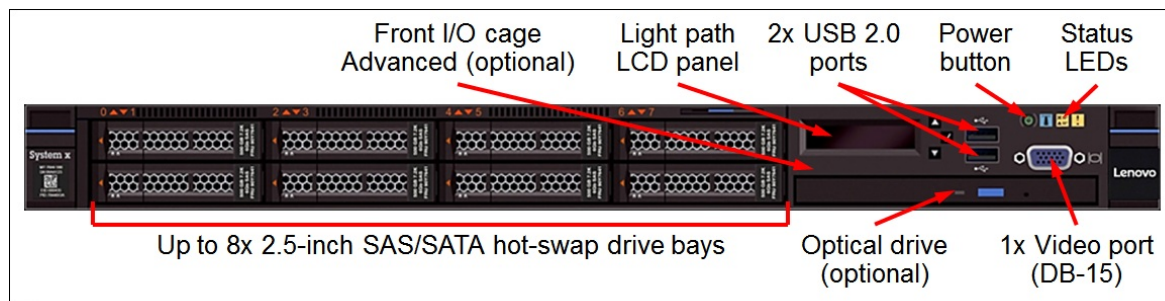


Figure 4. Front view of the System x3550 M5: 8x 2.5-inch drive bays; Front IO cage Advanced (optional)

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

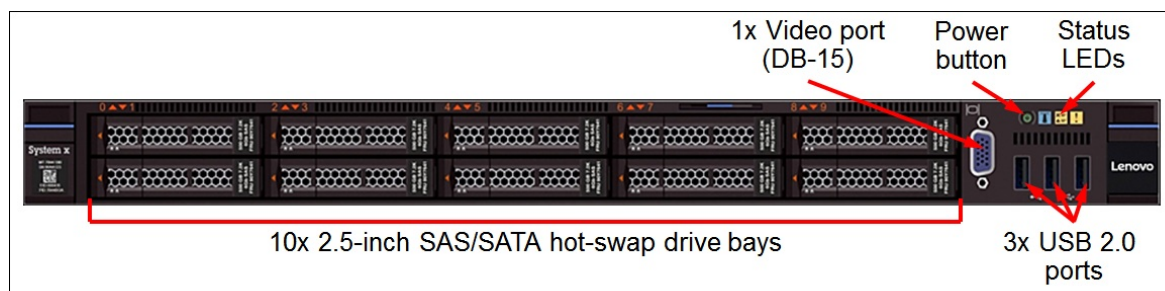


Figure 5. Front view of the System x3550 M5: 10x 2.5-inch drive bays

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.

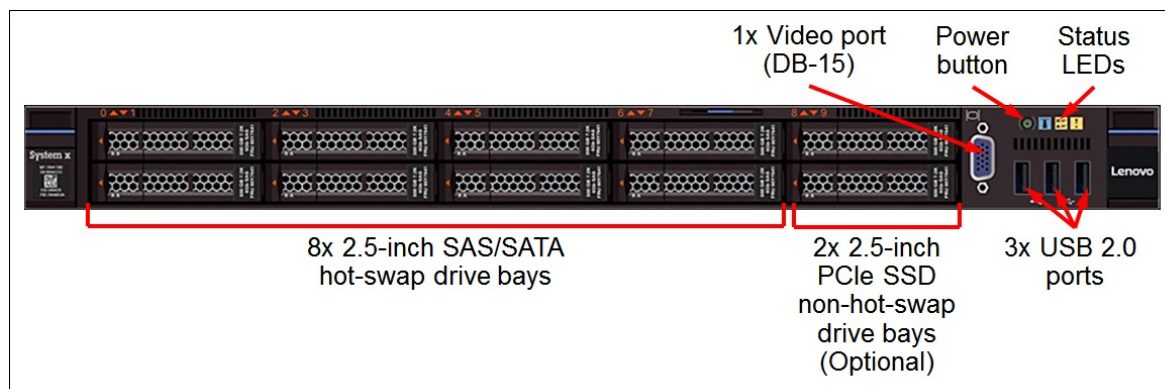


Figure 6. Front view of the System x3550 M5: 8x 2.5-inch SAS/SATA + 2x PCIe drive bays

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

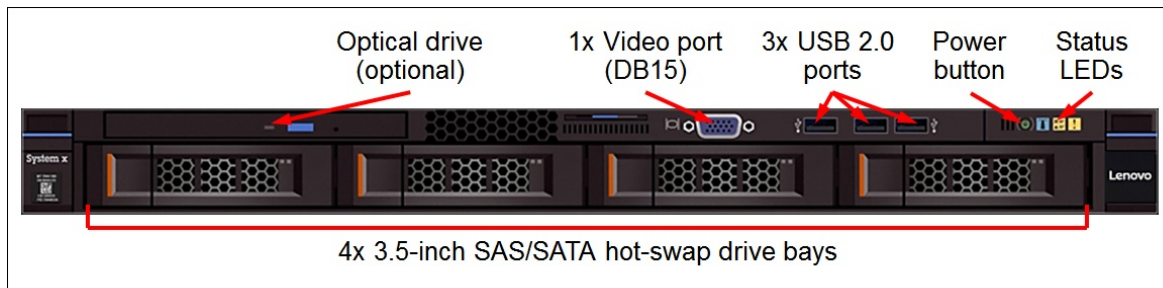


Figure 7. Front view of the System x3550 M5: 4x 3.5-inch drive bays

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

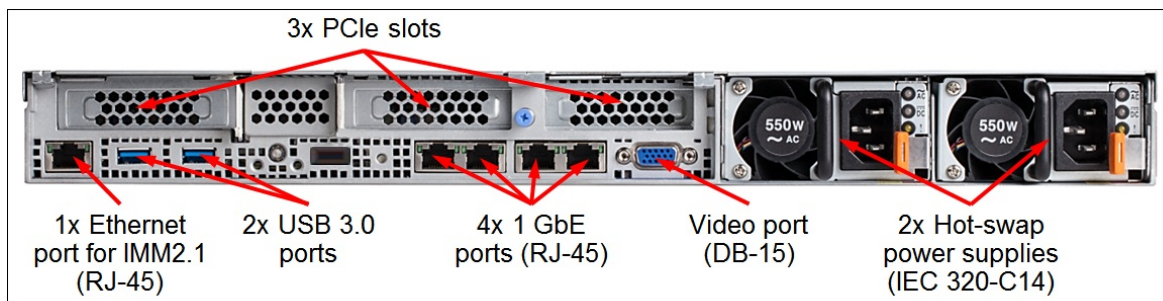


Figure 8. Rear view of the System x3550 M5

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

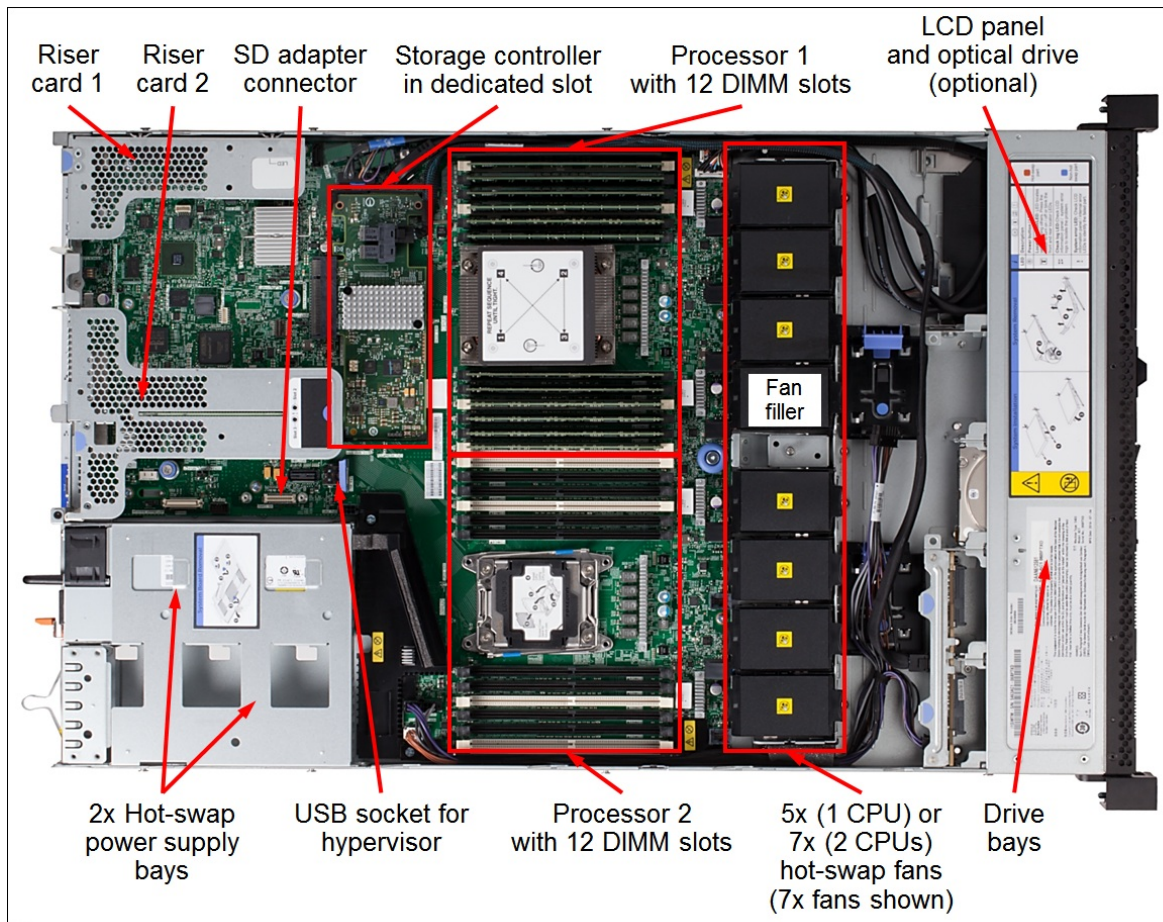


Figure 9. Internal view of the System x3550 M5

## System specifications

The following table lists the system specifications.

Table 1. System specifications

| Components               | Specification  |
|--------------------------|--|
| Form factor              | 1U rack-mount (Machine Type 8869)  |
| Processor                | <p>Up to two processors of the Intel Xeon processor E5-2600 v4 product family:</p> <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> <p>Up to two processors of the Intel Xeon processor E5-2600 v3 product family (CTO only):</p> <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> |
| 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 7.68 TB 2.5" SAS SSDs</li> <li>• Up to 40 TB with 10 TB 3.5" NL SAS or NL SATA HDDs</li> <li>• Up to 24 TB with 2 TB 2.5" NL SATA HDDs</li> <li>• Up to 21.6 TB with 1.8 TB 2.5" SAS HDDs</li> <li>• Up to 4 TB with 2 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>   |



| Components          | 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 DB-15 video ports (optional).</li> </ul> </li> <li>Rear: 2x USB 3.0 and 1x DB-15 video 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 2012, 2012 R2, and 2016; Red Hat Enterprise Linux 6 (x64) and 7; SUSE Linux Enterprise Server 11 (x64) and 12; VMware vSphere (ESXi) 5.5, 6.0, and 6.5.   |
| 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

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

**Product availability:** 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<br>15MB 1866MHz 85W   | 1x 8GB**       | M1215            | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option†       | Option‡     | 1x 550W<br>HS / 2         |
| 8869B2x                     | 1x E5-2609 v4 8C 1.7GHz<br>20MB 1866MHz 85W   | 1x 8GB**       | M1215            | 4x 3.5"<br>HS / 4      | Open bay | 4x GbE | 2 / 4^                | Option        | None        | 1x 550W<br>HS / 2         |
| 8869C2x                     | 1x E5-2620 v4 8C 2.1GHz<br>20MB 2133MHz 85W   | 1x 16GB        | M1215            | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option†       | Option‡     | 1x 550W<br>HS / 2         |
| 8869C4x                     | 1x E5-2620 v4 8C 2.1GHz<br>20MB 2133MHz 85W   | 1x 16GB        | M1215            | 4x 3.5"<br>HS / 4      | Open bay | 4x GbE | 2 / 4^                | Option        | None        | 1x 550W<br>HS / 2         |
| 8869D2x                     | 1x E5-2630 v4 10C 2.2GHz<br>25MB 2133MHz 85W  | 1x 16GB        | M5210<br>1GB (F) | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option†       | Option‡     | 1x 550W<br>HS / 2         |
| 8869F2x                     | 1x E5-2640 v4 10C 2.4GHz<br>25MB 2133MHz 90W  | 1x 16GB        | M5210<br>1GB (F) | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option†       | Option‡     | 1x 550W<br>HS / 2         |
| 8869G2x                     | 1x E5-2650 v4 12C 2.2GHz<br>30MB 2400MHz 105W | 1x 16GB        | M5210<br>1GB (F) | 10x 2.5"<br>HS / 12    | Open bay | 4x GbE | 2 / 4^                | None          | None        | 1x 900W<br>HS / 2         |
| 8869R2x                     | 1x E5-2660 v4 14C 2.0GHz<br>35MB 2400MHz 105W | 1x 16GB        | M5210<br>2GB (F) | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option        | Included    | 1x 750W<br>HS / 2         |
| 8869Q2x                     | 1x E5-2667 v4 8C 3.2GHz<br>25MB 2400MHz 135W  | 1x 16GB        | M5210<br>2GB (F) | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option        | Included    | 1x 750W<br>HS / 2         |
| 8869L2x                     | 1x E5-2690 v4 14C 2.6GHz<br>35MB 2400MHz 135W | 1x 16GB        | M5210<br>2GB (F) | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option†       | Option‡     | 1x 750W<br>HS / 2***      |
| 8869N2x                     | 1x E5-2697 v4 18C 2.3GHz<br>45MB 2400MHz 145W | 1x 16GB        | M5210<br>2GB (F) | 4x 2.5"<br>HS / 8      | Open bay | 4x GbE | 2 / 4^                | Option        | Included    | 1x 900W<br>HS / 2         |

\* x in the Model number represents a country-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 power supplies are 80 PLUS Platinum certified.

\*\* 8 GB 1Rx4 memory DIMM (46W0825).

† 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

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

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

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<br>15MB 1866MHz 85W   | 1x 16GB        | M1215 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 8869KBU                           | 1x E5-2603 v4 6C 1.7GHz<br>15MB 1866MHz 85W   | 1x 16GB        | M1215 | 4x 3.5"<br>HS / 4      | Open bay          | 4x GbE | 1 / 4                 | Option        | None        | 1x 900W<br>HS / 2         |
| 8869KCU                           | 1x E5-2609 v4 8C 1.7GHz<br>20MB 1866MHz 85W   | 1x 16GB        | M1215 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 8869KDU                           | 1x E5-2609 v4 8C 1.7GHz<br>20MB 1866MHz 85W   | 1x 16GB        | M1215 | 4x 3.5"<br>HS / 4      | Open bay          | 4x GbE | 1 / 4                 | Option        | None        | 1x 900W<br>HS / 2         |
| 8869KXU                           | 1x E5-2609 v4 8C 1.7GHz<br>20MB 1866MHz 85W   | 4x 16GB        | M1215 | 4x 3.5"<br>HS / 4      | 4x<br>1TB<br>7.2K | 4x GbE | 1 / 4                 | Option        | None        | 2x 900W<br>HS / 2         |
| 8869KZU                           | 2x E5-2609 v4 8C 1.7GHz<br>20MB 1866MHz 85W   | 2x 16GB        | M1215 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 2x 900W<br>HS / 2         |
| 8869KEU                           | 1x E5-2620 v4 8C 2.1GHz<br>20MB 2133MHz 85W   | 1x 16GB        | M1215 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 8869KFU                           | 1x E5-2620 v4 8C 2.1GHz<br>20MB 2133MHz 85W   | 1x 16GB        | M1215 | 4x 3.5"<br>HS / 4      | Open bay          | 4x GbE | 1 / 4                 | Option        | None        | 1x 900W<br>HS / 2         |
| 8869K3U                           | 2x E5-2620 v4 8C 2.1GHz<br>20MB 2133MHz 85W   | 2x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 2x 900W<br>HS / 2         |
| 8869KGU                           | 1x E5-2630 v4 10C 2.2GHz<br>25MB 2133MHz 85W  | 1x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 8869KHU                           | 1x E5-2630 v4 10C 2.2GHz<br>25MB 2133MHz 85W  | 1x 16GB        | M5210 | 4x 3.5"<br>HS / 4      | Open bay          | 4x GbE | 1 / 4                 | Option        | None        | 1x 900W<br>HS / 2         |
| 8869KYU                           | 1x E5-2630 v4 10C 2.2GHz<br>25MB 2133MHz 85W  | 4x 16GB        | M1215 | 4x 3.5"<br>HS / 4      | 4x<br>1TB<br>7.2K | 4x GbE | 1 / 4                 | Option        | None        | 2x 900W<br>HS / 2         |
| 8869KQU                           | 1x E5-2637 v4 4C 3.5GHz<br>15MB 2400MHz 135W  | 1x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 8869KJU                           | 1x E5-2640 v4 10C 2.4GHz<br>25MB 2133MHz 90W  | 1x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 8869KKU                           | 1x E5-2640 v4 10C 2.4GHz<br>25MB 2133MHz 90W  | 1x 16GB        | M5210 | 4x 3.5"<br>HS / 4      | Open bay          | 4x GbE | 1 / 4                 | Option        | None        | 1x 900W<br>HS / 2         |
| 886916E                           | 1x E5-2640 v4 10C 2.4GHz<br>25MB 2133MHz 90W  | 1x 16GB        | M5210 | 10x 2.5"<br>HS / 12    | Open bay          | 4x GbE | 1 / 4                 | None          | None        | 1x 900W<br>HS / 2         |
| 8869KUU                           | 2x E5-2640 v4 10C 2.4GHz<br>25MB 2133MHz 90W  | 2x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 2x 900W<br>HS / 2         |
| 8869KLU                           | 1x E5-2650 v4 12C 2.2GHz<br>30MB 2400MHz 105W | 1x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 886916I                           | 1x E5-2660 v4 14C 2.0GHz<br>35MB 2400MHz 105W | 1x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 2 / 4^                | Option†       | Option‡     | 1x 900W<br>HS / 2         |
| 8869KVU                           | 2x E5-2660 v4 14C 2.0GHz<br>35MB 2400MHz 105W | 2x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option        | Option‡     | 2x 900W<br>HS / 2         |
| 8869KRU                           | 1x E5-2667 v4 8C 3.2GHz<br>25MB 2400MHz 135W  | 1x 16GB        | M5210 | 4x 2.5"<br>HS / 8      | Open bay          | 4x GbE | 1 / 4                 | Option†       | Option‡     | 1x 900W<br>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)§ |
|--|--|----------------|-------|------------------------|--------------|--------|-----------------------|---------------|-------------|---------------------------|
| 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 | 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 | 8x 2.5" HS / 8         | Open bay     | 4x GbE | 1 / 4                 | Option        | Option‡     | 1x 750W HS / 2            |
| 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 | 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 | 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            |

| 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)§ |
|---------------------------------------|--|----------------|---------------|------------------------|----------|--------|-----------------------|---------------|-------------|---------------------------|
| 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).

§ The power supplies are 80 PLUS Platinum certified.

\* 8 GB 1Rx4 memory DIMM (46W0825).

† 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    |

| Description   | Part number | Feature codes* |
|---|-------------|----------------|
| 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    |
| 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.

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            |
| 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

## 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.

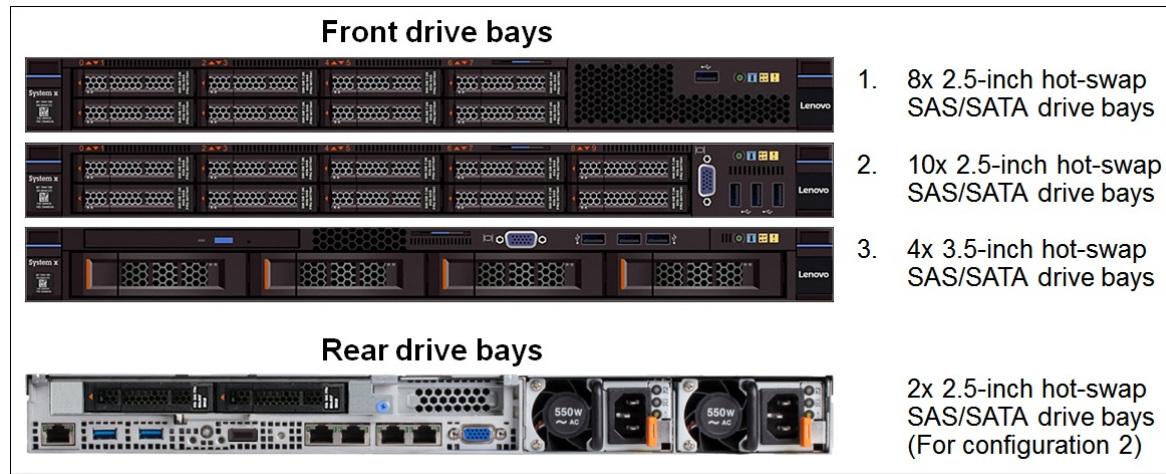


Figure 10. SAS/SATA drive bay configurations

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

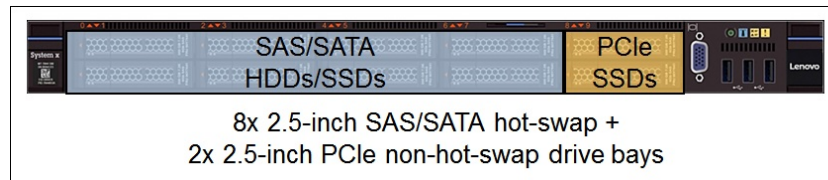


Figure 11. SAS/SATA and PCIe drive bay configurations

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                 |
| <b>Upgrade drive kits (require the base drive kit)</b> |             |              |                   |
| 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<br>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 |
|--|-------------|--------------|-------------------|---------------------|
| 12 Gb SAS/SATA controllers                                 |             |              |                   |                     |
| 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                   |
| Hardware upgrades for the M5210 (per one controller)       |             |              |                   |                     |
| 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                 | -                   |
| Features on Demand upgrades for the M5210 (system-wide)**  |             |              |                   |                     |
| 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*                | -                   |
| Features on Demand upgrades for the M1215 (system-wide)*** |             |              |                   |                     |
| ServeRAID M1200 Zero Cache/RAID 5 Upgrade                  | 00AE930     | A5H5         | 1                 | -                   |
| PCIe extenders (for NVMe PCIe SSDs)                        |             |              |                   |                     |
| 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      |

| Feature                            | M1215                              | M5210   | N2215                        |
|------------------------------------|------------------------------------|---|------------------------------|
| 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                         |
| RAID levels                        | 0/1/10;<br>Optional 5/50 (00AE930) | 0/1/10; Optional 5/50 (RAID 5 FoD, 47C8708, or cache upgrades);<br>Optional 6/60 (47C8706)                            | None                         |
| JBOD mode                          | Yes                                | Yes (without cache)   | Yes                          |
| Cache                              | None                               | 1 GB no backup (47C8656)<br>1 GB flash backup (47C8660)<br>2 GB flash backup (47C8664)<br>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 supported only for 10x 2.5" front drive bay models and connected to the SAS expander on the 10-drive backplane.

\* 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 10K 12Gbps SAS 2.5" G3HS 512e HDD                                   | 00NA241     | ASBF         | 12                |
| 600GB 15K 12Gbps SAS 2.5" G3HS HDD  | 00WG665     | AT85         | 12                |
| 900GB 10K 12Gbps SAS 2.5" G3HS HDD  | 00WG695     | AT8B         | 12                |
| 900GB 10K 12Gbps SAS 2.5" G3HS 512e HDD                                   | 00NA251     | ASBH         | 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                |
| <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 SAS</b>                             |             |              |                   |
| 500GB 7.2K 6Gbps NL SAS 2.5" G3HS HDD                                     | 00AJ121     | A4TT         | 12                |
| <b>2.5-inch hot-swap HDDs - 6 Gbps NL SATA</b>                            |             |              |                   |
| 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                |
| <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 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 - Enterprise Mainstream 12 Gbps SAS</b>         |             |              |                   |
| 400GB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD                        | 00YC460     | AT9M         | 12                |
| 800GB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD                        | 00YC465     | AT9N         | 12                |
| 1.6TB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD                        | 00YC470     | AT9P         | 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*               |

| Description   | Part number | Feature code | Maximum supported |
|---|-------------|--------------|-------------------|
| PM1635a 1.6TB Enterprise Mainstream 12Gb SAS G3HS 2.5" SSD        | 01GV771     | AWF0         | 12*               |
| 2.5-inch hot-swap SSDs - Enterprise 6 Gbps SAS                    |             |              |                   |
| 200GB SAS 2.5" MLC G3HS Enterprise SSD                            | 00AJ207     | A4UA         | 12                |
| 400GB SAS 2.5" MLC G3HS Enterprise SSD                            | 00AJ212     | A4UB         | 12                |
| 800GB SAS 2.5" MLC G3HS Enterprise SSD                            | 00AJ217     | A4UC         | 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 hot-swap SSDs - Enterprise Capacity 6 Gbps SAS           |             |              |                   |
| 3.84TB 6Gb SAS Enterprise Capacity G3HS MLC SSD                   | 00NA671     | ASW6         | 12                |
| 2.5-inch hot-swap SSDs - Enterprise Performance 6 Gbps SATA       |             |              |                   |
| Intel S3710 200GB Enterprise Performance SATA G3HS 2.5" SSD       | 00YC320     | AT9C         | 12                |
| Intel S3710 400GB Enterprise Performance SATA G3HS 2.5" SSD       | 00YC325     | AT9D         | 12                |
| Intel S3710 800GB Enterprise Performance SATA G3HS 2.5" SSD       | 00YC330     | AT9E         | 12                |
| 2.5-inch hot-swap SSDs - 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                |
| Intel S3610 1.6TB Enterprise Mainstream SATA G3HS 2.5" SSD        | 00YK227     | AU3F         | 12                |
| 2.5-inch non-hot-swap SSDs - 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                 |
| Intel P3700 1.6TB NVMe 2.5" G3HS Enterprise Performance PCIe SSD  | 00YA824     | AT7X         | 2                 |
| Intel P3700 2.0TB NVMe 2.5" G3HS Enterprise Performance PCIe SSD  | 00YA827     | AT7Y         | 2                 |
| 2.5-inch hot-swap SSDs - Enterprise Entry 6 Gbps SATA             |             |              |                   |
| 120GB Enterprise Entry SATA G3HS 2.5" SSD                         | 00YC385     | AT8R         | 12                |
| 240GB Enterprise Entry SATA G3HS 2.5" SSD                         | 00YC390     | AT8S         | 12                |
| 480GB Enterprise Entry SATA G3HS 2.5" SSD                         | 00YC395     | AT8T         | 12                |
| 960GB Enterprise Entry SATA G3HS 2.5" SSD                         | 00YC400     | AT8U         | 12                |
| 1.92TB Enterprise Entry SATA G3HS 2.5" SSD                        | 01GR711     | AUE7         | 12                |
| 2.5-inch hot-swap SSDs - S3510 Enterprise Entry 6 Gbps SATA       |             |              |                   |
| Intel S3510 120GB Enterprise Entry SATA G3HS 2.5" SSD             | 00WG620     | AT93         | 12                |
| Intel S3510 240GB Enterprise Entry SATA G3HS 2.5" SSD             | 00WG625     | AT94         | 12                |
| Intel S3510 480GB Enterprise Entry SATA G3HS 2.5" SSD             | 00WG630     | AT95         | 12                |
| Intel S3510 800GB Enterprise Entry SATA G3HS 2.5" SSD             | 00WG635     | AT96         | 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                |
| Intel S3520 960GB Enterprise Entry SATA G3HS 2.5" SSD             | 01GR736     | AUER         | 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                |

| Description   | Part number | Feature code | Maximum supported |
|---|-------------|--------------|-------------------|
| PM863a 960GB Enterprise Entry SATA G3HS 2.5" SSD            | 01GR846     | AVHR         | 12                |
| 2.5-inch hot-swap SSDs - Enterprise Value 6 Gbps SATA       |             |              |                   |
| 120GB SATA 2.5" MLC G3HS Enterprise Value SSD               | 00AJ395     | A577         | 12                |
| 240GB SATA 2.5" MLC G3HS Enterprise Value SSD               | 00AJ400     | A578         | 12                |
| 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 - Enterprise Value PCIe 3.0 x4** |             |              |                   |
| Intel P3600 400GB NVMe 2.5" G3HS Enterprise Value PCIe SSD  | 90Y3227     | A5RW         | 2                 |
| Intel P3600 800GB NVMe 2.5" G3HS Enterprise Value PCIe SSD  | 90Y3230     | A5RX         | 2                 |
| Intel P3600 1.6TB NVMe 2.5" G3HS Enterprise Value PCIe SSD  | 90Y3233     | A5RY         | 2                 |
| Intel P3600 2.0TB NVMe 2.5" G3HS Enterprise Value PCIe SSD  | 90Y3236     | A5RZ         | 2                 |
| 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" SSD with 3.5" tray) | 00WG675     | AT87         | 4                 |
| 600GB 15K 12Gbps SAS 3.5" G2HS HDD (2.5" SSD with 3.5" tray) | 00WG680     | AT88         | 4                 |
| 900GB 15K 12Gbps SAS 2.5" G3HS 512e HDD with 3.5" tray       | 01GV040     | AVL9         | 4*                |
| 3.5-inch hot-swap HDDs - 12 Gbps NL SAS                      |             |              |                   |
| 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                 |
| 4TB 7.2K 12Gbps NL SAS 3.5" G2HS 512e HDD                    | 00FN208     | A5VQ         | 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                 |
| 3.5-inch hot-swap HDDs - 6 Gbps NL SAS                       |             |              |                   |
| 2TB 7.2K 6Gbps NL SAS 3.5" G2HS HDD                          | 90Y8572     | A2U0         | 4                 |
| 3.5-inch hot-swap HDDs - 6 Gbps NL SATA                      |             |              |                   |
| 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                 |
| 2TB 7.2K 6Gbps NL SATA 3.5" G2HS 512e HDD                    | 00FN113     | A5VD         | 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                 |



| Description  | Part number | Feature code | Maximum supported |
|--|-------------|--------------|-------------------|
| 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                 |
| 3.5-inch hot-swap SEDs - 12 Gbps NL SAS                      |             |              |                   |
| 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*                |
| 3.5-inch hot-swap SSDs - Enterprise Capacity 12 Gbps SAS     |             |              |                   |
| PM1633a 3.84TB Enterprise Capacity 12Gb SAS HS 3.5" SSD      | 01GR791     | AVKW         | 4*                |
| 3.5-inch hot-swap SSDs - Enterprise Performance 6 Gbps SATA  |             |              |                   |
| Intel S3710 400GB Enterprise Performance SATA HS 3.5" SSD    | 00YC340     | AT9G         | 4                 |
| Intel S3710 800GB Enterprise Performance SATA HS 3.5" SSD    | 00YC345     | AT9H         | 4                 |
| 3.5-inch hot-swap SSDs - Enterprise Mainstream 6 Gbps SATA   |             |              |                   |
| 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                 |
| Intel S3610 1.6TB Enterprise Mainstream SATA HS 3.5" SSD     | 00YK252     | AU3L         | 4                 |
| 3.5-inch hot-swap SSDs - Enterprise Value 6 Gbps SATA        |             |              |                   |
| 120GB SATA 3.5" MLC HS Enterprise Value SSD                  | 00AJ435     | A57F         | 4                 |
| 480GB SATA 3.5" MLC HS Enterprise Value SSD                  | 00AJ445     | A57H         | 4                 |
| 3.5-inch hot-swap SSDs - S3520 Enterprise Entry 6 Gbps SATA  |             |              |                   |
| 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 240GB Enterprise Entry SATA HS 3.5" SSD          | 01GR751     | AUF2         | 4                 |
| 3.5-inch hot-swap SSDs - PM863a Enterprise Entry 6 Gbps SATA |             |              |                   |
| 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                 |
| 3.5-inch hot-swap SSDs - Enterprise Entry 6 Gbps SATA        |             |              |                   |
| 960GB Enterprise Entry SATA HS 3.5" SSD                      | 00YC420     | AT8Y         | 4                 |
| 1.92TB Enterprise Entry SATA HS 3.5" SSD                     | 01GR721     | AUE9         | 4                 |

## 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
- DVD-RAM (4.7 GB) 5X

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
- DVD-RAM 5X

### 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.

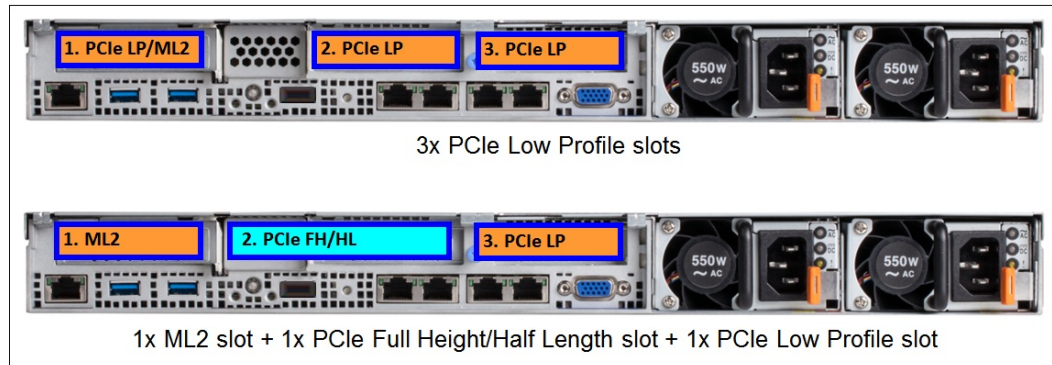


Figure 12. PCIe slot locations

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 10GbeseT (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 10GbeseT 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.

**Notes:**

- ML2 network adapters are supported in the ML2 slot 1 supplied by the ML2 Riser Card (part number 00KA063).
- Unless otherwise specified in the table footnote for the specific adapter, PCIe network adapters are supported in low profile and full-high PCIe x8 and x16 slots supplied by the riser cards 1 and 2.

Table 20. Network adapters

| Description   | Part number | Feature code | Maximum supported | I/O slots supported |
|---|-------------|--------------|-------------------|---------------------|
| <b>100 Gb Ethernet - PCIe</b>   |             |              |                   |                     |
| Mellanox ConnectX-4 2x100GbE/EDR IB QSFP28 VPI Adapter  | 00MM960     | ATRP         | 3^                | 1, 2, 3†            |
| <b>40 Gb Ethernet - ML2</b>   |             |              |                   |                     |
| Mellanox ConnectX-3 Pro ML2 2x40GbE/FDR VPI Adapter   | 00FP650     | A5RK         | 1*                | 1                   |
| <b>40 Gb Ethernet - PCIe</b>  |             |              |                   |                     |
| Mellanox ConnectX-4 Lx 1x40GbE QSFP+ Adapter  | 00MM950     | ATRN         | 3*                | 1, 2, 3             |
| Mellanox ConnectX-3 2x40GbE / FDR IB VPI 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                   |
| <b>10 Gb Ethernet - ML2</b>   |             |              |                   |                     |
| Broadcom NetXtreme II ML2 Dual Port 10GbBaseT   | 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)<br>(Upgrade for 00AG560 - one per adapter)                     | 00D8544     | A4NZ         | 1                 | -                   |
| Intel X540 ML2 Dual Port 10GbBaseT Adapter  | 00D1994     | A40P         | 1                 | 1                   |
| Intel X710-DA2 ML2 2x10GbE SFP+ Adapter   | 00JY940     | ATRH         | 1*                | 1                   |
| <b>25 Gb Ethernet - PCIe</b>  |             |              |                   |                     |
| Mellanox ConnectX-4 Lx 2x25GbE SFP28 Adapter  | 01GR250     | AUAJ         | 3#                | 1, 2, 3             |
| <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)<br>(Upgrade for 00JY820 and 00AG570 - one per adapter) | 00JY824     | A5UV         | 3                 | -                   |
| Emulex VFA5 2x10 GbE SFP+ Adapter and FCoE/iSCSI SW   | 00JY830     | A5UU         | 3*                | 1, 2, 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 10GBBaseT Adapter   | 49Y7970     | A2ED         | 3                 | 1, 2, 3             |
| Intel X550-T2 Dual Port 10GBBase-T Adapter  | 00MM860     | ATPX         | 3                 | 1, 2, 3             |

| Description   | Part number | Feature code | Maximum supported | I/O slots supported |
|---|-------------|--------------|-------------------|---------------------|
| Intel X710-DA2 2x10GbE SFP+ Adapter                                       | 01DA900     | AU2Y         | 3*                | 1, 2, 3             |
| Mellanox ConnectX-3 10 GbE Adapter  | 00D9690     | A3PM         | 3*                | 1, 2, 3             |
| QLogic 8200 Dual Port 10GbE SFP+ VFA                                      | 90Y4600     | A3MR         | 3*                | 1, 2, 3             |
| QLogic 8200 VFA FCoE/iSCSI License (FoD for 90Y4600 - one per adapter)    | 00Y5624     | A3MT         | 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             |
| <b>40 GbE QSFP+ transceivers and DAC cables for 40 GbE QSFP+ adapters</b> |             |              |                   |                     |
| Lenovo 40GBASE-SR4 QSFP+ Transceiver                                      | 49Y7884     | A1DR         | Port qty**        | -                   |
| Lenovo 1m Passive QSFP+ DAC Cable   | 49Y7890     | A1DP         | Port qty**        | -                   |
| Lenovo 3m Passive QSFP+ DAC Cable   | 49Y7891     | A1DQ         | Port qty**        | -                   |
| <b>10 GbE SFP+ transceivers and DAC cables for 10 GbE SFP+ adapters</b>   |             |              |                   |                     |
| Lenovo 10GBASE-SR SFP+ Transceiver  | 46C3447     | 5053         | Port qty**        | -                   |
| Brocade 10Gb SFP+ SR Optical Transceiver                                  | 49Y4216     | 0069         | Port qty**        | -                   |
| QLogic 10Gb SFP+ SR Optical Transceiver                                   | 49Y4218     | 0064         | Port qty**        | -                   |
| Lenovo 0.5m Passive SFP+ DAC Cable  | 00D6288     | A3RG         | Port qty**        | -                   |
| Lenovo 1m Passive SFP+ DAC Cable  | 90Y9427     | A1PH         | Port qty**        | -                   |
| Lenovo 1.5m Passive SFP+ DAC Cable  | 00AY764     | A51N         | Port qty**        | -                   |
| Lenovo 2m Passive SFP+ DAC Cable  | 00AY765     | A51P         | Port qty**        | -                   |
| Lenovo 3m Passive SFP+ DAC Cable  | 90Y9430     | A1PJ         | Port qty**        | -                   |
| Lenovo 5m Passive SFP+ DAC Cable  | 90Y9433     | A1PK         | Port qty**        | -                   |
| Lenovo 7m Passive SFP+ DAC Cable  | 00D6151     | A3RH         | Port qty**        | -                   |

^ Transceivers and DAC cables are available only from Mellanox or as a part of a Lenovo Intelligent Cluster solution.

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

\* SFP+ and QSFP+ based adapters require supported transceivers or DAC cables that must be purchased for the adapter (See "40 Gb QSFP+ transceivers and DAC cables" and "10 Gb SFP+ transceivers and DAC cables" in the table above).

# Transceivers and DAC cables are available only from Mellanox.

\*\* The maximum number of transceivers or cables that are supported per adapter equals the quantity of the adapter ports. All adapter ports must have the same type of transceiver or DAC cable selected.

**Configuration note:** If the QLogic 8200 Dual Port 10GbE SFP+ VFA (90Y4600) or Intel X540 ML2 Dual Port 10GbaseT Adapter (00D1994) is used, the additional system fans might be required (see Cooling for details).

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

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

## 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.

**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.

Table 21. SAS RAID adapters and HBAs for external storage

| Description   | Part number | Feature code | Maximum supported | I/O slots supported |
|---|-------------|--------------|-------------------|---------------------|
| <b>12 Gbps SAS RAID adapters - PCIe</b>                                 |             |              |                   |                     |
| ServeRAID M5225-2GB SAS/SATA Controller                                 | 00AE938     | A5ND         | 3                 | 1, 2, 3             |
| <b>Feature on Demand (FoD) upgrades for the M5225 (one per server)*</b> |             |              |                   |                     |
| 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>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.

The following table summarizes features of supported HBAs.

Table 22. 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;<br>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 23. 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>



## Flash storage adapters

The System x3550 M5 server supports the Flash storage adapters listed in the following table.

Table 24. Flash storage adapters (LP = Low Profile PCIe adapter, FH = Full-High PCIe adapter)

| Description  | Part number | Feature code | Maximum supported | I/O slots supported |
|--|-------------|--------------|-------------------|---------------------|
| <b>Enterprise Performance</b>                                    |             |              |                   |                     |
| Intel P3700 1.6TB NVMe Enterprise Performance Flash Adapter (LP) | 00YA812     | AT7L         | 3                 | 1, 2, 3             |
| Intel P3700 2.0TB NVMe Enterprise Performance Flash Adapter (LP) | 00YA815     | AT7M         | 3                 | 1, 2, 3             |
| <b>Enterprise Mainstream</b>                                     |             |              |                   |                     |
| io3 1.25TB Enterprise Mainstream Flash Adapter (LP)              | 00YA800     | AT7N         | 3                 | 1, 2, 3             |
| io3 1.6TB Enterprise Mainstream Flash Adapter (LP)               | 00YA803     | AT7P         | 3                 | 1, 2, 3             |
| io3 3.2TB Enterprise Mainstream Flash Adapter (LP)               | 00YA806     | AT7Q         | 3                 | 1, 2, 3             |
| io3 6.4TB Enterprise Mainstream Flash Adapter (FH)               | 00YA809     | AT7R         | 1                 | 2*                  |
| <b>Enterprise</b>  |             |              |                   |                     |
| 1000GB Enterprise io3 Flash Adapter (LP)                         | 00AE995     | ARYP         | 3                 | 1, 2, 3             |
| 1300GB Enterprise io3 Flash Adapter (LP)                         | 00AE998     | ARYQ         | 3                 | 1, 2, 3             |
| 2600GB Enterprise io3 Flash Adapter (LP)                         | 00JY001     | ARYR         | 3                 | 1, 2, 3             |

\* Supported only in the PCIe slot 2 and requires the FHHL x16 Riser Card 2 (feature code A5AD) and the second processor or the FHHL x8 Riser Card 2 (feature code A5AE).

### Configuration notes:

- The Flash Adapters might require the use of the additional system fans (see Cooling for details).
- Low profile Flash Adapters are supported in low profile and half-high slots; full-high Flash Adapters are supported only in the PCIe slot 2 and require the FHHL x8 or x16 Riser Card 2 (feature code A5AE or A5AD, respectively); FHHL x16 Riser requires the second processor.
- The io3 Flash Adapters cannot be factory installed; they are supported as field-installable options only. The server cannot be shipped with these adapters installed.

For more information, see the list of Product Guides in the Flash storage adapters category:

<http://lenovopress.com/servers/options/ssdadapter>

## GPU adapters

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

Table 25. 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                   |

\* Available only through CTO or special bid.

### 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)
- QLogic 8200 Dual Port 10GbE SFP+ VFA (part number 90Y4600)
- io3 Enterprise Flash Adapters (part numbers 00AE995, 00AE998, and 00JY001)
- io3 Enterprise Mainstream Flash Adapters (part numbers 00YA800, 00YA803, 00YA806, and 00YA809)
- P3700 NVMe Enterprise Performance Flash Adapters (part numbers 00YA812 and 00YA815)

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

Table 26. 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 27. 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 standard with or without a power cord (model dependent). A hot-swap power supply option ships standard with one 2.8m, 10A/100-250V, IEC 320-C13 to C14 rack power cable.

Country-specific line cords and rack power cables can be ordered, if needed (see the following table).

Table 28. 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         |
| 2.8m, 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>Country-specific 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 NBR 6147 2.8m line cord             | 39Y7929     | 6223         |
| 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         |
| European 10A/230V C13 to CEE7-VII 2.8m line cord           | 39Y7917     | 6212         |
| 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         |
| 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/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 4.3m line cord    | 39Y7931     | 6207         |
| United States 10A/250V C13 to NEMA 6-15P 2.8m line cord    | 46M2592     | A1RF         |

## 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 29. 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                 |
| 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                 |

\* 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 2016
  - Microsoft Windows Server 2012 R2
  - Microsoft Windows Server 2012
- Red Hat:
  - Red Hat Enterprise Linux 7.3
  - Red Hat Enterprise Linux 7.2
  - Red Hat Enterprise Linux 6.8 Server x64 Edition
  - Red Hat Enterprise Linux 6.7 Server x64 Edition
- SUSE:
  - 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 6.5 (ESXi)
  - VMware vSphere 6.0 (ESXi) Update 2
  - VMware vSphere 5.5 (ESXi) Update 3

See the ServerProven® website for the latest information about the specific versions and service levels supported and any other prerequisites:

<http://www.lenovo.com/us/en/serverproven/>

## 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 30. 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 31. 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 32. 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 33. 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

## Rack installation

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

Table 34. 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                 |
| <b>Cable management arm (CMA)</b>                 |             |              |                   |
| System x Enterprise 1U Cable Management Arm (CMA) | 00KA607     | A5AL         | 1                 |
| <b>Lockable front bezel</b>                       |             |              |                   |
| System x3550 M5 Security Bezel                    | 00KA162     | A5AP         | 1                 |

The following table summarizes the rail kit features and specifications.

Table 35. Rail kit features and specifications summary

| Feature               | System x3550 M5 Non-ball Bearing Slide Kit | System x3550 M5 Slide Kit G4  | System x Gen-II Universal Slides Kit | System x M5 Custom Rail Kit |
|-----------------------|--|-------------------------------|--------------------------------------|-----------------------------|
| Part number           | 00MV369                                    | 00KA606                       | 00KA500                              | 00MW239                     |
| Rail type             | Half-out slide (friction)                  | Full-out slide (ball bearing) | Full-out slide (ball bearing)        | Half-out slide (friction)   |
| Toolless installation | Yes  | Yes                           | No                                   | Yes                         |

| Feature  | System x3550 M5 Non-ball Bearing Slide Kit    | System x3550 M5 Slide Kit G4                  | System x Gen-II Universal Slides Kit    | System x M5 Custom Rail Kit                   |
|--|---|---|---|---|
| CMA support                                      | No  | Yes   | Yes                                     | No  |
| In-rack server maintenance                       | No  | Yes   | Yes                                     | No  |
| 1U PDU support                                   | Yes   | Yes   | Yes                                     | Yes   |
| 0U PDU support                                   | Limited**                                     | Limited*                                      | Limited*                                | Limited**                                     |
| Rack type  | IBM and Lenovo 4-post, IEC standard-compliant | IBM and Lenovo 4-post, IEC standard-compliant | Any 4-post, IEC standard-compliant      | IBM and Lenovo 4-post, IEC standard-compliant |
| Mounting holes                                   | Square or round                               | Square or round                               | Square, round, or threaded              | Square or round                               |
| 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.) – 4.65 mm (0.18 in.)    | 2 mm (0.08 in.) – 4 mm (0.16 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.)       | 617 mm (24.29 in.) – 812 mm (31.97 in.) | 595 mm (23.43 in.) – 746 mm (29.37 in.)       |
| Rail length***                                   | 728.1 mm (28.6 in.)                           | 833.5 mm (32.81 in.)                          | 836.8 mm (32.94 in.)                    | 755 mm (29.72 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)
- Noise level:
  - 6.6 bels (operating)
  - 6.4 bels (idle)

## Warranty

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. 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 more information about Lenovo warranty service upgrade offerings that are available in your country, refer to the Data Center Advisor and Configurator (DCACT; formerly known as LESC):

<http://lesc.lenovo.com>

The following table explains warranty service definitions in more detail.

Table 36. Warranty service definitions

| Term                       | Description  |
|----------------------------|--|
| Onsite Service             | If a problem with your product cannot be resolved via telephone, a Service Technician will be dispatched to arrive at your location.   |
| Parts Delivered            | If a problem with your product cannot be resolved via telephone and a CRU part is required, Lenovo will send a replacement CRU to arrive at your location. If a problem with your product cannot be resolved via telephone and a FRU part is required, a Service Technician will be dispatched to arrive at your location. |
| Technician Installed Parts | If a problem with your product cannot be resolved via telephone, a Service Technician will be dispatched to arrive at your location.   |
| Hours of coverage          | <ul style="list-style-type: none"> <li>• 9x5: 9 hours per day, 5 days per week, during normal business hours, excluding local public and national holidays</li> <li>• 24x7: 24 hours per day, 7 days per week, 365 days per year.</li> </ul>   |
| Response time target       | 2 hours, 4 hours, or Next Business Day: The time period from when the telephone based troubleshooting is completed and logged, to the delivery of the CRU or arrival of a Service Technician and part at the Customer's location for repair.   |
| Committed Repair           | 6 hours: The time period between the service request registration in Lenovo's call management system and the restoration of the product to conformance with its specification by a Service Technician.   |

The following Lenovo warranty service upgrades are available:

- Warranty and maintenance service upgrades:
  - Three, four, or five years of 9x5 or 24x7 service coverage
  - Parts delivered or technician installed parts from next business day to 4 or 2 hours
  - Committed repair service
  - Warranty extension of up to 5 years
  - Post warranty extensions
- Committed Repair Service  
 Committed Repair Services enhances the level of Warranty Service Upgrade or Post Warranty/Maintenance Service offering associated with the selected systems. Offerings vary and are available in select countries.
  - Priority handling to meet defined time frames to restore the failing machine to good working condition
  - 24x7x6 committed repair: Service performed 24 hours per day, 7 days per week, within 6 hours
- 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 Lenovo warranty upgrades and extensions.
- Microcode Support  
 Keeping microcode current helps prevent hardware failures and security exposure. There are two levels of service: analysis of the installed base and analysis and update where required. Offerings vary by country and can be bundled with other warranty upgrades and extensions.

- Enterprise 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.

In addition, you can access hardware “how to” support for System x servers. Staff can help resolve hardware problems not covered under warranty, refer you to the right documentation and publications, provide corrective service information for known defects, and transfer you to a hardware support call center if needed.

- 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. Your new systems will be configured and ready for your software installation.

## 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
- 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 table lists the 6 Gbps SAS external drive enclosures that are offered by Lenovo that can be used with the System x3550 M5 for storage expansion.

Table 37. E1012 and E1024 external drive enclosure models

| 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     |

For details about supported drives, adapters, and cables for the Lenovo Storage E1012 and E1024, see the Lenovo Press Product Guide: <http://lenovopress.com/lp0043>

The following table lists the relationship models of the 12 Gbps SAS external drive enclosures that are offered by Lenovo that can be used with the System x3550 M5 for storage expansion.

Table 38. D1212 and D1224 relationship models

| Description  | Part number |
|--|-------------|
| <b>LFF models</b>  |             |
| D1212 LFF Chassis, Dual 3-port ESMs (US English documentation)         | 4587A11*    |
| D1212 LFF Chassis, Dual 3-port ESMs (Simplified Chinese documentation) | 4587A1C^    |
| D1212 LFF Chassis, Dual 3-port ESMs (Japanese documentation)           | 4587A1J**   |
| <b>SFF models</b>  |             |
| D1224 SFF Chassis, Dual 3-port ESMs (US English documentation)         | 4587A31*    |
| D1224 SFF Chassis, Dual 3-port ESMs (Simplified Chinese documentation) | 4587A3C^    |
| D1224 SFF Chassis, Dual 3-port ESMs (Japanese documentation)           | 4587A3J**   |

\* Available worldwide (except China and Japan)

^ Available only in China

\*\* Available only in Japan

The following table lists the TopSeller models of the 12 Gbps SAS external drive enclosures that are offered by Lenovo that can be used with the System x3550 M5 for storage expansion.

Table 39. D1212 and D1224 TopSeller models

| Description   | Part number |
|---|-------------|
| <b>LFF models - North America (NA) and Europe, Middle East, and Africa (EMEA)</b>         |             |
| Lenovo Storage D1212 LFF Dual ESM Disk Expansion Enclosure (US English documentation)     | 4587E11     |
| <b>LFF models - Brazil and Latin America</b>  |             |
| D1212 LFF Chassis, Dual 3-port ESMs, 4x 2TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587EAU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 4x 4TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587EBU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 4x 6TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587ECU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 4x 8TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587EDU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 8x 2TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587EEU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 8x 4TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587EFU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 8x 6TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587EGU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 8x 8TB 3.5" HDDs, 4x 0.5m SAS cables                 | 4587EHU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 12x 2TB 3.5" HDDs, 4x 0.5m SAS cables                | 4587EIU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 12x 4TB 3.5" HDDs, 4x 0.5m SAS cables                | 4587EJU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 12x 6TB 3.5" HDDs, 4x 0.5m SAS cables                | 4587EKU     |
| D1212 LFF Chassis, Dual 3-port ESMs, 12x 8TB 3.5" HDDs, 4x 0.5m SAS cables                | 4587ELU     |
| <b>SFF models - North America (NA) and Europe, Middle East, and Africa (EMEA)</b>         |             |
| Lenovo Storage D1224 SFF Dual ESM Disk Expansion Enclosure (US English documentation)     | 4587E31     |
| <b>SFF models - Brazil and Latin America</b>  |             |
| D1224 SFF Chassis, Dual 3-port ESMs, 9x 1.2TB 10K HDDs, 4x 0.5m SAS cables                | 4587E6U     |
| D1224 SFF Chassis, Dual 3-port ESMs, 9x 1.2TB 10K HDDs, 2x 400GB SSDs, 4x 0.5m SAS cables | 4587E2U     |
| D1224 SFF Chassis, Dual 3-port ESMs, 9x 1.2TB 10K HDDs, 4x 400GB SSDs, 4x 0.5m SAS cables | 4587E4U     |

| Description  | Part number |
|--|-------------|
| D1224 SFF Chassis, Dual 3-port ESMs, 18x 1.2TB 10K HDDs, 1x 0.5m SAS cable                 | 4587E5U     |
| D1224 SFF Chassis, Dual 3-port ESMs, 18x 1.2TB 10K HDDs, 2x 400GB SSDs, 4x 0.5m SAS cables | 4587E1U     |
| D1224 SFF Chassis, Dual 3-port ESMs, 18x 1.2TB 10K HDDs, 4x 400GB SSDs, 4x 0.5m SAS cables | 4587E3U     |

For details about supported drives, adapters, and cables for the Lenovo Storage D1212 and D1224, see the Lenovo Press Product Guide: <http://lenovopress.com/lp0512>

The following table lists the relationship models of the 12 Gbps SAS external high density drive enclosures that are offered by Lenovo that can be used with the System x3550 M5 for storage expansion.

Table 40. D3284 relationship models

| Description   | Part number |
|---|-------------|
| 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     |

The following table lists the TopSeller models of the 12 Gbps SAS external high density drive enclosures that are offered by Lenovo that can be used with the System x3550 M5 for storage expansion..

Table 41. D3284 TopSeller models

| Description   | Part number |
|---|-------------|
| Lenovo Storage D3284 High Density Expansion Enclosure | 6413E5F     |
| Lenovo Storage D3284 4TB x 42 HD Expansion Enclosure  | 6413E1H     |
| Lenovo Storage D3284 4TB x 84 HD Expansion Enclosure  | 6413E1F     |
| Lenovo Storage D3284 6TB x 42 HD Expansion Enclosure  | 6413E2H     |
| Lenovo Storage D3284 6TB x 84 HD Expansion Enclosure  | 6413E2F     |
| Lenovo Storage D3284 8TB x 42 HD Expansion Enclosure  | 6413E3H     |
| Lenovo Storage D3284 8TB x 84 HD Expansion Enclosure  | 6413E3F     |
| Lenovo Storage D3284 10TB x 42 HD Expansion Enclosure | 6413E4H     |
| Lenovo Storage D3284 10TB x 84 HD Expansion Enclosure | 6413E4F     |

For details about supported drives, adapters, and cables for the Lenovo Storage D3284, see the Lenovo Press Product Guide: <http://lenovopress.com/lp0513>

## External storage systems

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

Table 42. External storage systems

| Description  | Part number |
|--|-------------|
| Lenovo Storage DX8200 Series (NAS, iSCSI connectivity; optional FC connectivity) |             |
| Lenovo Storage DX8200D Storage Virtualization Entry, 4TB, 3yr SW S&S             | 5135A2x*    |
| Lenovo Storage DX8200D Storage Virtualization Entry, 4TB, 4yr SW S&S             | 5135J2x*    |
| Lenovo Storage DX8200D Storage Virtualization Entry, 4TB, 5yr SW S&S             | 51351Vx*    |
| Lenovo Storage DX8200D Storage Virtualization Mid, 16TB, 3yr SW S&S              | 5135B2x*    |
| Lenovo Storage DX8200D Storage Virtualization Mid, 16TB, 4yr SW S&S              | 5135L2x*    |
| Lenovo Storage DX8200D Storage Virtualization Mid, 16TB, 5yr SW S&S              | 51352Vx*    |
| Lenovo Storage DX8200D Storage Virtualization High, 64TB, 3yr SW S&S             | 5135C2x*    |
| Lenovo Storage DX8200D Storage Virtualization High, 64TB, 4yr SW S&S             | 5135M2x*    |
| Lenovo Storage DX8200D Storage Virtualization High, 64TB, 5yr SW S&S             | 51353Vx*    |
| Lenovo Storage DX8200D ServerSAN Entry, 8TB, 3yr SW S&S                          | 5135D2x*    |
| Lenovo Storage DX8200D ServerSAN Entry, 8TB, 4yr SW S&S                          | 5135N2x*    |
| Lenovo Storage DX8200D ServerSAN Entry, 8TB, 5yr SW S&S                          | 51354Vx*    |
| Lenovo Storage DX8200D ServerSAN Mid, 16TB, 3yr SW S&S                           | 5135F2x*    |
| Lenovo Storage DX8200D ServerSAN Mid, 16TB, 4yr SW S&S                           | 5135P2x*    |
| Lenovo Storage DX8200D ServerSAN Mid, 16TB, 5yr SW S&S                           | 51355Vx*    |
| Lenovo Storage DX8200D ServerSAN High, 32TB, 3yr SW S&S                          | 5135G2x*    |
| Lenovo Storage DX8200D ServerSAN High, 32TB, 4yr SW S&S                          | 5135Q2x*    |
| Lenovo Storage DX8200D ServerSAN High, 32TB, 5yr SW S&S                          | 51356Vx*    |
| Lenovo Storage DX8200N with 1x N2226 HBA   | 5128A1x*    |
| Lenovo Storage DX8200N with 2x N2226 HBAs  | 5128A2x*    |
| Lenovo Storage S Series (SAS, iSCSI, or FC host connectivity)                    |             |
| Lenovo Storage S2200 LFF Chassis SAS Single Controller, Rack Kit, 9x5NBD         | 64112B1     |
| Lenovo Storage S2200 LFF Chassis SAS Dual Controller, Rack Kit, 9x5NBD           | 64112B2     |
| Lenovo Storage S2200 LFF Chassis FC/iSCSI Single Controller, Rack Kit, 9x5NBD    | 64114B1     |
| Lenovo Storage S2200 LFF Chassis FC/iSCSI Dual Controller, Rack Kit, 9x5NBD      | 64114B2     |
| Lenovo Storage S2200 SFF Chassis SAS Single Controller, Rack Kit, 9x5NBD         | 64112B3     |
| Lenovo Storage S2200 SFF Chassis SAS Dual Controller, Rack Kit, 9x5NBD           | 64112B4     |
| Lenovo Storage S2200 SFF Chassis FC/iSCSI Single Controller, Rack Kit, 9x5NBD    | 64114B3     |
| Lenovo Storage S2200 SFF Chassis FC/iSCSI Dual Controller, Rack Kit, 9x5NBD      | 64114B4     |
| Lenovo Storage S3200 LFF Chassis SAS Single Controller, Rack Kit, 9x5NBD         | 64113B1     |
| Lenovo Storage S3200 LFF Chassis SAS Dual Controller, Rack Kit, 9x5NBD           | 64113B2     |
| Lenovo Storage S3200 LFF Chassis FC/iSCSI Single Controller, Rack Kit, 9x5NBD    | 64116B1     |
| Lenovo Storage S3200 LFF Chassis FC/iSCSI Dual Controller, Rack Kit, 9x5NBD      | 64116B2     |
| Lenovo Storage S3200 SFF Chassis SAS Single Controller, Rack Kit, 9x5NBD         | 64113B3     |
| Lenovo Storage S3200 SFF Chassis SAS Dual Controller, Rack Kit, 9x5NBD           | 64113B4     |
| Lenovo Storage S3200 SFF Chassis FC/iSCSI Single Controller, Rack Kit, 9x5NBD    | 64116B3     |
| Lenovo Storage S3200 SFF Chassis FC/iSCSI Dual Controller, Rack Kit, 9x5NBD      | 64116B4     |



| Description  | Part number |
|--|-------------|
| Lenovo Storage V Series (SAS, iSCSI, FC, or FCoE host connectivity)                |             |
| Lenovo Storage V3700 V2 LFF Control Enclosure                                      | 6535C1D     |
| Lenovo Storage V3700 V2 LFF Control Enclosure (Top Seller)                         | 6535EC1     |
| Lenovo Storage V3700 V2 SFF Control Enclosure                                      | 6535C2D     |
| Lenovo Storage V3700 V2 SFF Control Enclosure (Top Seller)                         | 6535EC2     |
| Lenovo Storage V3700 V2 XP LFF Control Enclosure                                   | 6535C3D     |
| Lenovo Storage V3700 V2 XP LFF Control Enclosure (Top Seller)                      | 6535EC3     |
| Lenovo Storage V3700 V2 XP SFF Control Enclosure                                   | 6535C4D     |
| Lenovo Storage V3700 V2 XP SFF Control Enclosure (Top Seller)                      | 6535EC4     |
| 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     |
| IBM Storwize for Lenovo (SAS [except V7000], iSCSI, FC, or FCoE host connectivity) |             |
| IBM Storwize V3500 3.5-inch Dual Control Storage Controller Unit                   | 6096CU2**   |
| IBM Storwize V3500 2.5-inch Dual Control Storage Controller Unit                   | 6096CU3**   |
| IBM Storwize V3700 3.5-inch Storage Controller Unit                                | 6099L2C     |
| IBM Storwize V3700 2.5-inch Storage Controller Unit                                | 6099S2C     |
| IBM Storwize V3700 2.5-inch DC Storage Controller Unit                             | 6099T2C     |
| IBM Storwize V7000 2.5-inch Storage Controller Unit, w/3 Yr S&S (Model 524)        | 6195SC5†    |
| IBM Storwize V7000 2.5-inch Storage Controller Unit, w/3 Yr S&S (LA) (Model 524)   | 6195SCL‡    |
| IBM Storwize V7000 2.5-inch Storage Controller Unit, w/5 Yr S&S (Model 524)        | 61951F1†    |
| IBM Storwize V7000 2.5-inch Storage Controller Unit, w/5 Yr S&S (LA) (Model 524)   | 61951FL‡    |
| IBM Storwize V7000 SFF Control Enclosure, 3YR SWMA (Model HC1 [Gen2+])             | 6195C32†    |
| IBM Storwize V7000 SFF Control Enclosure, 3YR SWMA, LA (Model HC1 [Gen2+])         | 6195C3L‡    |
| IBM Storwize V7000 SFF Control Enclosure, 5YR SWMA (Model HC1 [Gen2+])             | 6195C52†    |
| IBM Storwize V7000 SFF Control Enclosure, 5YR SWMA, LA (Model HC1 [Gen2+])         | 6195C5L‡    |

\* x represents a geo-specific letter (for example: U = North America, G = EMEA). Ask a Lenovo representative for specifics.

\*\* Available only in China.

† Available worldwide except Latin America.

‡ Available only in Latin America.

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

- Lenovo NAS storage: <http://lenovopress.com/storage/nas>
- Lenovo S Series and V Series storage: <http://lenovopress.com/storage/san/lenovo>
- IBM Storwize for Lenovo storage: <http://lenovopress.com/storage/san/ibm>

## 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.

Table 43. External backup options

| Description   | Part number |
|---|-------------|
| <b>External RDX USB drives</b>  |             |
| RDX External USB 3.0 Dock with 320GB Cartridge                          | 362532Y     |
| RDX External USB 3.0 Dock with 500GB Cartridge                          | 362550Y     |
| RDX External USB 3.0 Dock with 1TB Cartridge                            | 36251TY     |
| <b>External SAS tape backup drives</b>                                  |             |
| IBM TS2250 Tape Drive Model H5S   | 6160S5E     |
| IBM TS2260 Tape Drive Model H6S   | 6160S6E     |
| IBM TS2270 Tape Drive Model H7S   | 6160S7E     |
| <b>External SAS tape backup autoloaders</b>                             |             |
| 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     |
| <b>External tape backup libraries</b>                                   |             |
| IBM TS3100 Tape Library Model L2U                                       | 61732UL     |
| IBM TS3200 Tape Library Model L4U                                       | 61734UL     |
| <b>Fibre Channel backup drives for TS3100 and TS3200 Tape Libraries</b> |             |
| 6173 LTO Ultrium 5 Fibre Channel Drive                                  | 00NA107     |
| 6173 LTO Ultrium 5 Half High Fibre Drive Sled                           | 00NA113     |
| 6173 LTO Ultrium 6 Fibre Channel Drive                                  | 00NA115     |
| 6173 LTO Ultrium 6 Half High Fibre Drive Sled                           | 00NA119     |
| 6173 LTO Ultrium 7 Fibre Channel Drive                                  | 00WF765     |
| 6173 LTO Ultrium 7 Half High Fibre Drive Sled                           | 00WF769     |
| <b>SAS backup drives for TS3100 and TS3200 Tape Libraries</b>           |             |
| 6173 LTO Ultrium 5 SAS Drive Sled                                       | 00NA109     |
| 6173 LTO Ultrium 5 Half High SAS Drive Sled                             | 00NA111     |
| 6173 LTO Ultrium 6 Half High SAS Drive Sled                             | 00NA117     |
| 6173 LTO Ultrium 7 Half High SAS Drive Sled                             | 00WF767     |

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 in network connectivity solutions.

Table 44. 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 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 RackSwitch G8124E (Rear to Front)  | 7159BR6     |
| Lenovo RackSwitch G8264 (Rear to Front)   | 7159G64     |
| Lenovo RackSwitch G8264CS (Rear to Front) | 7159DRX     |
| Lenovo RackSwitch G8272 (Rear to Front)   | 7159CRW     |
| Lenovo RackSwitch G8296 (Rear to Front)   | 7159GR6     |
| <b>40 Gb Ethernet switches</b>            |             |
| Lenovo RackSwitch G8332 (Rear to Front)   | 7159BRX     |

For more information, see the list of Product Guides in the Top-of-rack switches category:  
<http://lenovopress.com/servers/options/switches>

## Fibre Channel SAN switches

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

Table 45. Fibre Channel SAN switches

| Description   | Part number |
|---|-------------|
| <b>8 Gb Fibre Channel</b>   |             |
| Lenovo B300, 8 ports activated w/ 8Gb SWL SFPs, 1 PS, Rail Kit    | 3873AR3     |
| Lenovo B6505, 12 ports activated w/ 8Gb SWL SFPs, 1 PS, Rail Kit  | 3873AR4     |
| Lenovo B6510, 24 ports activated w/ 8Gb SWL SFPs, 2 PS, Rail Kit  | 3873BR2     |
| <b>16 Gb Fibre Channel</b>  |             |
| Lenovo B6505, 12 ports activated w/ 16Gb SWL SFPs, 1 PS, Rail Kit | 3873AR5     |
| Lenovo B6510, 24 ports activated w/ 16Gb SWL SFPs, 2 PS, Rail Kit | 3873BR3     |

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

## Rack cabinets

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

Table 46. 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 47. KVM switch and console options

| Description   | Part number |
|---|-------------|
| Consoles  |             |
| 1U 18.5" Standard Console (without keyboard)                  | 17238BX     |
| Console keyboards   |             |
| 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     |
| Keyboard w/ Int. Pointing Device USB - LA Span 171 RoHS v2    | 46W6728     |

| Description  | Part number |
|--|-------------|
| 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</b>                                      |             |
| Global 4x2x32 Console Manager (GCM32)                        | 1754D2X     |
| Global 2x2x16 Console Manager (GCM16)                        | 1754D1X     |
| Local 2x16 Console Manager (LCM16)                           | 1754A2X     |
| Local 1x8 Console Manager (LCM8)                             | 1754A1X     |
| <b>Console cables</b>  |             |
| Single Cable USB Conversion Option (UCO)                     | 43V6147     |
| USB Conversion Option (4 Pack UCO)                           | 39M2895     |
| Virtual Media Conversion Option Gen2 (VCO2)                  | 46M5383     |
| Serial Conversion Option (SCO)                               | 46M5382     |

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 48. 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     |

| Description  | Part number |
|--|-------------|
| 0U 12 C13/12 C19 Switched and Monitored 48A/200-240V/3Ph PDU w/ IEC60309 460P9 line cord | 00YJ783     |
| 1U 9 C19/3 C13 Switched and Monitored DPI PDU (without line cord)                        | 46M4002     |
| 1U 9 C19/3 C13 Switched and Monitored 60A 3Ph PDU with IEC 309 3P+Gnd cord               | 46M4003     |
| 1U 12 C13 Switched and Monitored DPI PDU (without line cord)                             | 46M4004     |
| 1U 12 C13 Switched and Monitored 60A 3 Phase PDU with IEC 309 3P+Gnd line cord           | 46M4005     |
| Ultra Density Enterprise PDUs (9x IEC 320 C13 + 3x IEC 320 C19 outlets)                  |             |
| Ultra Density Enterprise C19/C13 PDU Module (without line cord)                          | 71762NX     |
| Ultra Density Enterprise C19/C13 PDU 60A/208V/3ph with IEC 309 3P+Gnd line cord          | 71763NU     |
| C13 Enterprise PDUs (12x IEC 320 C13 outlets)  |             |
| DPI C13 Enterprise PDU+ (without line cord)  | 39M2816     |
| DPI Single Phase C13 Enterprise PDU (without line cord)                                  | 39Y8941     |
| C19 Enterprise PDUs (6x IEC 320 C19 outlets)   |             |
| DPI Single Phase C19 Enterprise PDU (without line cord)                                  | 39Y8948     |
| DPI 60A 3 Phase C19 Enterprise PDU with IEC 309 3P+G (208 V) fixed line cord             | 39Y8923     |
| Front-end PDUs (3x IEC 320 C19 outlets)  |             |
| DPI 30amp/125V Front-end PDU with NEMA L5-30P line cord                                  | 39Y8938     |
| DPI 30amp/250V Front-end PDU with NEMA L6-30P line cord                                  | 39Y8939     |
| DPI 32amp/250V Front-end PDU with IEC 309 2P+Gnd line cord                               | 39Y8934     |
| DPI 60amp/250V Front-end PDU with IEC 309 2P+Gnd line cord                               | 39Y8940     |
| DPI 63amp/250V Front-end PDU with IEC 309 2P+Gnd line cord                               | 39Y8935     |
| Universal PDUs (7x IEC 320 C13 outlets)  |             |
| DPI Universal 7 C13 PDU (with 2 m IEC 320-C19 to C20 rack power cord)                    | 00YE443     |
| NEMA PDUs (6x NEMA 5-15R outlets)  |             |
| DPI 100-127V PDU with fixed NEMA L5-15P line cord  | 39Y8905     |
| Line cords for PDUs that ship without a line cord  |             |
| DPI 30a Line Cord (NEMA L6-30P)  | 40K9614     |
| DPI 32a Line Cord (IEC 309 P+N+G)  | 40K9612     |
| DPI 32a Line Cord (IEC 309 3P+N+G)   | 40K9611     |
| DPI 60a Cord (IEC 309 2P+G)  | 40K9615     |
| 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 49. Uninterruptible power supply units

| Description   | Part number |
|---|-------------|
| RT1.5kVA 2U Rack or Tower UPS (100-125VAC)          | 55941AX     |
| RT1.5kVA 2U Rack or Tower UPS (200-240VAC)          | 55941KX     |
| RT2.2kVA 2U Rack or Tower UPS (100-125VAC)          | 55942AX     |
| RT2.2kVA 2U Rack or Tower UPS (200-240VAC)          | 55942KX     |
| RT3kVA 2U Rack or Tower UPS (100-125VAC)            | 55943AX     |
| RT3kVA 2U Rack or Tower UPS (200-240VAC)            | 55943KX     |
| RT5kVA 3U Rack or Tower UPS (200-240VAC)            | 55945KX     |
| RT6kVA 3U Rack or Tower UPS (200-240VAC)            | 55946KX     |
| RT8kVA 6U Rack or Tower UPS (200-240VAC)            | 55948KX     |
| RT11kVA 6U Rack or Tower UPS (200-240VAC)           | 55949KX     |
| RT8kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC)  | 55948PX     |
| RT11kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC) | 55949PX     |

For more information, see the list of Product Guides in the Power infrastructure category:

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

## Lenovo Financial Services

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## Related publications and links

For more information, see these resources:

- Lenovo servers product page  
<http://www.lenovo.com/systems/servers>
- Lenovo DataCenter Advisor and Configurator Tool (DCACT):  
<http://lesc.lenovo.com>
- ServerProven hardware compatibility page for the System x3550 M5  
<http://www.lenovo.com/us/en/serverproven/xseries/8869.shtml>
- *xREF: System x Reference*  
<http://lenovopress.com/xref>
- System x3550 M5 documentation  
<http://support.lenovo.com/us/en/products/Servers/Lenovo-x86-servers/Lenovo-System-x3550-M5?tabName=Documentation>
- Lenovo Support - System x3550 M5  
<https://support.lenovo.com/products/Servers/Lenovo-x86-servers/Lenovo-System-x3550-M5>

## Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)



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