Lenovo ThinkAgile VX3720 Appliance (Xeon SP Gen 2)
Product Guide (withdrawn product)

Lenovo ThinkAgile VX Series appliances combine industry-leading hyperconverged infrastructure software from VMware with Lenovo enterprise platforms that feature the second generation of the Intel Xeon Processor Scalable family (Xeon SP Gen 2). 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.

The ThinkAgile VX3720 appliances are dense nodes in the 2U 4-node (2U4N) rack-mount enclosures, and each node supports up to two processors, up to 1 TB of TruDDR4 memory with up to 2933 MHz memory speeds, 4x 2.5-inch SAS/SATA and 2x 2.5-inch AnyBay drive bays with an extensive choice of NVMe PCIe SSDs, SAS/SATA SSDs, and SAS HDDs, and flexible network connectivity options with 1/10 GbE RJ-45, 10 GbE SFP+, and 10/25 GbE SFP28 ports.

Several common uses for the ThinkAgile VX Series appliances for compute-heavy workloads include virtual desktop infrastructure (VDI), server virtualization, private/hybrid clouds, enterprise applications, light databases, and remote office and branch office workloads.

The ThinkAgile VX3720 appliances are shown in the following figure.

Figure 1. Lenovo ThinkAgile VX3720 Appliances in the VX Enclosure

Did you know?

The ThinkAgile VX Series appliances are built on industry-leading Lenovo ThinkSystem servers that feature enterprise-class reliability, management, and security.

The ThinkAgile VX Series appliances offer ThinkAgile Advantage Single Point of Support for quick 24/7 problem reporting and resolution.

Key features

The ThinkAgile VX Series appliances offer the following key features:

- Factory-integrated, pre-configured ready-to-go appliances 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 vSAN 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 software.
- Include Lenovo ThinkAgile Advantage Single Point of Support for quick 24/7 problem reporting and resolution.
- Offer Lenovo deployment services to get customers up and running quickly.

The VMware software running on ThinkAgile VX Series appliances 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.

Components and connectors

The following figure shows the front view of the VX3720 appliances in the VX Enclosure.
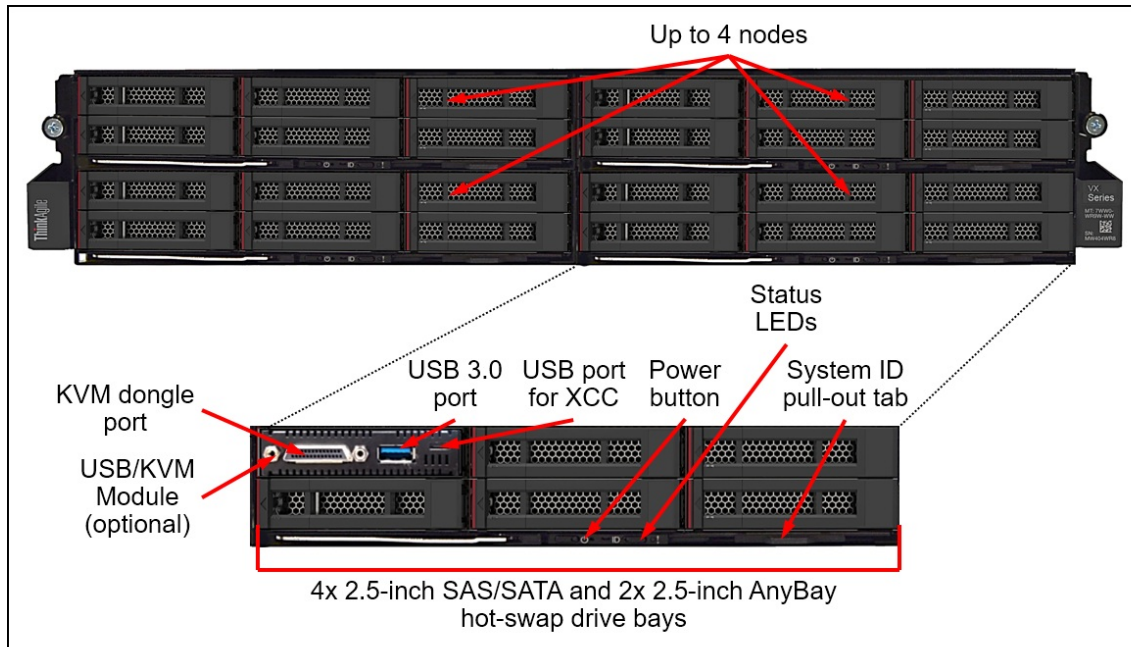

Figure 2. VX3720 appliances in the VX Enclosure front view

The front of the VX Enclosure contains up to four VX3720 appliances, and each appliance includes the following components:

- 4x SAS/SATA and 2x AnyBay SFF hot-swap drive bays
- Up to one KVM/USB module (optional)
  - One KVM dongle port
  - One USB 3.0 port
  - One USB port for XClarity Controller access
- A Power button
- Status LEDs that display the status of the system
- A System ID pull-out tab that contains system identification information

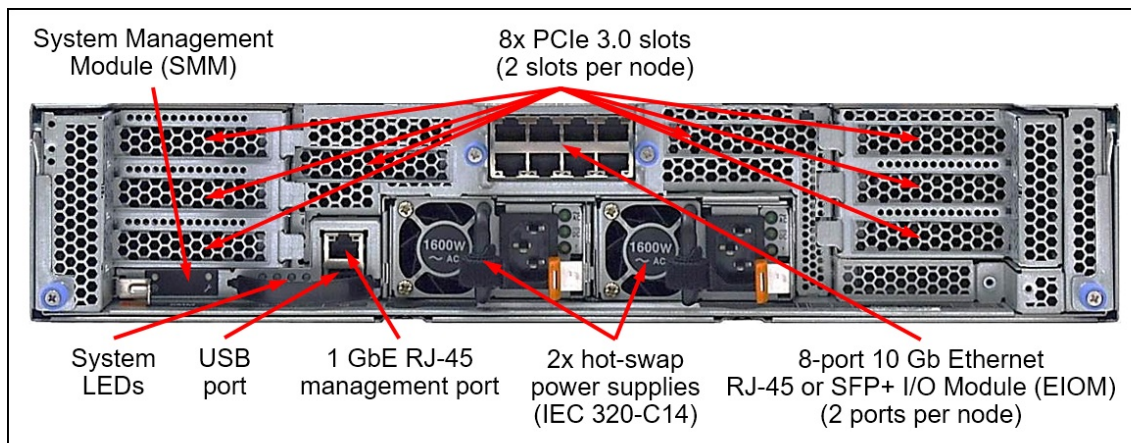The following figure shows the rear view of the VX Enclosure.

Figure 3. VX Enclosure rear view

The rear of the VX Enclosure includes the following components:

- Eight PCIe expansion slots (Two slots per node)
- Eight 10 GbE RJ-45 or SFP+ network ports
- A System Management Module
    - One 1 GbE management port
    - One USB port
    - Status LEDs that display the status of the system
- Two hot-swap power supplies

System specifications

The following table lists the system specifications of the ThinkAgile VX3720 appliance.

Table 1. VX3720 system specifications

Attribute	Specification
Form factor	VX3720: Half-wide, 1U node; up to four nodes per enclosure. VX Enclosure: 2U Four-node (2U4N) rack-mount.
Processor	One or two Intel Xeon Bronze, Silver, or Gold Gen 2 processors.
Chipset	Intel C624.
Memory	Up to 12 TruDDR4 RDIMMs: • 8 GB, 16 GB, 32 GB, and 64 GB 2933 MHz. • 16 GB and 32 GB 2666 MHz.
Memory capacity	Up to 1 TB.
Memory protection	Error correction code (ECC), Single Device Data Correction (SDDC; for x4-based memory DIMMs), Adaptive Double Device Data Correction (ADDDC; for x4-based memory DIMMs, requires Intel Xeon Gold or Platinum processors), patrol scrubbing, and demand scrubbing.
Drive bays	4x 2.5-inch SAS/SATA and 2x 2.5-inch AnyBay hot-swap.
Internal storage	• 1 drive group: 1 cache drive + from 2 to 5 capacity drives. • 2 drive groups: 1 cache drive + 2 capacity drives in each group. **Note:** The quantity of the capacity drives in each drive group should be the same.

Drive capacities	• Cache drives:
	   ○ 12 Gbps SAS SSDs up to 7.68 TB
	   ○ 6 Gbps SATA SSDs up to 7.68 TB
	   ○ NVMe PCIe 3.0 x4 SSDs up to 750 GB
	• Capacity drives:
	   ○ 12 Gbps SAS HDDs up to 2.4 TB
	   ○ 12 Gbps NL SAS HDDs up to 2 TB
	   ○ 12 Gbps SAS SSDs up to 7.68 TB
	   ○ 6 Gbps SATA SSDs up to 7.68 TB
	
	Note: All cache drives in the appliance must be of the same model and capacity. All capacity drives in the appliance must be of the same model and capacity.

Storage capacity	• Hybrid: Up to 12 TB (5x 2.4 TB HDDs). • All Flash: Up to 38.4 TB (5x 7.68 TB SSDs).
Storage controller	1x 430-8i Dense HBA (12 Gbps SAS/6 Gbps SATA). Onboard NVMe.
Network interfaces	• 1/10 GbE RJ-45 ports: 2 - 4 (EIOM + Up to 1 network adapters). • 10 GbE SFP+ ports: 2 - 4 (EIOM + Up to 1 network adapters). • 10/25 GbE SFP28 ports: 1 - 2 (Up to 1 network adapters).
Boot drive	2x M.2 non-hot-swap SSDs up to 480 GB (RAID-1).

Attribute	Specification

I/O expansion slots	• One PCIe 3.0 x8 on the system board (for an internal storage controller).
	• Two PCIe slots per node in the VX Enclosure with the PCIe x8 I/O shuttle:
	   ○ Slot 1-A (Node 1): PCIe 3.0 x8 low-profile
	   ○ Slot 1-B (Node 1): PCIe 3.0 x8 low-profile
	   ○ Slot 2-A (Node 2): PCIe 3.0 x8 low-profile
	   ○ Slot 2-B (Node 2): PCIe 3.0 x8 low-profile
	   ○ Slot 3-A (Node 3): PCIe 3.0 x8 low-profile
	   ○ Slot 3-B (Node 3): PCIe 3.0 x8 low-profile
	   ○ Slot 4-A (Node 4): PCIe 3.0 x8 low-profile
	   ○ Slot 4-B (Node 4): PCIe 3.0 x8 low-profile

Ports	Enclosure (on the System Management Module [SMM]): • 1x Ethernet RJ-45 port for systems management (in the VX Enclosure) • 1x USB port Node (on the optional KVM/USB module): • 1x KVM dongle port • 1x USB 3.0 port • 1x USB port for XClarity Controller access
Cooling	Five hot-swap system fans in the VX Enclosure.
Power supply	Two redundant hot-swap 1100 W (100 - 240 V), 1600 W (200 - 240 V), or 2000 W (200 - 240 V) High Efficiency Platinum power supplies in the VX Series enclosure.
Video	Matrox G200 with 16 MB memory integrated into the XClarity Controller. Maximum resolution is 1920x1200 at 60 Hz with 32 bits per pixel.
Hot-swap parts	SSDs, HDDs, power supplies, and fans.
Systems management	Lenovo XClarity Controller (XCC) Enterprise (Pilot 4 chip), proactive platform alerts, light path diagnostics, Lenovo XClarity Administrator with Integrator for VMware vCenter, Lenovo XClarity Energy Manager (optional).
Security features	Power-on password, administrator's password, secure firmware updates, Trusted Platform Module (TPM) 1.2 or 2.0 (configurable UEFI setting).
Software	Software licenses that must be purchased from Lenovo: • VMware vSAN: Standard, Advanced, Enterprise, or ROBO; or • HCI Kit: Essentials, Standard, Advanced, Enterprise, or ROBO; or • VMware Horizon: Advanced or Enterprise; or • VMware Cloud Foundation (VCF): Basic, Standard, Advanced, Enterprise, or for VDI. Software licenses that can be purchased from Lenovo or provided by the customer: • VMware vSphere: Standard, Enterprise Plus, or ROBO. • VMware Horizon: Standard (optional). • VMware vCenter Server: Foundation or Standard.
Hypervisors	VMware ESXi 6.5 U2, 6.5 U3, 6.7 U1, 6.7 U2, or 6.7 U3 (factory preload).
Warranty and support	Three- or five-year customer-replaceable unit and onsite limited hardware warranty with ThinkAgile Advantage 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.
Software maintenance	One- (PRC only), three-, five-year software support and subscription (matches the duration of the selected warranty period).
Dimensions	• Enclosure: Height: 87 mm (3.4 in.), width: 448 mm (17.6 in.), depth: 834 mm (32.8 in.). • Node: Height: 41 mm (1.6 in.), width: 222 mm (8.7 in.), depth: 562 mm (21.1 in.).
Weight	• Enclosure (maximum configuration, with four nodes): 55.0 kg (121.3 lb). • Node (maximum configuration): 7.5 kg (16.5 lb).

Factory-integrated models

Factory-integrated models of the ThinkAgile VX Series appliances are configured by using the Lenovo Data Center Solution Configurator (DCSC):
http://dcsc.lenovo.com

During the configuration process, you are selecting one of the Configure-to-Order (CTO) base models first, and then you are selecting components (processors, memory, drives, network adapters, power supplies, and software) for that model.

Note: You are required to engage a Lenovo representative in the project that includes the ThinkAgile VX Series appliances.

The following table lists the CTO base models of the VX3720 appliances.

Table 2. CTO base models

Description	Machine Type/Model
ThinkAgile VX3720 Appliance	7Y92CTO1WW
ThinkAgile VX Enclosure	7Y91CTO1WW

The following table lists the base chassis for the VX3720 appliances and VX Enclosures.

Table 3. Base chassis

Description	Feature code
ThinkAgile VX CLX Computing Node	B6BQ
ThinkAgile VX Enclosure	B1DN

The VX3720 appliances and VX Enclosures ship with the following items:

- *Electronic Publications Flyer*
- D2 Tool-less Slide Rail Kit with or without CMA (enclosure only; depending on the rack installation option selected)
- Two customer-selected power cables (enclosure only)

Processors

The ThinkAgile VX3720 appliances can be configured with one or two processors. The following table lists the processor options that are available for selection.

Table 4. Processor options

Description	Part number	Feature code*	Quantity (min / max)
Intel Xeon Bronze processors			
Intel Xeon Bronze 3204 6C 85W 1.9GHz Processor	4XG7A14328	B4HU	1 / 2
Intel Xeon Bronze 3206R 8C 85W 1.9GHz Processor	4XG7A63089	B7N3	1 / 2
Intel Xeon Silver processors			
Intel Xeon Silver 4208 8C 85W 2.1GHz Processor	4XG7A14327	B4HT	1 / 2
Intel Xeon Silver 4210 10C 85W 2.2GHz Processor	4XG7A14326	B4HS	1 / 2
Intel Xeon Silver 4210R 10C 100W 2.4GHz Processor	4XG7A63088	B7N5	1 / 2
Intel Xeon Silver 4214 12C 85W 2.2GHz Processor	4XG7A14325	B4HR	1 / 2

Description	Part number	Feature code*	Quantity (min / max)
Intel Xeon Silver 4214R 12C 100W 2.4GHz Processor	4XG7A63086	B7N6	1 / 2
Intel Xeon Silver 4214Y 12/10/8C 85W 2.2GHz Processor	4XG7A14343	B4NW	1 / 2
Intel Xeon Silver 4215 8C 85W 2.5GHz Processor	4XG7A14324	B4HQ	1 / 2
Intel Xeon Silver 4216 16C 100W 2.1GHz Processor	4XG7A14323	B4HP	1 / 2
Intel Xeon Gold processors			
Intel Xeon Gold 5215 10C 85W 2.5GHz Processor	4XG7A14321	B4HN	1 / 2
Intel Xeon Gold 5215M 10C 85W 2.5GHz Processor	4XG7A14340	B4P1	1 / 2
Intel Xeon Gold 5215L 10C 85W 2.5GHz Processor	4XG7A14342	B4P9	1 / 2
Intel Xeon Gold 5218 16C 125W 2.3GHz Processor	4XG7A14320	B4HL	1 / 2
Intel Xeon Gold 5218B 16C 125W 2.3GHz Processor	4XG7A37104	B6BS	1 / 2
Intel Xeon Gold 5218T 16C 105W 2.1GHz Processor	4XG7A14338	B4P3	1 / 2
Intel Xeon Gold 5220 18C 125W 2.2GHz Processor	4XG7A14319	B4HK	1 / 2
Intel Xeon Gold 5220S 18C 125W 2.7GHz Processor	4XG7A37066	B6CW	1 / 2
Intel Xeon Gold 6222V 20C 115W 1.8GHz Processor	4XG7A37070	B6CV	1 / 2
Intel Xeon Gold 6226 12C 125W 2.7GHz Processor	4XG7A37067	B6CL	1 / 2
Intel Xeon Gold 6230 20C 125W 2.1GHz Processor	4XG7A14318	B4HJ	1 / 2
Intel Xeon Gold 6238 22C 140W 2.1GHz Processor	4XG7A37060	B6CJ	1 / 2
Intel Xeon Gold 6238M 22C 140W 2.1GHz Processor	4XG7A37068	B6CM	1 / 2
Intel Xeon Gold 6238L 22C 140W 2.1GHz Processor	4XG7A37069	B6CR	1 / 2
Intel Xeon Gold 6262V 24C 135W 1.9GHz Processor	4XG7A37063	B6CU	1 / 2

* For CTO configurations, the feature code represents a processor, and heatsinks are derived by the configuration tool. For field upgrades, the part number includes a processor and a heatsink.

The following table lists the specifications of the processors for the appliances.

Processor specifications table abbreviations:

- UPI: Ultra Path Interconnect
- TDP: Thermal Design Power
- HT: Hyper-Threading
- TB: Turbo Boost 2.0
- VT-x: Virtualization Technology
- VT-d: Virtualization Technology for Directed I/O
- SST-PP: Speed Select Technology - Performance Profile
- RAS: Reliability, Availability, and Serviceability
    - Std: Standard RAS
    - Adv: Advanced RAS

Table 5. Processor specifications

CPU model	Cores / threads	Core speed (Base / TB Max)	Cache	Max DDR4 speed	Max memory capacity per socket	UPI speed	TDP	HT	TB	VT-x	VT-d	SST-PP	RAS
Intel Xeon Bronze processors													
3204	6 / 6	1.9 / 1.9 GHz	8.25 MB	2133 MHz	1 TB	9.6 GT/s	85 W	N	N	Y	Y	N	Std
3206R	8 / 8	1.9 / 1.9 GHz	11 MB	2133 MHz	1 TB	9.6 GT/s	85 W	N	N	Y	Y	N	Std
Intel Xeon Silver processors													
4208	8 / 16	2.1 / 3.2 GHz	11 MB	2400 MHz	1 TB	9.6 GT/s	85 W	Y	Y	Y	Y	N	Std
4210	10 / 20	2.2 / 3.2 GHz	13.75 MB	2400 MHz	1 TB	9.6 GT/s	85 W	Y	Y	Y	Y	N	Std
4210R	10 / 20	2.4 / 3.2 GHz	13.75 MB	2400 MHz	1 TB	9.6 GT/s	100 W	Y	Y	Y	Y	N	Std
4214	12 / 24	2.2 / 3.2 GHz	16.5 MB	2400 MHz	1 TB	9.6 GT/s	85 W	Y	Y	Y	Y	N	Std
4214R	12 / 24	2.4 / 3.5 GHz	16.5 MB	2400 MHz	1 TB	9.6 GT/s	100 W	Y	Y	Y	Y	N	Std
4214Y	12 / 24	2.2 / 3.2 GHz	16.5 MB	2400 MHz	1 TB	9.6 GT/s	85 W	Y	Y	Y	Y	Y	Std
	10 / 20	2.3 / 3.2 GHz											
	8 / 16	2.4 / 3.2 GHz											
4215	8 / 16	2.5 / 3.5 GHz	11 MB	2400 MHz	1 TB	9.6 GT/s	85 W	Y	Y	Y	Y	N	Std
4216	16 / 32	2.1 / 3.2 GHz	22 MB	2400 MHz	1 TB	9.6 GT/s	100 W	Y	Y	Y	Y	N	Std
Intel Xeon Gold processors													
5215	10 / 20	2.5 / 3.4 GHz	13.75 MB	2666 MHz	1 TB	10.4 GT/s	85 W	Y	Y	Y	Y	N	Adv
5215M	10 / 20	2.5 / 3.4 GHz	13.75 MB	2666 MHz	2 TB	10.4 GT/s	85 W	Y	Y	Y	Y	N	Adv
5215L	10 / 20	2.5 / 3.4 GHz	13.75 MB	2666 MHz	4.5 TB	10.4 GT/s	85 W	Y	Y	Y	Y	N	Adv
5218	16 / 32	2.3 / 3.9 GHz	22 MB	2666 MHz	1 TB	10.4 GT/s	125 W	Y	Y	Y	Y	N	Adv
5218B	16 / 32	2.3 / 3.9 GHz	22 MB	2666 MHz	1 TB	10.4 GT/s	125 W	Y	Y	Y	Y	N	Adv
5218T	16 / 32	2.1 / 3.8 GHz	22 MB	2667 MHz	1 TB	10.4 GT/s	105 W	Y	Y	Y	Y	N	Adv
5220	18 / 36	2.2 / 3.9 GHz	24.75 MB	2666 MHz	1 TB	10.4 GT/s	125 W	Y	Y	Y	Y	N	Adv
5220S	18 / 36	2.7 / 3.9 GHz	24.75 MB	2667 MHz	1 TB	10.4 GT/s	125 W	Y	Y	Y	Y	N	Adv
6222V	20 / 40	1.8 / 3.6 GHz	27.5 MB	2400 MHz	1 TB	10.4 GT/s	115 W	Y	Y	Y	Y	N	Adv
6226	12 / 24	2.7 / 3.7 GHz	19.25 MB	2933 MHz	1 TB	10.4 GT/s	125 W	Y	Y	Y	Y	N	Adv
6230	20 / 40	2.1 / 3.9 GHz	27.5 MB	2933 MHz	1 TB	10.4 GT/s	125 W	Y	Y	Y	Y	N	Adv
6238	22 / 44	2.1 / 3.7 GHz	30.25 MB	2933 MHz	1 TB	10.4 GT/s	140 W	Y	Y	Y	Y	N	Adv
6238M	22 / 44	2.1 / 3.7 GHz	30.25 MB	2933 MHz	2 TB	10.4 GT/s	140 W	Y	Y	Y	Y	N	Adv
6238L	22 / 44	2.1 / 3.7 GHz	30.25 MB	2933 MHz	4.5 TB	10.4 GT/s	140 W	Y	Y	Y	Y	N	Adv
6262V	24 / 48	1.9 / 3.6 GHz	33 MB	2400 MHz	1 TB	10.4 GT/s	135 W	Y	Y	Y	Y	N	Adv

Configuration notes:

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

Memory

The ThinkAgile VX3720 appliances support Lenovo TruDDR4 memory. TruDDR4 memory uses the highest-quality components sourced from Tier 1 DRAM suppliers and only memory that meets strict requirements is selected. It is compatibility tested and tuned to maximize performance and reliability.

The VX3720 supports up to 12 DIMMs with two processors. Each processor has six memory channels (two integrated memory controllers with three memory channels per memory controller), and there is a one DIMM per channel.

The following rules apply when selecting the memory configuration:

- The appliance supports RDIMMs with rated speeds of 2666 MHz or 2933 MHz for up to 1 TB of memory capacity.
- All DIMMs in the appliance must be of the same type, rank, and capacity (the same part number or feature code).
- All DIMMs in the certified node operate at the same speed, which is determined as the lowest value of:
    - DIMM rated speed (2666 MHz or 2933 MHz).
    - Memory speed supported by the specific processor (2133 MHZ, 2400 MHz, 2666 MHz, or 2933 MHz).
    - Memory speed for the selected quantity of DIMMs per channel:
        - One DIMM per channel (1 DPC): 2933 MHz.
        - Two DIMMs per channel (2 DPC): 2666 MHz.
    Note: Maximum memory speed can be achieved when Max performance mode is enabled in UEFI.

The following memory protection technologies are supported:

- ECC
- SDDC (for x4-based memory DIMMs)
- ADDDC (for x4-based memory DIMMs; Gold processors only)
- Patrol scrubbing
- Demand scrubbing

The following table lists the memory options that are available for selection.

Table 6. Memory options

Description	Part number	Feature code	Quantity*
2933 MHz RDIMMs			
ThinkSystem 8GB TruDDR4 2933MHz (1Rx8 1.2V) RDIMM	4ZC7A08706	B4H1	4, 6 / 4, 6, 8, 12
ThinkSystem 16GB TruDDR4 2933 MHz (1Rx4 1.2V) RDIMM	4ZC7A08707	B4LY	4, 6 / 4, 6, 8, 12
ThinkSystem 16GB TruDDR4 2933MHz (2Rx8 1.2V) RDIMM	4ZC7A08708	B4H2	4, 6 / 4, 6, 8, 12
ThinkSystem 32GB TruDDR4 2933MHz (2Rx4 1.2V) RDIMM	4ZC7A08709	B4H3	4, 6 / 4, 6, 8, 12
ThinkSystem 64GB TruDDR4 2933MHz (2Rx4 1.2V) RDIMM	4ZC7A08710	B4H4	4, 6 / 4, 6, 8, 12
RDIMMs			
ThinkSystem 16GB TruDDR4 2666 MHz (1Rx4 1.2V) RDIMM	7X77A01302	AUNB	4, 6 / 4, 6, 8, 12
ThinkSystem 16GB TruDDR4 2666 MHz (2Rx8 1.2V) RDIMM	7X77A01303	AUNC	4, 6 / 4, 6, 8, 12
ThinkSystem 32GB TruDDR4 2666 MHz (2Rx4 1.2V) RDIMM	7X77A01304	AUND	4, 6 / 4, 6, 8, 12

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

Internal storage

The ThinkAgile VX3720 appliance supports 4x SAS/SATA and 2x AnyBay hot-swap drive bays for configurable storage capacity, and it contains two internal M.2 SATA non-hot-swap SSDs for a hypervisor boot volume.

The following table lists the internal storage options for the VX3720 appliance.

Table 7. Internal storage options

Description	Part number	Feature code	Maximum quantity
Front drive backplanes			
ThinkSystem SD530 2.5" 6-bay (3x2) SAS/SATA/NVMe Backplane	None*	AUYH	1
M.2 enablement kits			
ThinkSystem M.2 with Mirroring Enablement Kit	7Y37A01093	AUMV	1

* Factory-installed only.

Configuration notes:

- One SAS/SATA/NVMe backplane and one M.2 with Mirroring Enablement Kit are derived by the configurator.
- NVMe PCIe SSDs are supported in the AnyBay drive bays and require the second processor to be installed.
- The optional VGA/USB KVM Breakout Module occupies the upper-left drive bay, limiting the maximum number of drives to 5.
- The M.2 with Mirroring Enablement Kit (7Y37A01093) is connected to the Intel PCH via the PCIe link, and the kit supports two M.2 SATA SSDs configured in a RAID-1 drive group for a hypervisor boot volume.

The following table lists M.2 drive selection options for the hypervisor boot volume.

Table 8. Drive options for hypervisor boot volume

Description	Part number	Feature code	Quantity
ThinkSystem M.2 128GB SATA 6Gbps Non-Hot-Swap SSD	7N47A00130	AUUV	2
ThinkSystem M.2 5100 240GB SATA 6Gbps Non-Hot Swap SSD	4XB7A14049	B5S4	2
ThinkSystem M.2 5300 240GB SATA 6Gbps Non-Hot Swap SSD	4XB7A17071	B8HS	2
ThinkSystem M.2 5100 480GB SATA 6Gbps Non-Hot-Swap SSD	7SD7A05703	B11V	2
ThinkSystem M.2 5300 480GB SATA 6Gbps Non-Hot Swap SSD	4XB7A17073	B919	2

Configuration note: Two M.2 SATA SSDs are required for selection, and they must be of the same model and capacity.

The following table lists the storage controllers for internal storage of the VX3720 appliance.

Table 9. Controllers for internal storage

Description	Part number	Feature code	Quantity
12 Gb SAS/SATA non-RAID HBA			
ThinkSystem 430-8i SAS/SATA 12Gb Dense HBA	None*	B0SS	1
NVMe PCIe interfaces (non-RAID)			
Onboard NVMe interface	None	None	1

* Factory-installed only.

Configuration notes:

- A dense SAS HBA for internal storage occupies the dedicated PCIe x8 slot on the system board.
- The onboard NVMe interface supports up to two U.2 NVMe PCIe SSDs with PCIe 3.0 x4 links to each of the SSDs in the drive bays 4 - 5.

Drives for internal storage

The following tables list the drive selection options.

Table 10. Drive selection options: Hybrid configurations

Description	Part number	Feature code	Quantity per drive group (min / max)
SSD selection (Cache tier): SAS 12Gb SSDs - SS300 Performance			
ThinkSystem 2.5" HUSMM32 400GB Performance SAS 12Gb Hot Swap SSD	7N47A00124	AUMG	1 / 1
ThinkSystem 2.5" HUSMM32 800GB Performance SAS 12Gb Hot Swap SSD	7N47A00125	AUMH	1 / 1
ThinkSystem 2.5" HUSMM32 1.6TB Performance SAS 12Gb Hot Swap SSD	7N47A00126	AVRB	1 / 1
SSD selection (Cache tier): SAS 12Gb SSDs - SS530 Performance			
ThinkSystem 2.5" SS530 400GB Performance SAS 12Gb Hot Swap SSD	4XB7A10219	B4Y4	1 / 1
ThinkSystem 2.5" SS530 800GB Performance SAS 12Gb Hot Swap SSD	4XB7A10230	B4Y5	1 / 1
ThinkSystem 2.5" SS530 1.6TB Performance SAS 12Gb Hot Swap SSD	4XB7A10231	B4Y6	1 / 1
ThinkSystem 2.5" SS530 3.2TB Performance SAS 12Gb Hot Swap SSD	4XB7A10232	B4Y7	1 / 1
SSD selection (Cache tier): SAS 12Gb SSDs - PM1645 Mainstream			
ThinkSystem 2.5" PM1645 800GB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13653	B4A0	1 / 1
ThinkSystem 2.5" PM1645 1.6TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13654	B4A1	1 / 1
ThinkSystem 2.5" PM1645 3.2TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13655	B4A2	1 / 1
SSD selection (Cache tier): SAS 12Gb SSDs - PM1645a Mainstream			
ThinkSystem 2.5" PM1645a 800GB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17062	B8HU	1 / 1
ThinkSystem 2.5" PM1645a 1.6TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17063	B8J4	1 / 1
ThinkSystem 2.5" PM1645a 3.2TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17064	B8JD	1 / 1
SSD selection (Cache tier): SAS 12Gb SSDs - PM1643 Capacity			
ThinkSystem 2.5" PM1643 3.84TB Capacity SAS 12Gb Hot Swap SSD	4XB7A13645	B4A7	1 / 1
ThinkSystem 2.5" PM1643 7.68TB Capacity SAS 12Gb Hot Swap SSD	4XB7A13646	B4A6	1 / 1
SSD selection (Cache tier): SAS 12Gb SSDs - PM1643a Entry			
ThinkSystem 2.5" PM1643a 1.92TB Entry SAS 12Gb Hot Swap SSD	4XB7A38176	B91B	1 / 1
ThinkSystem 2.5" PM1643a 3.84TB Entry SAS 12Gb Hot Swap SSD	4XB7A17054	B91C	1 / 1
ThinkSystem 2.5" PM1643a 7.68TB Entry SAS 12Gb Hot Swap SSD	4XB7A17055	B91D	1 / 1
SSD selection (Cache tier): SATA 6Gb SSDs - 5300 Mainstream			
ThinkSystem 2.5" 5300 480GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17088	B8HY	1 / 1
ThinkSystem 2.5" 5300 960GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17089	B8J6	1 / 1
ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17090	B8JE	1 / 1
ThinkSystem 2.5" 5300 3.84TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17091	B8J7	1 / 1
SSD selection (Cache tier): SATA 6Gb SSDs - S4600 Mainstream			
ThinkSystem 2.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD	7SD7A05720	B0ZS	1 / 1
SSD selection (Cache tier): SATA 6Gb SSDs - S4610 Mainstream			
ThinkSystem 2.5" Intel S4610 960GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13635	B49N	1 / 1
ThinkSystem 2.5" Intel S4610 1.92TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13636	B49P	1 / 1
ThinkSystem 2.5" Intel S4610 3.84TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13637	B49Q	1 / 1
SSD selection (Cache tier): SATA 6Gb SSDs - 5300 Entry			
ThinkSystem 2.5" 5300 960GB Entry SATA 6Gb Hot Swap SSD	4XB7A17077	B8HP	1 / 1

Description	Part number	Feature code	Quantity per drive group (min / max)
ThinkSystem 2.5" 5300 1.92TB Entry SATA 6Gb Hot Swap SSD	4XB7A17078	B8J5	1 / 1
ThinkSystem 2.5" 5300 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A17079	B8JP	1 / 1
SSD selection (Cache tier): SATA 6Gb SSDs - PM883 Entry			
ThinkSystem 2.5" PM883 1.92TB Entry SATA 6Gb Hot Swap SSD	4XB7A10198	B34L	1 / 1
ThinkSystem 2.5" PM883 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A10199	B34M	1 / 1
ThinkSystem 2.5" PM883 7.68TB Entry SATA 6Gb Hot Swap SSD	4XB7A10200	B4D2	1 / 1
SSD selection (Cache tier): SATA 6Gb SSDs - S4510 Entry			
ThinkSystem 2.5" Intel S4510 960GB Entry SATA 6Gb Hot Swap SSD	4XB7A10249	B49A	1 / 1
ThinkSystem 2.5" Intel S4510 1.92TB Entry SATA 6Gb Hot Swap SSD	4XB7A13622	B49B	1 / 1
ThinkSystem 2.5" Intel S4510 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A13623	B49C	1 / 1
HDD selection (Capacity tier): SAS 12Gb HDDs			
ThinkSystem 2.5" 900GB 10K SAS 12Gb Hot Swap 512n HDD	7XB7A00026	AUM0	2 / 5
ThinkSystem 2.5" 900GB 15K SAS 12Gb Hot Swap 512e HDD	7XB7A00023	AULX	2 / 5
ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD	7XB7A00027	AUM1	2 / 5
ThinkSystem 2.5" 1.8TB 10K SAS 12Gb Hot Swap 512e HDD	7XB7A00028	AUM2	2 / 5
ThinkSystem 2.5" 2.4TB 10K SAS 12Gb Hot Swap 512e HDD	7XB7A00069	B0YS	2 / 5
HDD selection (Capacity tier): NL SAS 12Gb HDDs			
ThinkSystem 2.5" 1TB 7.2K SAS 12Gb Hot Swap 512n HDD	7XB7A00034	AUM6	2 / 5
ThinkSystem 2.5" 2TB 7.2K SAS 12Gb Hot Swap 512n HDD	7XB7A00035	AUM7	2 / 5

Table 11. Drive selection options: All Flash configurations

Description	Part number	Feature code	Quantity per drive group (min / max)
Cache tier: NVMe PCIe SSDs - P4800X Performance			
ThinkSystem U.2 Intel P4800X 375GB Performance NVMe PCIe 3.0 x4 HS SSD	7N47A00081	AUMJ	1 / 1
ThinkSystem U.2 Intel P4800X 750GB Performance NVMe PCIe 3.0 x4 HS SSD	7N47A00083	B2ZJ	1 / 1
Cache tier: SAS 12Gb SSDs - SS300 Performance			
ThinkSystem 2.5" HUSMM32 400GB Performance SAS 12Gb Hot Swap SSD	7N47A00124	AUMG	1 / 1
ThinkSystem 2.5" HUSMM32 800GB Performance SAS 12Gb Hot Swap SSD	7N47A00125	AUMH	1 / 1
ThinkSystem 2.5" HUSMM32 1.6TB Performance SAS 12Gb Hot Swap SSD	7N47A00126	AVRB	1 / 1
Cache tier: SAS 12Gb SSDs - SS530 Performance			
ThinkSystem 2.5" SS530 400GB Performance SAS 12Gb Hot Swap SSD	4XB7A10219	B4Y4	1 / 1
ThinkSystem 2.5" SS530 800GB Performance SAS 12Gb Hot Swap SSD	4XB7A10230	B4Y5	1 / 1
ThinkSystem 2.5" SS530 1.6TB Performance SAS 12Gb Hot Swap SSD	4XB7A10231	B4Y6	1 / 1
ThinkSystem 2.5" SS530 3.2TB Performance SAS 12Gb Hot Swap SSD	4XB7A10232	B4Y7	1 / 1
Cache tier: SAS 12Gb SSDs - PM1645 Mainstream			
ThinkSystem 2.5" PM1645 800GB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13653	B4A0	1 / 1
ThinkSystem 2.5" PM1645 1.6TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13654	B4A1	1 / 1
ThinkSystem 2.5" PM1645 3.2TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13655	B4A2	1 / 1
Cache tier: SAS 12Gb SSDs - PM1645a Mainstream			

Description	Part number	Feature code	Quantity per drive group (min / max)
ThinkSystem 2.5" PM1645a 800GB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17062	B8HU	1 / 1
ThinkSystem 2.5" PM1645a 1.6TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17063	B8J4	1 / 1
ThinkSystem 2.5" PM1645a 3.2TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17064	B8JD	1 / 1
Cache tier: SAS 12Gb SSDs - PM1643 Capacity			
ThinkSystem 2.5" PM1643 3.84TB Capacity SAS 12Gb Hot Swap SSD	4XB7A13645	B4A7	1 / 1
ThinkSystem 2.5" PM1643 7.68TB Capacity SAS 12Gb Hot Swap SSD	4XB7A13646	B4A6	1 / 1
Cache tier: SAS 12Gb SSDs - PM1643a Entry			
ThinkSystem 2.5" PM1643a 3.84TB Entry SAS 12Gb Hot Swap SSD	4XB7A17054	B91C	1 / 1
ThinkSystem 2.5" PM1643a 7.68TB Entry SAS 12Gb Hot Swap SSD	4XB7A17055	B91D	1 / 1
Cache tier: SATA 6Gb SSDs - 5300 Mainstream			
ThinkSystem 2.5" 5300 480GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17088	B8HY	1 / 1
ThinkSystem 2.5" 5300 960GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17089	B8J6	1 / 1
ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17090	B8JE	1 / 1
ThinkSystem 2.5" 5300 3.84TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17091	B8J7	1 / 1
Cache tier: SATA 6Gb SSDs - S4600 Mainstream			
ThinkSystem 2.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD	7SD7A05720	B0ZS	1 / 1
Cache tier: SATA 6Gb SSDs - S4610 Mainstream			
ThinkSystem 2.5" Intel S4610 960GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13635	B49N	1 / 1
ThinkSystem 2.5" Intel S4610 1.92TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13636	B49P	1 / 1
ThinkSystem 2.5" Intel S4610 3.84TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13637	B49Q	1 / 1
Cache tier: SATA 6Gb SSDs - 5300 Entry			
ThinkSystem 2.5" 5300 1.92TB Entry SATA 6Gb Hot Swap SSD	4XB7A17078	B8J5	1 / 1
ThinkSystem 2.5" 5300 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A17079	B8JP	1 / 1
Cache tier: SATA 6Gb SSDs - PM883 Entry			
ThinkSystem 2.5" PM883 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A10199	B34M	1 / 1
ThinkSystem 2.5" PM883 7.68TB Entry SATA 6Gb Hot Swap SSD	4XB7A10200	B4D2	1 / 1
Capacity tier: SAS 12Gb SSDs - SS530 Performance			
ThinkSystem 2.5" SS530 400GB Performance SAS 12Gb Hot Swap SSD	4XB7A10219	B4Y4	2 / 5
ThinkSystem 2.5" SS530 800GB Performance SAS 12Gb Hot Swap SSD	4XB7A10230	B4Y5	2 / 5
ThinkSystem 2.5" SS530 1.6TB Performance SAS 12Gb Hot Swap SSD	4XB7A10231	B4Y6	2 / 5
ThinkSystem 2.5" SS530 3.2TB Performance SAS 12Gb Hot Swap SSD	4XB7A10232	B4Y7	2 / 5
Capacity tier: SAS 12Gb SSDs - PM1635a Mainstream			
ThinkSystem 2.5" PM1635a 1.6TB Mainstream SAS 12Gb Hot Swap SSD	7N47A00119	AVRG	2 / 5
Capacity tier: SAS 12Gb SSDs - PM1645 Mainstream			
ThinkSystem 2.5" PM1645 800GB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13653	B4A0	2 / 5
ThinkSystem 2.5" PM1645 1.6TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13654	B4A1	2 / 5
ThinkSystem 2.5" PM1645 3.2TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A13655	B4A2	2 / 5
Capacity tier: SAS 12Gb SSDs - PM1645a Mainstream			
ThinkSystem 2.5" PM1645a 800GB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17062	B8HU	2 / 5
ThinkSystem 2.5" PM1645a 1.6TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17063	B8J4	2 / 5
ThinkSystem 2.5" PM1645a 3.2TB Mainstream SAS 12Gb Hot Swap SSD	4XB7A17064	B8JD	2 / 5
Capacity tier: SAS 12Gb SSDs - PM1633a Capacity			

Description	Part number	Feature code	Quantity per drive group (min / max)
ThinkSystem 2.5" PM1633a 3.84TB Capacity SAS 12Gb Hot Swap SSD	7N47A00121	AUMK	2 / 5
ThinkSystem 2.5" PM1633a 7.68TB Capacity SAS 12Gb Hot Swap SSD	7N47A00122	AUML	2 / 5
Capacity tier: SAS 12Gb SSDs - PM1643 Capacity			
ThinkSystem 2.5" PM1643 960GB Capacity SAS 12Gb Hot Swap SSD	4XB7A17168	B6TL	2 / 5
ThinkSystem 2.5" PM1643 3.84TB Capacity SAS 12Gb Hot Swap SSD	4XB7A13645	B4A7	2 / 5
ThinkSystem 2.5" PM1643 7.68TB Capacity SAS 12Gb Hot Swap SSD	4XB7A13646	B4A6	2 / 5
Capacity tier: SAS 12Gb SSDs - PM1643a Entry			
ThinkSystem 2.5" PM1643a 960GB Entry SAS 12Gb Hot Swap SSD	4XB7A38175	B91A	2 / 5
ThinkSystem 2.5" PM1643a 1.92TB Entry SAS 12Gb Hot Swap SSD	4XB7A38176	B91B	2 / 5
ThinkSystem 2.5" PM1643a 3.84TB Entry SAS 12Gb Hot Swap SSD	4XB7A17054	B91C	2 / 5
ThinkSystem 2.5" PM1643a 7.68TB Entry SAS 12Gb Hot Swap SSD	4XB7A17055	B91D	2 / 5
Capacity tier: SATA 6Gb SSDs - 5300 Mainstream			
ThinkSystem 2.5" 5300 480GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17088	B8HY	2 / 5
ThinkSystem 2.5" 5300 960GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17089	B8J6	2 / 5
ThinkSystem 2.5" 5300 1.92TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17090	B8JE	2 / 5
ThinkSystem 2.5" 5300 3.84TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A17091	B8J7	2 / 5
Capacity tier: SATA 6Gb SSDs - S4600 Mainstream			
ThinkSystem 2.5" Intel S4600 960GB Mainstream SATA 6Gb Hot Swap SSD	7SD7A05721	B0ZR	2 / 5
ThinkSystem 2.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD	7SD7A05720	B0ZS	2 / 5
Capacity tier: SATA 6Gb SSDs - S4610 Mainstream			
ThinkSystem 2.5" Intel S4610 480GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13634	B49M	2 / 5
ThinkSystem 2.5" Intel S4610 960GB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13635	B49N	2 / 5
ThinkSystem 2.5" Intel S4610 1.92TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13636	B49P	2 / 5
ThinkSystem 2.5" Intel S4610 3.84TB Mainstream SATA 6Gb Hot Swap SSD	4XB7A13637	B49Q	2 / 5
Capacity tier: SATA 6Gb SSDs - 5300 Entry			
ThinkSystem 2.5" 5300 480GB Entry SATA 6Gb Hot Swap SSD	4XB7A17076	B8JM	2 / 5
ThinkSystem 2.5" 5300 960GB Entry SATA 6Gb Hot Swap SSD	4XB7A17077	B8HP	2 / 5
ThinkSystem 2.5" 5300 1.92TB Entry SATA 6Gb Hot Swap SSD	4XB7A17078	B8J5	2 / 5
ThinkSystem 2.5" 5300 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A17079	B8JP	2 / 5
ThinkSystem 2.5" 5300 7.68TB Entry SATA 6Gb Hot Swap SSD	4XB7A17080	B8J2	2 / 5
Capacity tier: SATA 6Gb SSDs - PM883 Entry			
ThinkSystem 2.5" PM883 240GB Entry SATA 6Gb Hot Swap SSD	4XB7A10195	B34H	2 / 5
ThinkSystem 2.5" PM883 480GB Entry SATA 6Gb Hot Swap SSD	4XB7A10196	B34J	2 / 5
ThinkSystem 2.5" PM883 960GB Entry SATA 6Gb Hot Swap SSD	4XB7A10197	B34K	2 / 5
ThinkSystem 2.5" PM883 1.92TB Entry SATA 6Gb Hot Swap SSD	4XB7A10198	B34L	2 / 5
ThinkSystem 2.5" PM883 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A10199	B34M	2 / 5
ThinkSystem 2.5" PM883 7.68TB Entry SATA 6Gb Hot Swap SSD	4XB7A10200	B4D2	2 / 5
Capacity tier: SATA 6Gb SSDs - S4500 Entry			
ThinkSystem 2.5" Intel S4500 960GB Entry SATA 6Gb Hot Swap SSD	7SD7A05740	B0Z0	2 / 5
ThinkSystem 2.5" Intel S4500 1.92TB Entry SATA 6Gb Hot Swap SSD	7SD7A05739	B0Z1	2 / 5
ThinkSystem 2.5" Intel S4500 3.84TB Entry SATA 6Gb Hot Swap SSD	7SD7A05738	B0Z2	2 / 5
Capacity tier: SATA 6Gb SSDs - S4510 Entry			

Description	Part number	Feature code	Quantity per drive group (min / max)
ThinkSystem 2.5" Intel S4510 480GB Entry SATA 6Gb Hot Swap SSD	4XB7A10248	B499	2 / 5
ThinkSystem 2.5" Intel S4510 960GB Entry SATA 6Gb Hot Swap SSD	4XB7A10249	B49A	2 / 5
ThinkSystem 2.5" Intel S4510 1.92TB Entry SATA 6Gb Hot Swap SSD	4XB7A13622	B49B	2 / 5
ThinkSystem 2.5" Intel S4510 3.84TB Entry SATA 6Gb Hot Swap SSD	4XB7A13623	B49C	2 / 5

Configuration notes:

- The VX3720 appliance supports up to 2 drive groups. Each drive group contains 1 cache drive and up to 2 or 5 capacity drives depending on the quantity of the drive groups:
    - 1 drive group: From 2 to 5 capacity drives.
    - 2 drive groups: 2 capacity drives in each group.
- The quantity of the capacity drives in each drive group must be the same.
- All cache drives in the appliance must be of the same model and capacity. All capacity drives in the appliance must be of the same model and capacity.

Network connectivity

The ThinkAgile VX3720 appliances provide base two-port 1/10 GbE RJ-45 or 10 GbE SFP+ network connectivity with the onboard Intel X722 NIC in the appliance and an Ethernet I/O Module (EIOM) installed in the VX Enclosure. Two additional 1/10 GbE RJ-45, 10 GbE SFP+, or 10/25 GbE SFP28 ports can be selected, if required.

The following table lists the network adapter options that are available for selection.

Table 12. Network adapter selection options

Description	Part number	Feature code	Quantity (min / max)
1/10 GbE RJ-45 LOM ports			
ThinkSystem D2 10Gb 8 port EIOM Base-T RJ-45	7M17A04001	AUYA	0 / 1*
1/10 GbE RJ-45 adapter ports			
Intel X550-T2 Dual Port 10GBase-T Adapter (RJ-45)	00MM860	ATPX	0 / 1
10 GbE SFP+ LOM ports			
ThinkSystem D2 10Gb 8 port EIOM SFP+	7M17A04000	AUY9	0 / 1*
10 GbE SFP+ adapter ports			
Emulex VFA5.2 2x10 GbE SFP+ PCIe Adapter	00AG570	AT7S	0 / 1
Intel X710-DA2 PCIe 10Gb 2-Port SFP+ Ethernet Adapter	7ZT7A00537	AUKX	0 / 1
10/25 GbE SFP28 adapter ports			
Broadcom 57412 10/25GbE SFP28 1-Port PCIe Ethernet Adapter	7ZT7A00505	AUKS	0 / 1
Intel XXV710-DA2 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	7XC7A05523	B0WY	0 / 1
Mellanox ConnectX-4 Lx 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	01GR250	AUAJ	0 / 1

* Per VX Enclosure.

Configuration notes:

- One of the network adapter options is required for selection. Additional ports can be selected, if needed.
- Supported transceivers or DAC cables should be purchased for the SFP+ and SFP28 adapters, and UTP Category 6 or Category 5e cables should be purchased for the 10 GbE (Category 6) or 1 GbE (Category 5e or 6) RJ-45 adapters. The maximum number of transceivers or cables that are supported per adapter equals the quantity of the adapter ports, and all adapter ports must have the same type of the transceiver or cable selected.

The following transceiver and cables can be purchased:

- UTP cables for 10 GbE RJ-45 adapters
- Transceivers and cables for 10 GbE SFP+ adapters
- Transceivers and cables for 25 GbE SFP28 adapters

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

Table 13. Cables for 10 GbE RJ-45 adapters

Description	Part number	Feature code
UTP Category 6 cables (Green) for 10 GbE RJ-45 adapters		
0.75m Cat6 Green Cable	00WE123	AVFW
1.0m Cat6 Green Cable	00WE127	AVFX
1.25m Cat6 Green Cable	00WE131	AVFY
1.5m Cat6 Green Cable	00WE135	AVFZ
3m Cat6 Green Cable	00WE139	AVG0
10m Cat6 Green Cable	90Y3718	A1MT
25m Cat6 Green Cable	90Y3727	A1MW

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

Table 14. Transceivers and cables for 10 GbE SFP+ adapters

Description	Part number	Feature code
10 GbE SFP+ SR transceivers for 10 GbE SFP+ adapters		
Lenovo 10GBASE-SR SFP+ Transceiver	46C3447	5053
Lenovo 10GBASE-LR SFP+ Transceiver	00FE331	B0RJ
Optical cables for 10 GbE SFP+ SR transceivers		
Lenovo 0.5m LC-LC OM3 MMF Cable	00MN499	ASR5
Lenovo 1m LC-LC OM3 MMF Cable	00MN502	ASR6
Lenovo 3m LC-LC OM3 MMF Cable	00MN505	ASR7
Lenovo 5m LC-LC OM3 MMF Cable	00MN508	ASR8
Lenovo 10m LC-LC OM3 MMF Cable	00MN511	ASR9
Lenovo 15m LC-LC OM3 MMF Cable	00MN514	ASRA
Lenovo 25m LC-LC OM3 MMF Cable	00MN517	ASRB
Lenovo 30m LC-LC OM3 MMF Cable	00MN520	ASRC
Passive SFP+ DAC cables for 10 GbE SFP+ adapters		
Lenovo 0.5m Passive SFP+ DAC Cable	00D6288	A3RG
Lenovo 1m Passive SFP+ DAC Cable	90Y9427	A1PH
Lenovo 1.5m Passive SFP+ DAC Cable	00AY764	A51N
Lenovo 2m Passive SFP+ DAC Cable	00AY765	A51P
Lenovo 3m Passive SFP+ DAC Cable	90Y9430	A1PJ
Lenovo 5m Passive SFP+ DAC Cable	90Y9433	A1PK
Lenovo 7m Passive SFP+ DAC Cable	00D6151	A3RH
Active SFP+ DAC cables for 10 GbE SFP+ adapters*		
Lenovo 1m Active DAC SFP+ Cable	00VX111	AT2R
Lenovo 3m Active DAC SFP+ Cable	00VX114	AT2S

Description	Part number	Feature code
Lenovo 5m Active DAC SFP+ Cable	00VX117	AT2T
SFP+ active optical cables for 10 GbE SFP+ ports		
Lenovo 1m SFP+ to SFP+ Active Optical Cable	00YL634	ATYX
Lenovo 3m SFP+ to SFP+ Active Optical Cable	00YL637	ATYY
Lenovo 5m SFP+ to SFP+ Active Optical Cable	00YL640	ATYZ
Lenovo 7m SFP+ to SFP+ Active Optical Cable	00YL643	ATZ0
Lenovo 15m SFP+ to SFP+ Active Optical Cable	00YL646	ATZ1
Lenovo 20m SFP+ to SFP+ Active Optical Cable	00YL649	ATZ2

* The Emulex VFA5.2 ML2 (00AG560) and PCIe (00AG570) network adapters do not support active SFP+ DAC cables.

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

Table 15. Transceivers and cables for 25 GbE SFP28 adapters

Description	Part number	Feature code
25 GbE SFP28 SR transceivers for 25 GbE SFP28 adapters		
Lenovo 25GBase-SR SFP28 Transceiver	7G17A03537	AV1B
Optical cables for 25 GbE SFP28 SR transceivers		
Lenovo 0.5m LC-LC OM3 MMF Cable	00MN499	ASR5
Lenovo 1m LC-LC OM3 MMF Cable	00MN502	ASR6
Lenovo 3m LC-LC OM3 MMF Cable	00MN505	ASR7
Lenovo 5m LC-LC OM3 MMF Cable	00MN508	ASR8
Lenovo 10m LC-LC OM3 MMF Cable	00MN511	ASR9
Lenovo 15m LC-LC OM3 MMF Cable	00MN514	ASRA
Lenovo 25m LC-LC OM3 MMF Cable	00MN517	ASRB
Lenovo 30m LC-LC OM3 MMF Cable	00MN520*	ASRC*
Passive copper cables for 25 GbE SFP28 network adapters		
Lenovo 1m Passive 25G SFP28 DAC Cable	7Z57A03557*	AV1W*
Lenovo 3m Passive 25G SFP28 DAC Cable	7Z57A03558	AV1X
Lenovo 5m Passive 25G SFP28 DAC Cable	7Z57A03559	AV1Y
Active optical cables for 25 GbE SFP28 network adapters*		
Lenovo 3m 25G SFP28 Active Optical Cable	7Z57A03541	AV1F
Lenovo 5m 25G SFP28 Active Optical Cable	7Z57A03542	AV1G
Lenovo 10m 25G SFP28 Active Optical Cable	7Z57A03543	AV1H
Lenovo 15m 25G SFP28 Active Optical Cable	7Z57A03544	AV1J
Lenovo 20m 25G SFP28 Active Optical Cable	7Z57A03545	AV1K

* Not supported with the Intel XXV710-DA2 PCIe 25Gb 2-Port SFP28 Ethernet Adapter (7XC7A05523).

Power supplies and cables

The VX Enclosures ship with two power supplies. The following table lists the power supply options that are available for selection.

Table 16. Power supplies

Description	Part number	Feature code	Quantity
ThinkSystem D2 1100W Platinum PSU	None*	AUZ0	2
ThinkSystem D2 1600W Platinum PSU	None*	AUZ1	2
ThinkSystem D2 2000W Platinum PSU	None*	AUZ2	2

* Factory-installed only.

Configuration notes:

- Two power supplies are required, and both power supplies must be identical.
- For N+N power redundancy, the power supplies should provide sufficient power without oversubscription for the selected node configuration. To ensure that the right power supply is chosen, you should always validate your appliance configuration using the latest version of the Lenovo Capacity Planner: http://datacentersupport.lenovo.com/us/en/solutions/lnvo-lcp
- The power supplies support AC (Worldwide) and HVDC (China only) power sources.

The VX Enclosures ship with two customer-configured power cords. The following table lists the rack power cables and line cords that can be ordered for the VX Enclosures.

Table 17. Power cables

Description	Part number	Feature code
Rack power cables		
1.0m, 10A/125-250V, C13 to IEC 320-C14 Rack Power Cable	00Y3043	A4VP
1.0m, 13A/100-250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08367	B0N5
1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7937	6201
1.5m, 13A/100-250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08368	B0N6
2.0m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08365	B0N4
2.0m, 13A/125V-10A/250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08369	6570
2.8m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08366	6311
2.8m, 13A/125V-10A/250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08370	6400
2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable	39Y7938	6204
4.3m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7932	6263
4.3m, 13A/125V-10A/250V, C13 to IEC 320-C14 Rack Power Cable	4L67A08371	6583
Line cords		
Argentina 2.8m, 10A/250V, C13 to IRAM 2073 Line Cord	39Y7930	6222
Argentina 4.3m, 10A/250V, C13 to IRAM 2073 Line Cord	81Y2384	6492
Australia/New Zealand 2.8m, 10A/250V, C13 to AS/NZS 3112 Line Cord	39Y7924	6211
Australia/New Zealand 4.3m, 10A/250V, C13 to AS/NZS 3112 Line Cord	81Y2383	6574
Brazil 2.8m, 10A/250V, C13 to NBR 14136 Line Cord	69Y1988	6532
Brazil 4.3m, 10A/250V, C13 to NBR14136 Line Cord	81Y2387	6404
China 2.8m, 10A/250V, C13 to GB 2099.1 Line Cord	39Y7928	6210
China 4.3m, 10A/250V, C13 to GB 2099.1 Line Cord	81Y2378	6580

Description	Part number	Feature code
Denmark 2.8m, 10A/250V, C13 to DK2-5a Line Cord	39Y7918	6213
Denmark 4.3m, 10A/250V, C13 to DK2-5a Line Cord	81Y2382	6575
Europe 2.8m, 10A/250V, C13 to CEE7-VII Line Cord	39Y7917	6212
Europe 4.3m, 10A/250V, C13 to CEE7-VII Line Cord	81Y2376	6572
India 2.8m, 10A/250V, C13 to IS 6538 Line Cord	39Y7927	6269
India 4.3m, 10A/250V, C13 to IS 6538 Line Cord	81Y2386	6567
Israel 2.8m, 10A/250V, C13 to SI 32 Line Cord	39Y7920	6218
Israel 4.3m, 10A/250V, C13 to SI 32 Line Cord	81Y2381	6579
Italy 2.8m, 10A/250V, C13 to CEI 23-16 Line Cord	39Y7921	6217
Italy 4.3m, 10A/250V, C13 to CEI 23-16 Line Cord	81Y2380	6493
Japan 2.8m, 12A/125V, C13 to JIS C-8303 Line cord	46M2593	A1RE
Japan 2.8m, 12A/250V, C13 to JIS C-8303 Line Cord	4L67A08357	6533
Japan 4.3m, 12A/125V, C13 to JIS C-8303 Line Cord	39Y7926	6335
Japan 4.3m, 12A/250V, C13 to JIS C-8303 Line Cord	4L67A08362	6495
Korea 2.8m, 12A/250V, C13 to KS C8305 Line Cord	39Y7925	6219
Korea 4.3m, 12A/250V, C13 to KS C8305 Line Cord	81Y2385	6494
South Africa 2.8m, 10A/250V, C13 to SABS 164 Line Cord	39Y7922	6214
South Africa 4.3m, 10A/250V, C13 to SABS 164 Line Cord	81Y2379	6576
Switzerland 2.8m, 10A/250V, C13 to SEV 1011-S24507 Line Cord	39Y7919	6216
Switzerland 4.3m, 10A/250V, C13 to SEV 1011-S24507 Line Cord	81Y2390	6578
Taiwan 2.8m, 10A/250V, C13 to CNS 10917-3 Line Cord	81Y2375	6317
Taiwan 2.8m, 15A/125V, C13 to CNS 10917-3 Line Cord	81Y2374	6402
Taiwan 4.3m, 10A/250V, C13 to CNS 10917-3 Line Cord	81Y2389	6531
Taiwan 4.3m, 15A/125V, C13 to CNS 10917-3 Line Cord	81Y2388	6530
United Kingdom 2.8m, 10A/250V, C13 to BS 1363/A Line Cord	39Y7923	6215
United Kingdom 4.3m, 10A/250V, C13 to BS 1363/A Line Cord	81Y2377	6577
United States 2.8m, 10A/250V, C13 to NEMA 6-15P Line Cord	46M2592	A1RF
United States 2.8m, 13A/125V, C13 to NEMA 5-15P Line Cord	00WH545	6401
United States 4.3m, 10A/250V, C13 to NEMA 6-15P Line Cord	4L67A08361	6373
United States 4.3m, 13A/125V, C13 to NEMA 5-15P Line Cord	4L67A08360	AX8A

Configuration note: If the 1100 W AC power supplies (feature code AUZ0) in the VX Enclosure are connected to a low-voltage power source (100 - 125 V), the only supported power cables are those that are rated above 10 A; cables that are rated at 10 A are not supported.

Rack installation

The VX Enclosures ship with a rail kit with or without CMA depending on the rack installation option selected. The following table lists the rack installation options that are available for the VX Enclosures and appliances.

Table 18. Rack installation options

Description	Part number	Feature code	Maximum quantity
4-post rail kit for VX Enclosure			
ThinkSystem D2 Slide Rail	None*	AUYC	1
Cable management arm (CMA) upgrade			
ThinkSystem D2 CMA (Cable Management Arm)	7XF7A03997	AUYD	1
Front VGA/USB ports			
ThinkSystem SD530 Front VGA/USB KVM Breakout Module	7M17A04002	AUYM	1
System Console Breakout Cable	81Y5286	A1NF	1

* CTO only.

Configuration note: The VGA/USB KVM Breakout Module occupies the upper-left drive bay, limiting the maximum number of drives to 5.

The following table summarizes the rail kit features and specifications.

Table 19. Rail kit features and specifications summary

Feature	D2 Slide Rail without CMA
Feature code	AUYC
CMA	7XF7A03997
Rail length	853 mm (33.58 in.)
Rail type	Full-out slide (ball bearing)
Tool-less installation	Yes
In-rack server maintenance	Yes
1U PDU support	Yes
0U PDU support	No
Rack type	IBM and Lenovo 4-post, IEC standard-compliant
Mounting holes	Square or round
Mounting flange thickness	2 mm (0.08 in.) – 3.3 mm (0.13 in.)
Distance between front and rear mounting flanges^	609.6 mm (24 in.) – 812.8 mm (32 in.)

^ Measured when mounted on the rack, from the front surface of the front mounting flange to the rear most point of the rail.

Software

The ThinkAgile VX Series appliances support the following VMware HCI components:

- VMware vSphere ESXi hypervisor
- VMware vSAN distributed enterprise storage
- VMware vCenter Server centralized management

The VMware ESXi hypervisor is factory-preinstalled on the 2x M.2 SSDs configured in a RAID-1 drive group.

The following table lists the VMware ESXi hypervisor versions that are available for selection.

Table 20. VMware ESXi hypervisor selection options

Description	Feature code
VMware ESXi 6.5 U2 (Factory Installed)	B3VW
VMware ESXi 6.5 U3 (Factory installed)	B6U0
VMware ESXi 6.7 U1 (Factory Installed)	B4XA
VMware ESXi 6.7 U2 (Factory Installed)	B6U1
VMware ESXi 6.7 U3 (Factory installed)	B88T

VMware vSAN, vSphere, and vCenter Server software licenses and support are required for ThinkAgile VX Series appliances. Customers are required to purchase VMware vSAN licenses for VX Series appliances from Lenovo. For VMware vSphere and vCenter Server, customers can use the existing VMware software licenses and active support contracts, or they can purchase software licenses and support from Lenovo or VMware.

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

- VMware vSAN License and Subscription
- VMware vSphere License and Subscription
- VMware HCI Kit License and Subscription
- VMware Horizon License and Subscription
- VMware Cloud Foundation License and Subscription
- VMware vCenter Server License and Subscription
- VMware License and Subscription with 1-year software support for PRC

Configuration notes:

- The selection of vSAN licenses is required: Standalone licenses, HCI bundle licenses, VDI solution licenses, or VCF licenses.
  Important: The Horizon 7 Standard license does not include vSAN; standalone vSAN license options must be selected with the Horizon 7 Standard.

- VMware software licenses that are available for selection include 1-year (the selection in available in PRC only), 3-year, or 5-year software support (matches the duration of the selected solution-level warranty period).

- The quantity of processor-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.

- The quantity of CCU-based licenses is specified based on the concurrent user requirements.

VMware vSAN License and Subscription

Lenovo offers the following VMware vSAN License and Subscription options that can be purchased for ThinkAgile VX Series appliances:

- *VMware Virtual SAN 6 Standard* provides support for hybrid and all-flash storage configurations.
- *VMware Virtual SAN 6 Advanced* provides support for hybrid and all-flash storage configurations with space efficiency features (compression, deduplication, and erasure coding).
- *VMware Virtual SAN 6 Enterprise* provides support for hybrid and all-flash storage configurations with space efficiency features (compression, deduplication, and erasure coding), stringent security (data-at-rest encryption), and advanced failure protection (stretched cluster).
- *VMware Virtual SAN 6 for Remote Office Branch Office (ROBO)* provides support for hybrid and all-flash storage configurations for up to 25 virtual machines at remote locations.

VMware vSAN selection options for the ThinkAgile VX Series appliances are listed in the following table.

Table 21. VMware vSAN selection options

Description	Feature code
VMware Virtual SAN 6 Standard	B2Q7
VMware Virtual SAN 6 Advanced	B2Q8
VMware Virtual SAN 6 Enterprise	B2Q9
VMware Virtual SAN 6 for Remote Office Branch Office (25 VM Pack)	B2QA

The following table lists the VMware vSAN License and Subscription options that are derived by the configurator based on the selected quantity of processors, software edition, and warranty period.

Table 22. VMware vSAN License and Subscription options

Description	Part number	Feature code
vSAN 6 Standard		
VMware vSAN 6 Standard for 1 Processor w/3Yr Support	7S06004TWW	B2C6
VMware vSAN 6 Standard for 1 Processor w/5Yr Support	7S060083WW	B2FG
vSAN 6 Advanced		
VMware vSAN 6 Advanced for 1 Processor w/3Yr Support	7S06004XWW	B2CA
VMware vSAN 6 Advanced for 1 Processor w/5Yr Support	7S060087WW	B2FL
vSAN 6 Enterprise		
VMware vSAN 6 Enterprise for 1 Processor w/3Yr Support	7S060051WW	B2CE
VMware vSAN 6 Enterprise for 1 Processor w/5Yr Support	7S06008BWW	B2FQ
vSAN 6 Standard for Remote Office Branch Office (ROBO)		
VMware vSAN 6 Standard for Rmt Off Brnch Off 25VM Pk w/3Yr Support	7S06004WWW	B2C9
VMware vSAN 6 Standard for Rmt Off Brnch Off 25VM Pk w/5Yr Support	7S060086WW	B2FK

The following table compares features of the VMware vSAN software editions.

Table 23. VMware vSAN software editions feature comparison

	VMware vSAN software edition		
Feature	**Standard**	**Advanced**	**Enterprise**
Licensing for data center	Processor-based (per 1 processor)		
Licensing for ROBO	VM-based (per 25 VMs)*		
Cluster size	2 - 64	2 - 64	2 - 64
Storage-Policy Based Management	Yes	Yes	Yes
Flash Read/Write Caching	Yes	Yes	Yes
Distributed RAID	Yes	Yes	Yes
Virtual Distributed Switch	Yes	Yes	Yes
Rack Awareness	Yes	Yes	Yes
vSphere Replication	Yes	Yes	Yes
Software Checksum	Yes	Yes	Yes
All-Flash Hardware	Yes	Yes	Yes
iSCSI Target Service	Yes	Yes	Yes
IOPS Limit	Yes	Yes	Yes
Deduplication and Compression	No	Yes**	Yes**
RAID-5/6 Erasure Coding	No	Yes**	Yes**
Data-at-Rest Encryption	No	No	Yes
Stretched Cluster with Local Failure Protection	No	No	Yes

* A maximum of 25 VMs is supported at any single location under the ROBO license. Two or more nodes can be used in a cluster under the ROBO license, however, the maximum number of VMs at the location must not exceed 25.
** Requires All-Flash configurations; hybrid configurations not supported.

VMware vSphere License and Subscription

Lenovo offers the following VMware vSphere License and Subscription options that can be purchased for ThinkAgile VX Series appliances:

- *VMware vSphere 6 Standard* provides an entry-level solution for basic server consolidation and business continuity.

- *VMware vSphere 6 Enterprise Plus* offers resource management with enhanced application availability and performance for server virtualization and cloud solutions.

- *VMware vSphere 6 Remote Office Branch Office (ROBO) Standard* provides remote site server virtualization with business continuity and backup features.

- *VMware vSphere 6 Remote Office Branch Office Advanced* provides remote site server virtualization that offers business continuity and backup with advanced features such as standardization of host configurations.

VMware vSphere selection options for the ThinkAgile VX Series appliances are listed in the following table.

Table 24. VMware vSphere selection options

Description	Feature code
VMware vSphere 6 Standard	B2Q0
VMware vSphere 6 Enterprise Plus	B2Q1
VMware vSphere 6 Remote Office Branch Office Standard	B2Q3
VMware vSphere 6 Remote Office Branch Office Advanced	B2Q4

The following table lists the VMware vSphere License and Subscription options that are derived by the configurator based on the selected quantity of processors, software edition, and warranty period.

Table 25. VMware vSphere License and Subscription options

Description	Part number	Feature code
vSphere 6 Standard		
VMware vSphere 6 Standard for 1 Processor w/3Yr Support	7S06003DWW	B2AS
VMware vSphere 6 Standard for 1 Processor w/5Yr Support	7S06006PWW	B2E2
vSphere 6 Enterprise Plus		
VMware vSphere 6 Enterprise Plus for 1 Processor w/3Yr Support	7S06003EWW	B2AT
VMware vSphere 6 Enterprise Plus for 1 Processor w/5Yr Support	7S06006QWW	B2E3
vSphere 6 Remote Office Branch Office Standard		
VMware vSphere 6 Remote Office Branch Office Standard (25 VM Pack) w/3Yr S&S	7S06003KWW	B2AY
VMware vSphere 6 Remote Office Branch Office Standard (25 VM Pack) w/5Yr S&S	7S06006VWW	B2E8
vSphere 6 Remote Office Branch Office Advanced		
VMware vSphere 6 Remote Office Branch Office Advanced (25 VM Pack) w/3Yr S&S	7S06003LWW	B2AZ
VMware vSphere 6 Remote Office Branch Office Advanced (25 VM Pack) w/5Yr S&S	7S06006WWW	B2E9

The following table compares features of the VMware vSphere software editions.

Table 26. VMware vSphere software editions feature comparison

Feature	VMware vSphere software edition			
	Standard	Enterprise Plus	ROBO Standard	ROBO Advanced
Licensing	Processor-based (per 1 processor)		VM-based (per 25 VMs)	
Hypervisor	Yes	Yes	Yes	Yes
vMotion	Yes	Yes	Yes	Yes
Storage vMotion	Yes	Yes	Yes	Yes
Cross-Switch vMotion	Yes	Yes	No	No
Fault Tolerance	2 vCPU	8 vCPU	2 vCPU	4 vCPU
Data Protection and Replication	Yes	Yes	Yes	Yes
Virtual Volumes	Yes	Yes	Yes	Yes
Storage-Policy Based Management	Yes	Yes	Yes	Yes
APIs for Storage Awareness	Yes	Yes	No	No
APIs for Array Integration, Multipathing	Yes	Yes	No	No

Feature	VMware vSphere software edition			
	Standard	Enterprise Plus	ROBO Standard	ROBO Advanced
Content Library	Yes	Yes	No	No
vCenter High Availability	Yes*	Yes*	No	No
vCenter Backup and Restore	Yes*	Yes*	No	No
vCenter Server Appliance Migration Tool	Yes*	Yes*	No	No
Virtual Machine Encryption	No	Yes	No	No
Proactive High Availability	No	Yes	No	No
vSphere Integrated Containers	No	Yes	No	Yes
Distributed Resource Scheduler (DRS)	No	Yes	No	No
Distributed Power Management	No	Yes	No	No
Big Data Extensions	No	Yes	No	No
Distributed Switch	No	Yes	No	Yes
Storage DRS	No	Yes	No	No
I/O Controls (Network and Storage) and SR-IOV	No	Yes	No	No
Host Profiles and Auto Deploy	No	Yes	No	Yes
Flash Read Cache	No	Yes	No	No
Cross-vCenter and Long Distance vMotion	No	Yes	No	No
vGPU	No	Yes	No	No

* Requires vCenter Server Standard.

VMware HCI Kit License and Subscription

Lenovo offers the following VMware HCI license bundles for ThinkAgile VX Series appliances that include both vSphere and vSAN License and Subscription options:

- VMware HCI Kit Essentials (For 3 nodes):
    - vSphere Essentials Plus
    - vSAN Standard

- VMware HCI Kit Standard (Per CPU):
    - vSphere Standard
    - vSAN Standard

- VMware HCI Kit Advanced (Per CPU):
    - vSphere Enterprise Plus
    - vSAN Advanced

- VMware HCI Kit Enterprise (Per CPU):
    - vSphere Enterprise Plus
    - vSAN Enterprise

Note: *VMware vSphere Essentials Plus* provides server virtualization and consolidation with centralized management and business continuity for up to three nodes, and it includes the following features: vSphere Hypervisor, vMotion, Cross-Switch vMotion, High Availability, Data Protection and Replication, and vCenter Server Essentials.

VMware HCI Kit selection options for the ThinkAgile VX Series appliances are listed in the following table.

Table 27. VMware HCI Kit selection options

Description	Feature code
VMware 6 HCI Kit Essentials for 3 Nodes (each node with up to two processors)	BAKF
VMware 6 HCI Kit Standard	BAKE
VMware 6 HCI Kit Advanced	B2PY
VMware 6 HCI Kit Enterprise	B2PZ

The following table lists the VMware HCI Kit License and Subscription options that are derived by the configurator based on the selected quantity of processors, software edition, and warranty period.

Table 28. VMware HCI Kit License and Subscription options

Description	Part number	Feature code
HCI Kit Essentials		
VMware HCI Kit Essentials for 3 Nodes w/3Yr Support	7S0600A9WW	S04F
VMware HCI Kit Essentials for 3 Nodes w/5Yr Support	7S0600ACWW	S04J
HCI Kit Standard		
VMware HCI Kit Standard (Per CPU) w/3Yr Support	7S060057WW	B2CL
VMware HCI Kit Standard (Per CPU) w/5Yr Support	7S06008HWW	B2FW
HCI Kit Advanced		
VMware HCI Kit Advanced (Per CPU) w/3Yr Support	7S060058WW	B2CM
VMware HCI Kit Advanced (Per CPU) w/5Yr Support	7S06008JWW	B2FX
HCI Kit Enterprise		
VMware HCI Kit Enterprise (Per CPU) w/3Yr Support	7S060059WW	B2CN
VMware HCI Kit Enterprise (Per CPU) w/5Yr Support	7S06008KWW	B2FY

VMware Horizon 7 License and Subscription

Lenovo offers the following VMware Horizon 7 License and Subscription options for Virtual Desktop Infrastructure (VDI) deployments that can be purchased for the ThinkAgile VX Series appliances:

- *VMware Horizon 7 Standard* delivers simple, powerful VDI with great user experience, and it includes VMware vSphere Desktop (delivers the full range of vSphere 6 Enterprise Plus features for desktop workloads) and vCenter Server for Desktop.

- *VMware Horizon 7 Advanced* delivers desktops and applications for physical and virtual machines through a unified workspace, and it includes VMware vSphere Desktop, vCenter Server for Desktop, and vSAN Advanced for Desktop with All-Flash.

- *VMware Horizon 7 Enterprise* delivers desktops and applications with closed-loop management and automation, and it includes VMware vSphere Desktop, vCenter Server for Desktop, and vSAN Advanced for Desktop with All-Flash.

The Standard license is available in 10-user or 100-user packs for concurrent users, and the Advanced and Enterprise licenses are available in 10-user or 100-user packs for concurrent or named users.

VMware Horizon 7 selection options for the ThinkAgile VX Series appliances are listed in the following table.

Table 29. VMware Horizon 7 selection options

Description	Feature code
VMware vSphere 7 Horizon Standard (concurrent users)	B2Z3
VMware vSphere 7 Horizon Advanced (concurrent users)	B2Z4
VMware vSphere 7 Horizon Advanced (named users)	B2Z5
VMware vSphere 7 Horizon Enterprise (concurrent users)	B2Z6
VMware vSphere 7 Horizon Enterprise (named users)	B2Z7

The following table lists the VMware Horizon License and Subscription options that are derived by the configurator based on the selected number of users, software edition, and warranty period.

Table 30. VMware Horizon License and Subscription options

Description	Part number	Feature code
Horizon 7 Standard		
VMware Horizon 7 Standard 10 Concurrent User Pack w/3Yr Support	7S06003VWW	B2B8
VMware Horizon 7 Standard 10 Concurrent User Pack w/5Yr Support	7S060075WW	B2EJ
VMware Horizon 7 Standard 100 Concurrent User Pack w/3Yr Support	7S06003WWW	B2B9
VMware Horizon 7 Standard 100 Concurrent User Pack w/5Yr Support	7S060076WW	B2EK
Horizon 7 Advanced		
VMware Horizon 7 Advanced 10 Concurrent User Pack w/3Yr Support	7S06003ZWW	B2BC
VMware Horizon 7 Advanced 10 Concurrent User Pack w/5Yr Support	7S060079WW	B2EN
VMware Horizon 7 Advanced 10 Named User Pack w/3Yr Support	7S060041WW	B2BE
VMware Horizon 7 Advanced 10 Named User Pack w/5Yr Support	7S06007BWW	B2EQ
VMware Horizon 7 Advanced 100 Concurrent User Pack w/3Yr Support	7S060040WW	B2BD
VMware Horizon 7 Advanced 100 Concurrent User Pack w/5Yr Support	7S06007AWW	B2EP
VMware Horizon 7 Advanced 100 Named User Pack w/3Yr Support	7S060042WW	B2BF
VMware Horizon 7 Advanced 100 Named User Pack w/5Yr Support	7S06007CWW	B2ER
Horizon 7 Enterprise		
VMware Horizon 7 Enterprise 10 Concurrent User Pack w/3Yr Support	7S060047WW	B2BL
VMware Horizon 7 Enterprise 10 Concurrent User Pack w/5Yr Support	7S06007HWW	B2EW
VMware Horizon 7 Enterprise 10 Named User Pack w/3Yr Support	7S060049WW	B2BN
VMware Horizon 7 Enterprise 10 Named User Pack w/5Yr Support	7S06007KWW	B2EY
VMware Horizon 7 Enterprise 100 Concurrent User Pack w/3Yr Support	7S060048WW	B2BM
VMware Horizon 7 Enterprise 100 Concurrent User Pack w/5Yr Support	7S06007JWW	B2EX
VMware Horizon 7 Enterprise 100 Named User Pack w/3Yr Support	7S06004AWW	B2BP
VMware Horizon 7 Enterprise 100 Named User Pack w/5Yr Support	7S06007LWW	B2EZ

The following table compares key features of the VMware Horizon software editions.

Table 31. VMware Horizon software editions feature comparison

Feature	VMware Horizon software edition		
	Standard	Advanced	Enterprise
Licensing	User-based (per 10 or 100 users)		
Concurrent Users	Yes	Yes	Yes
Named Users	No	Yes	Yes
Windows Virtual Desktops	Yes	Yes	Yes
Linux Virtual Desktops	No	No	Yes
Packaged Applications	Yes	Yes	Yes
Hosted Applications	No	Yes	Yes
Session-based Desktops	No	Yes	Yes
Single Sign-On for Application and Desktop Access	No	Yes	Yes
Image Management for Physical Desktop	No	Yes	Yes
Virtualization Pack for Skype for Business	No	Yes	Yes
Session Collaboration	No	No	Yes
Real-time Application Delivery	No	No	Yes
Just-in-Time Delivery with Instant Clone Technology	No	No	Yes
User, Profile, and Policy Management	No	No	Yes
Health Monitoring and Performance Analytics	No	No	Yes
Capacity Management: Planning and Optimization	No	No	Yes
Help Desk Tool	No	No	Yes

VMware Cloud Foundation

Lenovo offers VMware Cloud Foundation for hybrid cloud deployments of the ThinkAgile VX Series appliances. VMware Cloud Foundation is an integrated software platform that automates the deployment and lifecycle management of a complete software-defined data center (SDDC) in hyperconverged environments.

The following Cloud Foundation License and Subscription options are offered:

- *Cloud Foundation Basic* includes vSphere Enterprise Plus, vSAN Advanced, NSX Data Center Professional, and SDDC Manager.
- *Cloud Foundation Standard* includes vSphere Enterprise plus, vSAN Advanced, NSX Data Center Advanced, vRealize Suite Standard, vRealize Network Insight Advanced, and SDDC Manager.
- *Cloud Foundation Advanced* includes vSphere Enterprise plus, vSAN Advanced, NSX Data Center Advanced, vRealize Suite Enterprise, vRealize Network Insight Advanced, and SDDC Manager.
- *Cloud Foundation Enterprise* includes vSphere Enterprise plus, vSAN Enterprise, NSX Data Center Enterprise plus, vRealize Suite Enterprise, vRealize Network Insight Enterprise, and SDDC Manager.
- *Cloud Foundation for VDI* includes SDDC Manager for Desktop and NSX Data Center Advanced or Enterprise plus for Desktop, and it comes with or without Horizon Enterprise.

Configuration note: vCenter Server that is required for Cloud Foundation is licensed separately; only one vCenter Server license is required for all vCenter Servers deployed in a Cloud Foundation system.

VMware VCF selection options for the ThinkAgile VX Series appliances are listed in the following table.

Table 32. VMware VCF selection options

Description	Feature code
VMware Cloud Foundation Basic (1 CPU)	BAAM
VMware Cloud Foundation Standard (1 CPU)	BAAN
VMware Cloud Foundation Advanced (1 CPU)	BAAP
VMware Cloud Foundation Enterprise (1 CPU)	BAAQ
VCF for VDI: SDDC Manager, NSX DC ADV, and Horizon ENT (concurrent users)	BAAR
VCF for VDI: SDDC Manager and NSX DC ADV w/o Horizon ENT (concurrent users)	BAAS
VCF for VDI: SDDC Manager and NSX DC ENT+ w/o Horizon ENT (concurrent users)	BAAT

The following table lists the VMware Cloud Foundation License and Subscription options that are derived by the configurator based on the selected number of users (for concurrent user [CCU]-based licenses), quantity of processors (for processor-based licenses), software edition, and warranty period.

Table 33. VMware Cloud Foundation License and Subscription options

Description	Part number	Feature code
VMware Cloud Foundation Basic		
VMware Cloud Foundation Basic (Per CPU) w/3Yr Subscription and Support	7S0600D1WW	S1RR
VMware Cloud Foundation Basic (Per CPU) w/5Yr Subscription and Support	7S0600D2WW	S1RS
VMware Cloud Foundation Standard		
VMware Cloud Foundation Standard (Per CPU) w/3Y Subscription and Support	7S0600DNWW	S1SC
VMware Cloud Foundation Standard (Per CPU) w/5Y Subscription and Support	7S0600DPWW	S1SD
VMware Cloud Foundation Advanced		
VMware Cloud Foundation Advanced (Per CPU) w/3Y Subscription and Support	7S0600DRWW	S1SF
VMware Cloud Foundation Advanced (Per CPU) w/5Y Subscription and Support	7S0600DSWW	S1SG
VMware Cloud Foundation Enterprise		
VMware Cloud Foundation Enterprise (Per CPU) w/3Y Subscription and Support	7S0600DUWW	S1SJ
VMware Cloud Foundation Enterprise (Per CPU) w/5Y Subscription and Support	7S0600DVWW	S1SK
VMware Cloud Foundation for VDI with NSX Data Center Advanced and Horizon Enterprise		
VCF for VDI: SDDC Mgr, NSX DC ADV, and Horizon ENT 10 pack (Per CCU) w/3Y S&S	7S0600D7WW	S1RX
VCF for VDI: SDDC Mgr, NSX DC ADV, and Horizon ENT 10 pack (Per CCU) w/5Y S&S	7S0600D8WW	S1RY
VCF for VDI: SDDC Mgr, NSX DC ADV, and Horizon ENT 100 pack (Per CCU) w/3Y S&S	7S0600D4WW	S1RU
VCF for VDI: SDDC Mgr, NSX DC ADV, and Horizon ENT 100 pack (Per CCU) w/5Y S&S	7S0600D5WW	S1RV
VMware Cloud Foundation for VDI with NSX Data Center Advanced (no Horizon included)		
VCF for VDI: SDDC Mgr and NSX DC ADV w/o Horizon ENT 10 pack (per CCU) w/3Y S&S	7S0600DDWW	S1S3
VCF for VDI: SDDC Mgr and NSX DC ADV w/o Horizon ENT 10 pack (per CCU) w/5Y S&S	7S0600DEWW	S1S4
VCF for VDI: SDDC Mgr and NSX DC ADV w/o Horizon ENT 100 pack (per CCU) w/3Y S&S	7S0600DAWW	S1Z7
VCF for VDI: SDDC Mgr and NSX DC ADV w/o Horizon ENT 100 pack (per CCU) w/5Y S&S	7S0600DBWW	S1Z8
VMware Cloud Foundation for VDI with NSX Data Center Enterprise plus (no Horizon included)		
VCF for VDI: SDDC Mgr and NSX DC ENT+ w/o Horizon ENT 10 pack (Per CCU) w/3Y S&S	7S0600DKWW	S1S9
VCF for VDI: SDDC Mgr and NSX DC ENT+ w/o Horizon ENT 10 pack (Per CCU) w/5Y S&S	7S0600DLWW	S1SA

Description	Part number	Feature code
VCF for VDI: SDDC Mgr and NSX DC ENT+ w/o Horizon ENT 100 pack (Per CCU) w/3Y S&S	7S0600DGWW	S1S6
VCF for VDI: SDDC Mgr and NSX DC ENT+ w/o Horizon ENT 100 pack (Per CCU) w/5Y S&S	7S0600DHWW	S1S7

VMware vCenter Server License and Subscription

VMware vCenter Server provides centralized management of vSphere environments to simplify day-to-day operations and reduce the complexity of managing virtual infrastructure.

vCenter Server is required for managing ThinkAgile VX Series appliances. The nodes can be added to an existing installation of vCenter Server, or the software license for the vCenter Server instance can be purchased from Lenovo by selecting one the following License and Subscription options:

- VMware vCenter Server 6 Foundation for vSphere 6 (Per Instance) (manages up to 4 hosts)
- VMware vCenter Server 6 Standard for vSphere 6 (Per Instance) (unlimited hosts)

The vCenter Server license purchased from Lenovo includes three or five years of support and subscription (matches the duration of the selected hardware warranty period).

VMware vCenter Server selection options for the ThinkAgile VX Series appliances are listed in the following table.

Table 34. VMware vCenter Server selection options

Description	Feature code
VMware vCenter Server 6 Foundation	B2Q6
VMware vCenter Server 6 Standard	B2Q5

The following table lists the VMware vCenter License and Subscription options that are derived by the configurator based on the selected software edition and warranty period.

Table 35. VMware vCenter Server License and Subscription options

Description	Part number	Feature code
vCenter Server Foundation		
VMware vCenter Srv 6 Fdn for vSph 6 (Per Instance) w/3Yr Support	7S06003PWW	B2B2
VMware vCenter Srv 6 Fdn for vSph 6 (Per Instance) w/5Yr Support	7S06006ZWW	B2EC
vCenter Server Standard		
VMware vCenter Srv 6 Std for vSph 6 (Per Instance) w/3Yr Support	7S06003NWW	B2B1
VMware vCenter Srv 6 Std for vSph 6 (Per Instance) w/5Yr Support	7S06006YWW	B2EB

VMware vCenter Server offers the following key features:

- Centralized management of virtualized hosts and virtual machines from a single console.
- Centralized inventory of virtual machines, hosts, datastores and networks.
- Alerts and notifications can trigger automated workflows to remedy and preempt problems.
- Host profiles standardize and simplify configuration and management of VMware ESXi hosts.
- Resource management for virtual machines allows to control allocation of processor, memory, disk and network resources.
- Continuously monitors utilization across resource pools and intelligently allocates available resources among virtual machines according to predefined rules
- Automatically restarts virtual machines that have failed without manual intervention with VMware vSphere HA.
- Maintains records of significant configuration changes and exports reports for event tracking.
- Patch management enforces compliance to patch standards through automated scanning and patching of online ESXi hosts and select Microsoft and Linux virtual machines.

VMware License and Subscription with 1-year software support for PRC

The following table lists ordering information for the additional VMware License and Subscription options with 1-year software support that are available for selection in PRC only.

Table 36. VMware License and Subscription options with 1-year software support

Description	Part number	Feature code
vSAN 6		
VMware vSAN 6 Standard for 1 Processor w/1Yr Support	7S06001HWW	B28W
VMware vSAN 6 Advanced for 1 Processor w/1Yr Support	7S06001MWW	B290
VMware vSAN 6 Enterprise for 1 Processor w/1Yr Support	7S06001RWW	B294
VMware vSAN 6 Enterprise Plus for 1 Processor w/1Y Support	7S0600FRWW	S226
vSAN 6 for Remote Office Branch Office		
VMware vSAN 6 Standard for Rmt Off Brnch Off 25VM Pk w/1Yr Support	7S06001LWW	B28Z
VMware vSAN 6 Advanced for Rmt Off Brnch Off 25VM Pk w/1Yr Support	7S06001QWW	B293
VMware vSAN 6 Enterprise for Rmt Off Brnch Off 25VM Pk w/1Yr Support	7S06001UWW	B297
vSAN 6 for Desktop		
VMware vSAN 6 Standard for Desktop 10 Conc User Pk w/1Yr Support	7S06001JWW	B28X
VMware vSAN 6 Standard for Desktop 100 Conc User Pk w/1Yr Support	7S06001KWW	B28Y
VMware vSAN 6 Advanced for Desktop 10 Conc User Pk w/1Yr Support	7S06001NWW	B291
VMware vSAN 6 Advanced for Desktop 100 Conc User Pk w/1Yr Support	7S06001PWW	B292
VMware vSAN 6 Enterprise for Desktop 10 Conc User Pk w/1Yr Support	7S06001SWW	B295
VMware vSAN 6 Enterprise for Desktop 100 Conc User Pk w/1Yr Support	7S06001TWW	B296
vSphere 6		
VMware vSphere 6 Standard for 1 Processor w/1Yr Support	7S060003WW	B27G
VMware vSphere 6 Enterprise Plus for 1 Processor w/1Yr Support	7S060004WW	B27H
VMware vSphere 6 Remote Off Branch Off Std (25 VM Pk) w/1Yr Support	7S060009WW	B27N
VMware vSphere 6 Remote Off Branch Off Adv (25 VM Pk) w/1Yr Support	7S06000AWW	B27P
Horizon 7		
VMware Horizon 7 Standard 10 Concurrent User Pack w/1Yr Support	7S06000KWW	B27Y

Description	Part number	Feature code
VMware Horizon 7 Standard 100 Concurrent User Pack w/1Yr Support	7S06000LWW	B27Z
VMware Horizon 7 Advanced 10 Concurrent User Pack w/1Yr Support	7S06000PWW	B282
VMware Horizon 7 Advanced 10 Named User Pack w/1Yr Support	7S06000RWW	B284
VMware Horizon 7 Advanced 100 Concurrent User Pack w/1Yr Support	7S06000QWW	B283
VMware Horizon 7 Advanced 100 Named User Pack w/1Yr Support	7S06000SWW	B285
VMware Horizon 7 Enterprise 10 Concurrent User Pack w/1Yr Support	7S06000XWW	B28A
VMware Horizon 7 Enterprise 10 Named User Pack w/1Yr Support	7S06000ZWW	B28C
VMware Horizon 7 Enterprise 100 Concurrent User Pack w/1Yr Support	7S06000YWW	B28B
VMware Horizon 7 Enterprise 100 Named User Pack w/1Yr Support	7S060010WW	B28D
VMware Cloud Foundation		
VMware Cloud Foundation Basic (Per CPU) w/1Yr Subscription and Support	7S0600D0WW	S1RQ
VMware Cloud Foundation Standard (Per CPU) w/1Y Subscription and Support	7S0600DMWW	S1SB
VMware Cloud Foundation Advanced (Per CPU) w/1Y Subscription and Support	7S0600DQWW	S1SE
VMware Cloud Foundation Enterprise (Per CPU) w/1Y Subscription and Support	7S0600DTWW	S1SH
VMware Cloud Foundation for VDI		
VCF for VDI: SDDC Mgr, NSX DC ADV, and Horizon ENT 10 pack (Per CCU) w/1Y S&S	7S0600D6WW	S1RW
VCF for VDI: SDDC Mgr, NSX DC ADV, and Horizon ENT 100 pack (Per CCU) w/1Y S&S	7S0600D3WW	S1RT
VCF for VDI: SDDC Mgr and NSX DC ADV w/o Horizon ENT 10 pack (per CCU) w/1Y S&S	7S0600DCWW	S1S2
VCF for VDI: SDDC Mgr and NSX DC ADV w/o Horizon ENT 100 pack (per CCU) w/1Y S&S	7S0600D9WW	S1RZ
VCF for VDI: SDDC Mgr and NSX DC ENT+ w/o Horizon ENT 10 pack (Per CCU) w/1Y S&S	7S0600DJWW	S1S8
VCF for VDI: SDDC Mgr and NSX DC ENT+ w/o Horizon ENT 100 pack (Per CCU) w/1Y S&S	7S0600DFWW	S1S5
vCenter Server		
VMware vCenter Srv 6 Fdn for vSph 6 (Per Instance) w/1Yr Support	7S06000DWW	B27S
VMware vCenter Srv 6 Std for vSph 6 (Per Instance) w/1Yr Support	7S06000CWW	B27R

Systems management

The ThinkAgile VX Series appliances support the following systems management tools:

- Lenovo XClarity Controller
- Lenovo XClarity Administrator and XClarity Pro
- Lenovo XClarity Integrator for VMware vCenter
- Lenovo XClarity Energy Manager

Lenovo XClarity Controller

The ThinkAgile VX Series appliances contain Lenovo XClarity Controller (XCC) Enterprise, which provides advanced service-processor control, monitoring, and alerting functions.

XClarity Controller Enterprise offers the following capabilities for the ThinkAgile VX Series appliances:

- Gathering and viewing system information and inventory
- Monitoring system status and health
- Alerting and notifications
- Event logging
- Syslog alerting
- Configuring security
- Updating system firmware
- Real-time power usage monitoring

- Displaying graphics for real-time and historical power usage data and temperature
- Capping power usage
- Remotely controlling power (Power on, Power off, Restart)

The XClarity Controller provides remote server management through the following interfaces:

- Intelligent Platform Management Interface (IPMI) Version 2.0
- Simple Network Management Protocol (SNMP) Version 3
- Common Information Model (CIM)
- Data Center Manageability Interface (DCMI) Version 1.5
- Redfish REpresentational State Transfer (REST) API
- Web browser with HTML5 support
- Command-line interface
- Virtual Operator Panel with XClarity Mobile App via the front USB port with XClarity Controller access

Virtual Operator Panel provides quick access to system status, firmware, network, health, and alerts information. With proper authentication, it also allows to configure systems management and network settings and to control system power (Power on, Power off, Restart). The Virtual Operator Panel can be accessed from the XClarity Mobile App running on the Android or iOS mobile device that is connected to the front USB port with XClarity Controller access (See Components and connectors).

Lenovo XClarity Administrator and XClarity Pro

Lenovo XClarity Administrator is a centralized systems management solution that helps administrators deliver infrastructure faster. This solution integrates easily with Lenovo x86 servers, appliances, certified nodes, Top-of-Rack Ethernet switches, and storage systems, providing automated agent-less discovery, inventory, monitoring, and alerts across multiple systems. In addition, some managed endpoints support firmware updates and configuration management.

Lenovo XClarity Administrator is used for managing ThinkAgile VX Series appliances, and it comes with the Lenovo XClarity Pro subscription license that provides software support for XClarity Administrator and XClarity Integrator for VMware for the duration of the selected warranty period.

Lenovo XClarity Administrator offers the following features:

- Auto-discovery and monitoring of the ThinkAgile VX Series appliances

- Firmware updates and compliance enforcement

- External alerts and notifications via SNMP traps, syslog remote logging, and e-mail

- Secure connections to managed endpoints

- NIST 800-131A or FIPS 140-2 compliant cryptographic standards between the management solution and managed endpoints

- Integration into existing higher-level management systems such as cloud automation and orchestration tools through REST APIs, providing extensive external visibility and control over hardware resources

- An intuitive, easy-to-use GUI

- Scripting support with Windows PowerShell, providing command-line visibility and control over hardware resources

For more information, refer to the Lenovo XClarity Administrator Product Guide:
http://lenovopress.com/tips1200

Lenovo XClarity Integrator for VMware vCenter

Lenovo XClarity Integrator for VMware vCenter is a software plug-in module for Lenovo XClarity Administrator that allows administrators to manage physical infrastructure from leading external virtualization management software tool from VMware.

Lenovo XClarity Integrator for VMware vCenter offers the following features:

- Ability to discover, manage, and monitor Lenovo appliance hardware from the virtualization management tool
- Deployment of firmware updates to VX Series appliances from the virtualization management tool
- Non-disruptive server maintenance in clustered environments that reduces workload downtime by dynamically migrating workloads from affected hosts during rolling server updates or reboots
- Greater service level uptime and assurance in clustered environments during unplanned hardware events by dynamically triggering workload migration from impacted hosts when impending hardware failures are predicted

For more information, refer to the Lenovo XClarity Integrator for VMware vCenter web page:
https://support.lenovo.com/us/en/solutions/lnvo-vmware

Lenovo XClarity Energy Manager

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

Lenovo XClarity Energy Manager offers the following capabilities:

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

Lenovo XClarity Energy Manager license is included in the XClarity Controller Enterprise upgrade.

For more information, refer to the Lenovo XClarity Energy Manager web page:
http://datacentersupport.lenovo.com/us/en/solutions/lnvo-lxem

Physical specifications

The ThinkAgile VX3720 appliances have the following dimensions and weight (approximate):

- Enclosure
    - Height: 87 mm (3.4 in.)
    - Width: 448 mm (17.6 in.)
    - Depth: 834 mm (32.8 in.)
    - Weight (maximum, with four nodes): 55.0 kg (121.3 lb)
- Node
    - Height: 41 mm (1.6 in.)
    - Width: 222 mm (8.7 in.)
    - Depth: 562 mm (22.1 in.)
    - Weight (maximum): 7.5 kg (16.5 lb)

Operating environment

The ThinkAgile VX3720 appliances comply with ASHRAE class A2 specifications. The appliance performance might be impacted when the operating temperature is outside the ASHRAE A2 specifications. Some appliance configurations comply with ASHRAE A3 and A4 specifications, provided the following requirements are met:

- Two 1600 W or 2000 W power supplies installed.
- NVMe PCIe SSDs not installed.
- Processors with TDP more than 125 W not installed.
- Mellanox Ethernet adapters with active optical cables not installed.

The ThinkAgile VX3720 appliances are supported in the following environment:

- Air temperature:
  - Operating:
    - ASHRAE Class A4: 5 °C - 45 °C (41 °F - 113 °F); for altitudes above 900 m (2,953 ft), decrease the maximum ambient temperature by 1 °C for every 125-m (410-ft) increase in altitude
    - ASHRAE Class A3: 5 °C - 40 °C (41 °F - 104 °F); for altitudes above 900 m (2,953 ft), decrease the maximum ambient temperature by 1 °C for every 175-m (574-ft) increase in altitude
    - ASHRAE Class A2: 10 °C - 35 °C (50 °F - 95 °F); for altitudes above 900 m (2,953 ft), decrease the maximum ambient temperature by 1 °C for every 300-m (984-ft) increase in altitude
  - Non-operating: 5 °C - 45 °C (41 °F - 113 °F)
  - Storage: -40 °C - +60 °C (-40 °F - 140 °F)
- Maximum altitude: 3,050 m (10,000 ft)
- Humidity:
  - Operating:
    - ASHRAE Class A4: 8% - 90% (non-condensing); maximum dew point: 24 °C (75 °F)
    - ASHRAE Class A3: 8% - 85% (non-condensing); maximum dew point: 24 °C (75 °F)
    - ASHRAE Class A2: 8% - 80% (non-condensing); maximum dew point: 21 °C (70 °F)
  - Storage: 8% - 90% (non-condensing)
- Electrical:
  - 100 - 127 (nominal) V AC; 50 Hz / 60 Hz (1100 W power supplies only)
  - 200 - 240 (nominal) V AC; 50 Hz / 60 Hz
  - 180 - 300 V DC (supported in China only)
- Acoustics (maximum configuration, operating): 6.8 bels
- Vibration:
  - Operating: 0.21 G rms at 5 Hz to 500 Hz for 15 minutes across 3 axes
  - Non-operating: 1.04 G rms at 2 Hz to 200 Hz for 15 minutes across 6 surfaces
- Shock:
  - Operating: 15 G for 3 milliseconds in each direction (positive and negative X, Y, and Z axes)
  - Non-operating:
    - 12 kg - 22 kg: 50 G for 152 in./sec velocity change across 6 surfaces
    - 23 kg - 31 kg: 35 G for 152 in./sec velocity change across 6 surfaces

The following table lists the maximum system power load, rated inlet current, and system heat output based on the power supply and source voltage.

Table 37. Rated system power, inlet current, and system heat output

Power supply	Source voltage	Maximum power load per system (two power supplies)	Rated current per inlet	System heat output
1100 W Platinum	100 - 127 V AC	1382 W	12 A	4715 BTU/hour
	200 - 240 V AC	1408 W	6 A	4804 BTU/hour
	180 - 300 V DC	1408 W	5.1 A	4804 BTU/hour
1600 W Platinum	200 - 240 V AC	2068 W	8.7 A	7056 BTU/hour
	180 - 300 V DC	2024 W	7.3 A	6906 BTU/hour
2000 W Platinum	200 - 240 V AC	2610 W	11 A	8905 BTU/hour
	180 - 300 V DC	2597 W	9.2 A	8861 BTU/hour

Regulatory compliance

The ThinkAgile VX Certified Nodes conform to the following regulations:

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

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

Warranty and support

The ThinkAgile VX Series appliances 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 problem 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.

The base warranty provides 9x5 Next Business Day response with parts delivered. Lenovo's additional support services provide a sophisticated, unified support structure for a customer's data center, with an experience consistently ranked number one in customer satisfaction worldwide.

The following Lenovo support services are available for selection:

- **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 capabilities:
    - Direct technician-to-technician access through a dedicated phone line.
    - 24x7x365 remote support.
    - Single point of contact service.
    - End to end case management.
    - 3rd Party collaborative software support.
    - Online case tools and live chat support.
    - On-demand remote system analysis.

- **Warranty service level upgrades (Preconfigured Support)** are available to meet the on-site response time targets that match the criticality of customer's systems:
  - 3 or 5 years of service coverage.
  - **Foundation Service:** 9x5 service coverage with next business day onsite response, with optional YourDrive YourData.
  - **Essential Service:** 24x7 service coverage with 4-hour onsite response or 24-hour committed repair (available only in select regions), bundled with YourDrive YourData.
  - **Advanced Service:** 24x7 service coverage with 2-hour onsite response or 6-hour committed repair (available only in select regions), bundled with YourDrive YourData.
- **Managed Services**
  Lenovo Managed Services provide continuous 24x7 remote monitoring (plus 24x7 call center availability) and proactive management of a customer's 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 and operating system device driver levels, and software as needed. Lenovo will also maintain records of latest patches, critical updates, and firmware levels, to ensure customer's systems are providing business value through optimized performance.
- **Technical Account Management (TAM)**
  A Lenovo Technical Account Manager helps customers optimize operations of their data centers based on a deep understanding of customer's business. Customers gain direct access to a Lenovo TAM, who serves as their single point of contact to expedite service requests, provide status updates, and furnish reports to track incidents over time. Also, a TAM helps proactively make service recommendations and manage service relationship with Lenovo to make certain that customer's needs are met.
- **Enterprise Software Support**
  Lenovo Enterprise Software Support is an additional support service that provides 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 compatibility and interoperability issues, isolate causes of problems, report defects to software vendors, and more.
- **YourDrive YourData**
  Lenovo's YourDrive YourData service is a multi-drive retention offering that ensures that customer's data is always under their control, regardless of the number of drives that are installed in their Lenovo server. In the unlikely event of a drive failure, customers retain possession of their drive while Lenovo replaces the failed drive part. Customer's data stays safely on customer premises, in their hands. The YourDrive YourData service can be purchased in convenient bundles with Foundation, Essential, or Advanced services.
- **Health Check**
  Having a trusted partner who can perform regular and detailed health checks is central to maintaining efficiency and ensuring that customer 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.

Some regions might have different warranty terms and conditions than the standard warranty. This is due to local business practices or laws in the specific region. Local service teams can assist in explaining region-specific terms when needed. 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 support services are region-specific. Not all services are available in every region. For information about Lenovo support services that are available in a specific region, refer to the following resources:

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

For service definitions, region-specific details, and service limitations, 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

Software maintenance

The ThinkAgile VX Series appliances include one- (PRC only), three-, or five-year software support and 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. VMware will contact the customer and will own the software-related problem resolution until closure.

For the VMware vSphere, vSAN, and vCenter Server software and subscription licenses purchased from Lenovo together with the ThinkAgile VX Series appliances, 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.

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)

The following Lenovo deployment services are available for the ThinkAgile VX Series Integrated Systems to get customers up and running quickly:

- 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 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 38. 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/

Rack cabinets

The following table lists the rack cabinets that are currently offered by Lenovo that can be used for mounting the ThinkAgile VX3720 appliances and other IT infrastructure building blocks.

Table 39. Rack cabinets

Description	Part number
12U 1200mm Deep Micro Datacenter Rack (no sidewall compartments), 1YR Warranty	7D2B0001WW
12U 1200mm Deep Micro Datacenter Rack (no sidewall compartments), 3YR Warranty	7D2N0001WW
18U 1200mm Deep Micro Datacenter Rack (no sidewall compartments), 1YR Warranty	7D2C0001WW
18U 1200mm Deep Micro Datacenter Rack (no sidewall compartments), 3YR Warranty	7D2P0001WW
25U S2 Standard Rack (1000 mm deep; 2 sidewall compartments)	93072RX
25U Static S2 Standard Rack (1000 mm deep; 2 sidewall compartments)	93072PX
42U S2 Standard Rack (1000 mm deep; 6 sidewall compartments)	93074RX
42U 1100mm Enterprise V2 Dynamic Rack (6 sidewall compartments)	93634PX
42U 1100mm Enterprise V2 Dynamic Expansion Rack (6 sidewall compartments)	93634EX
42U 1200mm Deep Dynamic Rack (6 sidewall compartments)	93604PX
42U 1200mm Deep Static Rack (6 sidewall compartments)	93614PX
42U Enterprise Rack (1105 mm deep; 4 sidewall compartments)	93084PX
42U Enterprise Expansion Rack (1105 mm deep; 4 sidewall compartments)	93084EX

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

Power distribution units

The following table lists the power distribution units (PDUs) that are currently offered by Lenovo that can be used for distributing electrical power to the ThinkAgile VX3720 appliances and other IT infrastructure building blocks mounted in a rack cabinet.

Table 40. Power distribution units

Description	Part number
0U Basic PDUs	
0U 36 C13/6 C19 24A/200-240V 1 Phase PDU with NEMA L6-30P line cord	00YJ776
0U 36 C13/6 C19 32A/200-240V 1 Phase PDU with IEC60309 332P6 line cord	00YJ777
0U 21 C13/12 C19 32A/200-240V/346-415V 3 Phase PDU with IEC60309 532P6 cord	00YJ778
0U 21 C13/12 C19 48A/200-240V 3 Phase PDU with IEC60309 460P9 line cord	00YJ779
Switched and Monitored PDUs	
0U 20 C13/4 C19 Switched and Monitored 24A/200-240V/1Ph PDU w/ NEMA L6-30P cord	00YJ781
0U 20 C13/4 C19 Switched and Monitored 32A/200-240V/1Ph PDU w/ IEC60309 332P6 cord	00YJ780
0U 18 C13/6 C19 Switched and Monitored 32A/200-240/346-415V/3Ph PDU w/ IEC60309 532P6 cord	00YJ782
0U 12 C13/12 C19 Switched and Monitored 48A/200-240V/3Ph PDU w/ IEC60309 460P9 cord	00YJ783
1U 9 C19/3 C13 Switched and Monitored DPI PDU (without line cord)	46M4002
1U 9 C19/3 C13 Switched and Monitored 60A 3Ph PDU with IEC 309 3P+Gnd cord	46M4003
1U 12 C13 Switched and Monitored DPI PDU (without line cord)	46M4004
1U 12 C13 Switched and Monitored 60A 3 Phase PDU with IEC 309 3P+Gnd line cord	46M4005
Ultra Density Enterprise PDUs (9x IEC 320 C13 + 3x IEC 320 C19 outlets)	
Ultra Density Enterprise C19/C13 PDU Module (without line cord)	71762NX
Ultra Density Enterprise C19/C13 PDU 60A/208V/3ph with IEC 309 3P+Gnd line cord	71763NU
C13 Enterprise PDUs (12x IEC 320 C13 outlets)	
DPI C13 Enterprise PDU+ (without line cord)	39M2816
DPI Single Phase C13 Enterprise PDU (without line cord)	39Y8941
C19 Enterprise PDUs (6x IEC 320 C19 outlets)	
DPI Single Phase C19 Enterprise PDU (without line cord)	39Y8948
DPI 60A 3 Phase C19 Enterprise PDU with IEC 309 3P+G (208 V) fixed line cord	39Y8923
Front-end PDUs (3x IEC 320 C19 outlets)	
DPI 30amp/125V Front-end PDU with NEMA L5-30P line cord	39Y8938
DPI 30amp/250V Front-end PDU with NEMA L6-30P line cord	39Y8939
DPI 32amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8934
DPI 60amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8940
DPI 63amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8935
Universal PDUs (7x IEC 320 C13 outlets)	
DPI Universal 7 C13 PDU (with 2 m IEC 320-C19 to C20 rack power cord)	00YE443
Line cords for PDUs that ship without a line cord	
DPI 30a Line Cord (NEMA L6-30P)	40K9614
DPI 32a Line Cord (IEC 309 P+N+G)	40K9612
DPI 32a Line Cord (IEC 309 3P+N+G)	40K9611
DPI 60a Cord (IEC 309 2P+G)	40K9615

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

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

Uninterruptible power supply units

The following table lists the uninterruptible power supply (UPS) units that are currently offered by Lenovo that can be used for providing electrical power protection to the ThinkAgile VX3720 appliances and other IT infrastructure building blocks.

Table 41. Uninterruptible power supply units

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

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

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Related publications and links

For more information, see these resources:

- Lenovo ThinkAgile VX Series
  http://www3.lenovo.com/us/en/p/WMD00000340
- Lenovo Data Center Solution Configurator (DCSC):
  http://dcsc.lenovo.com
- ThinkAgile VX - Best Recipes
  http://datacentersupport.lenovo.com/us/en/solutions/HT505302
- VMware documentation
  https://docs.vmware.com/
- Lenovo Data Center Support
  http://datacentersupport.lenovo.com

Related product families

Product families related to this document are the following:

- Hyperconverged Infrastructure
- Hyperconverged Infrastructure
- ThinkAgile VX Series for VMware
- VMware Alliance

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