Lenovo ThinkAgile VX630 V3 1U Integrated System and Certified Node

Product Guide

The Lenovo ThinkAgile VX630 V3 Integrated System and Certified Node are 2-socket 1U systems that feature the 5th Generation Intel Xeon Scalable processors (formerly code named "Emerald Rapids) and 4th Generation Intel Xeon Scalable processors (formerly code named "Sapphire Rapids). ThinkAgile VX630 provides up to 64 cores per 5th generation processor and up to 60 cores per 4th generation processor and support for the new PCIe 5.0 standard for I/O, the VX systems offer the ultimate in two-socket performance in a 1U form factor. VMware offers a unique, software-defined approach to hyper convergence, leveraging the hypervisor to deliver compute, storage and management in a tightly integrated software stack.

Suggested uses: Inference, virtualization, VDI, HPC,

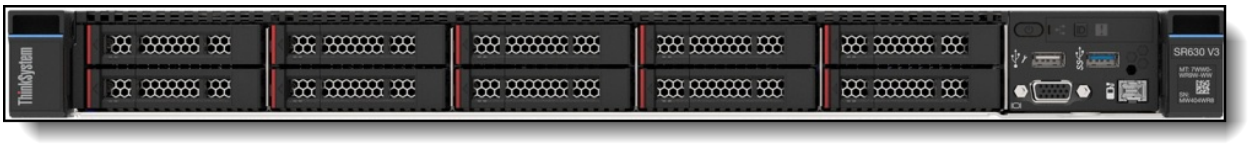

Figure 1. Lenovo ThinkAgile VX630 V3 with 2.5-inch drive bays

Did you know?

The ThinkAgile VX630 V3 Integrated System and Certified Node are built on the Lenovo ThinkSystem SR630 V3 server that features enterprise-class reliability, management, and security.

The VX630 V3 Integrated Systems comes paired with Premier Support that offers a single point of support for quick 24/7 problem reporting and resolution.

Key features

ThinkAgile features

The ThinkAgile VX630 V3 Integrated System and Certified Node offer the following key features:

- Factory-integrated, pre-configured ready-to-go integrated systems built on proven and reliable Lenovo ThinkSystem servers that provide compute power for a variety of workloads and applications and powered by industry-leading hyperconverged infrastructure software from VMware.
- Provide quick and convenient path to implement a hyperconverged solution powered by VMware Cloud Foundation (VCF) or VMware vSphere Foundation (VVF) software stacks with "one stop shop" and a single point of contact provided by Lenovo for purchasing, deploying, and supporting the solution.
- Meet various workload demands with cost-efficient hybrid or performance-optimized all-flash storage configurations.
- Deliver fully validated and integrated hardware and firmware that is certified with VMware by Broadcom.
- ThinkAgile Integrated Systems are bundled with Premier Support providing a single-point-of-contact for quick 24/7 hardware and software support, problem reporting and resolution.
- They also come with deployment delivered by Lenovo Professional Services and VMware software licenses.*
- Five-year hardware warranty, bundled with Premier Support that provides a 24x7 Single Point of Support

The VMware software running on ThinkAgile VX630 V3 Integrated System and Certified Node delivers the following key features:

- Distributed architecture that allows "pay-as-you-grow", non-disruptive scaling by adding new nodes to the cluster (scale-out) to increase capacity and performance.
- Advanced capacity management, including deduplication, compression, and erasure coding (RAID 5/6), which helps deliver greater storage utilization with dramatically lower storage capacity and costs.
- Automation of VM storage provisioning and control of storage service levels (capacity, performance, availability) with VM-centric policies to load balance storage resources.
- Native HCI security solution with two-factor authentication (SecurID and CAC) and data-at-rest encryption that does not require self-encrypting drives (SEDs).
- Stretched cluster with local and site failure protection between two geographically dispersed sites for higher level of availability with near zero downtime.
- Centralized management with provisioning, administering, and monitoring virtual resources across multiple hosts and clusters from a centralized interface.
- Rapid workload provisioning, simplified data center operations, increased business efficiency, and decreased CAPEX and OPEX costs.
- VM and data protection with agent-less, image-level virtual machine backups and application-aware protection for business-critical Microsoft applications (Exchange, SQL Server, SharePoint) along with WAN-efficient, encrypted backup data replication.
- Reduced unplanned downtime and virtually eliminated planned downtime for server and storage maintenance with live workload migration, high availability, and fault tolerance.
- Enhanced application performance and availability with resource management, load balancing, and access prioritization.
- Intelligent operations management and automation to proactively monitor and manage compute, storage, and networking resources, identify performance bottlenecks, and re-balance workloads by

leveraging predictive analytics.

- Capacity planning and optimization guidance to address future needs with performance trends, projections and extended forecasts.
- Managing remote offices and branch offices with rapid provisioning of servers through virtualization, minimization of host configuration drift, and enhanced visibility into regulatory compliance, across multiple sites.

*Customers now have the ability to opt out of these features. Please check sections on Software and Deployment Services for more information.

Hardware features

The VX systems are based on the SR630 V3 and have the following hardware features:

Scalability and performance

The VX630 V3 offer numerous features to boost performance, improve scalability and reduce costs:

- Supports one or two 5th Gen Intel Xeon Processor Scalable processors
  - Up to 64 cores and 128 threads
  - Core speeds of up to 3.9 GHz
  - TDP ratings of up to 350 W
- Supports one or two 4th Gen Intel Xeon Processor Scalable processors
  - Up to 60 cores and 120 threads
  - Core speeds of up to 3.7 GHz
  - TDP ratings of up to 350 W
- Support for DDR5 memory DIMMs to maximize the performance of the memory subsystem:
  - Up to 32 DDR5 memory DIMMs, 16 DIMMs per processor
  - 8 memory channels per processor (2 DIMMs per channel)
  - Supports 1 DIMM per channel operating at 5600 MHz (5th Gen processors) or 4800 MHz (4th Gen processors)
  - Supports 2 DIMMs per channel operating at 4800 MHz (5th Gen processors) or 4400 MHz (4th Gen processors)
  - Using 256GB 3DS RDIMMs, the server supports up to 8TB of system memory
- Supports up to three single-width GPUs, each up to 75W for substantial processing power in a 1U system.
- Supports up to 12x 2.5-inch hot-swap drive bays, by using combinations of front-accessible (up to 10 bays) and rear-accessible (2 bays).
- Supports four 3.5-inch drive bays for lower-cost high-capacity HDD storage.
- Supports up to 12x NVMe drives without oversubscription of PCIe lanes (1:1 connectivity) and without the need for additional NVMe adapters. The use of NVMe drives maximizes drive I/O performance, in terms of throughput and latency.
- 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 5.0 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 5.0 I/O expansion capabilities that doubles the theoretical maximum bandwidth of PCIe 4.0 (32GT/s in each direction for PCIe Gen 5, compared to 16 GT/s with PCIe Gen 4 and 8 GT/s with PCIe Gen 3). A PCIe 5.0 x16 slot provides 128 GB/s bandwidth, enough to

support a dual-port 200GbE network connection.

- The server offers up to three PCIe 5.0 slots, all with rear access, plus an internal bay for a cabled RAID adapter or HBA, plus a slot dedicated to the OCP adapter.

Availability and serviceability

The VX630 V3 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 for greater system uptime.
- Available M.2 boot adapters support RAID-1 which can enable two NVMe M.2 drives to be configured as a redundant pair.
- The server has up to two hot-swap redundant power supplies and up to eight 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), fans, power supplies, server ambient and subcomponent temperatures. Alerts can be surfaced through the XClarity Controller to managers such as Lenovo XClarity Administrator and VMware vCenter. 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 2 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 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 VX630 V3:

- The server includes XClarity Controller 2 (XCC2) to monitor server availability. Optional upgrade to XCC Platinum to provide remote control (keyboard video mouse) functions, support for the mounting of remote media files (ISO and IMG image files), boot capture, power capping and new XCC2 Platinum features. New XCC2 Platinum features include System Guard, new security modes including a CNSA-compliant mode, FIPS 140-3 and NIST 800-193 support, and a new Neighbor Group feature.

- Dedicated Ethernet port at the rear of the server for remote management (BMC management). Optional support for a second dedicated BMC management port, installed in the OCP adapter bay.
- 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, RAID Setup wizard, 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 VX630 V3 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.
- Carbon offset is available at click of button. You can project the carbon emissions per device for an average lifecycle (up to 5 years). That information is available **here**
- 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.
- Support for 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.
- 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.

Components and connectors

The ThinkAgile VX630 V3 Integrated System and Certified Node are based on the ThinkSystem SR630 V3 server.

The following figure shows the front of the VX630 V3 with 2.5-inch drives.

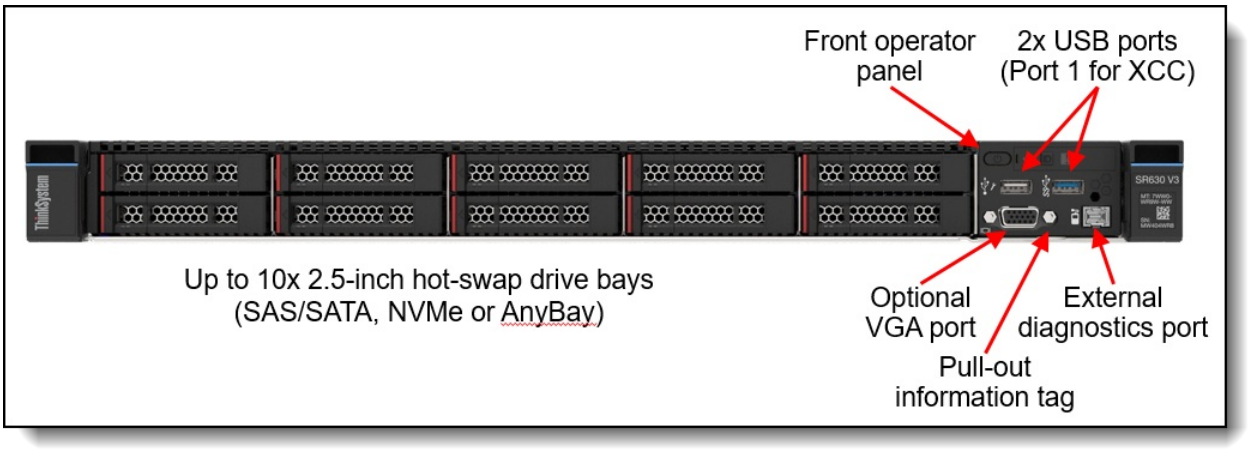

Figure 2. Front view of the ThinkAgile 630 V3 with 2.5-inch drives

The following figure shows the front of the 630 V3 with 3.5-inch drives.

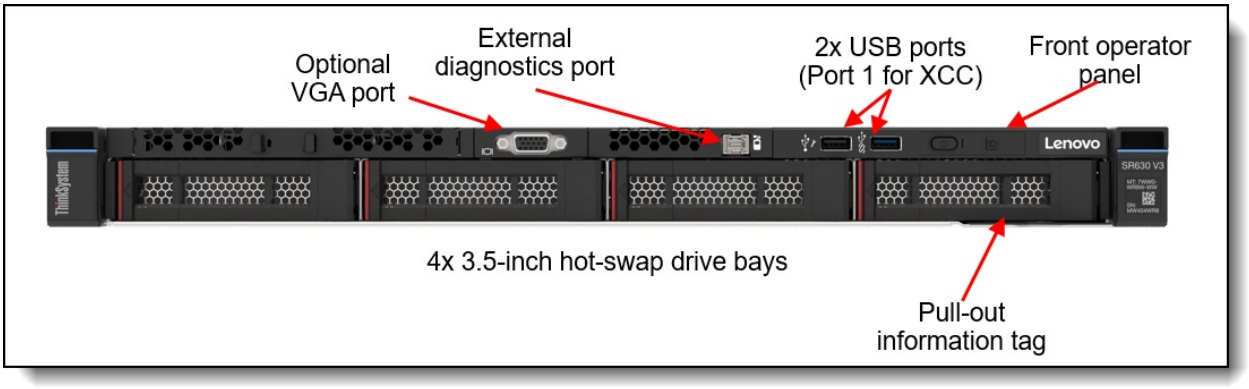

Figure 3. Front view of the ThinkAgile630 V3 with 3.5-inch drives

The following figure shows the components visible from the rear of the server. As shown, there are four different configurations available, including two with rear-mounted drive bays: two 2.5-inch hot-swap drive bays (SAS, SATA or NVMe) or new 7mm thickness hot-swap drives (SATA or NVMe).

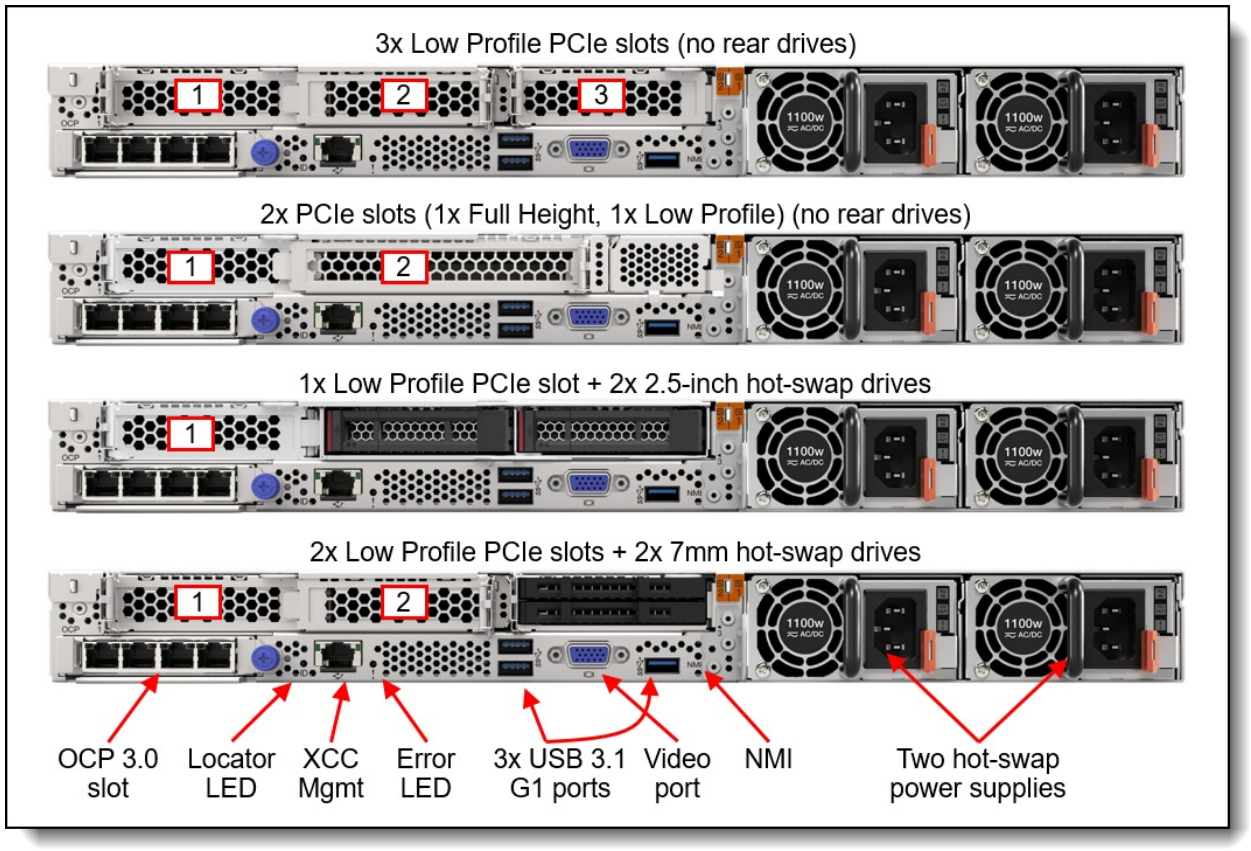

Figure 4. Rear view of the VX 630 V3 systems

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

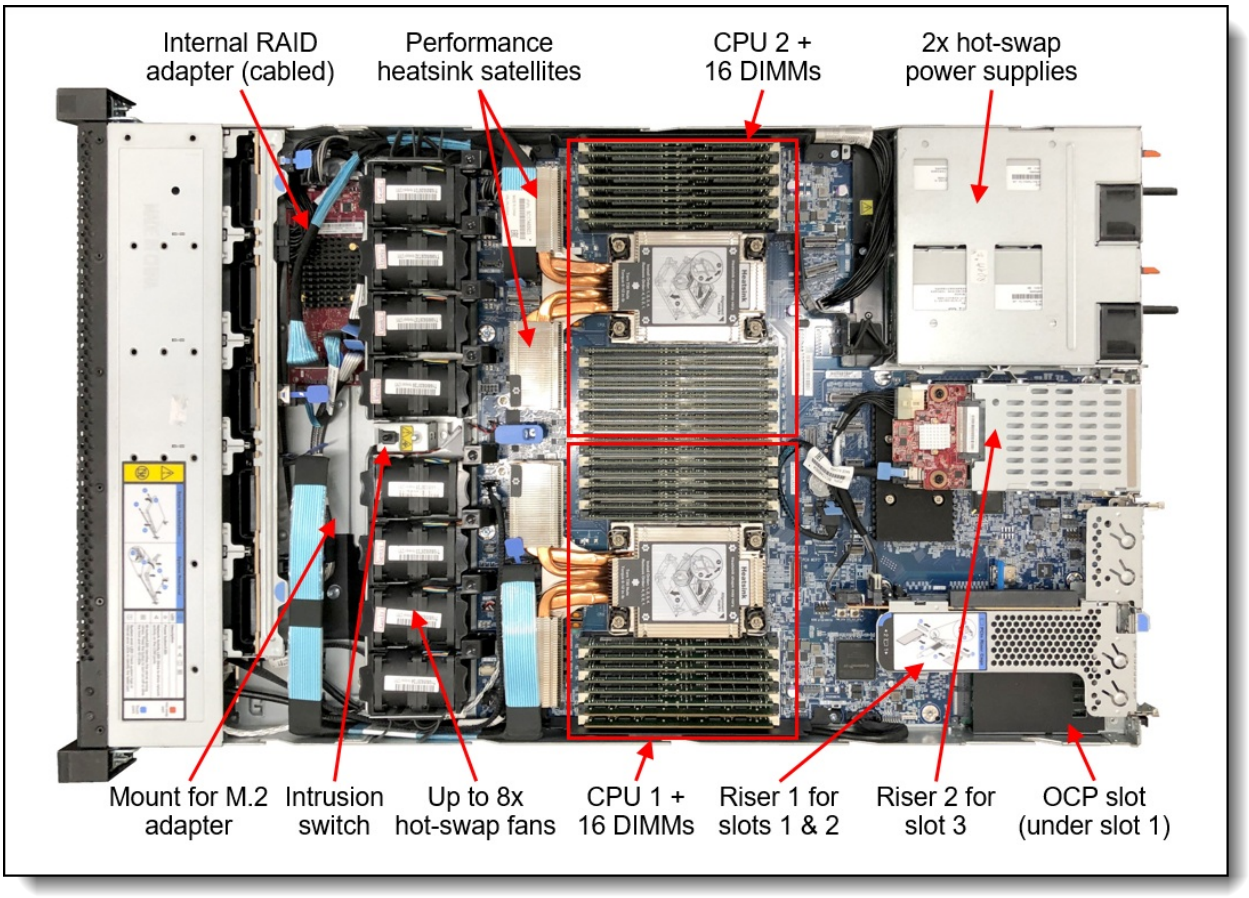

Figure 5. Internal view of the VX630 V3 systems

Standard specifications

The ThinkAgile VX630 V3 Integrated System and Certified Node are based on the ThinkSystem SR630 V3 server.

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

Table 1. Comparison of features

	VX630 V3 IS	**VX630 V3 CN**
VX offering type	Integrated System	Certified Node
Target workloads	SMB, ROBO, VDI	SMB, ROBO, VDI
Base MTM	7D6XCTO1WW	7D6XCTO2WW
Form Factor	1U	1U
Base platform	SR630 V3	SR630 V3
Max Cluster Size	64 Hosts	64 Hosts
CPU	1x or 2x Intel Xeon SP Gen 5 (Emerald Rapids) or Gen 4 (Sapphire Rapids)	1x or 2x Intel Xeon SP Gen 5 (Emerald Rapids) or Gen 4 (Sapphire Rapids)
Memory	32x DDR5 5600 MHz (8TB maximum)	32x DDR5 5600 MHz (8TB maximum)
Drive Bays	12x 2.5" 4x 3.5"	12x 2.5" 4x 3.5"
Drive configurations	All Flash Hybrid	All Flash Hybrid
Disk Groups	1 - 4	1 - 4
HBA	4350-xi 440-xi	4350-xi 440-xi
Boot drives	2x M.2 SATA 2x 7mm SATA or NVMe	2x M.2 SATA 2x 7mm SATA or NVMe
OCP networking	1x OCP 3.0 adapter 1Gb, 10Gb, 25Gb, 100Gb	1x OCP 3.0 adapter 1Gb, 10Gb, 25Gb, 100Gb
PCIe networking	Up to 3x adapters 10GBASE-T, 10Gb, 25Gb, 100Gb	Up to 3x adapters 10GBASE-T, 10Gb, 25Gb, 100Gb
GPUs	3x SW GPU up to 75W each 1x SW GPU up to 150W each	3x SW GPU up to 75W each 1x SW GPU up to 150W each
Hypervisor	ESXi 8.0 u2 (Factory Installed) ESXi 7.0 U3 (Factory Installed)	ESXi 8.0u2 (Factory Installed) ESXi 7.0 U3 (Factory Installed)

The following table lists the standard specifications.

Table 2. Standard specifications

Components	Specification
Machine types	7D6X - 3 year warranty
Form factor	1U rack.
Cluster Size	• With Lenovo ThinkAgile VX Series & VMware Cloud Foundation (VCF), you need a minimum of 4 nodes to create a management domain cluster. • With Lenovo ThinkAgile VX Series & VMware vSphere Foundation (VVF), you can create a vSAN cluster with a minimum 3 hosts* and a maximum of 64 hosts. Requires vSAN 7.0 and later releases. *Supports 2-node vSAN cluster deployment with a vSAN witness appliance deployed as a virtual machine or hardware appliance, typically in remote office/branch offices (ROBO) use cases and requires VMware vSphere Foundation (VVF) software license.
Processor	Supports one or two 5th generation Intel Xeon Scalable processor (formerly codenamed "Emerald Rapids") or 4th-generation Intel Xeon Scalable processor (formerly codenamed "Sapphire Rapids"). Supports up to 64 cores per 5th generation processor and up to 60 cores per 4th generation processor, core speeds of up to 3.9 GHz, and TDP ratings of up to 350 W.
Chipset	Intel C741 "Emmitsburg" chipset, part of the platform codenamed "Eagle Stream"
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 TruDDR5 RDIMMs, 9x4 RDIMMs, and 3DS RDIMMs are supported. DIMM slots are shared between standard system memory and persistent memory. DIMMs operate at up to 5600 MHz at 1 DPC and up to 4400 MHz at 2 DPC.
Memory maximum	With RDIMMs: Up to 8TB by using 32x 256GB 3DS RDIMMs
Memory protection	ECC, SDDC (for x4-based memory DIMMs), ADDDC (for x4-based memory DIMMs excluding 9x4 RDIMMs, requires Platinum or Gold processors), and memory mirroring.
Drive bays	Up to 4x 3.5-inch or 12x 2.5-inch hot-swap drive bays: • Front bays can be 3.5-inch (4 bays) or 2.5-inch (4, 6, 8,10 bays) • Rear can be 2.5-inch (2 bays) • Combinations of SAS/SATA, NVMe, or AnyBay (supporting SAS, SATA or NVMe) are available • Internal M.2 module supporting up to two M.2 drives, for OS boot and drive storage support **Note**: EDSFF drive bays are currently not supported.
Storage controller	• Up to 12x Onboard NVMe ports • NVMe Retimer Adapter • 12 Gb SAS/SATA non-RAID: 440-8i and 440-16i HBAs
Network interfaces	Dedicated OCP 3.0 SFF slot with PCIe 5.0 x16 host interface. Supports a variety of 2-port and 4-port adapters with 1GbE, 10GbE, 25GbE and 100GbE network connectivity. One port can optionally be shared with the XClarity Controller 2 (XCC2) management processor for Wake-on-LAN and NC-SI support.

Components	Specification
PCI Expansion slots	Up to 3x PCIe 5.0 slots, all with rear access, plus a slot dedicated to the OCP adapter. Slot availability is based on riser selection and rear drive bay selection. Slot 3 requires two processors. Four choices for rear-access slots: ● 3x PCIe 5.0 x16 low-profile slots ● 1x PCIe 5.0 x16 full-height half-length slot + 1x PCIe 4.0 x16 low-profile slot ● 1x PCIe 5.0 x16 low-profile slot (also supports 2x rear 2.5-inch drive bays) ● 2x PCIe 5.0 x16 low-profile slot (also supports 2x rear 7mm 2.5-inch drive bays) For 2.5-inch front drive configurations, the server supports the installation of a RAID adapter or HBA in a dedicated area that does not consume any of the PCIe slots.
GPU support	Supports up to 3x single-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: 2x USB 3.1 G1 (5 Gb/s) ports and 1x USB 2.0 port, 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). Optional second RJ-45 1GbE systems management port for XCC remote management (installed in OCP adapter slot). Internal: 1x USB 3.1 G1 connector for operating system or license key purposes
Cooling	Up to 8x N+1 redundant hot swap 40 mm fans, configuration dependent. 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. 750 W, 1100 W and 1800 W AC options, supporting 220 V AC. 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	Embedded graphics with 16 MB memory with 2D hardware accelerator, integrated into the XClarity Controller 2 management 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 2.5-inch front drive bays can optionally support an Integrated Diagnostics Panel. XClarity Controller 2 (XCC2) embedded management based on the ASPEED AST2600 baseboard management controller (BMC), XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management. Optional XCC Platinum to enable remote control functions and other features.
Security features	Chassis intrusion switch, Power-on password, administrator's password, Root of Trust module supporting TPM 2.0 and Platform Firmware Resiliency (PFR). Optional lockable front security bezel.

Components	Specification
Software	All ThinkAgile VX Series products (Integrated Systems and Certified Nodes) will support the following Primary Software Stack (3-year & 5-year terms) and Add-Ons. Primary Software 1. VMware Cloud Foundation 5 (VCF) 2. VMware vSphere Foundation 8 (VVF) Add-On Options (requires purchase of a Primary Software version) 1. VMware vSAN 8 (for capacity over TiB allocation from primary SKU) 2. VMware Live Recovery 3. VMware Firewall (requires VCF) 4. VMware Firewall with Advanced Threat Prevention (requires VCF) 5. VMware Avi Load Balancer 6. VMware Private AI Foundation (requires VCF)
Hypervisors	VMware ESXi. See Operating system support section for details.
Limited warranty	Three-year or one-year (model dependent) customer-replaceable unit and onsite limited warranty with 9x5 next business day (NBD).
Service and support	Optional service upgrades are available through Lenovo Services: 4-hour or 2-hour response time, 6-hour fix time, 1-year or 2-year warranty extension, software support for Lenovo hardware and some third-party applications.
Dimensions	Width: 440 mm (17.3 in.), height: 43 mm (1.7 in.), depth: 773 mm (30.4 in.).
Weight	Maximum: 26.3 kg (58 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 VX Series Integrated Systems 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 VX630 V3 Integrated System	7D6XCTO1WW	7D6XCTOAWW
ThinkAgile VX630 V3 Certified Node	7D6XCTO2WW	7D6XCTOBWW

Comparison with the ThinkSystem SR630 V3

The ThinkAgile VX630 V3 Integrated System and Certified Node are based on the ThinkSystem SR630 V3 server, however there are key differences:

- No onboard SATA controller support
- Persistent Memory not supported
- RAID adapter supported for boot only
- No SATA HDDs
- Encryption not supported on SED drives
- Fibre Channel support for use cases like data migration
- No InfiniBand support
- Drives are categorized as Cache or Capacity drives and are formed as disk groups (up to 5 disk groups for OSA configurations. ESA configurations only consist of a storage tier, no cache drives or disk groups required

For details about the ThinkSystem SR630 V3, see the SR630 V3 product guide:
https://lenovopress.com/lp1600-thinksystem-sr630-v3-server

To verify what specific hardware components are supported with the VX630 V3, see the DCSC configurator:
https://dcsc.lenovo.com

Processors

The VX630 V3 supports processors in either the 5th Gen Intel Xeon Scalable Processor family or the 4th Gen Intel Xeon Scalable Processor family.

Topics in this section:

5th Gen Intel Xeon Scalable processors

The VX630 V3 systems support the following processors. The systems support 1 or 2 processors installed.

For details about these options, including configuration rules, see the SR630 V3 product guide:
https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#processors

Table 4. Processor choices

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
None	BYVT	Intel Xeon Bronze 3508U 8C 125W 2.1GHz Processor	1	1
None	BYW3	Intel Xeon Silver 4509Y 8C 125W 2.6GHz Processor	2	2
None	BYW4	Intel Xeon Silver 4510 12C 150W 2.4GHz Processor	2	2
None	BYVS	Intel Xeon Silver 4510T 12C 115W 2.0GHz Processor	2	2
None	BYVP	Intel Xeon Silver 4514Y 16C 150W 2.0GHz Processor	2	2
None	BYW6	Intel Xeon Silver 4516Y+ 24C 185W 2.2GHz Processor	2	2
None	BYVU	Intel Xeon Gold 5512U 28C 185W 2.1GHz Processor	1	1
None	BYVW	Intel Xeon Gold 5515+ 8C 165W 3.2GHz Processor	2	2

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
None	BYW7	Intel Xeon Gold 5520+ 28C 205W 2.2GHz Processor	2	2
None	BYVX	Intel Xeon Gold 6526Y 16C 195W 2.8GHz Processor	2	2
None	BYWK	Intel Xeon Gold 6530 32C 270W 2.1GHz Processor	2	2
None	BYW0	Intel Xeon Gold 6534 8C 195W 3.9GHz Processor	2	2
None	BYVQ	Intel Xeon Gold 6538N 32C 205W 2.1GHz Processor	2	2
None	BYW8	Intel Xeon Gold 6538Y+ 32C 225W 2.2GHz Processor	2	2
None	BYVY	Intel Xeon Gold 6542Y 24C 250W 2.9GHz Processor	2	2
None	BYW1	Intel Xeon Gold 6544Y 16C 270W 3.6GHz Processor	2	2
None	BYVR	Intel Xeon Gold 6548N 32C 250W 2.8GHz Processor	2	2
None	BYVZ	Intel Xeon Gold 6548Y+ 32C 250W 2.5GHz Processor	2	2
None	BYW9	Intel Xeon Gold 6554S 36C 270W 2.2GHz Processor	2	2
None	BYVV	Intel Xeon Gold 6558Q 32C 350W 3.2GHz Processor	2	2
None	BYW5	Intel Xeon Platinum 8558 48C 330W 2.1GHz Processor	2	2
None	BYWA	Intel Xeon Platinum 8558P 48C 350W 2.7GHz Processor	2	2
None	BYWE	Intel Xeon Platinum 8558U 48C 300W 2.0GHz Processor	1	1
None	BYW2	Intel Xeon Platinum 8562Y+ 32C 300W 2.8GHz Processor	2	2
None	BYWF	Intel Xeon Platinum 8568Y+ 48C 350W 2.3GHz Processor	2	2
None	BYWG	Intel Xeon Platinum 8570 56C 350W 2.1GHz Processor	2	2
None	BYWD	Intel Xeon Platinum 8571N 52C 300W 2.4GHz Processor	1	1
None	BYWH	Intel Xeon Platinum 8580 60C 350W 2.0GHz Processor	2	2
None	BYWC	Intel Xeon Platinum 8581V 60C 270W 2.0GHz Processor	1	1
None	BYWJ	Intel Xeon Platinum 8592+ 64C 350W 1.9GHz Processor	2	2
None	BYWB	Intel Xeon Platinum 8592V 64C 330W 2.0GHz Processor	2	2

4th Gen Intel Xeon Scalable processors

The VX630 V3 systems support the following processors. The systems support 1 or 2 processors installed.

For details about these options, including configuration rules, see the SR630 V3 product guide: https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#processors

Table 5. Processor choices

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
None	BXHX	Intel Xeon 5423N 20C 145W 2.1GHz Processor	1	1
None	BXHY	Intel Xeon 5433N 20C 160W 2.3GHz Processor	1	1
None	BYQK	Intel Xeon 6403N 24C 185W 1.9GHz Processor	1	1
None	BYQH	Intel Xeon 6423N 28C 195W 2.0GHz Processor	1	1
None	BYQJ	Intel Xeon 6433N 32C 205W 2.0GHz Processor	1	1
None	BYQG	Intel Xeon 6443N 32C 195W 1.6GHz Processor	1	1
None	BQ68	Intel Xeon Bronze 3408U 8C 125W 1.8GHz Processor	1	1

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
None	BQ64	Intel Xeon Silver 4410T 10C 150W 2.7GHz Processor	2	2
None	BQ67	Intel Xeon Silver 4410Y 12C 150W 2.0GHz Processor	2	2
None	BQ69	Intel Xeon Silver 4416+ 20C 165W 2.0GHz Processor	2	2
None	BQ6J	Intel Xeon Gold 5411N 24C 165W 1.9GHz Processor	1	1
None	BQ63	Intel Xeon Gold 5415+ 8C 150W 2.9GHz Processor	2	2
None	BQ6L	Intel Xeon Gold 5416S 16C 150W 2.0GHz Processor	2	2
None	BQ6H	Intel Xeon Gold 5418N 24C 165W 1.8GHz Processor	2	2
None	BQ66	Intel Xeon Gold 5418Y 24C 185W 2.0GHz Processor	2	2
None	BQ65	Intel Xeon Gold 5420+ 28C 205W 2.0GHz Processor	2	2
None	BPPD	Intel Xeon Gold 6414U 32C 250W 2.0GHz Processor	1	1
None	BQ6C	Intel Xeon Gold 6416H 18C 165W 2.2GHz Processor	2	2
None	BQ6B	Intel Xeon Gold 6418H 24C 185W 2.1GHz Processor	2	2
None	BQ6G	Intel Xeon Gold 6421N 32C 185W 1.8GHz Processor	1	1
None	BPQF	Intel Xeon Gold 6426Y 16C 185W 2.5GHz Processor	2	2
None	BQ6F	Intel Xeon Gold 6428N 32C 185W 1.8GHz Processor	2	2
None	BPPC	Intel Xeon Gold 6430 32C 270W 2.1GHz Processor	2	2
None	BPQC	Intel Xeon Gold 6434 8C 195W 3.7GHz Processor	2	2
None	BQ6E	Intel Xeon Gold 6434H 8C 195W 3.7GHz Processor	2	2
None	BQ6K	Intel Xeon Gold 6438M 32C 205W 2.2GHz Processor	2	2
None	BQ6D	Intel Xeon Gold 6438N 32C 205W 2.0GHz Processor	2	2
None	BQ62	Intel Xeon Gold 6438Y+ 32C 205W 2.0GHz Processor	2	2
None	BPQE	Intel Xeon Gold 6442Y 24C 225W 2.6GHz Processor	2	2
None	BPQB	Intel Xeon Gold 6444Y 16C 270W 3.6GHz Processor	2	2
None	BQ6A	Intel Xeon Gold 6448H 32C 250W 2.4GHz Processor	2	2
None	BPQD	Intel Xeon Gold 6448Y 32C 225W 2.1GHz Processor	2	2
None	BPPM	Intel Xeon Gold 6454S 32C 270W 2.2GHz Processor	2	2
None	BPPH	Intel Xeon Platinum 8444H 16C 270W 2.9GHz Processor	2	2
None	BPPG	Intel Xeon Platinum 8450H 28C 250W 2.0GHz Processor	2	2
None	BPPB	Intel Xeon Platinum 8452Y 36C 300W 2.0GHz Processor	2	2
None	BPPF	Intel Xeon Platinum 8454H 32C 270W 2.1GHz Processor	2	2
None	BPPT	Intel Xeon Platinum 8458P 44C 350W 2.7GHz Processor	2	2
None	BPPN	Intel Xeon Platinum 8460H 40C 330W 2.2GHz Processor	2	2
None	BPPQ	Intel Xeon Platinum 8460Y+ 40C 300W 2.0GHz Processor	2	2
None	BPPK	Intel Xeon Platinum 8461V 48C 300W 2.2GHz Processor	1	1
None	BPQA	Intel Xeon Platinum 8462Y+ 32C 300W 2.8GHz Processor	2	2
None	BPPU	Intel Xeon Platinum 8468 48C 350W 2.1GHz Processor	2	2
None	BPPE	Intel Xeon Platinum 8468H 48C 330W 2.1GHz Processor	2	2
None	BPPP	Intel Xeon Platinum 8468V 48C 330W 2.4GHz Processor	2	2
None	BN0N	Intel Xeon Platinum 8470 52C 350W 2.0GHz Processor	2	2
None	BPPJ	Intel Xeon Platinum 8470N 52C 300W 1.7GHz Processor	2	2

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
None	BPPR	Intel Xeon Platinum 8471N 52C 300W 1.8GHz Processor	1	1
None	BN0M	Intel Xeon Platinum 8480+ 56C 350W 2.0GHz Processor	2	2
None	BPPS	Intel Xeon Platinum 8490H 60C 350W 1.9GHz Processor	2	2

Lenovo Processor Neptune Core Module - Open-loop liquid cooling

The VX630 V3 also supports advanced direct-water cooling (DWC) capability with the Lenovo Processor Neptune Core Module. This module implements a liquid cooling solution where heat from the processors is removed from the rack and the data center using an open loop and coolant distribution units.

With the Processor Neptune Core Module, all heat generated by the processors is removed from the server using water. This means that the server fans and data center air conditioning units only need to remove the heat generated by the other components. This results in lower air conditioning costs and it enables the use of slower fans which results in lower overall power consumption.

Typical power saving of 26% (up to 17.2KW per rack) are possible, based on 35x VX630 V3 servers in a rack (DC level PUE weighted) at 30°C ambient temperature. Power savings are configuration dependent.

The following figure shows the Lenovo Processor Neptune Core Module.

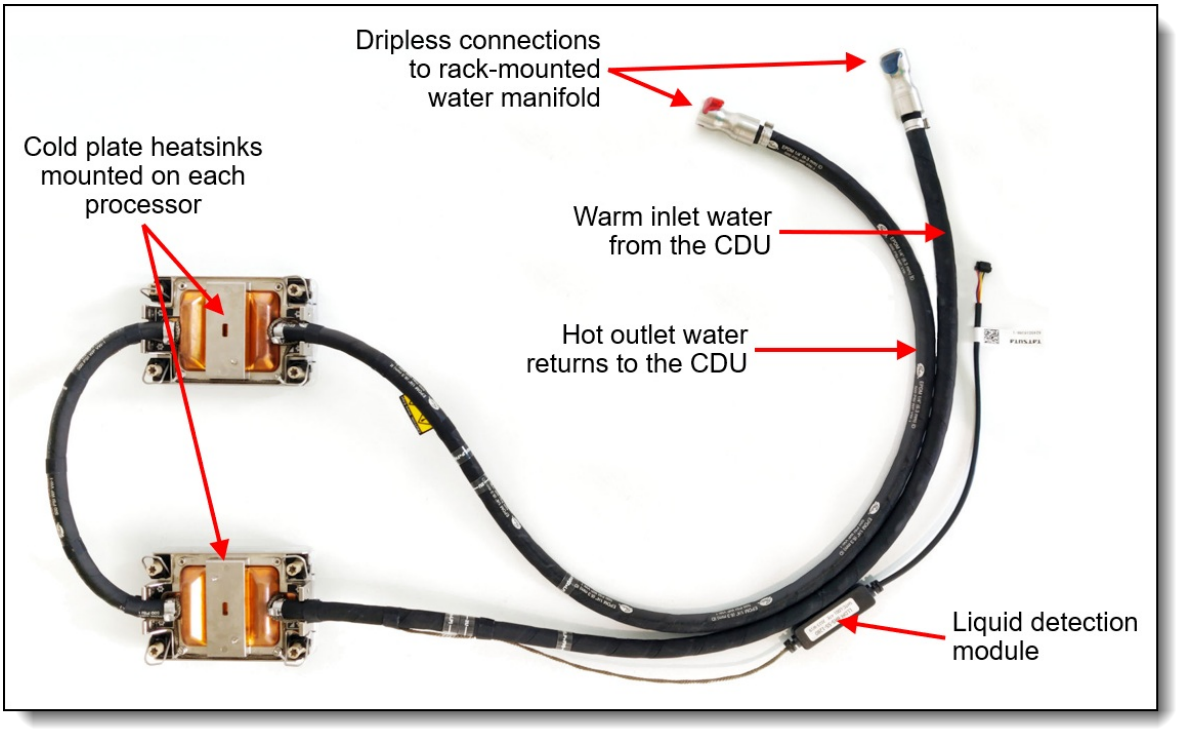

Figure 6. Lenovo Processor Neptune Core Module

The Processor Neptune Core Module also includes a leak detection module which can detect a leakage of more than 0.5ml (about 10 drops) along the length of the tube and then issue an event to the XClarity Controller. XCC will then post an error to the System Event Log and enable further actions. Once the liquid evaporates, a further event is issue to XCC.

The Processor Neptune Core Module is only available in CTO orders, not as a field upgrade. Ordering information is listed in the following table.

Table 6. Lenovo Processor Neptune Core Module

Part number	Feature code	Description
CTO only	BXBC*	ThinkSystem V3 1U/2U Neptune Processor Direct Water Cooling Solution

* In DCSC, this feature code is listed in the Processor tab

Configuration notes:

- The Processor Neptune Core Module requires water infrastructure be available in the rack cabinet and data center, as described in the Water infrastructure section.
- All processor SKUs are supported
- Either one or two CPUs are supported
- All front drive bay configurations are supported
- Slot 2 is not available for adapters - the water loop is routed through the space otherwise occupied by slot 2
- Only the following slot configurations are supported:
  - 2x Low profile x16 slots, in slot 1 and slot 3
  - 1x Low profile x16 slot in slot 1, and 2x 7mm drives in slot 3
- Rear 2.5-inch drive bays are not supported
- RAID flash power module (supercap) support is limited only to positions 1 (2.5-inch drives only) or position 3 (slot 3), as described in the RAID flash power module (supercap) support section. Location 2 on the air baffle is not supported.
- M.2 adapters are supported based on the configurations in the Storage configurations section
- Standard fans can be configured in most configurations
- The use of a cable management arm (CMA) is not supported

For more information, see the Thermal Rules page for the direct water cooling module:
https://pubs.lenovo.com/sr630-v3/thermal_rules#server-models-with-direct-water-cooling-module

Memory

5th Generation Memory options

The VX630 V3 systems support the following 5th generation memory options.

For details about these options, including configuration rules, see the SR630 V3 product guide: https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#memory-options

Table 7. Memory options

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
4X77A90991	BZ4U	ThinkSystem 32GB TruDDR5 Performance+ 5600MHz (2Rx8) RDIMM	32	32
4X77A90992	BZ4V	ThinkSystem 64GB TruDDR5 Performance+ 5600MHz (2Rx4) RDIMM	32	32
4X77A88049	BWHW	ThinkSystem 32GB TruDDR5 5600MHz (1Rx4) RDIMM	32	32
4X77A88052	BWHS	ThinkSystem 64GB TruDDR5 5600MHz (2Rx4) RDIMM	32	32
4X77A88639	BX8Y	ThinkSystem 48GB TruDDR5 5600MHz (1Rx4) RDIMM	32	32
4X77A88058	BWHV	ThinkSystem 96GB TruDDR5 5600MHz (2Rx4) RDIMM	32	32
4X77A93887	C4EA	ThinkSystem 128GB TruDDR5 5600MHz (2Rx4) RDIMM	32	32
4X77A88087	BWJE	ThinkSystem 16GB TruDDR5 5600MHz (1Rx8) RDIMM	32	32
4X77A88051	BWJC	ThinkSystem 32GB TruDDR5 5600MHz (2Rx8) RDIMM	32	32
4X77A88056	BWSL	ThinkSystem 24GB TruDDR5 5600MHz (1Rx8) RDIMM	32	32
4X77A88057	BWJD	ThinkSystem 48GB TruDDR5 5600MHz (2Rx8) RDIMM	32	32
3DS RDIMMs - 5600 MHz				
4X77A88054	BWHU	ThinkSystem 128GB TruDDR5 5600MHz (4Rx4) 3DS RDIMM	32	32

4th Generation Memory options

The VX630 V3 systems support the following 4th generation memory options.

For details about these options, including configuration rules, see the SR630 V3 product guide: https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#memory-options

Table 8. Memory options

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
RDIMMs				
4X77A77029	BKTL	ThinkSystem 16GB TruDDR5 4800MHz (1Rx8) RDIMM	32	32
4X77A87033	C1HB	ThinkSystem 48GB TruDDR5 4800MHz (2Rx8) RDIMM	32	32
4X77A77030	BNF6	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM	32	32
4X77A77483	BNW5	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 9x4 RDIMM	32	32
4X77A77031	BKTM	ThinkSystem 32GB TruDDR5 4800MHz (2Rx8) RDIMM	32	32
4X77A77032	BNF9	ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 10x4 RDIMM	32	32
4X77A77033	BKTN	ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 9x4 RDIMM	32	32
4X77A87034	BZC2	ThinkSystem 96GB TruDDR5 4800MHz (2Rx4) RDIMM	32	32
3DS RDIMMs				
4X77A77034	BNFC	ThinkSystem 128GB TruDDR5 4800MHz (4Rx4) 3DS RDIMM v2	32	32
CTO Only	BY8F	ThinkSystem 128GB TruDDR5 4800MHz (4Rx4) 3DS RDIMM v1	32	32
4X77A77035	BNF8	ThinkSystem 256GB TruDDR5 4800MHz (8Rx4) 3DS RDIMM v2	32	32

Disk Groups

The following table lists the supported Disk Groups for each VX system.

Table 9. Disk Groups

Drive Selection Rules	VX630 V3 IS	VX630 V3 CN
Model Type	Hybrid (HY) All Flash (AF)	Hybrid (HY) All Flash (AF)
Maximum number of drives	12	12
Number of Disk Groups	1-4	1 - 4
Number of Cache Drives per Disk Group	1	1
Number of Capacity Drives per Disk Group	2 - 7	2 - 7
Allowed Capacity Drive Quantities:		
1 Disk Group (1 Cache Drive)	2, 3, 4, 5, 6, or 7	2, 3, 4, 5, 6 or 7
2 Disk Groups (2 Cache Drives)	4, 6, 8 or 10	4, 6, 8 or 10
3 Disk Groups (3 Cache Drives)	6, 9	6, 9
4 Disk Groups (4 Cache Drives)	8	8

Internal storage

The VX630 V3 support 4x 3.5-inch or 12x 2.5-inch drive bays, depending on the selected chassis and backplane configuration.

- Front drive bays:
  - 12x 2.5-inch SAS/SATA hot-swap bays
  - 12x 2.5-inch NVMe hot-swap bays
- Rear drive bays
  - 4x 3.5-inch SAS/SATA hot-swap bays
  - 4x 3.5-inch NVMe hot-swap bays
  - Also supports 2x 7mm hot-swap drives bays

The server also supports two M.2 drives, installed in an M.2 adapter internal to the server for boot drives. These are an alternative to the 7mm hot-swap drives.

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

For details about these options, including configuration rules, see the SR630 V3 product guide: https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#internal-storage

Table 10. Drive backplanes

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
Front 3.5-inch drive backplanes				
None	B8L3	ThinkSystem 1U/2U 4x3.5" SAS/SATA Backplane	1	1
None	B8N1	ThinkSystem 1U 4x3.5" AnyBay Backplane	1	1
Front 2.5-inch drive backplanes				
None	BCGB	ThinkSystem 1U 4x2.5" SAS/SATA Backplane	1	1
None	BPC9	ThinkSystem 1U 4x 2.5" NVMe Gen 4 Backplane	1	1
None	B8N0	ThinkSystem 1U 8x2.5" SAS/SATA Backplane	1	1
None	BHU8	ThinkSystem 1U 10x2.5" SAS/SATA Backplane	1	1
None	B8MX	ThinkSystem 1U 10x2.5" (6x SAS/SATA 4x AnyBay) Backplane	1	1
None	BRQY	ThinkSystem 1U 2.5" 6 SAS/SATA 4 AnyBay Gen5 Backplane	1	1
None	BCQP	ThinkSystem 1U 10x2.5" (6x SAS/SATA 2x AnyBay 2x NVMe) Backplane	1	1
None	BU1W	ThinkSystem 1U 10x2.5" (6x SAS/SATA 2x AnyBay 2x NVMe) Gen5 Backplane	1	1
None	BB3T	ThinkSystem 1U 10x2.5" AnyBay Backplane	1	1
None	BLKC	ThinkSystem V3 1U 10x2.5" AnyBay Gen5 Backplane	1	1
None	BCQQ	ThinkSystem 1U 10x2.5" NVMe Backplane	1	1
None	BRQX	ThinkSystem 1U 2.5" 10 NVMe Gen5 Backplane	1	1
None	BT1N	ThinkSystem V3 1U 4x2.5" Gen5 NVMe Backplane	1	1
Rear - 2.5-inch drive backplanes				
None	BDY6	ThinkSystem 1U 2x2.5" NVMe Rear Backplane	1	1
None	B8MY	ThinkSystem 1U 2x2.5" SAS/SATA Rear Backplane	1	1

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 SR630 V3 product guide:
https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#internal-storage

Table 11. Boot Drive Enablement

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
M.2 enablement kits				
4Y37A09750	B8P9	ThinkSystem M.2 NVMe 2-Bay RAID Adapter	1	1
4Y37A90063	BYFF	ThinkSystem M.2 RAID B540i-2i SATA/NVMe Adapter	1	1
7mm enablement kits				
4XH7A61058	B8Q2	ThinkSystem 1U 7mm Drive Kit w/ NVMe RAID	1	1
4Y37A90062	BYFG	ThinkSystem 7mm SATA/NVMe 2-Bay Rear Hot-Swap RAID Enablement Kit	1	1

Controllers for internal storage

The VX630 V3 support the following storage controller options.

For details about these options, including configuration rules, see the SR630 V3 product guide:
https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#controllers-for-internal-storage

Table 12. Controllers for internal storage

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
SAS/SATA HBA - PCIe 4.0				
4Y37A78602	BM50	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA	1	1
4Y37A78601	BM51	ThinkSystem 440-8i SAS/SATA PCIe Gen4 12Gb HBA	1	1
4Y37A09725	B8P1	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb Internal HBA	1	1
SAS/SATA HBA - PCIe 3.0				
4Y37A72481	BJHJ	ThinkSystem 4350-16i SAS/SATA 12Gb HBA	1	1
4Y37A72480	BJHH	ThinkSystem 4350-8i SAS/SATA 12Gb HBA	1	1
NVMe adapters				
4C57A65446	B98C	ThinkSystem 4-Port PCIe Gen4 NVMe Retimer Adapter	1	1
4TA7A84579	BLKY	ThinkSystem PCIe Gen5 NVMe Retimer Adapter	1	1

Internal drive options

This section lists the supported drives:

- Boot drives
- Internal drives for VX630 V3 Integrated System
- Internal drives for VX630 V3 Certified Node

Configuration Note:

- VMware will no longer support higher capacity hard drives greater than 8TB
- Express Storage Architecture (ESA) supports a minimum of 2 drives and a maximum of 24 drives. Please reference the vSAN ESA ReadyNode Hardware Guidance for additional requirements.
- VMware vSAN certification for Generic NVMe drives: The drives are listed in the VMware Compatibility Guide (VCG) under the drive vendor company name instead of Lenovo. To check a drive for vSAN certification, search the VCG using the Supplier part number. Part numbers can be found using the Product Guide for the corresponding Drive Family on Lenovo Press https://lenovopress.lenovo.com/servers/options/drives#sort=last_update.

Boot drives

The VX630 V3 systems support the following drive for boot functions.

Table 13. Boot drives

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
7mm 6 Gb SATA SSDs				
4XB7A82264	BQ1U	ThinkSystem 7mm 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A82265	BQ1V	ThinkSystem 7mm 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A82266	BQ1W	ThinkSystem 7mm 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A17106	BK79	ThinkSystem 7mm S4520 240GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A17107	BK7A	ThinkSystem 7mm S4520 480GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A17108	BK7B	ThinkSystem 7mm S4520 960GB Read Intensive SATA 6Gb HS SSD	2	2
7mm PCIe 4.0 NVMe Drives				
4XB7A82853	BPZ4	ThinkSystem 7mm U.3 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	2	2
4XB7A82855	BPZ5	ThinkSystem 7mm U.3 7450 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	2	2
4XB7A82856	BPZ6	ThinkSystem 7mm U.3 7450 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	2	2
M.2 6 Gb SATA SSDs				
4XB7A82286	BQ1Z	ThinkSystem M.2 5400 PRO 240GB Read Intensive SATA 6Gb NHS SSD	2	2
4XB7A82287	BQ1Y	ThinkSystem M.2 5400 PRO 480GB Read Intensive SATA 6Gb NHS SSD	2	2
4XB7A82288	BQ20	ThinkSystem M.2 5400 PRO 960GB Read Intensive SATA 6Gb NHS SSD	2	2
4XB7A89422	BYF7	ThinkSystem M.2 ER3 240GB Read Intensive SATA 6Gb NHS SSD	2	2
4XB7A90049	BYF8	ThinkSystem M.2 ER3 480GB Read Intensive SATA 6Gb NHS SSD	2	2
4XB7A90230	BYF9	ThinkSystem M.2 ER3 960GB Read Intensive SATA 6Gb NHS SSD	2	2
M.2 PCIe 4.0 NVMe Drives				
4XB7A13999	BKSR	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2	2
4XB7A90102	BXMH	ThinkSystem M.2 PM9A3 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2	2

Internal drives for VX630 V3 Integrated System

The following table lists the drives supported in the VX630 V3 Integrated System. For both All Flash Storage and Hybrid Storage configurations, drives are classified as either Cache drives, Capacity drives, or both.

Table 14. Drives supported in the VX630 V3 Integrated System

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
2.5-inch hot-swap 12 Gb SAS HDDs							
7XB7A00027	AUM1	ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD	No	No	No	No	12
7XB7A00028	AUM2	ThinkSystem 2.5" 1.8TB 10K SAS 12Gb Hot Swap 512e HDD	No	No	No	No	12
4XB7A83970	BRG7	ThinkSystem 2.5" 2.4TB 10K SAS 12Gb Hot Swap 512e HDD v2	No	No	No	No	12
2.5-inch hot-swap 24 Gb SAS SSDs							
4XB7A80318	BNWC	ThinkSystem 2.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80319	BNWE	ThinkSystem 2.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80320	BNWF	ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80321	BP3E	ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80322	BP3J	ThinkSystem 2.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80323	BP3D	ThinkSystem 2.5" PM1653 30.72TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80340	BNW8	ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
4XB7A80341	BNW9	ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
4XB7A80342	BNW6	ThinkSystem 2.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
4XB7A80343	BP3K	ThinkSystem 2.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
2.5-inch hot-swap 6 Gb SAS SSDs							
4XB7A82258	BQ1Q	ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82259	BQ1P	ThinkSystem 2.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82260	BQ1R	ThinkSystem 2.5" 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82261	BQ1X	ThinkSystem 2.5" 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82262	BQ1S	ThinkSystem 2.5" 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82263	BQ1T	ThinkSystem 2.5" 5400 PRO 7.68TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17101	BA7G	ThinkSystem 2.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A17102	BA7H	ThinkSystem 2.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17103	BA7J	ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17104	BK77	ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17105	BK78	ThinkSystem 2.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82289	BQ21	ThinkSystem 2.5" 5400 MAX 480GB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A82290	BQ24	ThinkSystem 2.5" 5400 MAX 960GB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A82291	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A82292	BQ23	ThinkSystem 2.5" 5400 MAX 3.84TB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A17125	BA7Q	ThinkSystem 2.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
4XB7A17126	BA4T	ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
4XB7A17127	BA4U	ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
4XB7A17128	BK7L	ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
2.5-inch hot-swap PCIe 5.0 NVMe SSDs							
4XB7A93480	C0BB	ThinkSystem 2.5" U.2 CD8P 1.92TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93481	C0BA	ThinkSystem 2.5" U.2 CD8P 3.84TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93482	C0B9	ThinkSystem 2.5" U.2 CD8P 7.68TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93483	C0B8	ThinkSystem 2.5" U.2 CD8P 15.36TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93888	C0ZM	ThinkSystem 2.5" U.2 CD8P 1.6TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	12	12	12	No
4XB7A93889	C0ZL	ThinkSystem 2.5" U.2 CD8P 3.2TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	12	12	12	No
4XB7A93890	C0ZK	ThinkSystem 2.5" U.2 CD8P 6.4TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	12	12	12	No
4XB7A93891	C0ZJ	ThinkSystem 2.5" U.2 CD8P 12.8TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
2.5-inch hot-swap PCIe 4.0 NVMe SSDs							
4XB7A13941	BMGD	ThinkSystem 2.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A13943	BNEF	ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A13631	BNEQ	ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01867	C6MA	ThinkSystem 2.5" U.2 Solidigm P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01868	C6MB	ThinkSystem 2.5" U.2 Solidigm P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01869	C6MC	ThinkSystem 2.5" U.2 Solidigm P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01870	C7NZ	ThinkSystem 2.5" U.2 Solidigm P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A17129	BNEG	ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7A17133	BNEZ	ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7A17136	BA4V	ThinkSystem 2.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01879	C6M2	ThinkSystem 2.5" U.2 Solidigm P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7B01880	C6M3	ThinkSystem 2.5" U.2 Solidigm P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7B01881	C6M4	ThinkSystem 2.5" U.2 Solidigm P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7B01882	C6M5	ThinkSystem 2.5" U.2 Solidigm P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A17158	BKKY	ThinkSystem 2.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No
4XB7A17159	BKKZ	ThinkSystem 2.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A17160	BMM8	ThinkSystem 2.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No
4XB7A79646	BNF3	ThinkSystem 2.5" U.3 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	12	No	No
4XB7A95050	C2BR	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A95051	C2BS	ThinkSystem 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A95052	C2BT	ThinkSystem 2.5" U.3 7500 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A95053	C2BU	ThinkSystem 2.5" U.3 7500 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A79639	BNF1	ThinkSystem 2.5" U.3 7450 MAX 800GB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No
4XB7A95055	C2BV	ThinkSystem 2.5" U.3 7500 MAX 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	No	No
4XB7A95056	C2BW	ThinkSystem 2.5" U.3 7500 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	No	No
4XB7A95057	C2BF	ThinkSystem 2.5" U.3 7500 MAX 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	No	No
4XB7A95058	C2BX	ThinkSystem 2.5" U.3 7500 MAX 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
3.5-inch hot-swap 12 Gb SAS HDDs							
7XB7A00042	AUU5	ThinkSystem 3.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	No	No	No	4
7XB7A00043	AUU6	ThinkSystem 3.5" 4TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	No	No	No	4
7XB7A00044	AUU7	ThinkSystem 3.5" 6TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	No	No	No	4
7XB7A00045	B0YR	ThinkSystem 3.5" 8TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	No	No	No	4
3.5-inch hot-swap 24 Gb SAS SSDs							
4XB7A80324	BNWD	ThinkSystem 3.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80325	BNWG	ThinkSystem 3.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80326	BNWH	ThinkSystem 3.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80327	BP3F	ThinkSystem 3.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A80328	BP3H	ThinkSystem 3.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80345	BNWA	ThinkSystem 3.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	No	4	4	4	No
4XB7A80346	BNWB	ThinkSystem 3.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	No	4	4	4	No
4XB7A80347	BP3G	ThinkSystem 3.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	No	4	4	4	No
3.5-inch hot-swap 6 Gb SAS SSDs							
4XB7A17118	BA7K	ThinkSystem 3.5" S4520 240GB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17119	BA7L	ThinkSystem 3.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17120	BA7M	ThinkSystem 3.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17121	BA7N	ThinkSystem 3.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17122	BK7F	ThinkSystem 3.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17123	BK7G	ThinkSystem 3.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17137	BA4W	ThinkSystem 3.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
4XB7A17138	BA4X	ThinkSystem 3.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
4XB7A17139	BA4Y	ThinkSystem 3.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
4XB7A17140	BK7P	ThinkSystem 3.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
3.5-inch hot-swap PCIe 4.0 NVMe SSDs							
4XB7A13632	BNES	ThinkSystem 3.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A76778	BNEU	ThinkSystem 3.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A76779	BNF0	ThinkSystem 3.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7B01871	C6MD	ThinkSystem 3.5" U.2 Solidigm P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7B01872	C6ME	ThinkSystem 3.5" U.2 Solidigm P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7B01873	C6MF	ThinkSystem 3.5" U.2 Solidigm P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A17141	BNEK	ThinkSystem 3.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7A17144	BNEN	ThinkSystem 3.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7A17148	BNEP	ThinkSystem 3.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7B01883	C6M6	ThinkSystem 3.5" U.2 Solidigm P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7B01884	C6M7	ThinkSystem 3.5" U.2 Solidigm P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7B01885	C6M8	ThinkSystem 3.5" U.2 Solidigm P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7B01886	C6M9	ThinkSystem 3.5" U.2 Solidigm P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A17161	BMM7	ThinkSystem 3.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7A17162	BMM5	ThinkSystem 3.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7A77070	BMM6	ThinkSystem 3.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No

Internal drives for VX630 V3 Certified Node

The following table lists the drives supported in the VX630 V3 Certified Node. For both All Flash Storage and Hybrid Storage configurations, drives are classified as either Cache drives, Capacity drives, or both.

Table 15. Drives supported in the VX630 V3 Certified Node

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
2.5-inch hot-swap 12 Gb SAS HDDs							
7XB7A00027	AUM1	ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD	No	No	No	No	12
7XB7A00028	AUM2	ThinkSystem 2.5" 1.8TB 10K SAS 12Gb Hot Swap 512e HDD	No	No	No	No	12

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A83970	BRG7	ThinkSystem 2.5" 2.4TB 10K SAS 12Gb Hot Swap 512e HDD v2	No	No	No	No	12
2.5-inch hot-swap 24 Gb SAS SSDs							
4XB7A80318	BNWC	ThinkSystem 2.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80319	BNWE	ThinkSystem 2.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80320	BNWF	ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80321	BP3E	ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80322	BP3J	ThinkSystem 2.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80323	BP3D	ThinkSystem 2.5" PM1653 30.72TB Read Intensive SAS 24Gb HS SSD	No	No	12	No	No
4XB7A80340	BNW8	ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
4XB7A80341	BNW9	ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
4XB7A80342	BNW6	ThinkSystem 2.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
4XB7A80343	BP3K	ThinkSystem 2.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	No	12	12	12	No
2.5-inch hot-swap 6 Gb SAS SSDs							
4XB7A82258	BQ1Q	ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82259	BQ1P	ThinkSystem 2.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82260	BQ1R	ThinkSystem 2.5" 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82261	BQ1X	ThinkSystem 2.5" 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82262	BQ1S	ThinkSystem 2.5" 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82263	BQ1T	ThinkSystem 2.5" 5400 PRO 7.68TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17101	BA7G	ThinkSystem 2.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17102	BA7H	ThinkSystem 2.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17103	BA7J	ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A17104	BK77	ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A17105	BK78	ThinkSystem 2.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	No	12	No	No
4XB7A82289	BQ21	ThinkSystem 2.5" 5400 MAX 480GB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A82290	BQ24	ThinkSystem 2.5" 5400 MAX 960GB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A82291	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A82292	BQ23	ThinkSystem 2.5" 5400 MAX 3.84TB Mixed Use SATA 6Gb HS SSD	No	No	12	12	No
4XB7A17125	BA7Q	ThinkSystem 2.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
4XB7A17126	BA4T	ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
4XB7A17127	BA4U	ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
4XB7A17128	BK7L	ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	No	12	12	12	No
2.5-inch hot-swap PCIe 5.0 NVMe SSDs							
4XB7A93480	C0BB	ThinkSystem 2.5" U.2 CD8P 1.92TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93481	C0BA	ThinkSystem 2.5" U.2 CD8P 3.84TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93482	C0B9	ThinkSystem 2.5" U.2 CD8P 7.68TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93483	C0B8	ThinkSystem 2.5" U.2 CD8P 15.36TB Read Intensive NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
4XB7A93888	C0ZM	ThinkSystem 2.5" U.2 CD8P 1.6TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	12	12	12	No
4XB7A93889	C0ZL	ThinkSystem 2.5" U.2 CD8P 3.2TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	12	12	12	No
4XB7A93890	C0ZK	ThinkSystem 2.5" U.2 CD8P 6.4TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	12	12	12	No
4XB7A93891	C0ZJ	ThinkSystem 2.5" U.2 CD8P 12.8TB Mixed Use NVMe PCIe 5.0 x4 HS SSD	12	No	12	No	No
2.5-inch hot-swap PCIe 4.0 NVMe SSDs							
4XB7A13941	BMGD	ThinkSystem 2.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A13943	BNEF	ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A13631	BNEQ	ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01867	C6MA	ThinkSystem 2.5" U.2 Solidigm P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01868	C6MB	ThinkSystem 2.5" U.2 Solidigm P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01869	C6MC	ThinkSystem 2.5" U.2 Solidigm P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01870	C7NZ	ThinkSystem 2.5" U.2 Solidigm P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A17129	BNEG	ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7A17133	BNEZ	ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7A17136	BA4V	ThinkSystem 2.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7B01879	C6M2	ThinkSystem 2.5" U.2 Solidigm P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7B01880	C6M3	ThinkSystem 2.5" U.2 Solidigm P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7B01881	C6M4	ThinkSystem 2.5" U.2 Solidigm P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	12	No
4XB7B01882	C6M5	ThinkSystem 2.5" U.2 Solidigm P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A17158	BKKY	ThinkSystem 2.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No
4XB7A17159	BKKZ	ThinkSystem 2.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No
4XB7A17160	BMM8	ThinkSystem 2.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No
4XB7A79646	BNF3	ThinkSystem 2.5" U.3 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	12	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A95050	C2BR	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A95051	C2BS	ThinkSystem 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A95052	C2BT	ThinkSystem 2.5" U.3 7500 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A95053	C2BU	ThinkSystem 2.5" U.3 7500 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
4XB7A79639	BNF1	ThinkSystem 2.5" U.3 7450 MAX 800GB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	12	12	No	No
4XB7A95055	C2BV	ThinkSystem 2.5" U.3 7500 MAX 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	No	No
4XB7A95056	C2BW	ThinkSystem 2.5" U.3 7500 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	No	No
4XB7A95057	C2BF	ThinkSystem 2.5" U.3 7500 MAX 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	12	No	No
4XB7A95058	C2BX	ThinkSystem 2.5" U.3 7500 MAX 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	No	12	No	No
3.5-inch hot-swap 12 Gb SAS HDDs							
7XB7A00042	AUU5	ThinkSystem 3.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	No	No	No	4
7XB7A00043	AUU6	ThinkSystem 3.5" 4TB 7.2K SAS 12Gb Hot Swap 512n HDD	No	No	No	No	4
7XB7A00044	AUU7	ThinkSystem 3.5" 6TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	No	No	No	4
7XB7A00045	B0YR	ThinkSystem 3.5" 8TB 7.2K SAS 12Gb Hot Swap 512e HDD	No	No	No	No	4
3.5-inch hot-swap 24 Gb SAS SSDs							
4XB7A80324	BNWD	ThinkSystem 3.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80325	BNWG	ThinkSystem 3.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80326	BNWH	ThinkSystem 3.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80327	BP3F	ThinkSystem 3.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80328	BP3H	ThinkSystem 3.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	No	4	No	No
4XB7A80345	BNWA	ThinkSystem 3.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	No	4	4	4	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A80346	BNWB	ThinkSystem 3.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	No	4	4	4	No
4XB7A80347	BP3G	ThinkSystem 3.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	No	4	4	4	No
3.5-inch hot-swap 6 Gb SAS SSDs							
4XB7A17118	BA7K	ThinkSystem 3.5" S4520 240GB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17119	BA7L	ThinkSystem 3.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17120	BA7M	ThinkSystem 3.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17121	BA7N	ThinkSystem 3.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17122	BK7F	ThinkSystem 3.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17123	BK7G	ThinkSystem 3.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	No	4	No	No
4XB7A17137	BA4W	ThinkSystem 3.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
4XB7A17138	BA4X	ThinkSystem 3.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
4XB7A17139	BA4Y	ThinkSystem 3.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
4XB7A17140	BK7P	ThinkSystem 3.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	No	4	4	4	No
3.5-inch hot-swap PCIe 4.0 NVMe SSDs							
4XB7A13632	BNES	ThinkSystem 3.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A76778	BNEU	ThinkSystem 3.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A76779	BNF0	ThinkSystem 3.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7B01871	C6MD	ThinkSystem 3.5" U.2 Solidigm P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7B01872	C6ME	ThinkSystem 3.5" U.2 Solidigm P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7B01873	C6MF	ThinkSystem 3.5" U.2 Solidigm P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A17141	BNEK	ThinkSystem 3.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No

Part number	Feature	Description	All Flash	All Flash		Hybrid	
			ESA	Cache	Capacity	Cache	Capacity
4XB7A17144	BNEN	ThinkSystem 3.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7A17148	BNEP	ThinkSystem 3.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7B01883	C6M6	ThinkSystem 3.5" U.2 Solidigm P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7B01884	C6M7	ThinkSystem 3.5" U.2 Solidigm P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7B01885	C6M8	ThinkSystem 3.5" U.2 Solidigm P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7B01886	C6M9	ThinkSystem 3.5" U.2 Solidigm P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	No	No	4	No	No
4XB7A17161	BMM7	ThinkSystem 3.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7A17162	BMM5	ThinkSystem 3.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No
4XB7A77070	BMM6	ThinkSystem 3.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	No	4	4	No	No

Network adapters

The VX630 V3 systems support the following networking options.

For details about these options, including configuration rules, see the SR630 V3 product guide:
https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#i-o-expansion
https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#network-adapters

Table 16. OCP network adapters

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
Gigabit Ethernet				
4XC7A88428	BW97	ThinkSystem Intel I350 1GbE RJ45 4-Port OCP Ethernet Adapter V2	1	1
4XC7A08235	B5T1	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter	1	1
4XC7A08277	B93E	ThinkSystem Intel I350 1GbE RJ45 4-port OCP Ethernet Adapter	1	1
10 Gb Ethernet				
4XC7A08236	B5ST	ThinkSystem Broadcom 57416 10GBASE-T 2-port OCP Ethernet Adapter	1	1
4XC7A08240	B5T4	ThinkSystem Broadcom 57454 10GBASE-T 4-port OCP Ethernet Adapter	1	1
4XC7A08278	BCD5	ThinkSystem Intel X710-T2L 10GBASE-T 2-port OCP Ethernet Adapter	1	1
4XC7A80268	BPPY	ThinkSystem Intel X710-T4L 10GBase-T 4-Port OCP Ethernet Adapter	1	1
25 Gb Ethernet				
4XC7A08237	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1
4XC7A62582	BE4T	ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1
4XC7A80567	BPPW	ThinkSystem Broadcom 57504 10/25GbE SFP28 4-Port OCP Ethernet Adapter	1	1
4XC7A08294	BCD4	ThinkSystem Intel E810-DA2 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1
4XC7A80269	BP8L	ThinkSystem Intel E810-DA4 10/25GbE SFP28 4-Port OCP Ethernet Adapter	1	1
100 Gb Ethernet				
4XC7A08243	BPPX	ThinkSystem Broadcom 57508 100GbE QSFP56 2-Port OCP Ethernet Adapter	1	1

Table 17. PCIe network adapters

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
Gigabit Ethernet				
7ZT7A00535	AUZW	ThinkSystem I350-T4 PCIe 1Gb 4-Port RJ45 Ethernet Adapter	3	3
7ZT7A00484	AUZV	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	3	3
10GBASE-T Ethernet				
4XC7A80266	BNWL	ThinkSystem Intel X710-T2L 10GBase-T 2-Port PCIe Ethernet Adapter	3	3
4XC7A79699	BMXB	ThinkSystem Intel X710-T4L 10GBase-T 4-Port PCIe Ethernet Adapter	3	3
7ZT7A00496	AUKP	ThinkSystem Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter	3	3
4XC7A08245	B5SU	ThinkSystem Broadcom 57454 10GBASE-T 4-port PCIe Ethernet Adapter	3	3
25 Gb Ethernet				
4XC7A80566	BNWM	ThinkSystem Broadcom 57504 10/25GbE SFP28 4-Port PCIe Ethernet Adapter	1	1
4XC7A08238	BK1H	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	3	3
4XC7A08295	BCD6	ThinkSystem Intel E810-DA2 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	3	3
4XC7A80267	BP8M	ThinkSystem Intel E810-DA4 10/25GbE SFP28 4-Port PCIe Ethernet Adapter	3	3
4XC7A62580	BE4U	ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	3	3
100 Gb Ethernet				
4XC7A08248	B8PP	ThinkSystem Mellanox ConnectX-6 Dx 100GbE QSFP56 2-port PCIe Ethernet Adapter	3	3
4XC7A08297	BK1J	ThinkSystem Broadcom 57508 100GbE QSFP56 2-port PCIe 4 Ethernet Adapter	3	3
4C57A14177	B4R9	ThinkSystem Mellanox ConnectX-6 HDR100/100GbE QSFP56 1-port PCIe VPI Adapter	3	3
4C57A14178	B4RA	ThinkSystem Mellanox ConnectX-6 HDR100/100GbE QSFP56 2-port PCIe VPI Adapter	3	3
200 Gb Ethernet				
4C57A15326	B4RC	ThinkSystem Mellanox ConnectX-6 HDR/200GbE QSFP56 1-port PCIe 4 VPI Adapter	3	3
200 Gb Ethernet / NDR InfiniBand				
4XC7A81883	BQBN	ThinkSystem Nvidia ConnectX-7 NDR200/HDR QSFP112 2-Port PCIe Gen5 x16 InfiniBand Adapter	3	3
400 Gb / NDR InfiniBand				
4XC7A80289	BQ1N	ThinkSystem NVIDIA ConnectX-7 NDR400 OSFP 1-Port PCIe Gen5 Adapter	3	3

GPU adapters

The VX630 V3 systems support the following GPU options.

For details about these options, including configuration rules, see the SR630 V3 product guide: https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#gpu-adapters

Table 18. GPU adapters

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
4X67A81547	BQZT	ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU w/o CEC	3	3
4X67A84824	BS2C	ThinkSystem NVIDIA L4 24GB PCIe Gen4 Passive GPU	3	3

Fibre Channel host bus adapters

Table 19. Fibre Channel host bus adapters

Part number	Feature	Description	Maximum supported	
			VX630 V3 IS	VX630 V3 CN
64 Gb Fibre Channel HBAs				
4XC7A77485	BLC1	ThinkSystem Emulex LPe36002 64Gb 2-port PCIe Fibre Channel Adapter	3	3
32 Gb Fibre Channel HBAs				
4XC7A76498	BJ3G	ThinkSystem Emulex LPe35000 32Gb 1-port PCIe Fibre Channel Adapter v2	3	3
4XC7A76525	BJ3H	ThinkSystem Emulex LPe35002 32Gb 2-port PCIe Fibre Channel Adapter V2	3	3
4XC7A08279	BA1G	ThinkSystem QLogic QLE2770 32Gb 1-Port PCIe Fibre Channel Adapter	3	3
4XC7A08276	BA1F	ThinkSystem QLogic QLE2772 32Gb 2-Port PCIe Fibre Channel Adapter	3	3
16 Gb Fibre Channel HBAs				
01CV840	ATZV	Emulex 16Gb Gen6 FC Dual-port HBA	3	3
01CV830	ATZU	Emulex 16Gb Gen6 FC Single-port HBA	3	3
01CV760	ATZC	QLogic 16Gb Enhanced Gen5 FC Dual-port HBA	3	3
01CV750	ATZB	QLogic 16Gb Enhanced Gen5 FC Single-port HBA	3	3

Operating system support

The ThinkAgile VX630 V3 Integrated System supports the following operating systems:

- ESXi 7.0u3 (Factory Installed)
- ESXi 8.0u1 (Factory Installed)
- ESXi 8.0u3 (Factory Installed)

The ThinkAgile VX630 V3 Certified Node supports the following operating systems:

- ESXi 7.0u3 (Factory Installed)
- ESXi 8.0u1 (Factory Installed)
- ESXi 8.0u2 (Factory Installed)
- ESXi 8.0u3 (Factory Installed)

Configuration Note:

VMware vSAN certification for Generic NVMe drives: The drives are listed in the VMware Compatibility Guide (VCG) under the drive vendor company name instead of Lenovo. To check a drive for vSAN certification, search the VCG using the Supplier part number. Part numbers can be found using the Product Guide for the corresponding Drive Family on Lenovo Press https://lenovopress.lenovo.com/servers/options/drives#sort=last_update.

For further details, including any restrictions, see the OS Interoperability Guide: https://lenovopress.lenovo.com/osig#term=vx&support=all

Software

ThinkAgile VX Series offerings are available with the VMware Cloud Foundation (VCF) and VMware vSphere Foundation (VVF) primary software stack options. Licenses can be purchased through flexible term subscription-based models with 3-year or 5-year durations. In addition to the primary stack options, advanced service add-on options are available for features like vSAN additional capacity, Live Recovery, Firewall with Advanced Threat Prevention, Avi Load Balancer and Private AI Foundation.

Customers who have purchased VMware Licenses directly from Broadcom or an approved distributor have the flexibility to choose “Customer has VMware by Broadcom Software License” in their DCSC configuration.

Lenovo offers the following VMware software license and support options for ThinkAgile VX Series systems:

- Primary Software
    1. VMware Cloud Foundation (VCF)
    2. VMware vSphere Foundation (VVF)
- Add-On Options (requires purchase of a Primary Software version)
    1. VMware vSAN (for capacity over TiB allocation from primary SKU)
    2. VMware Live Recovery
    3. VMware vDefend Firewall Bundle (requires VCF)
    4. VMware vDefend Firewall with Advanced Threat Prevention Bundle (requires VCF)
    5. VMware Avi Load Balancer
    6. VMware Private AI Foundation (requires VCF)

For details and ordering information, see the VMware Software Solution Product Guide: https://lenovopress.com/lp1265-vmware-software-solution-product-guide

Configuration notes:

- VMware software licenses that are available for selection include 3-year, or 5-year software support (matches the duration of the selected solution-level warranty period).
- The quantity of processor core count-based licenses is derived by the configuration tool based on the number of processors selected.
- The quantity of VM-based licenses is specified based on VM requirements.

ThinkAgile VX Deployer Tool

The ThinkAgile VX Deployer tool is a web-based UI tool used to simplify and automate the deployment of Lenovo ThinkAgile VX systems within your VMware environment. The ThinkAgile VX Deployer tool can install and configure the following software:

VMware ESXi

VMware ESXi is a bare-metal hypervisor that the ThinkAgile VX Deployer tool installs on the hardware of each host in the cluster. ESXi translates requests between the physical and virtual resources, making virtualization possible.

VMware vCenter Server

VMware vCenter Server is a management console that provides a centralized platform for controlling VMware vSphere environments. One service that runs in VMware vCenter Server is VMware vLCM, which provides centralized and simplified management to install software, maintain that software through updates and upgrades, and decommission it.

Lenovo® XClarity Integrator

Lenovo XClarity Integrator is the hardware support manager (HSM) used by vCenter for firmware upgrades. Lenovo XClarity Integrator fully integrates with VMware vLCM to give the VMware vCenter Server software visibility into Lenovo hardware. The interface for the ThinkAgile VX Deployer tool is a straightforward web-based installation wizard with three top-level options:

- Install a new cluster (using the wizard).
- Add nodes to an existing cluster (using the wizard).
- Use a configuration file to install a new cluster or add nodes to an existing cluster.

Prowess testing included all three of these options, plus some key lifecycle-management features in VMware vCenter Server. To view the results of our testing please use the link https://prowessconsulting.com/wp-content/uploads/2023/07/lenovo-thinkagile-vx-hci-easy-deployment-operation-vmware-1.pdf

Warranty and Support

The VX630 V3 have a 3-year warranty based on the machine type:

- 7D6X - 3 year warranty

The ThinkAgile VX Series Integrated Systems can be configured with a three- or five-year hardware warranty with 24x7 ThinkAgile Advantage Single Point of Support (Lenovo server hardware and VMware software; requires an active software support contract purchased either from VMware or Lenovo) and various levels of coverage with a well-defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions.

The Lenovo local support centers perform Premier determination and resolution for hardware-related issues and escalate to VMware, on behalf of the customer, for software-related problem determination. VMware will contact the customer and will own the software-related problem resolution until closure.

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

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

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

Software maintenance

The ThinkAgile VX Series Integrated Systems (appliances) or Certified Nodes can include three-, or five-year software subscription (matches the duration of the selected warranty period) that entitles customers to submit service requests to troubleshoot VMware software issues and receive code updates, including fixes, patches, and new software releases.

The Lenovo local support centers perform problem determination and resolution for hardware-related issues and escalate to VMware, on behalf of the customer, for software-related problem determination. Lenovo will contact the customer and will own the software-related problem resolution until closure.

For the VMware by Broadcom license purchased from Lenovo together with the ThinkAgile VX Series Certifed Nodes, software support that is provided by VMware includes Production-level support with 24x7 phone and web coverage with the following target response times (priorities are defined by VMware based on the impact on productivity):

- Severity 1 (Critical: Substantial loss or disruption of service, significant risk of data loss): 30 minutes
- Severity 2 (Major: Operations are severely constrained, significant impact): 4 business hours
- Severity 3 (Minor: Non-critical loss of functionality, minimal impact): 8 business hours
- Severity 4 (Cosmetic: General questions): 12 business hours

For the VMware software and subscription licenses provided by the customer, software support that is provided by VMware is based on the support level included with these licenses. VMware by Broadcom will contact the customer and will own the software-related problem resolution until closure.

Deployment services

The following optional Lenovo basic installation services are available for the ThinkAgile VX Series Integrated Systems (appliances):

- Unpacking and inspecting the systems
- Mounting the systems in a rack cabinet
- 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)

ThinkAgile VX Integrated Systems include deployment services delivered by Lenovo Professional Services for the ultimate customer experience. However, “Channel Partner Provided” option is also available on DCSC. By choosing this option, Lenovo Customer or Lenovo Business Partner assumes the full responsibility to perform the deployment services for the quoted system. It is strongly recommended that Lenovo Professional Services or approved business partners are used to perform the deployment services.

The following additional Lenovo deployment services are available for the ThinkAgile VX Series with VMware vSphere Foundation solution to get customers up and running quickly. You can use the table below to add these services:

- Conducting remote preparation and planning
- Verifying firmware versions and performing firmware updates, if needed
- Configuring XCC management settings
- Configuring hypervisor settings
- Configuring vSAN
- Configuring VMware vCenter Server and discovering hosts and storage
- Configuring Lenovo XClarity network settings and performing discovery and inventory
- Transferring knowledge
- Developing post-installation documentation

The following Lenovo deployment services are provided with the ThinkAgile VX Series with VMware Cloud Foundation co-engineered solution to get customers up and running quickly:

- Planning and Design
  - Collect technical details for hardware and VMware environment
  - Plan the architecture based on Customer's business and tech requirements
  - Fill the VCF Plan, Prepare Workbook
- Implementation
  - Configure hardware (XCC IP, UEFI), upgrade firmware via OneCLI or BoMC
  - Deploy & Configure ESXi, Cloud Builder & import VCF Workbook, Lenovo xClarity software components
  - Check compliance with VX Best Recipes
- Handover
  - BAU updates based on VCF releases and VX Best Recipes
  - VMware Async Patch Tool (if required)
- Readiness Handover
  - Create handover document and knowledge transfer
  - Includes details for each deployed component

The following table lists ThinkAgile Health Check & Deployment offerings are available for ThinkAgile VX 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 20. ThinkAgile Deployment offerings

Part number	Description
Onsite deployment services	
5MS7B00082	ThinkAgile VX Onsite Deployment (up to 4 nodes)
5MS7B00083	ThinkAgile VX Onsite Deployment (additional node)
Remote deployment services	
5MS7A87711	ThinkAgile VX Remote Deployment (up to 4 nodes)
5MS7A87712	ThinkAgile VX Remote Deployment (additional node)
Remote Health Check	
5MS7B00178	ThinkAgile VX 1X Remote Health Check (up to 4 node cluster)
5MS7B00179	ThinkAgile VX 1X Remote Health Check (additional node)
5MS7B00059	ThinkAgile VX 1X Remote Health Check & Update (up to 4 node cluster)
5MS7B00060	ThinkAgile VX 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 TruScale

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

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

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

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

Regulatory compliance

The server conforms to the following standards:

- Energy Star 3.0
- FCC: Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 6, Class A
- UL/IEC 62368-1
- CAN/CSA-C22.2 No. 62368-1
- NOM-019
- Argentina IEC 62368-1
- Japan VCCI, Class A
- Australia/New Zealand AS/NZS CISPR 32, Class A; AS/NZS 60950.1
- IEC 60950-1 & IEC 62368-1 (CB Certificate and CB Test Report)
- China CCC (GB4943.1), GB9254 Class A, GB17625.1
- Taiwan BSMI CNS13438, Class A; CNS14336-1; section 5 of CNS15663
- Korea KN32, Class A; KN35
- Russia, Belorussia and Kazakhstan, EAC: TP TC 004/2011 (for Safety); TP TC 020/2011 (for EMC); TP EAC 037/2016 (for RoHS)
- CE Mark (EN55032 Class A, EN60950-1, EN62368-1, EN55024, EN55035, EN61000-3-2, (EU) 2019/424, EN 50581-1 and EN61000-3-3)
- CISPR 32, Class A
- TUV-GS (EN62368-1, EK1-ITB2000, AfPS GS 01 PAK Par. 3.1)
- India BIS certification

Lenovo Financial Services

Why wait to obtain the technology you need now? No payments for 90 days and predictable, low monthly payments make it easy to budget for your Lenovo solution.

- **Flexible**

  Our in-depth knowledge of the products, services and various market segments allows us to offer greater flexibility in structures, documentation and end of lease options.

- **100% Solution Financing**

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

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

  Leverage latest technology to advance your business. Customized solutions aligned to your needs. Flexibility to add equipment to support growth. Protect your technology with Lenovo's Premier Support service.

- **24/7 Asset management**

  Manage your financed solutions with electronic access to your lease documents, payment histories, invoices and asset information.

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

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

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

Related publications and links

For more information, see these resources:

- Lenovo ThinkAgile VX Series
  https://www.lenovo.com/us/en/data-center/software-defined-infrastructure/ThinkAgile-VX-Series/p/WMD00000340
- ThinkAgile VX - Best Recipes
  http://datacentersupport.lenovo.com/us/en/solutions/HT505302
- VMware documentation
  https://docs.vmware.com/
- ThinkSystem SR630 V3 product guide:
  https://lenovopress.lenovo.com/lp1600-thinksystem-sr630-v3-server

Related product families

Product families related to this document are the following:

- 2-Socket Rack Servers
- Hyperconverged Infrastructure
- ThinkAgile VX Series for VMware

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