

ThinkSystem PM1733 Entry NVMe PCIe 4.0 x4 SSDs Product Guide

The ThinkSystem PM1733 Entry NVMe PCIe solid-state drives (SSDs), available in capacities up to 15.36TB, are general-purpose yet high-performance NVMe PCIe SSDs. They are engineered for greater performance and endurance in a cost-effective design, and to support a broader set of workloads.



Figure 1. ThinkSystem PM1733 Entry NVMe PCIe 4.0 x4 SSD

Did you know?

The PM1733 family of SSDs are the first PCIe 4.0 SSDs in the ThinkSystem portfolio. By having a Gen 4 host interface, sequential performance is doubled. The NVMe host interface also maximizes flash storage performance and minimizes latency. The PM1733 drives offer 40% and 60% improvements in latency over SAS and SATA SSDs respectively.

Lenovo Entry SSDs are suitable for read-intensive 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.

Table 1. Ordering information

Part number	Feature code	Description
2.5-inch drives		
4XB7A38196	BC4Y	ThinkSystem U.2 PM1733 1.92TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD
4XB7A38197	BC4Z	ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD
4XB7A38283	BE2E	ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD
4XB7A38284	BE2F	ThinkSystem U.2 PM1733 15.36TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD

The part numbers include the following items:

- One solid-state drive
- Documentation flyer

Features

Non-Volatile Memory Express (NVMe) is PCIe 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 x4 connection, which provides at significantly greater bandwidth and lower 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 PM1733 Entry NVMe PCIe SSD have the following features:

- Direct PCIe 4.0 x4 connection for each NVMe drive, resulting in up to 7 GBps overall throughput.
- Also supports PCIe 3.0 host connection for servers with first and second-generation Intel Xeon Scalable processors or with PCIe 3.0 NVMe switch adapters
- Low cost, read-intensive SSD from Samsung using TLC flash technology
- Advanced ECC Engine and End-to-End Data Protection
- Samsung's SSD virtualization technology allows a single SSD to be subdivided into smaller SSDs, up to 64, providing independent virtual workspaces. It also enables SSDs to take on certain tasks typically carried out by the server CPUs, such as Single-Root I/O Virtualization (SR-IOV), requiring fewer server CPUs and SSDs.
- V-NAND Machine Learning enables the SSD to accurately predict and verify cell characteristics, as well as detect any variations in circuit patterns.
- Fail-In-Place technology ensures the SSD operates normally even when errors occur at the chip level. It allows the PM1733 to identify failing NAND cells, and actually recover then relocate the data without interrupting normal operations or impacting performance.
- Protect data integrity from unexpected power loss with Samsung's advanced power-loss protection architecture
- Supports Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T).

Entry SSDs and Performance SSDs have similar read IOPS performance, but the key difference between them is their endurance -- how long they can reliably perform write operations. Entry 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) write 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 Entry solid-state drives, careful planning must be done to use them only in read-intensive or mixed up to 70% read/30% write environments to ensure that the TBW of the drive will not be exceeded before the required life expectancy.

For example, the PM1733 1.92 TB drive has an endurance of 3,504 TB of total bytes written (TBW). This means that for full operation over five years, write workload must be limited to no more than 1,920 GB of writes per day, which is equivalent to 1.0 full drive writes per day (DWPD). For the device to last three years, the drive write workload must be limited to no more than 3,200 GB of writes per day, which is equivalent to 1.7 full drive writes per day.

Technical specifications

The following tables present the technical specifications for the PM1733 Entry NVMe PCIe SSDs. Note that the performance data and power consumption is based on whether the drives are connected to a PCIe 4.0 host interface or a PCIe 3.0 host interface.

Table 2. Technical specifications

Feature	1.92 TB drive	3.84 TB drive	7.68 TB drive	15.36 TB drive
Interface	PCIe 4.0 x4*	PCIe 4.0 x4*	PCIe 4.0 x4*	PCIe 4.0 x4*
Capacity	1.92 TB	3.84 TB	7.68 TB	15.36 TB
SED encryption	None	None	None	None
Endurance (total bytes written)	3504 TB	7008 TB	14,016 TB	28,032 TB
Endurance (drive writes per day for 5 years)	1 DWPD	1 DWPD	1 DWPD	1 DWPD
Data reliability (UBER)	< 1 in 10 ¹⁷ bits read	< 1 in 10 ¹⁷ bits read	< 1 in 10 ¹⁷ bits read	< 1 in 10 ¹⁷ bits read
MTBF	2,000,000 hours	2,000,000 hours	2,000,000 hours	2,000,000 hours
Performance & Power - PCIe 4.0 host interface				
IOPS reads (4 KB blocks)	800,000	1,500,000	1,450,000	1,450,000
IOPS writes (4 KB blocks)	100,000	135,000	135,000	135,000
Sequential read rate (128 KB blocks)	7000 MBps	7000 MBps	7000 MBps	7000 MBps
Sequential write rate (128 KB blocks)	2400 MBps	3500 MBps	3500 MBps	3500 MBps
Latency (random R/W)	100 µs / 25 µs	100 µs / 25 µs	100 µs / 25 µs	100 µs / 25 µs
Latency (sequential R/W)	220 µs / 80 µs	220 µs / 80 µs	220 µs / 80 µs	220 µs / 80 µs
Typical power (R/W)	15 W / 15 W	20 W / 20 W	20 W / 20 W	20 W / 22 W
Performance & Power - PCIe 3.0 host interface				
IOPS reads (4 KB blocks)	800,000	800,000	800,000	800,000
IOPS writes (4 KB blocks)	100,000	135,000	135,000	135,000
Sequential read rate (128 KB blocks)	3400 MBps	3400 MBps	3400 MBps	3400 MBps
Sequential write rate (128 KB blocks)	2400 MBps	3200 MBps	3200 MBps	3200 MBps
Latency (random R/W)	100 µs / 25 µs	100 µs / 25 µs	100 µs / 25 µs	100 µs / 25 µs
Latency (sequential R/W)	250 µs / 100 µs	250 µs / 100 µs	250 µs / 100 µs	250 µs / 100 µs
Typical power (R/W)	15 W / 15 W	15 W / 20 W	15 W / 20 W	15 W / 22 W

* Backwards compatible with a PCIe 3.0 x4 host interface

Server support

The following tables list the ThinkSystem servers that are compatible.

Table 3. Server support (Part 1 of 2)

Part Number	Description	Edge		1S Intel V2				2S Intel V2				AMD				Dense V2				4S V2	8S
		SE350 (7Z46 / 7D1X)	SE450 (7D8T)	ST150 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)	SR650 V2 (7Z72 / 7Z73)	SR670 V2 (7Z22 / 7Z23)	SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	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)	SR950 (7X11 / 7X12)
2.5-inch drives																					
4XB7A38196	ThinkSystem U.2 PM1733 1.92TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	N	N
4XB7A38197	ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	N	N
4XB7A38283	ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	N	N
4XB7A38284	ThinkSystem U.2 PM1733 15.36TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	N	N

Table 4. Server support (Part 2 of 2)

Part Number	Description	1S Intel V1				2S Intel V1								Dense V1				4S V1	
		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)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)
2.5-inch drives																			
4XB7A38196	ThinkSystem U.2 PM1733 1.92TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A38197	ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N
4XB7A38283	ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N
4XB7A38284	ThinkSystem U.2 PM1733 15.36TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD	N	N	N	N	N	N	N	N	N	Y	Y	N	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) 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 tables list the supported operating systems.

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

Table 5. Operating system support for ThinkSystem U.2 PM1733 3.84TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD, 4XB7A38197

Operating systems	SR650 V2	SR635	SR645	SR655	SR665	SR630 (Gen 2)	SR650 (Gen 2)	SR630 (Gen 1)	SR650 (Gen 1)
Microsoft Windows 10	N	N	N	Y ²¹	N	N	N	N	N
Microsoft Windows 11	N	N	N	Y ²¹	N	N	N	N	N
Microsoft Windows Server 2012 R2	N	N	N	N	N	N	N	Y	Y

	SR650 V2	SR635	SR645	SR655	SR665	SR630 (Gen 2)	SR650 (Gen 2)	SR630 (Gen 1)	SR650 (Gen 1)
Operating systems									
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 6.10	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 6.9	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.3	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.5	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.6	N	Y ¹	Y ¹⁴	Y ²²	Y ²⁵	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	N	Y ²	Y ¹⁵	Y ¹⁵	Y ¹⁵	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	N	Y ³	Y ³	Y ³	Y ³	Y	Y	Y	Y
Red Hat Enterprise Linux 7.9	Y	Y ⁴	Y ¹⁶	Y ¹⁶	Y ¹⁶	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	N	Y ⁵	N	Y ²³	N	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	N	Y ⁶	Y ¹⁷	Y ¹⁷	Y ¹⁷	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y ⁷	Y ¹⁸	Y ¹⁸	Y ¹⁸	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	N	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP2	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP2 with Xen	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP3 with Xen	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP4	N	Y ⁸	N	Y ⁸	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	N	Y ⁹	N	Y ⁹	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	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
SUSE Linux Enterprise Server 15	N	N	N	N	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	N	Y ¹⁰	Y ¹⁰	Y ¹⁰	Y ¹⁰	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	N	Y ¹¹	Y ¹⁹	Y ¹⁹	Y ¹⁹	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2	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
SUSE Linux Enterprise Server 15 SP3	N	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	N	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR650 V2	SR635	SR645	SR655	SR665	SR630 (Gen 2)	SR650 (Gen 2)	SR630 (Gen 1)	SR650 (Gen 1)
Operating systems									
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	N	N	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	Y	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	Y	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5	N	N	N	N	N	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U1	N	N	N	N	N	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U2	N	N	N	N	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	N	N	N	N	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	N	N	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	N	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	N	N	N	N	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	N	Y	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	N	Y ¹²	Y ²⁰	Y ²⁰	Y ²⁰	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	Y ¹³	Y	Y ²⁴	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	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
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y

- ¹ RHEL 7.6 Not support with EPYC 7003 processors.
- ² RHEL7.7 Not support with EPYC 7003 processors.
- ³ RHEL7.8 Not support with EPYC 7003 processors
- ⁴ RHEL7.9 Not support with EPYC 7003 processors.
- ⁵ RHEL8.0 Not support with EPYC 7003 processors.
- ⁶ RHEL8.1 Not support with EPYC 7003 processors.
- ⁷ RHEL8.2 Not support with EPYC 7003 processors.
- ⁸ SLES12 SP4 Not support with EPYC 7003 processors
- ⁹ SLES12 SP4 Xen Not support with EPYC 7003 processors
- ¹⁰ SLES15 SP1 Not support with EPYC 7003 processors
- ¹¹ SLES15 SP1 Xen Not support with EPYC 7003 processors.
- ¹² VMware 7.0 Not support with EPYC 7003 processors.
- ¹³ VMware 7.0 U1 Not support with EPYC 7003 processors.
- ¹⁴ RHEL7.6 Not support with EPYC 7003 processors
- ¹⁵ RHEL7.7 Not support with EPYC 7003 processors
- ¹⁶ RHEL7.9 Not support with EPYC 7003 processors
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- ¹⁷ RHEL8.1 Not support with EPYC 7003 processors
- ¹⁸ RHEL8.2 Not support with EPYC 7003 processors
- ¹⁹ SLES15 SP1 Xen Not support with EPYC 7003 processors
- ²⁰ VMware 7.0 Not support with EPYC 7003 processors
- ²¹ ISG will not sell/preload this OS, but compatibility and cert only.
- ²² RHEL 7.6 Not support with EPYC 7003 processors
- ²³ RHEL8.0 Not support with EPYC 7003 processors
- ²⁴ VMware 7.0 U1 Not support with EPYC 7003 processors
- ²⁵ RHEL7.6 Not support with EPYC 7003 processors.

Table 6. Operating system support for ThinkSystem U.2 PM1733 7.68TB Entry NVMe PCIe 4.0 x4 Hot Swap SSD, 4XB7A38283

Operating systems	SR650 V2	SR635	SR645	SR655	SR665	SR630 (Gen 2)	SR650 (Gen 2)	SR630 (Gen 1)	SR650 (Gen 1)
Microsoft Windows 10	N	N	N	Y ¹⁹	N	N	N	N	N
Microsoft Windows 11	N	N	N	Y ¹⁹	N	N	N	N	N
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 6.10	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 6.9	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.3	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.5	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 7.6	N	Y ¹	Y ¹³	Y ²⁰	Y ²³	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	N	Y ²	Y ¹⁴	Y ¹⁴	Y ¹⁴	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	N	Y ³	Y ³	Y ³	Y ³	Y	Y	Y	Y
Red Hat Enterprise Linux 7.9	Y	Y ⁴	Y ¹⁵	Y ¹⁵	Y ¹⁵	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	N	Y ⁵	N	Y ²¹	N	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	N	Y ⁶	Y ¹⁶	Y ¹⁶	Y ¹⁶	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y ⁷	Y ¹⁷	Y ¹⁷	Y ¹⁷	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	N	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 11 SP4 with Xen	N	N	N	N	N	N	N	Y	Y

	SR650 V2	SR635	SR645	SR655	SR665	SR630 (Gen 2)	SR650 (Gen 2)	SR630 (Gen 1)	SR650 (Gen 1)
Operating systems									
SUSE Linux Enterprise Server 12 SP2	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP2 with Xen	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP3 with Xen	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP4	N	Y ⁸	N	Y ⁸	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	N	Y ⁹	N	Y ⁹	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	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
SUSE Linux Enterprise Server 15	N	N	N	N	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	N	Y ¹⁰	Y ¹⁰	Y ¹⁰	Y ¹⁰	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	N	Y ¹¹	Y ¹⁸	Y ¹⁸	Y ¹⁸	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2	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
SUSE Linux Enterprise Server 15 SP3	N	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	N	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	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
SUSE Linux Enterprise Server 15 with Xen	N	N	N	N	N	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	Y	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	Y	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	Y ¹²	Y	Y ²²	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	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
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y

- ¹ RHEL 7.6 Not support with EPYC 7003 processors.
- ² RHEL7.7 Not support with EPYC 7003 processors.
- ³ RHEL7.8 Not support with EPYC 7003 processors
- ⁴ RHEL7.9 Not support with EPYC 7003 processors.
- ⁵ RHEL8.0 Not support with EPYC 7003 processors.
- ⁶ RHEL8.1 Not support with EPYC 7003 processors.
- ⁷ RHEL8.2 Not support with EPYC 7003 processors.
- ⁸ SLES12 SP4 Not support with EPYC 7003 processors
- ⁹ SLES12 SP4 Xen Not support with EPYC 7003 processors

- ¹⁰ SLES15 SP1 Not support with EPYC 7003 processors
- ¹¹ SLES15 SP1 Xen Not support with EPYC 7003 processors.
- ¹² VMware 7.0 U1 Not support with EPYC 7003 processors.
- ¹³ RHEL7.6 Not support with EPYC 7003 processors
- ¹⁴ RHEL7.7 Not support with EPYC 7003 processors
- ¹⁵ RHEL7.9 Not support with EPYC 7003 processors
- ¹⁶ RHEL8.1 Not support with EPYC 7003 processors
- ¹⁷ RHEL8.2 Not support with EPYC 7003 processors
- ¹⁸ SLES15 SP1 Xen Not support with EPYC 7003 processors
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- ²⁰ RHEL 7.6 Not support with EPYC 7003 processors
- ²¹ RHEL8.0 Not support with EPYC 7003 processors
- ²² VMware 7.0 U1 Not support with EPYC 7003 processors
- ²³ RHEL7.6 Not support with EPYC 7003 processors.

Warranty

The PM1733 SSDs carry a one-year, customer-replaceable unit (CRU) limited warranty. When the SSDs are installed in a supported server, these drives assume the server'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 PM1733 Entry NVMe PCIe 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: 190 g (6.7 oz)

Operating environment

The PM1733 Entry NVMe PCIe SSDs are supported in the following environment:

- Temperature (operating): 0 to 70 °C (32 to 158 °F)
- Temperature (non-operating): -40 to 85 °C (-40 to 185 °F)
- Relative humidity (non-operating): 5 to 95% (noncondensing)
- Maximum altitude: 3,050 m (10,000 ft)
- Shock, operating: 1,500 G (Max) at 0.5 ms
- Vibration: 20 G_{PEAK} (10-2000 Hz) at 15 mins per axis

Agency approvals

The PM1733 Entry NVMe PCIe SSDs conform to the following regulations:

- UL
- TUV
- FCC
- CE Mark
- C-Tick Mark
- BSMI (Taiwan)
- KCC (Korea EMI)

Related publications and links

For more information, see the following documents:

- Lenovo ThinkSystem SSD Portfolio Comparison
<https://lenovopress.com/lp1261-lenovo-thinksystem-ssd-portfolio>
- Lenovo ThinkSystem storage options product web page
<https://lenovopress.com/lp0761-storage-options-for-thinksystem-servers>
- Samsung product page for Enterprise SSDs
<https://www.samsung.com/semiconductor/ssd/enterprise-ssd/>

Related product families

Product families related to this document are the following:

- [Drives](#)

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