ThinkAgile MX3530 and MX3531 2U Appliances and Certified Nodes (Intel Xeon SP Gen 3)

Product Guide

The Lenovo ThinkAgile MX3530 and MX3531 2U Appliances & Certified Nodes are 2-socket 2U systems that are designed for deploying highly available, highly scalable hyper-converged infrastructure (HCI) and software-defined storage (SDS) from Microsoft on Lenovo enterprise platforms that feature the 3rd Gen Intel Xeon Scalable processors. The MX systems deliver fully validated and integrated Lenovo hardware and firmware that is certified for Microsoft Azure Stack HCI solutions.

The MX 2U systems are available either as an Appliance (MXnnn0) or Certified Node (MXnnn1):

- MX3530-H and MX3531-H with hybrid storage
- MX3530-F and MX3531-F with all-flash storage

MX Appliances deliver fully validated and integrated Lenovo hardware and firmware, certified and preloaded with licensed Microsoft Azure software. They also include ThinkAgile Premier support with one single point of contact for support of the hardware and software.

MX Certified Nodes deliver fully validated Lenovo hardware and firmware, certified and can be preloaded with Microsoft Azure software. Certified Nodes do not include licenses to Microsoft Azure software and enhanced software support.

Figure 1. Lenovo ThinkAgile MX3530 and MX3531 2U Appliances & Certified Nodes with 2.5-inch drive bays

Did you know?

The ThinkAgile MX3530 and MX3531 2U Appliances & Certified Nodes are built on industry-leading Lenovo ThinkSystem servers that feature enterprise-class reliability, management, and security. They deliver fully validated and integrated hardware and firmware that is certified for Microsoft Azure Stack HCI solutions.

The MX3530-F and MX3530-H appliances offer ThinkAgile Premier Single Point of Support for quick 24/7 problem reporting and resolution.

Key features

Combining performance and flexibility, the MX 2U systems systems are a great choice for enterprises of all sizes. The systems offer a broad selection of processors, memory and drives, and offers high performance features that industries such as finance, healthcare and telco need. Outstanding reliability, availability, and serviceability (RAS) and high-efficiency design can improve your business environment and can help save operational costs.

ThinkAgile MX Series platforms offer the choice of Azure Stack HCI Appliance (Integrated System) or Azure Stack HCI Certified Node. These validated platforms help modernize on-premises infrastructure with pre-tested, pre-configured, and easy-to-order configurations, with seamless Azure integration. As a new direct and indirect Microsoft Cloud Solution Provider, Lenovo offers cloud services and subscriptions through the Lenovo Cloud Marketplace, which enable HCI use cases with the ThinkAgile MX platforms.

- The appliances include the Azure Stack HCI operating system, which is delivered as an Azure subscription service via the Microsoft CSP program. It also includes ThinkAgile Premier support with one single point of contact for support of the hardware and warm-case transfer for software. Deployment and Update features in Windows Admin Center and tight integration with Lenovo XClarity make cluster management, hardware and software update management & enforcing site-wide policies easy for administrators. Azure hybrid by design, native integration with Azure services makes it easy for customers to adopt a hybrid cloud strategy for their workloads and use cases.
- The certified nodes deliver fully validated and integrated Lenovo hardware and firmware that is certified for Microsoft Azure Stack HCI solutions. These HCI Certified Nodes have the option of Windows Server 2019 Datacenter Edition for HCI functionality, and guest licenses are included.

Appliance features

The ThinkAgile MX Appliances offers the following key features:

- Quick and convenient path to implement a hyperconverged solution powered by the new Azure Stack HCI OS with Hyper-V virtualization, Microsoft Storage Spaces Direct (S2D), Software Defined Storage (SDS), and Software Defined Networking (SDN) network virtualization.
- Streamlined management of Azure Stack HCI with unified single-pane-of-glass for creating and managing VMs, S2D volumes, and virtual networks through Windows Admin Center.
- Consistent, low latency performance with hypervisor-embedded architecture, built-in read and write cache, and support for NVMe PCIe drives.
- Provides per-VM storage performance management with policy-driven Quality of Service (QoS) and continuous built-in monitoring and alerting with cluster-wide performance and capacity metrics.
- Can sustain drive, server, or component failures with built-in resiliency for continuous availability.
- GPU support to enable AI training, inferencing and data visualization scenarios, HPC workloads, virtual desktops and graphics intensive applications.
- Built on proven and reliable Lenovo ThinkSystem servers that provide compute power and space efficiency for a variety of edge workloads and applications.
- Provides comprehensive hardware management with advanced systems management capabilities with XClarity
- Delivers fully validated and integrated hardware and firmware that is certified for Microsoft Azure Stack HCI solutions.
- Ready for out-of-box deployment with the mandatory Azure Stack HCI OS preloaded, with the option to purchase a Windows Server 2019 Datacenter or Windows Server 2022 Datacenter license if unlimited guest OS VMs are desired.
- Includes Lenovo ThinkAgile Premier Single Point of Support for quick 24/7 problem reporting and resolution.
- Optional Lenovo deployment services to get customers up and running quickly.

Certified Node features

The ThinkAgile MX Certified Node offers the following key features:

- Quick and convenient path to implement a hyperconverged solution powered by Windows Server 2019 Datacenter or Windows Server 2022 Datacenter with Hyper-V virtualization, Microsoft Storage Spaces Direct (S2D), Software Defined Storage (SDS), and Software Defined Networking (SDN) network virtualization.
- Streamlined management of Azure Stack HCI with unified single-pane-of-glass for creating and managing VMs, S2D volumes, and virtual networks through Windows Admin Center.
- Consistent, low latency performance with hypervisor-embedded architecture, built-in read and write cache, and support for NVMe PCIe drives.
- Provides per-VM storage performance management with policy-driven Quality of Service (QoS) and continuous built-in monitoring and alerting with cluster-wide performance and capacity metrics.
- Can sustain drive, server, or component failures with built-in resiliency for continuous availability.
- GPU support to enable AI training, inferencing and data visualization scenarios, HPC workloads, virtual desktops and graphics intensive applications.
- Built on proven and reliable Lenovo ThinkSystem servers that provide compute power and space efficiency for a variety of edge workloads and applications.
- Provides comprehensive hardware management with advanced systems management capabilities.
- Delivers fully validated and integrated hardware and firmware that is certified for Microsoft Azure Stack HCI solutions.
- Ready for out-of-box deployment with the optional Windows Server 2019 Datacenter, Windows Server 2022 Datacenter, or Azure Stack HCI OS preload.
- Provide flexibility in using the existing Microsoft Windows Server 2019 or 2022 enterprise license agreements or purchasing new software licenses from Microsoft or Lenovo.
- Optional Lenovo deployment services to get customers up and running quickly.

Hardware features

The MX 2U systems are based on the SR650 V2 and have the following hardware features:

Scalability and performance

The MX 2U systems offer numerous features to boost performance, improve scalability and reduce costs:

- Supports two third-generation Intel Xeon Processor Scalable processors
  - Up to 40 cores and 80 threads
  - Core speeds of up to 3.6 GHz
  - TDP ratings of up to 270W
- Support for up to 32 TruDDR4 memory DIMMs operating at up to 3200 MHz means you have the fastest available memory subsystem.
- Supports configurations of 2 DIMMs per channel to operate at the 3200 MHz rated speed of the memory DIMMs.
- Using 128GB 3DS RDIMMs, the server supports up to 4TB of system memory.
- Supports single-width GPUs or double-wide GPUs, for substantial processing power in a 2U system.
- Configurations with 2.5-inch drives support up to 28x hot-swap drives, all front or rear accessible
- Configurations with 3.5-inch drives support up to 12x 3.5-inch hot-swap front-accessible drives plus either 4x 3.5-inch or 4x 2.5-inch hot-swap rear-accessible drives
- Supports 24x NVMe drives without oversubscription of PCIe lanes (1:1 connectivity). The use of NVMe drives maximizes drive I/O performance, in terms of throughput and latency.
- Supports high-speed HBA controllers providing 12 Gb SAS connectivity to the drive backplanes.
- Supports up to two externally accessible 7mm hot-swap drives with RAID functionality for operating system boot functions.
- Supports M.2 drives for convenient operating system boot functions. Available M.2 adapters support either one M.2 drive or two M.2 drives in a RAID 1 configuration for performance and reliability.

- The server has a dedicated industry-standard OCP 3.0 small form factor (SFF) slot, with a PCIe 4.0 x16 interface, supporting a variety of Ethernet network adapters. A simple-swap mechanism with a thumbscrew and pull-tab enables tool-less installation and removal of the adapter. The adapter supports shared BMC network sideband connectivity to enable out-of-band systems management.
- The server offers PCI Express 4.0 I/O expansion capabilities that doubles the theoretical maximum bandwidth of PCIe 3.0 (16GT/s in each direction for PCIe 4.0, compared to 8 GT/s with PCIe 3.0). A PCIe 4.0 x16 slot provides 64 GB/s bandwidth, enough to support a 200GbE network connection.
- The server offers up to eight PCIe 4.0 slots, all with rear access, plus an internal bay for a cabled HBA, plus a slot dedicated to the OCP adapter.

Availability and serviceability

The MX 2U systems provide many features to simplify serviceability and increase system uptime:

- The server offers Single Device Data Correction (SDDC, also known as Chipkill), Adaptive Double-Device Data Correction (ADDDC, also known as Redundant Bit Steering or RBS), and memory mirroring for redundancy in the event of a non-correctable memory failure.
- The server offers hot-swap drives, providing greater system uptime.
- Available internal M.2 RAID Boot Adapters support RAID-1 which can enable two SATA or two NVMe M.2 drives to be configured as a redundant pair.
- A pair of rear-accessible 7mm hot-swap boot drives can be accessed without removing the cover or powering down the server.
- The server has up to two hot-swap redundant power supplies and up to six hot-swap redundant fans to provide availability for business-critical applications.
- The light path diagnostics feature uses LEDs to lead the technician to failed (or failing) components, which simplifies servicing, speeds up problem resolution, and helps improve system availability.
- Solid-state drives (SSDs) offer more reliability and performance than traditional mechanical HDDs for greater uptime.
- 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, server ambient and subcomponent temperatures. Alerts can be surfaced through the XClarity Controller 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.
- The built-in XClarity Controller continuously monitors system parameters, triggers alerts, and performs recovery actions in case of failures to minimize downtime.
- Built-in diagnostics in UEFI, using Lenovo XClarity Provisioning Manager, speed up troubleshooting tasks to reduce service time.
- Lenovo XClarity Provisioning Manager supports diagnostics and can save service data to a USB key drive or remote CIFS share folder for troubleshooting and reduce service time.
- Auto restart in the event of a momentary loss of AC power (based on power policy setting in the XClarity Controller service processor)
- Offers a diagnostics port on the front of the server to allow you to attach an external diagnostics handset for enhanced systems management capabilities.
- Support for the XClarity Administrator Mobile app running on a supported smartphone or tablet and connected to the server through the service-enabled USB port, enables additional local systems management functions.
- Three-year or one-year customer-replaceable unit and onsite limited warranty (varies by geography), 9 x 5 next business day. Optional service upgrades are available.

Manageability and security

Systems management features simplify local and remote management of the MX 2U systems:

- The server includes an XClarity Controller (XCC) to monitor server availability. Optional upgrade to XCC

Advanced to provide remote control (keyboard video mouse) functions. Optional upgrade to XCC Enterprise enables the additional support for the mounting of remote media files (ISO and IMG image files), boot capture, and power capping.

- Lenovo XClarity Administrator offers comprehensive hardware management tools that help to increase uptime, reduce costs and improve productivity through advanced server management capabilities.
- UEFI-based Lenovo XClarity Provisioning Manager, accessible from F1 during boot, provides system inventory information, graphical UEFI Setup, platform update function, operating system installation function, and diagnostic functions.
- Support for Lenovo XClarity Energy Manager, which captures real-time power and temperature data from the server and provides automated controls to lower energy costs.
- An integrated industry-standard Unified Extensible Firmware Interface (UEFI) enables improved setup, configuration, and updates, and simplifies error handling.
- Support for industry standard management protocols, IPMI 2.0, SNMP 3.0, Redfish REST API, serial console via IPMI
- An integrated hardware Trusted Platform Module (TPM) supporting TPM 2.0 enables advanced cryptographic functionality, such as digital signatures and remote attestation.
- Administrator and power-on passwords help protect from unauthorized access to the server.
- Supports Secure Boot to ensure only a digitally signed operating system can be used. Supported with HDDs and SSDs, as well as 7mm and M.2 drives.
- Industry-standard Advanced Encryption Standard (AES) NI support for faster, stronger encryption.
- Intel Execute Disable Bit functionality can prevent certain classes of malicious buffer overflow attacks when combined with a supported 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.
- Additional physical security features are an available chassis intrusion switch and available lockable front bezel.

Energy efficiency

The MX 2U systems offer the following energy-efficiency features to save energy, reduce operational costs, and increase energy availability:

- Energy-efficient system board components help lower operational costs.
- High-efficiency power supplies with 80 PLUS Platinum and Titanium certifications
- Solid-state drives (SSDs) consume as much as 80% less power than traditional spinning 2.5-inch HDDs.
- The server uses hexagonal ventilation holes, which can be grouped more densely than round holes, providing more efficient airflow through the system and thus keeping your system cooler.
- Optional Lenovo XClarity Energy Manager provides advanced data center power notification, analysis, and policy-based management to help achieve lower heat output and reduced cooling needs.

Components and connectors

The ThinkAgile MX3530 and MX3531 2U Appliances & Certified Nodes are based on the ThinkSystem SR650 V2 server.

The following figure shows the front of the MX 2U systems with 2.5-inch drives.

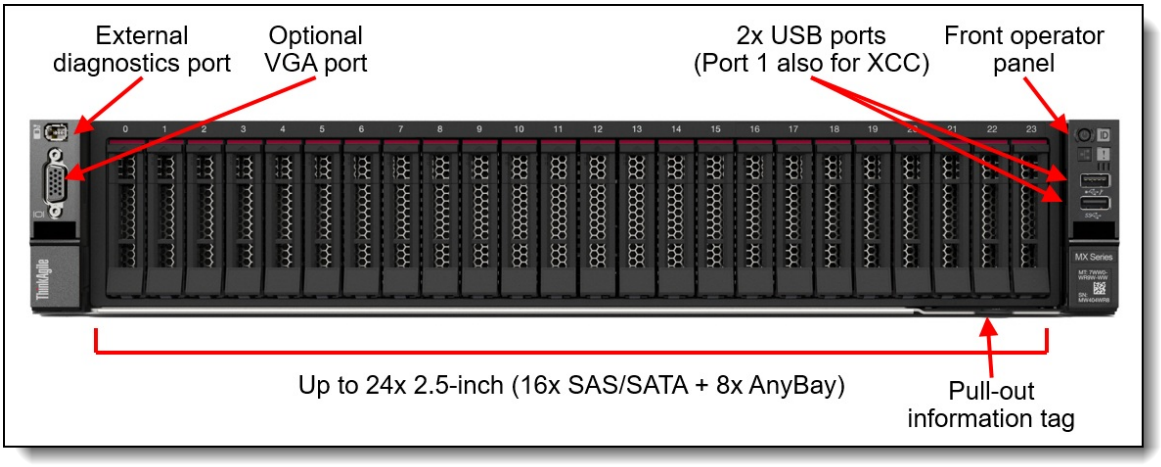

Figure 2. Front view of the MX 2U systems with 2.5-inch drives

The following figure shows the front of the MX 2U systems with 3.5-inch drives.

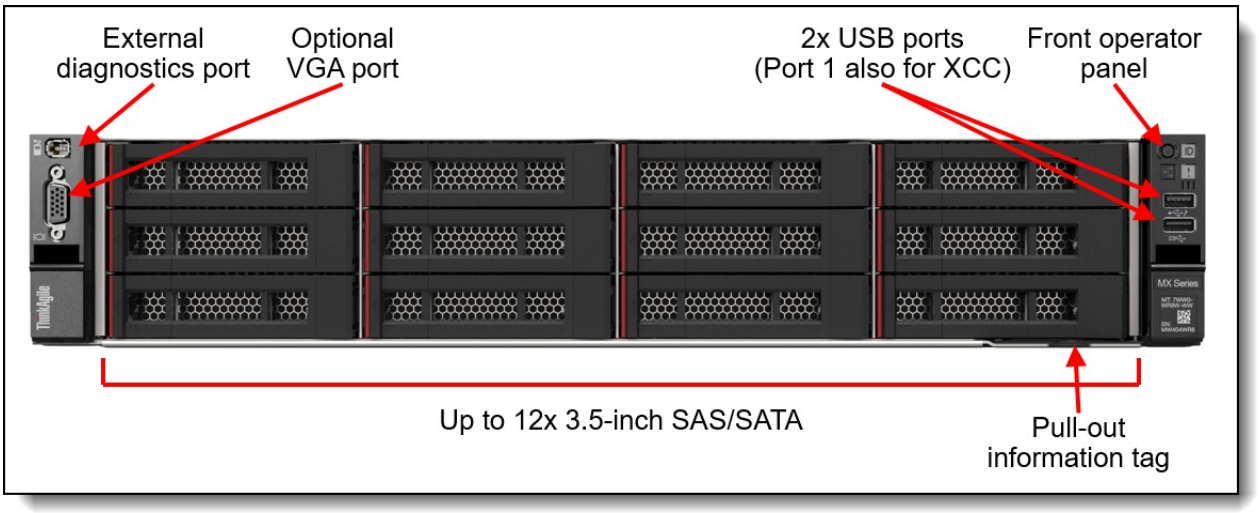

Figure 3. Front view of the MX 2U systems with 3.5-inch drives

The following figure shows the components visible from the rear of the system. The figure shows one configuration, with eight PCIe slots, however there are additional rear configurations which include 3.5-inch drive bays, 2.5-inch drive bays, or 7mm drive bays.

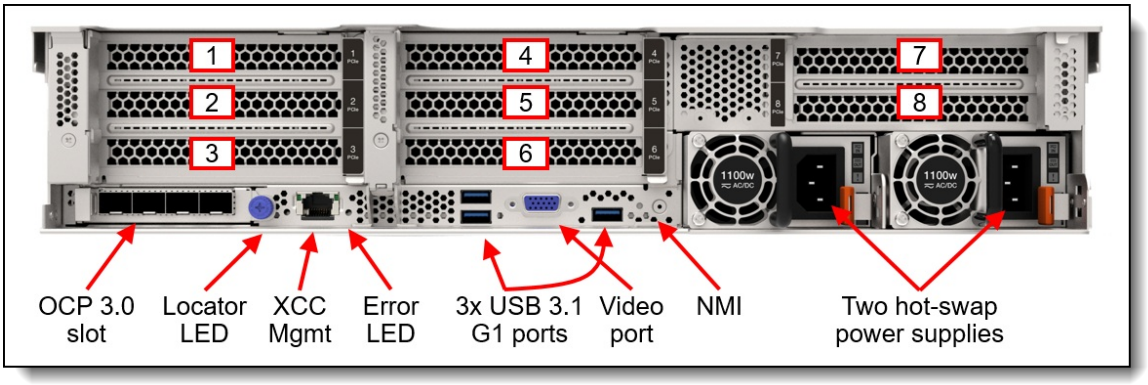

Figure 4. Rear view of the MX 2U systems (configuration with eight PCIe slots)

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

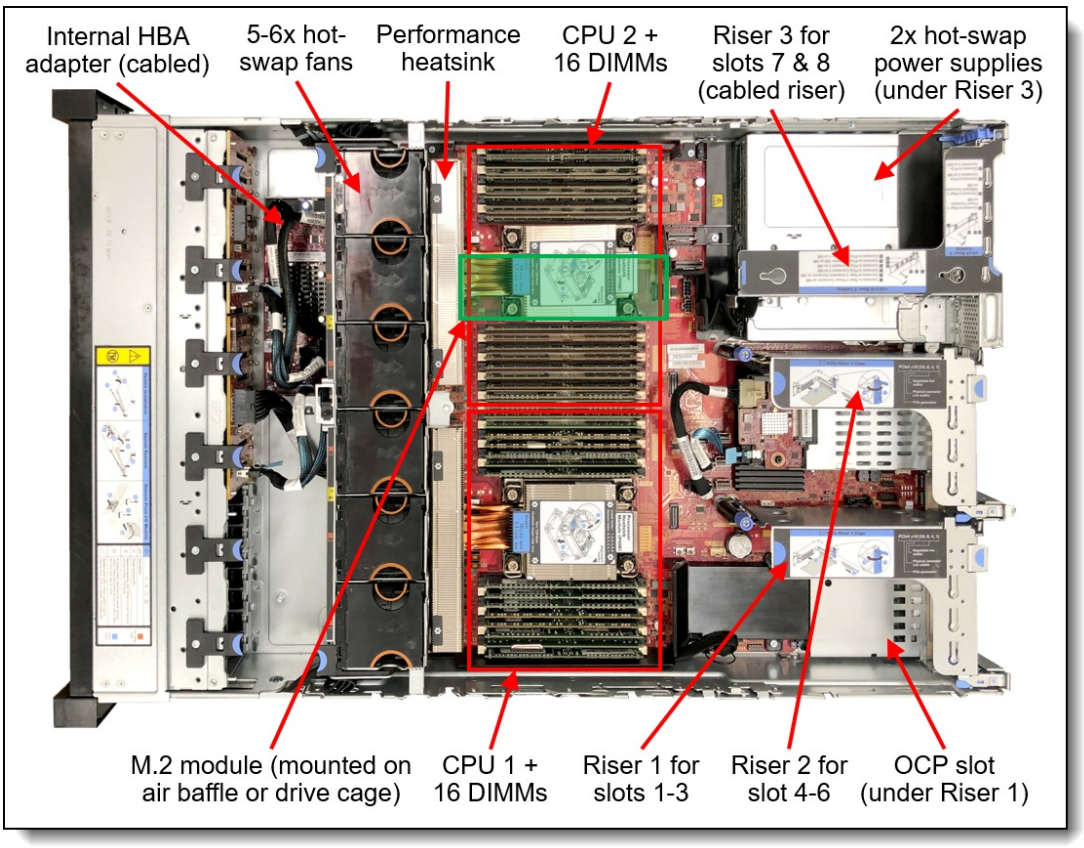

Figure 5. Internal view of the MX 2U systems

Standard specifications

The ThinkAgile MX3530 and MX3531 2U Appliances & Certified Nodes are based on the ThinkSystem SR650 V2 server.

The following table provides an overview comparison between the MX systems.

Table 1. Comparison of features

	MX3530-H Appliance **MX3531-H Certified Node**	**MX3530-F Appliance** **MX3531-F Certified Node**
MX offering type	Appliance Certified Node	Appliance Certified Node
Target workloads	Database, VDI	Database, VDI, stretched cluster, AI/ML
Base MTM	7D6BCTO1WW (Appliance) 7D66CTO1WW (Certified Node)	7D6BCTO2WW (Appliance) 7D66CTO2WW (Certified Node)
Form Factor	2U	2U
Base platform	SR650 V2	SR650 V2
CPU	2x Intel Xeon SP Gen 3	2x Intel Xeon SP Gen 3
Memory	32x DDR4 3200 MHz (4TB maximum)	32x DDR4 3200 MHz (4TB maximum)

Drive Bays	• Front bay choices:
	  ◦ 12x 3.5" SAS/SATA
	  ◦ 12x 3.5" AnyBay
	• Rear bay choices
	  ◦ 2x 3.5" SAS/SATA
	  ◦ 4x 3.5" SAS/SATA
	  ◦ 4x 2.5" SAS/SATA
		• Front bay choices:
		  ◦ 24x 2.5" SAS/SATA
		  ◦ 16x 2.5" NVMe
		  ◦ 24x 2.5" NVMe
		  ◦ 16x 2.5" SAS/SATA + 8x 2.5" AnyBay
		• Rear bay choices
		  ◦ 4x 2.5" SAS/SATA

Drive configurations	Hybrid storage:
	• Drive choices:
	  ◦ HDDs for capacity
	  ◦ SAS or NVMe SSDs for cache
	• Minimum 2, maximum 6 cache drives
	• Minimum 4 capacity drives
	• For configs with 4x 2.5" rear drives, rear drives are for cache
	• Minimum of 1:10 Cache:Capacity required
		All Flash storage:
		• Drive choices:
		  ◦ All SAS/SATA for cache & capacity
		  ◦ All NVMe for cache & capacity
		  ◦ NVMe cache with SAS/SATA capacity
		• For configs with 1 type of SSD installed: minimum 4 drives
		• For configs with different cache and capacity drives: minimum 2 for cache, minimum 4 for capacity
		• Minimum of 1:10 Cache:Capacity required

HBA	• 430-16i HBA	• 430-8i HBA • 430-16i HBA • 440-16i Internal HBA
Boot drives	• 2x M.2 non-hot-swap SATA • 2x 7mm hot-swap drives	• 2x M.2 non-hot-swap SATA • 2x 7mm hot-swap drives
OCP networking	1x OCP 3.0 adapter: 1Gb, 10Gb, 25Gb	1x OCP 3.0 adapter: 1Gb, 10Gb, 25Gb
PCIe networking	Up to 8x adapters: 1Gb, 10Gb, 25Gb, 100Gb	Up to 8x adapters: 1Gb, 10Gb, 25Gb, 100Gb
GPUs	• 3x DW GPU 300W each • 8x SW GPU 75W each • 4x SW GPU 150W each	• 3x DW GPU 300W each • 8x SW GPU 75W each • 4x SW GPU 150W each

	MX3530-H Appliance **MX3531-H Certified Node**	**MX3530-F Appliance** **MX3531-F Certified Node**

Hypervisor	• Appliance:
	  ◦ Azure Stack HCI OS preloaded
	  ◦ Windows Server 2019 Datacenter optional
	  ◦ Windows Server 2022 Datacenter optional
	• Certified Node:
	  ◦ Windows Server 2019 Datacenter optional
	  ◦ Windows Server 2022 Datacenter optional
	  ◦ Azure Stack HCI OS optional
		• Appliance:
		  ◦ Azure Stack HCI OS preloaded
		  ◦ Windows Server 2019 Datacenter optional
		  ◦ Windows Server 2022 Datacenter optional
		• Certified Node:
		  ◦ Windows Server 2019 Datacenter optional
		  ◦ Windows Server 2022 Datacenter optional
		  ◦ Azure Stack HCI OS optional

The following table lists the standard specifications.

Table 2. Standard specifications

Components	**Specification**
Machine types	7D6B - 2U Appliance - 3 year warranty 7D66 - 2U Certified Node - 3 year warranty
Form factor	2U rack
Processor	One or two third-generation Intel Xeon Scalable processor (formerly codenamed "Ice Lake"). Supports processors up to 40 cores, core speeds of up to 3.6 GHz, and TDP ratings of up to 270W.
Chipset	Intel C621A "Lewisburg" chipset, part of the platform codenamed "Whitley"
Memory	32 DIMM slots with two processors (16 DIMM slots per processor). Each processor has 8 memory channels, with 2 DIMMs per channel (DPC). Lenovo TruDDR4 RDIMMs and 3DS RDIMMs are supported. DIMMs operate at up to 3200 MHz at 2 DPC.
Persistent memory	Supports up to 16x Intel Optane Persistent Memory 200 Series modules (8 per processor) installed in the DIMM slots. Persistent memory (Pmem) is installed in combination with system memory DIMMs.
Memory maximum	With RDIMMs: Up to 4TB by using 32x 128GB 3DS RDIMMs With Persistent Memory: Up to 6TB by using 16x 128GB 3DS RDIMMs and 16x 256GB Pmem modules
Memory protection	ECC, SDDC (for x4-based memory DIMMs), ADDDC (for x4-based memory DIMMs, requires Platinum or Gold processors), and memory mirroring.

Disk drive bays	• MX3530-H Appliance and MX3531-H Certified Node:
	  ◦ Front drive bays: 12x 3.5" SAS/SATA or 12x 3.5" AnyBay
	  ◦ Rear drive bays: 2x or 4x 3.5" SAS/SATA or 4x 2.5" SAS/SATA
	• MX3530-F Appliance and MX3531-F Certified Node
	  ◦ Front drive bays: 24x 2.5" SAS/SATA or 24x 2.5" NVMe or 16x 2.5" SAS/SATA + 8x AnyBay
	  ◦ Rear bay choices: 4x 2.5" SAS/SATA
	• OS boot support:
	  ◦ Internal M.2 module supporting up to two M.2 SATA drives
	  ◦ Rear accessible 2x 7mm hot-swap drives, SATA or NVMe

Storage controller	• Onboard NVMe ports (RAID not supported)
	• 12 Gb SAS/SATA non-RAID:
	  ◦ 430-8i HBA
	  ◦ 430-16i HBA
	  ◦ 440-16i Internal HBA

Components	Specification
Network interfaces	Dedicated OCP 3.0 SFF slot with PCIe 4.0 x16 host interface. Supports 10GbE and 25GbE network connectivity. One port can optionally be shared with the XClarity Controller (XCC) management processor for Wake-on-LAN and NC-SI support.
PCIe slots	Up to 8x PCIe 4.0 slots, all full height slots and with rear access, plus a slot dedicated to the OCP adapter. Slot availability is based on riser selection and rear drive bay selection. Slots 4-8 require two processors. Slots are configured using three riser cards. Riser 1 (slots 1-3) and Riser 2 (slots 4-6) are installed in slots in the system board, Riser 3 (slots 7-8) is cabled to ports on the system board. For 2.5-inch front drive configurations, the server supports the installation of an HBA in a dedicated area that does not consume any of the PCIe slots.
GPU support	Supports up to 8x single-wide GPUs or up to 3x double-wide GPUs
Ports	Front: 1x USB 3.1 G1 (5 Gb/s) port, 1x USB 2.0 port (also for XCC local management), External diagnostics port, optional VGA port. Rear: 3x USB 3.1 G1 (5 Gb/s) ports, 1x VGA video port, 1x RJ-45 1GbE systems management port for XCC remote management. Optional DB-9 COM serial port (installs in slot 3). Internal: 1x USB 3.1 G1 connector for operating system or license key purposes
Cooling	6x (with two processors installed) or 5x (with one processor installed) dual-rotor hot swap 60 mm fans, configuration dependent. Fans are N+1 redundant, tolerating a single-rotor failure. One fan integrated in each power supply.
Power supply	Up to two hot-swap redundant AC power supplies, 80 PLUS Platinum or 80 PLUS Titanium certification. 500 W, 750 W, 1100 W and 1800 W AC options, supporting 220 V AC. 500 W, 750 W and 1100 W options also support 110V input supply. In China only, all power supply options support 240 V DC. Also available is a 1100W power supply with a -48V DC input.
Video	G200 graphics with 16 MB memory with 2D hardware accelerator, integrated into the XClarity Controller. Maximum resolution is 1920x1200 32bpp at 60Hz.
Hot-swap parts	Drives, power supplies, and fans.
Systems management	Operator panel with status LEDs. Optional External Diagnostics Handset with LCD display. Models with 8x or 16x 2.5-inch front drive bays can optionally support an Integrated Diagnostics Panel. XClarity Controller (XCC) embedded management, XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management. Optional XClarity Controller Advanced and Enterprise to enable remote control functions.
Security features	Chassis intrusion switch, Power-on password, administrator's password, Trusted Platform Module (TPM), supporting TPM 2.0. In China only, optional Nationz TPM 2.0. Optional lockable front security bezel.
Software	• Appliances: Azure Stack HCI OS preloaded • Certified Nodes: Windows Server 2019 Datacenter, Windows Server 2022 Datacenter, Azure Stack HCI OS (all optional)

Components	Specification
Hardware warranty	• Appliances: Three-, four-, or five-year customer-replaceable unit and onsite limited hardware warranty with ThinkAgile Premier Support and selectable service levels: 9x5 next business day (NBD) parts delivered, 9x5 NBD onsite response, 24x7 coverage with 2-hour or 4-hour onsite response, or 6-hour or 24-hour committed repair (select areas). Also available are YourDrive YourData, Premier Support, and Enterprise Software Support. • Certified Nodes: Three, four, or five-year customer-replaceable unit and onsite limited warranty with selectable service levels: 9x5 coverage with next business day (NBD) parts delivered (base warranty), 9x5 coverage with NBD onsite response (Foundation Service), 24x7 coverage with 4-hour onsite response or 24-hour committed repair (select areas) (Essential Service), or 24x7 coverage with 2-hour onsite response or 6-hour committed repair (select areas) (Advanced Service). Also available are 1-year and 2-year post-warranty extensions, YourDrive YourData, and Enterprise Software Support.
Software maintenance	Three-, four-, or five-year software support and subscription (matches the duration of the selected warranty period).
Dimensions	Width: 445 mm (17.5 in.), height: 87 mm (3.4 in.), depth: 764 mm (30.1 in.)
Weight	Maximum: 38.8 kg (85.5 lb)

Models

Factory-integrated models of the integrated systems and certified nodes are configured by using the Lenovo Data Center Solution Configurator (DCSC), http://dcsc.lenovo.com

To ensure that the controlled GPUs and accelerators are only sold in the supported markets, the following configure-to-order base machine-type models (CTO MTMs) are selectable in DCSC:

- **Standard Open models** are available in all markets worldwide. Controlled GPUs cannot be configured using these models. These are CTO1WW models.
- **GPU Controlled models** are used to order any of the controlled GPUs and accelerators. Controlled models are not available in affected markets. If you start from a controlled model, your configuration must include a controlled GPUs.

Note:

- For all models listed in the GPU **Controlled models** column, one of the controlled GPUs *must* be selected in the DCSC configurator. DCSC will display an error if you configuration does not include one of the controlled GPUs.
- It is highly recommended to engage a Lenovo representative early in a project that includes the ThinkAgile MX Series Integrated Systems/Appliances and Certified Nodes

The following table lists the base CTO models.

Table 3. CTO base models

Server model	Standard Open models	GPU Controlled models
	These CTO models are available in all markets. Configurations based on these MTMs cannot include controlled GPUs.	These CTO models are not available in affected markets. Configurations based on these MTMs must include controlled GPUs.
ThinkAgile MX3530-H Hybrid Appliance	7D6BCTO1WW	7D6BCTOAWW
ThinkAgile MX3531-H Hybrid Certified Node	7D66CTO1WW	7D66CTOAWW
ThinkAgile MX3530-F All Flash Appliance	7D6BCTO2WW	7D6BCTOBWW
ThinkAgile MX3531-F All Flash Certified Node	7D66CTO2WW	7D66CTOBWW

Comparison with the ThinkSystem SR650 V2

The ThinkAgile MX3530 and MX3531 2U Appliances & Certified Nodes are based on the ThinkSystem SR650 V2 server, however there are key differences:

- No persistent memory support
- No onboard SATA controller support
- No RAID adapter support for data drives
- No VROC RAID support
- No mid-chassis drive bay support
- No SED drive support
- No Fibre Channel support
- No InfiniBand support

For details about the ThinkSystem SR650 V2, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server

Only certain network adapters have been certified for particular network traffic types in the Azure Stack HCI operating system. For details regarding which available network adapters can be used for each network traffic type, see Lenovo Certified Configurations for Azure Stack HCI – V2 Servers:
https://lenovopress.com/lp1520

To verify what specific hardware components are supported with the MX 2U systems, see the DCSC configurator:
https://dcsc.lenovo.com

Processors

The MX 2U systems systems support the following processors.

For details about these options, including configuration rules, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#processors

Table 4. Processor choices

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
4XG7A63443	BB2N	Intel Xeon Silver 4309Y 8C 105W 2.8GHz Processor	2	2	2	2
4XG7A63468	BB3C	Intel Xeon Silver 4310 12C 120W 2.1GHz Processor	2	2	2	2
4XG7A63459	BB34	Intel Xeon Silver 4310T 10C 105W 2.3GHz Processor	2	2	2	2
4XG7A63455	BB2Z	Intel Xeon Silver 4314 16C 135W 2.4GHz Processor	2	2	2	2
4XG7A63465	BB39	Intel Xeon Silver 4316 20C 150W 2.3GHz Processor	2	2	2	2
4XG7A63477	BB3M	Intel Xeon Gold 5315Y 8C 140W 3.2GHz Processor	2	2	2	2
4XG7A63456	BB30	Intel Xeon Gold 5317 12C 150W 3.0GHz Processor	2	2	2	2
4XG7A63470	BB3E	Intel Xeon Gold 5318N 24C 150W 2.1GHz Processor	2	2	2	2
4XG7A63442	BB2M	Intel Xeon Gold 5318S 24C 165W 2.1GHz Processor	2	2	2	2

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
4XG7A63460	BB35	Intel Xeon Gold 5318Y 24C 165W 2.1GHz Processor	2	2	2	2
4XG7A63581	BB2R	Intel Xeon Gold 5320 26C 185W 2.2GHz Processor	2	2	2	2
4XG7A63454	BB2Y	Intel Xeon Gold 5320T 20C 150W 2.3GHz Processor	2	2	2	2
4XG7A63446	BB4E	Intel Xeon Gold 6326 16C 185W 2.9GHz Processor	2	2	2	2
4XG7A63473	BB3H	Intel Xeon Gold 6330 28C 205W 2.0GHz Processor	2	2	2	2
4XG7A63478	BB3N	Intel Xeon Gold 6330N 28C 165W 2.2GHz Processor	2	2	2	2
4XG7A63469	BB3D	Intel Xeon Gold 6334 8C 165W 3.6GHz Processor	2	2	2	2
4XG7A63480	BB3S	Intel Xeon Gold 6336Y 24C 185W 2.4GHz Processor	2	2	2	2
4XG7A63579	BB3P	Intel Xeon Gold 6338 32C 205W 2.0GHz Processor	2	2	2	2
4XG7A63457	BB31	Intel Xeon Gold 6338N 32C 185W 2.2GHz Processor	2	2	2	2
4XG7A63458	BB33	Intel Xeon Gold 6338T 24C 165W 2.1GHz Processor	2	2	2	2
4XG7A63578	BB3B	Intel Xeon Gold 6342 24C 230W 2.8GHz Processor	2	2	2	2
4XG7A63452	BB2W	Intel Xeon Gold 6346 16C 205W 3.1GHz Processor	2	2	2	2
4XG7A63575	BB2L	Intel Xeon Gold 6348 28C 235W 2.6GHz Processor	2	2	2	2
4XG7A63450	BB2U	Intel Xeon Gold 6354 18C 205W 3.0GHz Processor	2	2	2	2
4XG7A63580	BB3Q	Intel Xeon Platinum 8352S 32C 205W 2.2GHz Processor	2	2	2	2
4XG7A63448	BB2S	Intel Xeon Platinum 8352V 36C 195W 2.1GHz Processor	2	2	2	2
4XG7A63451	BB2V	Intel Xeon Platinum 8352Y 32C 205W 2.2GHz Processor	2	2	2	2
4XG7A63479	BB3R	Intel Xeon Platinum 8358 32C 250W 2.6GHz Processor	2	2	2	2
4XG7A63466	BB3A	Intel Xeon Platinum 8358P 32C 240W 2.6GHz Processor	2	2	2	2
4XG7A63444	BB2P	Intel Xeon Platinum 8360Y 36C 250W 2.4GHz Processor	2	2	2	2
4XG7A63462	BB37	Intel Xeon Platinum 8368 38C 270W 2.4GHz Processor	2	2	2	2
4XG7A63576	BB3G	Intel Xeon Platinum 8380 40C 270W 2.3GHz Processor	2	2	2	2

Memory

The MX 2U systems systems support the following memory options.

For details about these options, including configuration rules, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#memory-options

Table 5. Memory options

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
RDIMMs						
4X77A08632	B963	ThinkSystem 16GB TruDDR4 3200 MHz (2Rx8 1.2V) RDIMM	32	32	32	32
4X77A08633	B964	ThinkSystem 32GB TruDDR4 3200 MHz (2Rx4 1.2V) RDIMM	32	32	32	32
4X77A08634	B965	ThinkSystem 32GB TruDDR4 3200 MHz (2Rx8 1.2V) RDIMM	32	32	32	32
4X77A08635	B966	ThinkSystem 64GB TruDDR4 3200 MHz (2Rx4 1.2V) RDIMM	32	32	32	32
3DS RDIMMs						
4X77A08636	BA62	ThinkSystem 128GB TruDDR4 3200 MHz (4Rx4 1.2V) 3DS RDIMM	32	32	32	32

Persistent memory

The MX 2U systems support the following persistent memory (PMem) options. PMem is only supported in Memory Mode.

For details about these options, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#persistent-memory

Table 6. Persistent memory

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
4ZC7A08732	B98B	ThinkSystem 128GB TruDDR4 3200MHz (1.2V) Intel Optane Persistent Memory	16	16	16	16
4ZC7A08734	B98A	ThinkSystem 256GB TruDDR4 3200MHz (1.2V) Intel Optane Persistent Memory	16	16	16	16

Internal storage

Internal storage configurations of the MX 2U systems are as follows.

In this section:

- MX3530-H and MX3531-H Hybrid systems
- MX3530-F and MX3531-F All-flash systems
- Backplanes
- Boot drive enablement

MX3530-H and MX3531-H Hybrid systems

Drive bay configurations are as follows:

- Front drive bays - choice of:
  - 12x 3.5" SAS/SATA hot-swap drive bays
  - 12x 3.5" AnyBay hot-swap drive bays
- Rear drive bays - choice of:
  - 2x 3.5" SAS/SATA hot-swap drive bays
  - 4x 3.5" SAS/SATA hot-swap drive bays
  - 4x 2.5" SAS/SATA hot-swap drive bays
- Mid-chassis drive bays are not supported

These configurations are shown in the following figure.

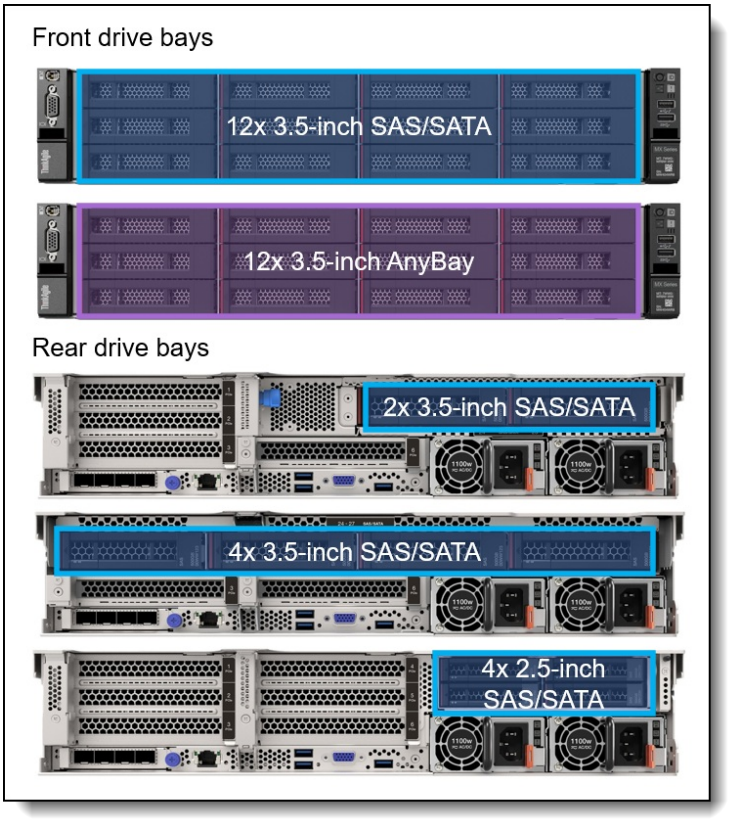

Figure 6. MX3530-H and MX3531-H drive bays

For OS boot functionality, the server supports either:

- One or two M.2 SATA drives, installed in an M.2 adapter internal to the server.
- One or two 7mm hot-swap SATA or NVMe drives, accessible from the rear of the server.

Configuration rules are as follows:

- All Hybrid storage configurations are two-tier, cache tier and capacity tier
- Drive type choices are as follows:
  - HDDs for capacity
  - SAS/SATA or NVMe SSDs for cache
- For cache drives, a minimum of 2 and maximum of 6 drives is required
- For capacity drives, a minimum of 4 drives is required
- For configurations with 2.5-inch rear drives, the rear drives are for cache and the front drives are for capacity
- The total Cache storage must be a minimum of 10% of the total Capacity storage

MX3530-F and MX3531-F All-flash systems

Drive bay configurations are as follows:

- Front drive bays - choice of:
  - 24x 2.5" SAS/SATA hot-swap drive bays
  - 16x 2.5" NVMe hot-swap drive bays
  - 24x 2.5" NVMe hot-swap drive bays
  - 16x 2.5" SAS/SATA + 8x 2.5" AnyBay hot-swap drive bays
- Rear drive bays:
  - 4x 2.5-inch SAS/SATA hot-swap drive bays
- Mid-chassis drive bays are not supported

These configurations are shown in the following figure.

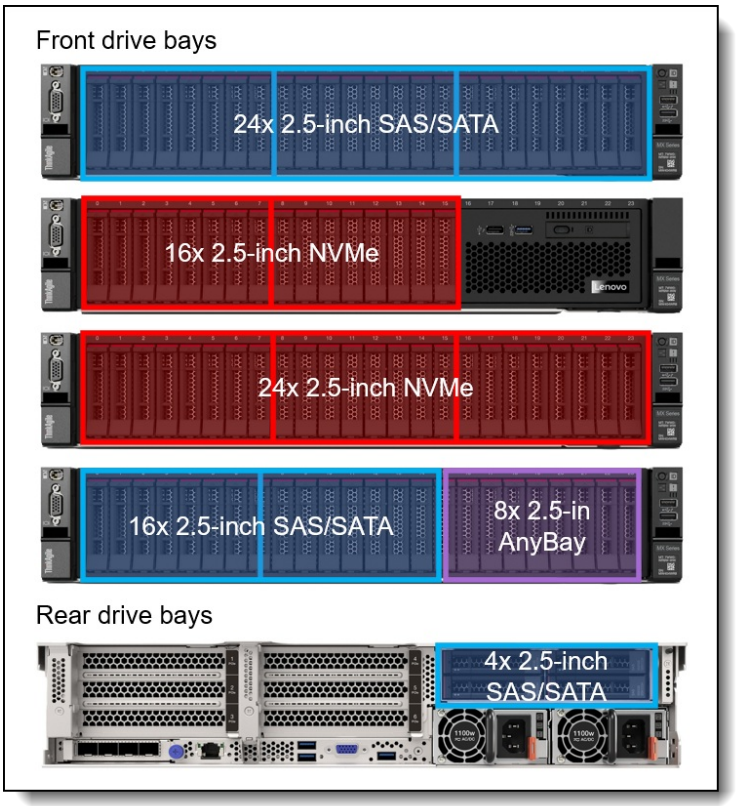

Figure 7. MX3530-F and MX3531-F drive bays

For OS boot functionality, the server supports either:

- One or two M.2 SATA drives, installed in an M.2 adapter internal to the server.
- One or two 7mm hot-swap SATA or NVMe drives, accessible from the rear of the server

Configuration rules are as follows:

- All-flash configurations can be single-tier or two-tier storage:
  - To select a single-tier configuration in DCSC, select the drive you wish to use (from either the capacity or cache lists) and ensure that all other drive selections are set to None
  - To select a two-tier configuration in DCSC, select a quantity of cache drives and a quantity of capacity drives
- Drive choices for a single-tier configuration are as follows:
  - Drives can be either SAS SSDs, SATA SDDs or NVMe SSDs
  - All drives must be the same feature code
  - A minimum of 4 drives is required
- Drive choices for a two-tier configuration are as follows:
  - The following combinations are supported:
    - SAS SSD for cache and SAS/SATA SSD for capacity
    - NVMe SSD for both cache & capacity
    - NVMe SSD for cache and SAS/SATA SSD for capacity
  - All cache drives must be the same feature code and all capacity drives must be the same feature code
  - A minimum of 2 cache drives and a minimum of 4 capacity drives is required
  - The total cache storage must be a minimum of 10% of the total capacity storage

Backplanes

The choice of backplanes supported varies by system, as listed in the following table.

For details about these options, including configuration rules, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#internal-storage

Table 7. Drive backplanes

Feature	Description	Maximum supported			
		MX3530-H	MX3531-H	MX3530-F	MX3531-F
Front 3.5-inch drive backplanes					
B8LT	ThinkSystem 2U 12x3.5" SAS/SATA Backplane	1	1	No	No
BH8C	ThinkSystem 2U 12x3.5" AnyBay Backplane	1	1	No	No
Front 2.5-inch drive backplanes					
B8LU	ThinkSystem 2U 8x2.5" SAS/SATA Backplane	No	No	3	3
BH8B	ThinkSystem 2U/4U 8x2.5" AnyBay Backplane	No	No	1	1
BH8D	ThinkSystem 2U/4U 8x2.5" NVMe Backplane	No	No	3	3
Rear 3.5-inch drive backplanes					
BAG7	ThinkSystem 2U 2x3.5" SAS/SATA Rear Backplane	1	1	No	No
B8L3	ThinkSystem 1U/2U 4x3.5" SAS/SATA Backplane	1	1	No	No
Rear 2.5-inch drive backplanes					
B8LV	ThinkSystem 2U 4x2.5" SAS/SATA Backplane	1	1	1	1

Boot drive enablement

For OS boot functions, the systems also support one or two 7mm hot-swap drives at the rear of the server, or one or two M.2 drives installed on an adapter internal to the server. The following table lists the supported controllers/enablement kits for M.2 and 7mm boot drives.

For details about these options, including configuration rules, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#internal-storage

Table 8. Boot drive enablement

Part number	Feature	Description	Maximum supported			
			MX3531-H	MX3531-F	MX3530-H	MX3530-F
M.2 enablement kits						
4Y37A09739	B5XH	ThinkSystem M.2 SATA 2-Bay RAID Enablement Kit	1	1	1	1
4Y37A09750	B8P9	ThinkSystem M.2 NVMe 2-Bay RAID Enablement Kit	1	1	1	1
7mm enablement kits						
4XH7A61057	B8P2	ThinkSystem 2U 7mm Drive Kit w/ SATA RAID	1	1	1	1
4XH7A61058	B8P3	ThinkSystem 2U 7mm Drive Kit w/ NVMe RAID	1	1	1	1

Controllers for internal storage

The MX 2U systems support the following internal storage controllers.

For details about these options, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#controllers-for-internal-storage

Table 9. Controllers for internal storage

Part number	Feature	Description	Maximum supported			
			MX3530-F	MX3530-H	MX3531-F	MX3531-H
SAS/SATA HBA - PCIe 3.0						
7Y37A01088	AUNL	ThinkSystem 430-8i SAS/SATA 12Gb HBA	No	No	3	3
7Y37A01089	AUNM	ThinkSystem 430-16i SAS/SATA 12Gb HBA	1	1	1	1
4Y37A72480	BJHH	ThinkSystem 4350-8i SAS/SATA 12Gb HBA	1	1	1	1
4Y37A72481	BJHJ	ThinkSystem 4350-16i SAS/SATA 12Gb HBA	1	1	1	1
SAS/SATA HBA - PCIe 4.0						
4Y37A78602	BM50	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA	1	1	No	No
4Y37A09725	B8P1	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb Internal HBA	No	No	1	1
SAS Expander						
4Y37A09736	B8P6	ThinkSystem 48 port 12Gb Internal Expander	No	No	1	1
NVMe adapters						
4C57A65446	B98C	ThinkSystem 4-Port PCIe Gen4 NVMe Retimer Adapter	No	No	3	3

Internal drive options

This section lists the supported drives:

- Boot drives
- Internal drives for MX3530-H
- Internal drives for MX3531-H
- Internal drives for MX3530-F
- Internal drives for MX3531-F

Boot drives

The MX 2U systems systems support the following drive for boot functions.

Table 10. Boot drives

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
7mm 2.5-inch hot-swap 6 Gb SATA SSDs						
4XB7A82265	BQ1V	ThinkSystem 7mm 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	2	2	2	2
4XB7A82266	BQ1W	ThinkSystem 7mm 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	2	2	2	2
4XB7A82267	BR13	ThinkSystem 7mm 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD	2	2	2	2
4XB7A82268	BR12	ThinkSystem 7mm 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD	2	2	2	2
4XB7A17107	BK7A	ThinkSystem 7mm S4520 480GB Read Intensive SATA 6Gb HS SSD	2	2	2	2
4XB7A17108	BK7B	ThinkSystem 7mm S4520 960GB Read Intensive SATA 6Gb HS SSD	2	2	2	2
7mm PCIe 4.0 NVMe SSDs						
4XB7A82853	BPZ4	ThinkSystem 7mm U.3 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	2	2	2	2
4XB7A82855	BPZ5	ThinkSystem 7mm U.3 7450 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	2	2	2	2
4XB7A82856	BPZ6	ThinkSystem 7mm U.3 7450 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	2	2	2	2
M.2 SATA drives						
4XB7A17074	B8JJ	ThinkSystem M.2 5300 960GB SATA 6Gbps Non-Hot Swap SSD	2	2	2	2
4XB7A82287	BQ1Y	ThinkSystem M.2 5400 PRO 480GB Read Intensive SATA 6Gb NHS SSD	2	2	2	2

Internal drives for MX3530-H

The following table lists the drives support in the MX3530-H. The drives are classified as either Cache drives, Capacity drives, or both. The quantities listed in the table are the maximum supported for each drive option. For cache drives, a minimum of 2 and maximum of 4 drives is required.

Table 11. Drives supported in the MX3530-H

Part number	Feature	Description	Hybrid Storage	
			Cache	Capacity
3.5-inch hot-swap 12 Gb SAS HDDs				
7XB7A00042	AUU5	ThinkSystem 3.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	14
7XB7A00043	AUU6	ThinkSystem 3.5" 4TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	14
7XB7A00044	AUU7	ThinkSystem 3.5" 6TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
7XB7A00045	B0YR	ThinkSystem 3.5" 8TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14

Part number	Feature	Description	Hybrid Storage	
			Cache	Capacity
7XB7A00046	AUUG	ThinkSystem 3.5" 10TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
7XB7A00067	B117	ThinkSystem 3.5" 12TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
4XB7A13906	B496	ThinkSystem 3.5" 14TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
3.5-inch hot-swap 6 Gb SATA HDDs				
7XB7A00049	AUUF	ThinkSystem 3.5" 1TB 7.2K SATA 6Gb Hot Swap 512n HDD	No	14
7XB7A00050	AUUD	ThinkSystem 3.5" 2TB 7.2K SATA 6Gb Hot Swap 512n HDD	No	14
7XB7A00051	AUU8	ThinkSystem 3.5" 4TB 7.2K SATA 6Gb Hot Swap 512n HDD	No	14
7XB7A00052	AUUA	ThinkSystem 3.5" 6TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
7XB7A00053	AUU9	ThinkSystem 3.5" 8TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
7XB7A00054	AUUB	ThinkSystem 3.5" 10TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
7XB7A00068	B118	ThinkSystem 3.5" 12TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
4XB7A13907	B497	ThinkSystem 3.5" 14TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
3.5-inch hot-swap 24 Gb SAS SSDs				
4XB7A80344	BNW7	ThinkSystem 3.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	6	No
4XB7A80345	BNWA	ThinkSystem 3.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	6	No
4XB7A80346	BNWB	ThinkSystem 3.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	6	No
4XB7A80347	BP3G	ThinkSystem 3.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	6	No
3.5-inch hot-swap PCIe 4.0 NVMe SSDs				
4XB7A17161	BMM7	ThinkSystem 3.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17162	BMM5	ThinkSystem 3.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A77070	BMM6	ThinkSystem 3.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17141	BNEK	ThinkSystem 3.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17148	BNEP	ThinkSystem 3.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17143	BNEM	ThinkSystem 3.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17144	BNEN	ThinkSystem 3.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
3.5-inch hot-swap PCIe 3.0 NVMe SSDs				
4XB7A38163	B970	ThinkSystem 3.5" U.2 P4800X 750GB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	6	No
4XB7A38164	B974	ThinkSystem 3.5" U.2 P4800X 1.5TB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	6	No

Internal drives for MX3531-H

The following table lists the drives support in the MX3531-H. The drives are classified as either Cache drives, Capacity drives, or both. The quantities listed in the table are the maximum supported for each drive option. For cache drives, a minimum of 2 and maximum of 4 drives is required.

Table 12. Drives supported in the MX3531-H

Part number	Feature	Description	Hybrid Storage	
			Cache	Capacity
3.5-inch hot-swap 12 Gb SAS HDDs				
7XB7A00042	AUU5	ThinkSystem 3.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	14
7XB7A00043	AUU6	ThinkSystem 3.5" 4TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	14
7XB7A00044	AUU7	ThinkSystem 3.5" 6TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
7XB7A00045	B0YR	ThinkSystem 3.5" 8TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
7XB7A00046	AUUG	ThinkSystem 3.5" 10TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
7XB7A00067	B117	ThinkSystem 3.5" 12TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
4XB7A13906	B496	ThinkSystem 3.5" 14TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	14
3.5-inch hot-swap 6 Gb SATA HDDs				
7XB7A00049	AUUF	ThinkSystem 3.5" 1TB 7.2K SATA 6Gb Hot Swap 512n HDD	No	14
7XB7A00050	AUUD	ThinkSystem 3.5" 2TB 7.2K SATA 6Gb Hot Swap 512n HDD	No	14
7XB7A00051	AUU8	ThinkSystem 3.5" 4TB 7.2K SATA 6Gb Hot Swap 512n HDD	No	14
7XB7A00052	AUUA	ThinkSystem 3.5" 6TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
7XB7A00053	AUU9	ThinkSystem 3.5" 8TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
7XB7A00054	AUUB	ThinkSystem 3.5" 10TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
7XB7A00068	B118	ThinkSystem 3.5" 12TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
4XB7A13907	B497	ThinkSystem 3.5" 14TB 7.2K SATA 6Gb Hot Swap 512e HDD	No	14
3.5-inch hot-swap 24 Gb SAS SSDs				
4XB7A80344	BNW7	ThinkSystem 3.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	6	No
4XB7A80345	BNWA	ThinkSystem 3.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	6	No
4XB7A80346	BNWB	ThinkSystem 3.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	6	No
4XB7A80347	BP3G	ThinkSystem 3.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	6	No
3.5-inch hot-swap PCIe 4.0 NVMe SSDs				
4XB7A17161	BMM7	ThinkSystem 3.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17162	BMM5	ThinkSystem 3.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A77070	BMM6	ThinkSystem 3.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17141	BNEK	ThinkSystem 3.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17148	BNEP	ThinkSystem 3.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17143	BNEM	ThinkSystem 3.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
4XB7A17144	BNEN	ThinkSystem 3.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	6	No
3.5-inch hot-swap PCIe 3.0 NVMe SSDs				
4XB7A38163	B970	ThinkSystem 3.5" U.2 P4800X 750GB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	6	No
4XB7A38164	B974	ThinkSystem 3.5" U.2 P4800X 1.5TB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	6	No

Internal drives for MX3530-F

The following table lists the drives support in the MX3530-F. The drives are classified as either Cache drives, Capacity drives, or both. The quantities listed in the table are the maximum supported for each drive option. For two-tier configurations, a minimum of 2 cache drives and a minimum of 4 capacity drives is required.

Table 13. Drives supported in the MX3530-F

Part number	Feature	Description	All Flash Storage	
			Cache	Capacity
2.5-inch hot-swap 24 Gb SAS SDDs				
4XB7A80318	BNWC	ThinkSystem 2.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80319	BNWE	ThinkSystem 2.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80320	BNWF	ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80321	BP3E	ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80322	BP3J	ThinkSystem 2.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80323	BP3D	ThinkSystem 2.5" PM1653 30.72TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80340	BNW8	ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	28	28
4XB7A80341	BNW9	ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	28	28
4XB7A80342	BNW6	ThinkSystem 2.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	28	28
4XB7A80343	BP3K	ThinkSystem 2.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	28	28
2.5-inch hot-swap 6 Gb SATA SSDs				
4XB7A17090	B8JE	ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD	No	28
4XB7A17080	B8J2	ThinkSystem 2.5" 5300 7.68TB Entry SATA 6Gb Hot Swap SSD	No	28
4XB7A17101	BA7G	ThinkSystem 2.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17102	BA7H	ThinkSystem 2.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17103	BA7J	ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17104	BK77	ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17105	BK78	ThinkSystem 2.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A82259	BQ1P	ThinkSystem 2.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82260	BQ1R	ThinkSystem 2.5" 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82261	BQ1X	ThinkSystem 2.5" 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82262	BQ1S	ThinkSystem 2.5" 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82263	BQ1T	ThinkSystem 2.5" 5400 PRO 7.68TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A87525	BWKM	ThinkSystem 2.5" PM893a 960GB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A87526	BWKL	ThinkSystem 2.5" PM893a 1.92TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A87527	BWKK	ThinkSystem 2.5" PM893a 3.84TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A17125	BA7Q	ThinkSystem 2.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	No	40
4XB7A17126	BA4T	ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	No	40
4XB7A17127	BA4U	ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	No	40
4XB7A17128	BK7L	ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	No	40
2.5-inch hot-swap PCIe 4.0 NVMe SSDs				
4XB7A17158	BKKY	ThinkSystem 2.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17159	BKKZ	ThinkSystem 2.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	24	24

Part number	Feature	Description	All Flash Storage	
			Cache	Capacity
4XB7A17160	BMM8	ThinkSystem 2.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17129	BNEG	ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17130	BNEH	ThinkSystem 2.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17133	BNEZ	ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17136	BA4V	ThinkSystem 2.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A13941	BMGD	ThinkSystem 2.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A13942	BMGE	ThinkSystem 2.5" U.2 P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A13943	BNEF	ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A13631	BNEQ	ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A17145	BCFT	ThinkSystem 2.5" U.2 P5500 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A38197	BC4Z	ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	No	24
4XB7A38283	BE2E	ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	No	24
4XB7A38284	BE2F	ThinkSystem U.2 PM1733 15.36TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	No	24
2.5-inch hot-swap PCIe 3.0 NVMe SSDs				
4XB7A38160	B973	ThinkSystem 2.5" U.2 P4800X 750GB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	24	24
4XB7A17163	B96L	ThinkSystem 2.5" U.2 P4800X 1.5TB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	24	24
4XB7A10176	B34P	ThinkSystem U.2 PM983 3.84TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD	No	24

Internal drives for MX3531-F

The following table lists the drives support in the MX3531-F. The drives are classified as either Cache drives, Capacity drives, or both. The quantities listed in the table are the maximum supported for each drive option. For two-tier configurations, a minimum of 2 cache drives and a minimum of 4 capacity drives is required.

Table 14. Drives supported in the MX3531-F

Part number	Feature	Description	All Flash Storage	
			Cache	Capacity
2.5-inch hot-swap 24 Gb SAS SDDs				
4XB7A80318	BNWC	ThinkSystem 2.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80319	BNWE	ThinkSystem 2.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80320	BNWF	ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	28

Part number	Feature	Description	All Flash Storage	
			Cache	Capacity
4XB7A80321	BP3E	ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80322	BP3J	ThinkSystem 2.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80323	BP3D	ThinkSystem 2.5" PM1653 30.72TB Read Intensive SAS 24Gb HS SSD	No	28
4XB7A80340	BNW8	ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	28	28
4XB7A80341	BNW9	ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	28	28
4XB7A80342	BNW6	ThinkSystem 2.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	28	28
4XB7A80343	BP3K	ThinkSystem 2.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	28	28
2.5-inch hot-swap 6 Gb SATA SSDs				
4XB7A17090	B8JE	ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD	No	28
4XB7A17080	B8J2	ThinkSystem 2.5" 5300 7.68TB Entry SATA 6Gb Hot Swap SSD	No	28
4XB7A17101	BA7G	ThinkSystem 2.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17102	BA7H	ThinkSystem 2.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17103	BA7J	ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17104	BK77	ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A17105	BK78	ThinkSystem 2.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	40
4XB7A82259	BQ1P	ThinkSystem 2.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82260	BQ1R	ThinkSystem 2.5" 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82261	BQ1X	ThinkSystem 2.5" 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82262	BQ1S	ThinkSystem 2.5" 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A82263	BQ1T	ThinkSystem 2.5" 5400 PRO 7.68TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A87525	BWKM	ThinkSystem 2.5" PM893a 960GB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A87526	BWKL	ThinkSystem 2.5" PM893a 1.92TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A87527	BWKK	ThinkSystem 2.5" PM893a 3.84TB Read Intensive SATA 6Gb HS SSD	No	28
4XB7A17125	BA7Q	ThinkSystem 2.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	No	40
4XB7A17126	BA4T	ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	No	40
4XB7A17127	BA4U	ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	No	40
4XB7A17128	BK7L	ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	No	40
2.5-inch hot-swap PCIe 4.0 NVMe SSDs				
4XB7A17158	BKKY	ThinkSystem 2.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17159	BKKZ	ThinkSystem 2.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17160	BMM8	ThinkSystem 2.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17129	BNEG	ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17130	BNEH	ThinkSystem 2.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17133	BNEZ	ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A17136	BA4V	ThinkSystem 2.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	24	24
4XB7A13941	BMGD	ThinkSystem 2.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24

Part number	Feature	Description	All Flash Storage	
			Cache	Capacity
4XB7A13942	BMGE	ThinkSystem 2.5" U.2 P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A13943	BNEF	ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A13631	BNEQ	ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A17145	BCFT	ThinkSystem 2.5" U.2 P5500 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	24
4XB7A38197	BC4Z	ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	No	24
4XB7A38283	BE2E	ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	No	24
4XB7A38284	BE2F	ThinkSystem U.2 PM1733 15.36TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	No	24
2.5-inch hot-swap PCIe 3.0 NVMe SSDs				
4XB7A38160	B973	ThinkSystem 2.5" U.2 P4800X 750GB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	24	24
4XB7A17163	B96L	ThinkSystem 2.5" U.2 P4800X 1.5TB Write Intensive NVMe PCIe 3.0 x4 HS SSD 60DWPD	24	24
4XB7A10176	B34P	ThinkSystem U.2 PM983 3.84TB Entry NVMe PCIe 3.0 x4 Hot Swap SSD	No	24

Network adapters

The MX 2U systems support the following networking options.

Only certain network adapters have been certified for particular network traffic types in the Azure Stack HCI operating system. For details regarding which available network adapters can be used for each network traffic type, see Lenovo Certified Configurations for Azure Stack HCI – V2 Servers:
https://lenovopress.com/lp1520

For details about these options, including configuration rules, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#i-o-expansion
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#network-adapters

Table 15. OCP network adapters

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
Gigabit Ethernet						
4XC7A08235	B5T1	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter	1	1	1	1
4XC7A08277	B93E	ThinkSystem Intel I350 1GbE RJ45 4-port OCP Ethernet Adapter	1	1	1	1
Combo Gigabit + 10 Gb Ethernet						
4XC7A08239	B5SS	ThinkSystem Broadcom 57416 10GBASE-T 2-port + 5720 1GbE 2-port OCP Ethernet Adapter	1	1	1	1
10 Gb Ethernet						
4XC7A08236	B5ST	ThinkSystem Broadcom 57416 10GBASE-T 2-port OCP Ethernet Adapter	1	1	1	1
4XC7A08240	B5T4	ThinkSystem Broadcom 57454 10GBASE-T 4-port OCP Ethernet Adapter	1	1	1	1
4XC7A08278	BCD5	ThinkSystem Intel X710-T2L 10GBASE-T 2-port OCP Ethernet Adapter	1	1	1	1
25 GbE						
4XC7A08294	BCD4	ThinkSystem Intel E810-DA2 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1	1	1
4XC7A62582	BE4T	ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1	1	1
4XC7A08237	B5SZ	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port OCP Ethernet Adapter	1	1	1	1
4XC7A08242	B5SV	ThinkSystem Broadcom 57454 10/25GbE SFP28 4-port OCP Ethernet Adapter	1	1	1	1

Table 16. PCIe network adapters

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
Gigabit Ethernet						
7ZT7A00533	AUZZ	ThinkSystem I350-F1 PCIe 1Gb 1-Port SFP Ethernet Adapter	8	8	8	8
7ZT7A00534	AUZY	ThinkSystem I350-T2 PCIe 1Gb 2-Port RJ45 Ethernet Adapter	8	8	8	8
7ZT7A00535	AUZW	ThinkSystem I350-T4 PCIe 1Gb 4-Port RJ45 Ethernet Adapter	8	8	8	8
10 Gb Ethernet SFP+						
7ZT7A00537	AUKX	ThinkSystem Intel X710-DA2 PCIe 10Gb 2-Port SFP+ Ethernet Adapter	8	8	8	8
10GBASE-T Ethernet						
00MM860	ATPX	Intel X550-T2 Dual Port 10GBase-T Adapter	8	8	8	8
4XC7A08225	B31G	ThinkSystem QLogic QL41134 PCIe 10Gb 4-Port Base-T Ethernet Adapter	8*	8*	8*	8*
25 Gb Ethernet						
4XC7A08295	BCD6	ThinkSystem Intel E810-DA2 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	8	8	8	8
4XC7A62580	BE4U	ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	8	8	8	8
100 Gb Ethernet						
4XC7A08248	B8PP	ThinkSystem Mellanox ConnectX-6 Dx 100GbE QSFP56 2-port PCIe Ethernet Adapter	6	6	6	6

* The QLogic QL41134 adapter does not support Windows Server 2022 and Azure Stack HCI 21H2 OS

GPU adapters

The MX 2U systems systems support the following GPU options.

For details about these options, including configuration rules, see the SR650 V2 product guide:
https://lenovopress.com/lp1392-thinksystem-sr650-v2-server#gpu-adapters

Table 17. GPU adapters

Part number	Feature	Description	Maximum supported			
			MX3530-H	MX3531-H	MX3530-F	MX3531-F
Double-wide GPUs						
4X67A76581	BJHG	ThinkSystem NVIDIA A30 24GB PCIe Gen4 Passive GPU	3	3	3	3
4X67A13135	BEL5	ThinkSystem NVIDIA A100 40GB PCIe Gen4 Passive GPU	3	3	3	3
CTO Only	BQZS	ThinkSystem NVIDIA A10 24GB PCIe Gen4 Passive GPU w/o CEC	4	4	4	4
CTO Only	BQZQ	ThinkSystem NVIDIA A40 48GB PCIe Gen4 Passive GPU w/o CEC	3	3	3	3
CTO Only	BQZU	ThinkSystem NVIDIA A16 64GB Gen4 PCIe Passive GPU w/o CEC	3	3	3	3
CTO Only	BQZT	ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU w/o CEC	3	3	3	3
Single-wide GPUs						
4X67A14926	B4YB	ThinkSystem NVIDIA T4 16GB PCIe Passive GPU	8	8	8	8

Software

The MX Integrated Systems include the preloaded Azure Stack HCI operating system only and requires activation via a CSP such as Lenovo Cloud Marketplace, with the option to purchase a Windows Server 2019 Datacenter or Windows Server 2022 Datacenter license if unlimited guest OS VMs are desired.

The MX Certified Nodes can optionally have Windows Server 2019 Datacenter, Windows Server 2022 Datacenter, or Azure Stack HCI OS preinstalled. Customers can use existing Windows Server Datacenter software licenses, or they can purchase new software licenses from Lenovo or Microsoft. If the licenses are purchased from Lenovo, Windows Server can be factory-installed or shipped in the box with the Certified Node for the installation at the customer site.

The following table lists the Windows Server Datacenter software options that are available for selection from Lenovo for Certified Nodes.

Table 18. Windows Server Datacenter software selection options (Certified Nodes only)

Feature code	Description
Windows Server 2022 Datacenter (Factory installed)	
BPA7	Windows Server Datacenter 2022 for Microsoft Azure Stack HCI - English (factory installed)
Windows Server 2022 Datacenter (Not preinstalled)	
BPA3	Windows Server Datacenter 2022 for Microsoft Azure Stack HCI - Multilanguage (not pre-installed)
BPA4	Windows Server Datacenter 2022 for Microsoft Azure Stack HCI - Simplified Chinese (not pre-installed)
BPA5	Windows Server Datacenter 2022 for Microsoft Azure Stack HCI - Traditional Chinese (not pre-installed)
BPA6	Windows Server Datacenter 2022 for Microsoft Azure Stack HCI - Japanese (not pre-installed)
Windows Server 2019 Datacenter (Factory installed)	
B6P2	Windows Server Datacenter 2019 for Microsoft Azure Stack HCI - English (factory installed)
Windows Server 2019 Datacenter (Not preinstalled)	
B6NY	Windows Server Datacenter 2019 for Microsoft Azure Stack HCI - Multilanguage (not pre-installed)
B6P0	Windows Server Datacenter 2019 for Microsoft Azure Stack HCI - Simplified Chinese (not pre-installed)
B6P1	Windows Server Datacenter 2019 for Microsoft Azure Stack HCI - Traditional Chinese (not pre-installed)
B6NZ	Windows Server Datacenter 2019 for Microsoft Azure Stack HCI - Japanese (not pre-installed)

Configuration notes:

- The selection of Windows Server software licenses is optional.
- The quantity of core-based licenses should be sufficient to cover all processor cores in the system.
- Current supported version of Azure Stack HCI OS is 23H2

Warranty and Support

The ThinkAgile MX Appliances can be configured with a three-, four, or five-year hardware warranty with 24x7 ThinkAgile Premier Single Point of Support (Lenovo appliance hardware and Microsoft software) and various levels of coverage with a defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions. For more information refer to the Lenovo Support Plan - MX Appliance support plan, available from https://support.lenovo.com/us/en/solutions/HT511522.

The ThinkAgile MX Certified Nodes can be configured with a three-, four-, or five-year hardware warranty and various levels of service coverage with a defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions.

The ThinkAgile MX3530 and MX3531 2U Appliances & Certified Nodes have a 3-year base warranty:

- 7D6B - 2U Appliance - 3 year warranty
- 7D66 - 2U Certified Node - 3 year warranty

The standard warranty terms are customer-replaceable unit (CRU) and onsite (for field-replaceable units FRUs only) with standard call center support during normal business hours and 9x5 Next Business Day Parts Delivered.

Lenovo's additional support services provide a sophisticated, unified support structure for your data center, with an experience consistently ranked number one in customer satisfaction worldwide. Available offerings include:

- **Premier Support**

  Premier Support provides a Lenovo-owned customer experience and delivers direct access to technicians skilled in hardware, software, and advanced troubleshooting, in addition to the following:

  - Direct technician-to-technician access through a dedicated phone line
  - 24x7x365 remote support
  - Single point of contact service
  - End to end case management
  - Third-party collaborative software support
  - Online case tools and live chat support
  - On-demand remote system analysis

- **Warranty Upgrade (Preconfigured Support)**

  Services are available to meet the on-site response time targets that match the criticality of your systems.

  - 3, 4, or 5 years of service coverage
  - 1-year or 2-year post-warranty extensions
  - **Foundation Service**: 9x5 service coverage with next business day onsite response. YourDrive YourData is an optional extra (see below).
  - **Essential Service:** 24x7 service coverage with 4-hour onsite response or 24-hour committed repair (available only in select markets). Bundled with YourDrive YourData.
  - **Advanced Service:** 24x7 service coverage with 2-hour onsite response or 6-hour committed repair (available only in select markets). Bundled with YourDrive YourData.

- **Managed Services**

  Lenovo Managed Services provides continuous 24x7 remote monitoring (plus 24x7 call center availability) and proactive management of your data center using state-of-the-art tools, systems, and practices by a team of highly skilled and experienced Lenovo services professionals.

  Quarterly reviews check error logs, verify firmware & OS device driver levels, and software as needed. We'll also maintain records of latest patches, critical updates, and firmware levels, to ensure you systems are providing business value through optimized performance.

- **Technical Account Management (TAM)**

  A Lenovo Technical Account Manager helps you optimize the operation of your data center based on a deep understanding of your business. You gain direct access to your Lenovo TAM, who serves as your single point of contact to expedite service requests, provide status updates, and furnish reports to track incidents over time. In addition, your TAM will help proactively make service recommendations and manage your service relationship with Lenovo to make certain your needs are met.

- **Enterprise Server Software Support**

  Enterprise Software Support is an additional support service providing customers with software support on Microsoft, Red Hat, SUSE, and VMware applications and systems. Around the clock availability for critical problems plus unlimited calls and incidents helps customers address challenges fast, without incremental costs. Support staff can answer troubleshooting and diagnostic questions, address product comparability and interoperability issues, isolate causes of problems, report defects to software vendors, and more.

- **YourDrive YourData**

  Lenovo's YourDrive YourData 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 and is optional with Foundation Service. It is bundled with Essential Service and Advanced Service.

- **Health Check**

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

Examples of region-specific warranty terms are second or longer business day parts delivery or parts-only base warranty.

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

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

Lenovo Service offerings are region-specific. Not all preconfigured support and upgrade options are available in every region. For information about Lenovo service upgrade offerings that are available in your region, refer to the following resources:

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

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

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

Deployment services

The MX systems can optionally include Lenovo deployment services to get customers up and running quickly.

The following Lenovo custom installation services are optional for both MX Integrated Systems and MX Certified Nodes:

- Unpacking and inspecting the systems
- Mounting the systems (rack cabinet, desktop, stack, bookshelf, wall or ceiling, or rack installation)
- Connecting the systems to electrical power and network
- Checking and updating firmware to the latest levels
- Verifying operations
- Disposal of the packaging materials (within the customer site)

The following Lenovo deployment services are optional for both MX Integrated Systems and MX Certified Nodes:

- Conducting remote preparation and planning
- Verifying firmware versions and performing firmware updates, if needed
- Configuring XCC management settings
- Configuring Storage Spaces Direct
- Configuring Microsoft System Center and discovering hosts and storage (if System Center is used)
- Configuring Lenovo XClarity network settings and performing discovery and inventory (if XClarity is selected)
- Transferring knowledge
- Developing post-installation documentation

The following table lists ThinkAgile Health Check & Deployment offerings are available for ThinkAgile MX customers. These offerings are performed by Lenovo Professional Services.

- **Onsite Deployment**: Install, configure, and validate solution on-site, and conduct knowledge transfer.
- **Remote Deployment**: Install, configure, and validate solution remotely, and conduct knowledge transfer.
- **Remote Health Check**: Report & remediation of hardware and cluster health issues, including firmware and software updates.

Table 19. ThinkAgile Health Check & Deployment offerings

Part number	Description
Onsite deployment services	
5MS7B09464	ThinkAgile MX Onsite Deployment (up to 2 nodes)
5MS7B09465	ThinkAgile MX Onsite Deployment (additional node)
Remote deployment services	
5MS7B09466	ThinkAgile MX Remote Deployment (up to 2 nodes)
5MS7B09467	ThinkAgile MX Remote Deployment (additional node)
Remote Health Check	
5MS7B00049	ThinkAgile MX 1X Remote Health Check (per 2-4 node cluster)
5MS7B00050	ThinkAgile MX 1X Remote Health Check (additional node)
5MS7B00051	ThinkAgile MX 1X Remote Health Check & Update (per 2-4 node cluster)
5MS7B00052	ThinkAgile MX 1X Remote Health Check & Update (additional node)

For more information, refer to the Data Center Implementation Services web page:
https://www.lenovo.com/us/en/data-center/services/implementation-services/

Lenovo Financial Services

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

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

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

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

For your region-specific offers, please ask your Lenovo sales representative or your technology provider about the use of Lenovo Financial Services. For more information, see the following Lenovo website:

https://www.lenovo.com/us/en/landingpage/lenovo-financial-services/

Seller training courses

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

1. **VTT Cloud and Edge Architecture: Principal Consultant Overview**
   2024-04-10 | 50 minutes | Employees Only

   Join Ruth Miller, Lenovo Principal Consultant, SSG Services for a data-led discussions to examine in detail customer IT environments, highlighting pain points, performance issues, edge and hybrid cloud strategy and carbon reduction capability.
   Examples of workshop deliverables and outcomes will be discussed to illustrate the value of early engagement and discovery.

   Published: 2024-04-10
   Length: 50 minutes
   Employee link: Grow@Lenovo
   Course code: DVCLD211

2. **VTT Data Management How to sell storage - April 2024**
   2024-04-10 | 60 minutes | Employees Only

   In this course, you will know:

   - Why do we sell storage?
   - What are the basics you need to get an opportunity rolling?
   - Why Lenovo for Storage?
   - What is happening in the market today?
   - How to determine traction?

   Published: 2024-04-10
   Length: 60 minutes
   Employee link: Grow@Lenovo
   Course code: DVDAT209
3. **Partner Technical Webinar - Latest on Azure Stack HCI and ThinkAgile MX**
   2024-03-26 | 60 minutes | Employees and Partners

   In this PDF, Phil Searles, Solution Architect, and Amit Kulkarni, Sr. Product Manager of Cloud and HCI reviewed the latest info regarding Thinkagile MX and Microsoft Azure Stack HCI.

   Published: 2024-03-26
   Length: 60 minutes
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning
   Course code: 032224
4. **Data management Overview**
   2024-03-14 | 25 minutes | Employees and Partners

   After completing this course you will be able to:
   1. Know more about the data management trends and challenges
   2. Understand the data management portfolio
   3. Find out how data drives business value

   Published: 2024-03-14
   Length: 25 minutes
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning
   Course code: DSTOO201

5. **VTT Cloud Architecture: ThinkAgile MX – Latest Premier Solutions, AI, from Cloud to Edge, and AVD**
   2024-03-12 | 75 minutes | Employees Only

   Join Amit Kulkarni, Adam Mandelbloom (Lenovo), and distinguished Microsoft speakers for an exclusive VTT call centered around the Lenovo ThinkAgile MX. Amidst the evolving landscape of technology, Artificial Intelligence stands as a pivotal discussion point, often finding its application at the edge. Explore firsthand how Lenovo and Microsoft navigate these challenges with their compelling edge-to-cloud solutions. Journey into the realm of AVD (Azure Virtual Desktop) and its pivotal role in reshaping the paradigms of remote work.
   Introducing Microsoft Premier Solutions, witness firsthand how it stands apart in its approach, offering unparalleled support and expertise to empower an organization's digital journey.
   Furthermore, gain invaluable insights into the nuances between Azure Stack HCI 22H2 and 23H2. Our experts will dissect the differences and elucidate the implications for your infrastructure strategy.
   Join us for an enlightening session where industry leaders converge to explore the forefront of innovation and chart a course for digital transformation. Don't miss out on this opportunity to gain a competitive edge in today's rapidly evolving landscape.

   Published: 2024-03-12
   Length: 75 minutes
   Employee link: Grow@Lenovo
   Course code: DVCLD210

6. **Technical Overview: ThinkAgile HCI and Cloud Platforms**
   2024-03-07 | 35 minutes | Employees and Partners

   This course is designed to give Lenovo sales and partner representatives a technical overview of Lenovo’s ThinkAgile hyperconverged infrastructure and cloud platforms. Turnkey cloud platforms along with their architectural makeup, and container and data protection solutions are also covered.

   Learning Objectives:

   • Describe Lenovo’s ThinkAgile hyperconverged infrastructure and cloud platforms
   • Explain do-it-yourself and turnkey cloud platforms along with their architectural makeup
   • Describe container and data protection solutions

   Published: 2024-03-07
   Length: 35 minutes
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning
   Course code: DCLDT2001r3

7. **ThinkAgile MX Overview**
   2024-02-20 | 17 minutes | Employees and Partners

   The Lenovo ThinkAgile MX Certified Node is designed for those customers who want to build their own infrastructure and are embracing hyperconverged. The Lenovo MX Certified Node program brings to the customer validated, performance tested components and configurations supported by both Lenovo and Microsoft. Watch this video to learn features and benefits of the Lenovo MX Certified Node program, options and flexibility of configurations, and who is the customer. Last updated: January 2024

   Published: 2024-02-20
   Length: 17 minutes
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning
   Course code: DMSO1004

8. **Family Portfolio: ThinkAgile MX**
   2024-01-29 | 15 minutes | Employees and Partners

   This course is designed to give Lenovo sales and partner representatives an overview of ThinkAgile MX integrated systems (appliances) and validated nodes (certified nodes). It explains each offering, the differences between them, and when to choose specific products.

   Published: 2024-01-29
   Length: 15 minutes
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning
   Course code: SXSW2108r4

9. **Family Introduction: Converged and Hyperconverged**
   2024-01-25 | 15 minutes | Employees and Partners

   This course is designed to give Lenovo sales a foundation on the characteristics of the Converged and Hyperconverged family. As an introduction to each family, this course also includes positioning, when to use a family and product, and keywords a client may use when discussing a converged or hyperconverged product.
   Objectives:
   • Family characteristics
   • Priority positioning
   • Product usage
   • Key words and phrases

   Published: 2024-01-25
   Length: 15 minutes
   Employee link: Grow@Lenovo
   Partner link: Lenovo Partner Learning
   Course code: SXSW1101r2

10. **FY24Q3 Hybrid Cloud Update**
    2023-12-11 | 15 minutes | Employees and Partners

    This update is designed to help you discuss the features and customer benefits of Lenovo ThinkAgile systems that use the 5th Gen Intel® Xeon® processors. Lenovo has also introduced a new service, Lenovo TruScale Hybrid Cloud for Edge, which provides agile and reliable infrastructure as a service where you need it, when you need it. New Professional Services for AI with NVIDIA provides customers with expert guidance for designing and implementing tailored AI solutions. Reasons to call your customer and talk about refreshing their infrastructure are also included as a guideline.

    Published: 2023-12-11
    Length: 15 minutes
    Employee link: Grow@Lenovo
    Partner link: Lenovo Partner Learning
    Course code: SXXW2523a

11. **VTT Cloud Architecture: What new with ThinkAgile MX and SXM roadshow review and AKS?**
    2023-11-22 | 65 minutes | Employees Only

    Join us as our speakers discuss the latest from Microsoft Ignite conference and ThinkAgile SXM and MX with Intel EagleStream and the differences from previous generations. Our speakers will cover the top use cases and workloads as well as an in-depth discussion on AKS Hybrid Architecture on MX Azure Stack HCI, deployment, and maintaining a Kubernetes cluster on-premises, making it quicker to get started hosting Linux and Windows containers in your customer’s datacenter.

    Published: 2023-11-22
    Length: 65 minutes
    Employee link: Grow@Lenovo
    Course code: DVCLD207

12. **Lenovo Azure Stack Solutions Overview**
    2023-11-02 | 15 minutes | Employees and Partners

    In this course, Eric Mills presents the new Microsoft Azure Stack family and Lenovo ThinkAgile MX server, offering detailed information on Hub and Edge.

    Upon completion of this training, you will be able to:
    • List the solutions of the Microsoft Azure Stack family
    • Name the Lenovo hardware for Microsoft Azure Stack family

    Published: 2023-11-02
    Length: 15 minutes
    Employee link: Grow@Lenovo
    Partner link: Lenovo Partner Learning
    Course code: DMXF100

13. **Lenovo Azure Stack HCI Solution Overview**
    2023-11-02 | 27 minutes | Employees and Partners

    In this course, watch Phillip Moss define the Microsoft Azure HCI solution. He walks your though the technologies the HCI solution is built on and the business value it can bring to your customers.

    Upon completion of this training, you will be able to:
    • Identify the core features of Azure Stack HCI
    • Identify the key benefits of an Azure Stack HCI solution
    • Describe Storage Spaces Direct and it's key features

    Published: 2023-11-02
    Length: 27 minutes
    Employee link: Grow@Lenovo
    Partner link: Lenovo Partner Learning
    Course code: DMXF101

14. **Azure Stack HCI Solution Selling Tips**
    2023-11-01 | 8 minutes | Employees and Partners

    In this course Eric Mills provides useful selling tips for the ThinkAgile MX solution with Azure Stack HCI.

    Published: 2023-11-01
    Length: 8 minutes
    Employee link: Grow@Lenovo
    Partner link: Lenovo Partner Learning
    Course code: DMXF107

15. **Azure Stack HCI Licensing**
    2023-10-30 | 8 minutes | Employees and Partners

    In this course, Phillip Moss and Eric Mills discuss the licensing for the Azure Stack HCI solution.

    Published: 2023-10-30
    Length: 8 minutes
    Employee link: Grow@Lenovo
    Partner link: Lenovo Partner Learning
    Course code: DMXF105

16. **Azure Stack HCI Core Components and Features**
2023-10-30 | 15 minutes | Employees and Partners

In this course, Phillip Moss, with an assist from Cosmos Darwin discuss the core components and features of the Azure Stack HCI solution. The course further details each of the components, features and the role it plays in the HCI.

Published: 2023-10-30
Length: 15 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: DMXF103

17. **Azure Stack HCI Management**
2023-10-30 | 16 minutes | Employees and Partners

In this course, Phillip Moss, Eric Mills and Cosmo Darwin take turns discussing the number of available options to manage the Microsoft Azure HCI solution. The course briefly discusses each of the management platforms and how each is used to manage the HCI solution and its integration with Lenovo's XClarity hardware management.

Published: 2023-10-30
Length: 16 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: DMXF102

18. **ThinkAgile Accelerating Cloud Agility: MX Series Technical Presentation**
2023-07-28 | 45 minutes | Employees and Partners

Amalu Santhosh, Lenovo Technical Product Manager, reviews the ThinkAgile MX product portfolio and SXM. She will walk you through a technical deep dive into MX and SXM workloads and discuss technical details and performance of the latest ThinkAgile MX and SXM solutions.

Published: 2023-07-28
Length: 45 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: DMXT201

19. **Lenovo Data Center Product Portfolio**
2023-07-21 | 15 minutes | Employees and Partners

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

Published: 2023-07-21
Length: 15 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: SXXW1110r6

20. **Cloud and HCI or Somewhere in Between**
2023-07-11 | 40 minutes | Employees and Partners

Provides a brief overview of Lenovo Portfolio for HCI and Cloud including ThinkAgile HX, VX, MX Certified Nodes and Appliances, Azure, and Engineered Cloud Solutions. Review Scenarios and complete questions "choose your own adventure" to identify and qualify an opportunity as HCI or Cloud and which portfolio solution would be the best option.

Course objectives:
• Where in the Sales Cycle we are
• What is Cloud
• What is Hyperconverged Infrastructure (HCI)
• Review Lenovo Offerings in Cloud and HCI
• Scenarios

Published: 2023-07-11
Length: 40 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: DCLDS104r2

21. **Partner Technical Webinar - HX vs VX vs MX Panelist Discussion**
2023-04-11 | 60 minutes | Employees and Partners

In this 60-minute replay, Joe Murphy moderated a panelist discussion on ThinkAgile SHI. Baker Hull, VMware represented VX; Mike Tilt, Lenovo Technical Sales Manager presented HX; Phil Searles, Lenovo Solution Architect represented MX; and Brandon Saxton Lenovo NA Product Manager for ThinkAgile made up the panelist. The focus was less on the differences but how to elevate the conversation to get to the best solution. No slides were presented.

Published: 2023-04-11
Length: 60 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: 033123

22. **ThinkAgile MX & SXM Seller Presentation**
2023-02-17 | 25 minutes | Employees Only

This training is designed for Lenovo internal sales team to help them understand MX & SXM, its sales tactics and transaction processes. By the end of this training, you should be able to articulate the benefits of selling ThinkAgile MX, identify the sales elevator pitch, and describe the processes to transact both hardware and software and customer consumption's models.

Published: 2023-02-17
Length: 25 minutes
Employee link: Grow@Lenovo
Course code: DMXSP101

23. **Partner Technical Webinar - ThinkAgile V3 Overview and SMB Express**
2023-02-13 | 60 minutes | Employees and Partners

In this 60-minute replay, Joe Murphy and Dave Brown, Lenovo Solution Architects reviewed the new ThinkAgile V3 solutions. In addition, Dave did a lengthy demo and explanation of the new SMB Express feature of DCSC.

Published: 2023-02-13
Length: 60 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: 021023

24. **Lenovo Solutions Supporting Microsoft Business Continuity Services**
2023-02-01 | 30 minutes | Employees and Partners

This training aims to build familiarity with Lenovo Microsoft solutions for BCDR (Business Continuity and Disaster Recovery) and the relevance of Lenovo Cloud Marketplace, Azure Backup and Azure Site Recovery.

Completing this course will enable the sellers to:
• Describe Lenovo Solutions supporting Microsoft Business Continuity Services
• Identify customers who would benefit from Azure Backup and Azure Site Recovery
• Start the Business Continuity conversation
• Start the customer conversation.

Published: 2023-02-01
Length: 30 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: DMSO200

25. **ThinkAgile MX & SXM Customer Presentation**
2022-11-01 | 25 minutes | Employees Only

This training was designed to guide customers facing teams who's pitching ThinkAgile Microsoft solutions to the customers. By the end of this training, you should be able to describe the Customer Environments & Application Requirements, articulate the benefits of choosing Lenovo ThinkAgile MX, and identify Hybrid Cloud Use Cases with ThinkAgile MX.

Published: 2022-11-01
Length: 25 minutes
Employee link: Grow@Lenovo
Course code: DMXCP101

26. **ThinkAgile Advantage Services**
2022-07-20 | 15 minutes | Employees and Partners

The goal of this training is to go through the details of ThinkAgile Advantage, and to provide everything you need to have customer conversations and to order ThinkAgile Advantage and recommended services.
Course objectives:
1. Learn about the customer challenges and benefits of ThinkAgile Advantage
2. Discover what it includes
3. Understand how to make the most of ThinkAgile products and solutions with the elevator pitch for customer conversations.

Published: 2022-07-20
Length: 15 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: DSVC121r2

27. **Start the Conversation - Lenovo Cloud Strategy**
2021-10-25 | 25 minutes | Employees and Partners

The purpose of this course is to help sellers use the Lenovo cloud strategy as a foundation to start the customer cloud conversation. Topics include:
• Why customers choose the cloud
• The Lenovo Cloud Strategy
• Starting the customer cloud conversation

Published: 2021-10-25
Length: 25 minutes
Employee link: Grow@Lenovo
Partner link: Lenovo Partner Learning
Course code: DCLDS103r2

Related publications and links

For more information, see these resources:

- Lenovo ThinkAgile MX Series product page
https://www.lenovo.com/us/en/data-center/software-defined-infrastructure/ThinkAgile-MX-Certified-Node/p/WMD00000377
- Microsoft Azure Stack HCI documentation
https://docs.microsoft.com/en-us/azure-stack/hci/overview
- Lenovo Data Center Solution Configurator (DCSC):
https://dcsc.lenovo.com
- Lenovo ThinkAgile MX for Microsoft Azure Stack HCI Best Recipes
https://datacentersupport.lenovo.com/us/en/solutions/ht507406

Related product families

Product families related to this document are the following:

- 2-Socket Rack Servers
- Hyperconverged Infrastructure
- Hyperconverged Infrastructure
- ThinkAgile MX Series for Microsoft Azure Stack HCI

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