

# ThinkSystem Toshiba CM5-V Mainstream NVMe PCIe 3.0 x4 SSDs

## Product Guide (withdrawn product)

The ThinkSystem Toshiba CM5-V Mainstream NVMe solid-state drives (SSDs) in capacities from 800 GB to 6.4 TB are advanced data center SSDs optimized for mixed read-write performance, endurance, and strong data protection for Lenovo servers. They are engineered for greater performance and endurance in a cost-effective design, and to support a broader set of workloads.

Suggested uses: Business Intelligence, OLTP, Software Defined Storage, and Virtualization.



Figure 1. ThinkSystem Toshiba CM5-V Mainstream NVMe PCIe 3.0 x4 SSD

### Did you know?

NVMe (Non-Volatile Memory Express) is a technology that overcomes SAS/SATA SSD performance limitations by optimizing hardware and software to take full advantage of flash technology. The use of NVMe drives means data is transferred more efficiently from the processor to the drives compared to the legacy Advance Host Controller Interface (AHCI) stack, thereby reducing latency and overhead. These SSDs connect directly to the processor via the PCIe bus, further reducing latency and TCO.

Lenovo Mainstream SSDs are suitable for mixed read-write and general-purpose data center workloads, however their NVMe PCIe interface means the drives also offer high performance. Overall, these SSDs provide outstanding IOPS/watt and cost/IOPS for enterprise solutions.

## Part number information

The following table lists the part numbers and feature codes for ThinkSystem servers.

**Withdrawn:** All drives listed below are now withdrawn from marketing.

Table 1. Part numbers and feature codes for ThinkSystem

Part number	Feature code	Description
2.5-inch drives		
4XB7A08516	B21W	ThinkSystem U.2 Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD
4XB7A08517	B21X	ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD
4XB7A08518	B21Y	ThinkSystem U.2 Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD
4XB7A08519	B2XJ	ThinkSystem U.2 Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD
3.5-inch drives		
4XB7A08532	B21Z	ThinkSystem 3.5" Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD
4XB7A08533	B220	ThinkSystem 3.5" Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD
4XB7A08534	B221	ThinkSystem 3.5" Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD
4XB7A08535	B2XK	ThinkSystem 3.5" Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD

**Tip:** These drives were previously named KCM51V drives.

The part numbers include the following items:

- One 2.5-inch solid-state drive installed in a 2.5-inch or 3.5-inch hot-swap tray
- Documentation

## Features

Non-Volatile Memory Express (NVMe) is new PCIe 3.0 high performance SSD technology that provides high I/O throughput and low latency. NVMe interfaces remove SAS/SATA bottlenecks and unleash all of the capabilities of contemporary NAND flash memory. Each NVMe PCI SSD has direct PCIe 3.0 x4 connection, which provides at least 2x more bandwidth and 2x less latency than SATA/SAS-based SSD solutions. NVMe drives are also optimized for heavy multi-threaded workloads by using internal parallelism and many other improvements, such as enlarged I/O queues.

The ThinkSystem Toshiba CM5-V Mainstream NVMe SSDs have the following features:

- 2.5-inch drive (U.2) or 3.5-inch drive bay form factor
- Based on the Toshiba KCM51VUG drives
- Third Generation BiCS 3D NAND 64 layer TLC
- 3 drive-write-per-day (DWPD) SSD for mixed read-write workloads
- Direct PCIe 3.0 x4 connection for each NVMe drive, resulting in up to 4 GBps overall throughput.
- Full Power-Loss-Protection and End-to-End Data Protection
- Low power consumption (maximum 18 W)

Mainstream SSDs and Performance SSDs have similar read and write IOPS performance, but the key difference between them is their endurance (or lifetime) (that is, how long they can perform write operations because SSDs have a finite number of program/erase (P/E) cycles). Mainstream SSDs have a better cost/IOPS ratio but lower endurance compared to Performance SSDs. SSD write endurance is typically measured by the number of program/erase (P/E) cycles that the drive incurs over its lifetime, listed as the total bytes of written data (TBW) in the device specification.

The TBW value assigned to a solid-state device is the total bytes of written data (based on the number of P/E cycles) that a drive can be guaranteed to complete (% of remaining P/E cycles = % of remaining TBW). Reaching this limit does not cause the drive to immediately fail. It simply denotes the maximum number of writes that can be guaranteed. A solid-state device will not fail upon reaching the specified TBW. At some point based on manufacturing variance margin, after surpassing the TBW value, the drive will reach the end-of-life point, at which the drive will go into a read-only mode.

Because of such behavior by Mainstream solid-state drives, careful planning must be done to use them only in mixed read-write environments to ensure that the TBW of the drive will not be exceeded before the required life expectancy.

For example, the 3.2 TB drive has an endurance of 17,520 TB of total bytes written (TBW). This means that for full operation over five years, write workload must be limited to no more than 9.6 TB of writes per day, which is equivalent to 3.0 full drive writes per day (DWPD). For the device to last three years, the drive write workload must be limited to no more than 16 TB of writes per day, which is equivalent to 5.0 full drive writes per day.

## Technical specifications

The following table presents technical specifications for the ThinkSystem Toshiba CM5-V Mainstream NVMe SSDs.

Table 2. Technical specifications

Feature	800 GB drive	1.6 TB drive	3.2 TB drive	6.4 TB drive
Host interface	PCIe 3.0 x4	PCIe 3.0 x4	PCIe 3.0 x4	PCIe 3.0 x4
Capacity	800 GB	1.6 TB	3.2 TB	6.4 TB
Endurance (total bytes written)	4,380 TB	8,760 TB	17,520 TB	35,040 TB
Endurance (drive writes per day for 5 years)	3.0 DWPD	3.0 DWPD	3.0 DWPD	3.0 DWPD
Data reliability (UBER)	< 1 in 10 <sup>17</sup> bits read	< 1 in 10 <sup>17</sup> bits read	< 1 in 10 <sup>17</sup> bits read	< 1 in 10 <sup>17</sup> bits read
MTBF	2,500,000 hours	2,500,000 hours	2,500,000 hours	2,500,000 hours
IOPS reads (4 KB blocks)	370,000	650,000	750,000	770,000
IOPS writes (4 KB blocks)	95,000	145,000	160,000	165,000
Sequential read rate (128 KB blocks)	3250 MBps	3250 MBps	3350 MBps	3350 MBps
Sequential write rate (128 KB blocks)	1250 MBps	2460 MBps	3040 MBps	3040 MBps
Latency (random read)	110 µs	110 µs	110 µs	110 µs
Latency (random write)	30 µs	30 µs	30 µs	30 µs
Maximum power	18 W	18 W	18 W	18 W

## Server support

The following tables list the ThinkSystem servers that are compatible.

Table 3. Server support (Part 1 of 4)

Part Number	Description	AMD V3				2S Intel V3/V4				4S 8S Intel V3			Multi Node V3/V4		1S V3					
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR630 V4 (7DG8 / 7DG9)	SR650 V4 (7DGC / 7DGD)	SR650a V4 (7DGC / 7DGD)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	ST45 V3 (7DH4 / 7DH5)	ST50 V3 (7DF4 / 7DF3)	ST250 V3 (7DCF / 7DCE)
<b>2.5-inch drives</b>																				
4XB7A08516	ThinkSystem U.2 Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08517	ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08518	ThinkSystem U.2 Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08519	ThinkSystem U.2 Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<b>3.5-inch drives</b>																				
4XB7A08532	ThinkSystem 3.5" Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08533	ThinkSystem 3.5" Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08534	ThinkSystem 3.5" Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08535	ThinkSystem 3.5" Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 4. Server support (Part 2 of 4)

Part Number	Description	GPU Rich					Edge					Super Computing							
		SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR685a V3 (7DHC)	SR780a V3 (7DJ5)	SE100 (7DGR)	SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)	SC750 V4 (7DDJ)	SC777 V4 (7DKA)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)
<b>2.5-inch drives</b>																			
4XB7A08516	ThinkSystem U.2 Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08517	ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08518	ThinkSystem U.2 Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08519	ThinkSystem U.2 Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<b>3.5-inch drives</b>																			
4XB7A08532	ThinkSystem 3.5" Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08533	ThinkSystem 3.5" Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08534	ThinkSystem 3.5" Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A08535	ThinkSystem 3.5" Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 5. Server support (Part 3 of 4)

Part Number	Description	1S Intel V2			2S Intel V2			AMD V1				Dense V2			4S V2	8S		
		ST150 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)	SR650 V2 (7Z72 / 7Z73)	SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS	SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)
<b>2.5-inch drives</b>																		
4XB7A08516	ThinkSystem U.2 Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	Y
4XB7A08517	ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	Y	Y	N	N	N	N	N	Y
4XB7A08518	ThinkSystem U.2 Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	Y	Y	N	N	N	N	N	Y
4XB7A08519	ThinkSystem U.2 Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	Y
<b>3.5-inch drives</b>																		
4XB7A08532	ThinkSystem 3.5" Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N
4XB7A08533	ThinkSystem 3.5" Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	Y	N	Y	Y	N	N	N	N	N	N
4XB7A08534	ThinkSystem 3.5" Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	Y	N	Y	Y	N	N	N	N	N	N
4XB7A08535	ThinkSystem 3.5" Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N

Table 6. Server support (Part 4 of 4)

Part Number	Description	4S V1			1S Intel V1				2S Intel V1						Dense V1						
		SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)	SR250 (7Y52 / 7Y51)	ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)	
<b>2.5-inch drives</b>																					
4XB7A08516	ThinkSystem U.2 Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	Y	Y	Y	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N	Y	N	Y	Y
4XB7A08517	ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	Y	Y	Y	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N	Y	N	Y	Y
4XB7A08518	ThinkSystem U.2 Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	Y	Y	Y	N	N	N	N	N	N	N	Y	Y	Y	Y	N	Y	N	Y	Y	
4XB7A08519	ThinkSystem U.2 Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	Y	Y	Y	N	N	N	N	N	N	N	Y	Y	Y	Y	N	Y	N	Y	Y	
<b>3.5-inch drives</b>																					
4XB7A08532	ThinkSystem 3.5" Toshiba CM5-V 800GB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	
4XB7A08533	ThinkSystem 3.5" Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	
4XB7A08534	ThinkSystem 3.5" Toshiba CM5-V 3.2TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	
4XB7A08535	ThinkSystem 3.5" Toshiba CM5-V 6.4TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	

### Storage controller support

NVMe PCIe SSDs require a NVMe drive backplane and some form of PCIe connection to processors. PCIe connections can take the form of either an adapter (PCIe Interposer or PCIe extender/switch adapter) or simply a cable that connects to an onboard NVMe connector.

Consult the relevant server product guide for details about required components for NVMe drive support.

### Operating system support

The following two tables list the supported operating systems, for 2.5-inch drives and 3.5-inch drives respectively.



**Tip:** These tables are automatically generated based on data from [Lenovo ServerProven](#).

Table 7. Operating system support for ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD, 4XB7A08517 (Part 1 of 2)

Operating systems	SR635	SR645	SR655	SR665	SD530 (Xeon Gen 2)	SN550 (Xeon Gen 2)	SN850 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)
Microsoft Windows 10	N	N	Y <sup>2</sup>	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	Y <sup>2</sup>	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2012 R2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2016	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2025	N	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server version 1709	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server version 1803	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6.10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.6	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.9	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	Y <sup>1</sup>	N	Y <sup>1</sup>	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

	SR635	SR645	SR655	SR665	SD530 (Xeon Gen 2)	SN550 (Xeon Gen 2)	SN850 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)
<b>Operating systems</b>															
SUSE Linux Enterprise Server 12 SP2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP2 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N
SUSE Linux Enterprise Server 12 SP3 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N
SUSE Linux Enterprise Server 12 SP4	Y <sup>1</sup>	N	Y <sup>1</sup>	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y <sup>1</sup>	N	Y <sup>1</sup>	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.0 U3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U2	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y <sup>1</sup>	N	Y <sup>1</sup>	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y <sup>1</sup>	Y	Y <sup>1</sup>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Operating systems	SR635	SR645	SR655	SR665	SD530 (Xeon Gen 2)	SN550 (Xeon Gen 2)	SN850 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> The OS is not supported with EPYC 7003 processors.

<sup>2</sup> ISG will not sell/preload this OS, but compatibility and cert only.

Table 8. Operating system support for ThinkSystem U.2 Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD, 4XB7A08517 (Part 2 of 2)

Operating systems	SD530 (Xeon Gen 1)	SN550 (Xeon Gen 1)	SN850 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2012 R2	Y	N	Y	Y	Y	N	N	Y	Y	Y
Microsoft Windows Server 2016	Y	N	Y	Y	Y	N	N	Y	Y	Y
Microsoft Windows Server 2019	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2025	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server version 1709	Y	N	Y	Y	Y	N	N	Y	Y	Y
Microsoft Windows Server version 1803	Y	Y	N	N	N	N	N	Y	Y	Y
Red Hat Enterprise Linux 6.10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 6.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.3	Y	Y	Y	N	N	Y	Y	Y	N	Y
Red Hat Enterprise Linux 7.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SD530 (Xeon Gen 1)	SN550 (Xeon Gen 1)	SN850 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)
<b>Operating systems</b>										
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP2	Y	N	Y	N	N	Y	Y	Y	N	Y
SUSE Linux Enterprise Server 12 SP2 with Xen	Y	N	Y	N	N	Y	Y	Y	N	Y
SUSE Linux Enterprise Server 12 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.0 U3	Y	N	Y	Y	Y	N	N	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5	Y	N	Y	N	N	N	N	Y	N	Y
VMware vSphere Hypervisor (ESXi) 6.5 U1	Y	N	Y	Y	Y	N	N	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	Y	Y	N	N	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	Y	Y	Y	Y	Y	N	N	Y	Y	Y

	SD530 (Xeon Gen 1)	SN550 (Xeon Gen 1)	SN850 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)
<b>Operating systems</b>										
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 9. Operating system support for ThinkSystem 3.5" Toshiba CM5-V 1.6TB Mainstream NVMe PCIe 3.0 x4 Hot Swap SSD, 4XB7A08533

	SR645	SR655	SR665	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)
<b>Operating systems</b>							
Microsoft Windows 10	N	Y <sup>2</sup>	N	N	N	N	N
Microsoft Windows 11	N	Y <sup>2</sup>	N	N	N	N	N
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	N	N
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2025	Y	N	Y	N	N	N	N
Red Hat Enterprise Linux 6.10	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 6.9	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.3	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.4	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.5	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.6	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
Red Hat Enterprise Linux 7.9	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	N	Y <sup>1</sup>	N	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y

	SR645	SR655	SR665	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)
<b>Operating systems</b>							
Red Hat Enterprise Linux 8.2	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP2	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP2 with Xen	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP3 with Xen	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP4	N	Y <sup>1</sup>	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	N	Y <sup>1</sup>	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	N	N	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	Y	Y	Y	Y
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U2	N	N	N	Y	Y	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U3	N	Y <sup>1</sup>	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	Y	Y	Y	N
VMware vSphere Hypervisor (ESXi) 6.7 U2	N	N	N	Y	Y	Y	Y

	SR645	SR655	SR665	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)
<b>Operating systems</b>							
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y <sup>1</sup>	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> The OS is not supported with EPYC 7003 processors.

<sup>2</sup> ISG will not sell/preload this OS, but compatibility and cert only.

## Warranty

The ThinkSystem Toshiba CM5-V Mainstream NVMe SSDs carry a one-year, customer-replaceable unit (CRU) limited warranty. When the SSDs are installed in a supported server, these drives assume the system's base warranty and any warranty upgrades.

Solid State Memory cells have an intrinsic, finite number of program/erase cycles that each cell can incur. As a result, each solid state device has a maximum amount of program/erase cycles to which it can be subjected. The warranty for Lenovo solid state drives (SSDs) is limited to drives that have not reached the maximum guaranteed number of program/erase cycles, as documented in the Official Published Specifications for the SSD product. A drive that reaches this limit may fail to operate according to its Specifications.

## Physical specifications

The ThinkSystem Toshiba CM5-V Mainstream NVMe SSDs have the following physical specifications:

Dimensions and weight (approximate, without the drive tray):

- Height: 15 mm (0.6 in.)
- Width: 70 mm (2.8 in.)
- Depth: 100 mm (4.0 in.)
- Weight: 130 g (5.3 oz)

Shipping dimensions and weight for the 2.5-inch drives (approximate):

- Height: 63 mm (2.5 in.)
- Width: 133 mm (5.2 in.)
- Depth: 174 mm (6.9 in.)
- Weight (with drive tray): 500 g (1.0 lb)

## Operating environment

The ThinkSystem Toshiba CM5-V Mainstream NVMe SSDs are supported in the following environment:

- Temperature:
  - Operating: 0 to 60 °C (32 to 140 °F)
  - Non-operating: -40 to 70 °C (-40 to 158 °F)
  - Transport: -40 to 70 °C (-40 to 158 °F)
- Relative humidity: 5 to 95% (non-condensing)
- Maximum altitude:
  - Operating: 5,486 m (18,000 ft)
  - Non-operating: 12,192 m (40,000 ft)
- Shock: 1,000 G (Max) at 0.5 ms
- Vibration: 2.17 G<sub>RMS</sub> (5-800 Hz)

## Agency approvals

The ThinkSystem Toshiba CM5-V Mainstream NVMe SSDs conform to the following regulations:

- Underwriters Laboratories: UL60950-1
- Canada: CAN/CSA-C22.2 No.60950-1
- TUV: EN 60950-1
- BSMI (Taiwan): CNS 13438 (CISPR Pub. 22 Class B): D33003
- MSIP: KN22, KN24 (CISPR Pub. 22 Class B)
- Australia/New Zealand: AS/NZS CISPR32:2015 Class B
- Canada: ICES-003 Issue 6 Class B
- EMC: EN55022 (2010) Class B
- EMC: EN55024 (2010)
- RoHS 2011/65/EU: EN50581 (2012) Category 3

## Related publications and links

For more information, see the following documents:

- Lenovo ThinkSystem storage options product web page  
<https://lenovopress.com/lp0761-storage-options-for-thinksystem-servers>
- Implementing NVMe Drives on Lenovo Servers  
<https://lenovopress.com/lp0508-implementing-nvme-drives-on-lenovo-servers>
- Toshiba Enterprise SSDs product page:  
<https://business.toshiba-memory.com/en-us/product/storage-products/enterprise-ssd.html>

## Related product families

Product families related to this document are the following:

- [Drives](#)



## Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service. Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

Lenovo (United States), Inc.  
8001 Development Drive  
Morrisville, NC 27560  
U.S.A.  
Attention: Lenovo Director of Licensing

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Lenovo may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary. Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk. Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

© Copyright Lenovo 2025. All rights reserved.

This document, LP0938, was created or updated on July 19, 2022.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at:  
<https://lenovopress.lenovo.com/LP0938>
- Send your comments in an e-mail to:  
[comments@lenovopress.com](mailto:comments@lenovopress.com)

This document is available online at <https://lenovopress.lenovo.com/LP0938>.

## Trademarks

Lenovo and the Lenovo logo are trademarks or registered trademarks of Lenovo in the United States, other countries, or both. A current list of Lenovo trademarks is available on the Web at <https://www.lenovo.com/us/en/legal/copytrade/>.

The following terms are trademarks of Lenovo in the United States, other countries, or both:

Lenovo®

ServerProven®

ThinkSystem®

The following terms are trademarks of other companies:

AMD is a trademark of Advanced Micro Devices, Inc.

Intel® and Xeon® are trademarks of Intel Corporation or its subsidiaries.

Linux® is the trademark of Linus Torvalds in the U.S. and other countries.

Microsoft®, Windows Server®, and Windows® are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.