

Intel S4600 Mainstream SATA 6Gb SSDs Product Guide (withdrawn product)

The Intel S4600 Mainstream SATA solid-state drives (SSDs) for Lenovo servers are advanced data center SSDs optimized for mixed read-write performance, endurance and strong data protection. The drives are available in either 2.5-inch or 3.5-inch drive form factor.

The Intel SSD S4600 drives with 3 full drives writes per day (DWD) are an excellent choice as cache in transactional application and high-speed storage for enterprise databases.

The Intel S4600 Enterprise Mainstream SATA solid-state drive is shown in the following figure.



Figure 1. Intel S4600 Mainstream SATA SSD

Did you know?

By combining the Intel 3D NAND TLC Flash Memory technology and Intel's latest controller, the design of Intel S4600 Mainstream SATA SSDs delivers consistent performance, reduced power consumption, and end-to-end data protection, as well as being optimized for endurance and IOPS/watt.

Rigorous testing of Intel S4600 Mainstream SATA SSDs by Lenovo through the ServerProven® program ensures a high degree of storage subsystem compatibility and reliability. Providing additional peace of mind, these drives are covered under Lenovo warranty.

Part number information

Withdrawn: The S4600 drives are now all withdrawn from marketing.

The following table lists the ordering information for drives for ThinkSystem servers.

Table 1. Ordering information for ThinkSystem

Part number	Feature	Description
2.5-inch drives with hot-swap tray		
7SD7A05723	B0ZP	ThinkSystem 2.5" Intel S4600 240GB Mainstream SATA 6Gb Hot Swap SSD
7SD7A05722	B0ZQ	ThinkSystem 2.5" Intel S4600 480GB Mainstream SATA 6Gb Hot Swap SSD
7SD7A05721	B0ZR	ThinkSystem 2.5" Intel S4600 960GB Mainstream SATA 6Gb Hot Swap SSD
7SD7A05720	B0ZS	ThinkSystem 2.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD
3.5-inch drives with hot-swap tray		
7SD7A05718	B0ZT	ThinkSystem 3.5" Intel S4600 240GB Mainstream SATA 6Gb Hot Swap SSD
7SD7A05717	B0ZU	ThinkSystem 3.5" Intel S4600 480GB Mainstream SATA 6Gb Hot Swap SSD
7SD7A05716	B0ZV	ThinkSystem 3.5" Intel S4600 960GB Mainstream SATA 6Gb Hot Swap SSD
7SD7A05715	B109	ThinkSystem 3.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD

The following table lists the ordering information for drives for System x, NeXtScale and Flex System servers.

Table 2. Ordering information for System x

Part number	Feature	Description
2.5-inch drives with G3HS hot-swap tray		
4XB7A08499	B10A	Intel S4600 240GB Enterprise Mainstream SATA G3HS 2.5" SSD
7SD7A05713	B10B	Intel S4600 480GB Enterprise Mainstream SATA G3HS 2.5" SSD
7SD7A05712	B10C	Intel S4600 960GB Enterprise Mainstream SATA G3HS 2.5" SSD
7SD7A05711	B10D	Intel S4600 1.92TB Enterprise Mainstream SATA G3HS 2.5" SSD
3.5-inch drives with hot-swap tray		
4XB7A08500	B10E	Intel S4600 240GB Enterprise Mainstream SATA HS 3.5" SSD
7SD7A05710	B10F	Intel S4600 480GB Enterprise Mainstream SATA HS 3.5" SSD
7SD7A05709	B10G	Intel S4600 960GB Enterprise Mainstream SATA HS 3.5" SSD
7SD7A05708	B10H	Intel S4600 1.92TB Enterprise Mainstream SATA HS 3.5" SSD
2.5-inch drives for NeXtScale		
4XB7A08501	B10J	Intel S4600 240GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale
7SD7A05707	B10K	Intel S4600 480GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale
7SD7A05706	B10L	Intel S4600 960GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale
7SD7A05705	B10M	Intel S4600 1.92TB Enterprise Mainstream SATA 2.5" SSD for NeXtScale

The following table lists the ordering information for drives for ThinkServer systems.

Table 3. Ordering information for ThinkServer systems

Part number	Description
2.5-inch drives with hot-swap tray	
4XB0N68525	Lenovo ThinkServer 2.5" S4600 240GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series
4XB0N68526	Lenovo ThinkServer 2.5" S4600 480GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series
4XB0N68527	Lenovo ThinkServer 2.5" S4600 960GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series
4XB0N68519	Lenovo ThinkServer Gen 5 2.5" S4600 240GB Mainstream SATA 6Gbps Hot Swap SSD
4XB0N68520	Lenovo ThinkServer Gen 5 2.5" S4600 480GB Mainstream SATA 6Gbps Hot Swap SSD
4XB0N68521	Lenovo ThinkServer Gen 5 2.5" S4600 960GB Mainstream SATA 6Gbps Hot Swap SSD
3.5-inch drives with hot-swap tray	
4XB0N68528	Lenovo ThinkServer 3.5" S4600 240GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series
4XB0N68529	Lenovo ThinkServer 3.5" S4600 480GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series
4XB0N68530	Lenovo ThinkServer 3.5" S4600 960GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series
4XB0N68522	Lenovo ThinkServer Gen 5 3.5" S4600 240GB Mainstream SATA 6Gbps Hot Swap SSD
4XB0N68523	Lenovo ThinkServer Gen 5 3.5" S4600 480GB Mainstream SATA 6Gbps Hot Swap SSD
4XB0N68524	Lenovo ThinkServer Gen 5 3.5" S4600 960GB Mainstream SATA 6Gbps Hot Swap SSD

Features

The Intel S4600 Mainstream SATA SSDs have the following features:

- Industry-standard 2.5-inch or 3.5-inch form factors
- Cost-effective Intel 3D NAND TLC Flash Memory
- Endurance of 3 drive writes per day (DWPD) for 5 years, using Intel High Endurance Technology (HET).
- SATA TLC solid-state drive with high read performance and consistently low latencies to fulfill client needs in the enterprise space
- High reliability and enhanced ruggedness
- Energy saving, with 5 W typical power consumption per drive
- Absence of moving parts to reduce potential failure points in the server
- S.M.A.R.T. support
- Advanced Encrypting Standard (AES) 256-bit encryption
- Full end-to-end data path protection
- Thermal throttling to extend the life of the drive
- Enhanced power loss data protection

The key difference between Performance SSDs such as the S3710 SSDs, Mainstream SSDs such as the S4600 SSDs, and Entry SSDs, such as the S4500 SSDs, is their endurance (life expectancy). SSDs have a huge, but finite, number of program/erase (P/E) cycles, which determines how long the drives can perform write operations and thus their life expectancy. Mainstream SSDs have better endurance than the Entry SSDs, but at a higher cost/IOPS ratio.

SSD write endurance is typically measured by the number of program/erase cycles that the drive can incur over its lifetime, which is listed as TBW in the device specification. The TBW value that is assigned to a solid-state device is the total bytes of written data that a drive can be guaranteed to complete. Reaching this limit does not cause the drive to immediately fail; the TBW simply denotes the maximum number of writes that can be guaranteed.

A solid-state device does not fail upon reaching the specified TBW, but at some point after surpassing the TBW value (and based on manufacturing variance margins), the drive reaches the end-of-life point, at which time the drive goes into read-only mode. Because of such behavior, careful planning must be done to use SSDs in the application environments to ensure that the TBW of the drive is not exceeded before the required life expectancy.

For example, the S4600 Mainstream 480 GB drive has an endurance of 2,950 TB of total bytes written (TBW). This means that for full operation over five years, write workload must be limited to no more than 1,616 GB of writes per day, which is equivalent to 3.4 full drive writes per day (DWPD). For the device to last three years, the drive write workload must be limited to no more than 2,694 GB of writes per day, which is equivalent to 5.6 full drive writes per day.

Technical specifications

The following table presents technical specifications for the Intel S4600 Mainstream SATA SSDs.

Table 4. Technical specifications

Feature	240 GB drive	480 GB drive	960 GB drive	1.92 TB drive
Interface	6 Gbps SATA	6 Gbps SATA	6 Gbps SATA	6 Gbps SATA
Capacity	240 GB	480 GB	960 GB	1.92 TB
Endurance (drive writes per day)	3.19 DWPD	3.36 DWPD	3.0 DWPD	3.09 DWPD
Endurance (total bytes written)	1.4 PB	2.95 PB	5.25 PB	10.84 PB
Data reliability	< 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
IOPS reads (4 KB blocks)	72,000	72,000	72,000	72,000
IOPS writes (4 KB blocks)	38,000	60,000	65,000	65,000
Sequential read rate (128 KB blocks)	500 MBps	500 MBps	500 MBps	500 MBps
Sequential write rate (128 KB blocks)	260 MBps	480 MBps	490 MBps	480 MBps
Read latency (seq)	36 µs	36 µs	36 µs	36 µs
Write latency (seq)	36 µs	36 µs	36 µs	36 µs
Shock, operating	1,000 G (Max) at 0.5 ms	1,000 G (Max) at 0.5 ms	1,000 G (Max) at 0.5 ms	1,000 G (Max) at 0.5 ms
Vibration, operating	2.17 G _{RMS} (5-700 Hz)	2.17 G _{RMS} (5-700 Hz)	2.17 G _{RMS} (5-700 Hz)	2.17 G _{RMS} (5-700 Hz)
Vibration, non-operating	3.13 G _{RMS} (5-800 Hz)	3.13 G _{RMS} (5-800 Hz)	3.13 G _{RMS} (5-800 Hz)	3.13 G _{RMS} (5-800 Hz)
Typical power (Active Write Avg)	3.1 W	4.5 W	4.8 W	4.9 W

Server support - ThinkSystem

The following table lists the ThinkSystem servers that are compatible.

Table 5. ThinkSystem server support

Part number	Description	1S Rack & Tower				2S Rack & Tower								4S Rack			Dense/ Blade			
		ST50 (7Y48/7Y50)	ST250 (7Y45/7Y46)	SR150 (7Y54)	SR250 (7Y51/7Y52)	ST550 (7X09/7X10)	SR530 (7X07/7X08)	SR550 (7X03/7X04)	SR570 (7Y02/7Y03)	SR590 (7X98/7X99)	SR630 (7X01/7X02)	SR650 (7X05/7X06)	SR670 (7Y36/7Y37/7Y38)	SR850 (7X18/7X19)	SR860 (7X69/7X70)	SR950 (7X11/12/13)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
2.5-inch drives with hot-swap tray																				
7SD7A05723	ThinkSystem 2.5" Intel S4600 240GB Mainstream SATA 6Gb Hot Swap SSD	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y
7SD7A05722	ThinkSystem 2.5" Intel S4600 480GB Mainstream SATA 6Gb Hot Swap SSD	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y
7SD7A05721	ThinkSystem 2.5" Intel S4600 960GB Mainstream SATA 6Gb Hot Swap SSD	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y
7SD7A05720	ThinkSystem 2.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y
3.5-inch drives with hot-swap tray																				
7SD7A05718	ThinkSystem 3.5" Intel S4600 240GB Mainstream SATA 6Gb Hot Swap SSD	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
7SD7A05717	ThinkSystem 3.5" Intel S4600 480GB Mainstream SATA 6Gb Hot Swap SSD	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
7SD7A05716	ThinkSystem 3.5" Intel S4600 960GB Mainstream SATA 6Gb Hot Swap SSD	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
7SD7A05715	ThinkSystem 3.5" Intel S4600 1.92TB Mainstream SATA 6Gb Hot Swap SSD	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N

Server support - System x

The following tables list the System x servers that are compatible.

Support for System x and dense servers with Xeon E5/E7 v4 and E3 v5 processors

Table 6. Support for System x and dense servers with Xeon E5/E7 v4 and E3 v5 processors

Part number	Description	x3250 M6 (3943)	x3250 M6 (3633)	x3550 M5 (8869)	x3650 M5 (8871)	x3850 X6/x3950 X6 (6241, E7 v4)	nx360 M5 (5465, E5-2600 v4)	sd350 (5493)	nx360 M5 WCT (5467, E5-2600 v4)
2.5-inch drives with G3HS hot-swap tray									
4XB7A08499	Intel S4600 240GB Enterprise Mainstream SATA G3HS 2.5" SSD	Y	Y	Y	Y	Y	Y	N	N
7SD7A05713	Intel S4600 480GB Enterprise Mainstream SATA G3HS 2.5" SSD	Y	Y	Y	Y	Y	Y	N	N
7SD7A05712	Intel S4600 960GB Enterprise Mainstream SATA G3HS 2.5" SSD	Y	Y	Y	Y	Y	Y	N	N
7SD7A05711	Intel S4600 1.92TB Enterprise Mainstream SATA G3HS 2.5" SSD	Y	Y	Y	Y	Y	Y	N	N
3.5-inch drives with hot-swap tray									
4XB7A08500	Intel S4600 240GB Enterprise Mainstream SATA HS 3.5" SSD	Y	Y	Y	Y	N	N	N	N
7SD7A05710	Intel S4600 480GB Enterprise Mainstream SATA HS 3.5" SSD	Y	Y	Y	Y	N	N	N	N
7SD7A05709	Intel S4600 960GB Enterprise Mainstream SATA HS 3.5" SSD	Y	Y	Y	Y	N	N	N	N
7SD7A05708	Intel S4600 1.92TB Enterprise Mainstream SATA HS 3.5" SSD	Y	Y	Y	Y	N	N	N	N
2.5-inch drives for NeXtScale									
4XB7A08501	Intel S4600 240GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	Y	N	Y
7SD7A05707	Intel S4600 480GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	Y	N	Y
7SD7A05706	Intel S4600 960GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	Y	N	Y
7SD7A05705	Intel S4600 1.92TB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	Y	N	Y

Support for System x and dense servers with Intel Xeon v3 processors

Table 7. Support for servers with Intel Xeon v3 processors

Part number	Description	x3100 M5 (5457)	x3250 M5 (5458)	x3500 M5 (5464)	x3550 M5 (5463)	x3650 M5 (5462)	x3850 X6/x3950 X6 (6241, E7 v3)	nx360 M5 (5465)
2.5-inch drives with G3HS hot-swap tray								
4XB7A08499	Intel S4600 240GB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	N	N	N	Y	Y
7SD7A05713	Intel S4600 480GB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	N	N	N	Y	Y
7SD7A05712	Intel S4600 960GB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	N	N	N	Y	Y
7SD7A05711	Intel S4600 1.92TB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	N	N	N	Y	Y
3.5-inch drives with hot-swap tray								
4XB7A08500	Intel S4600 240GB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
7SD7A05710	Intel S4600 480GB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
7SD7A05709	Intel S4600 960GB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
7SD7A05708	Intel S4600 1.92TB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
2.5-inch drives for NeXtScale								
4XB7A08501	Intel S4600 240GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	Y
7SD7A05707	Intel S4600 480GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	Y
7SD7A05706	Intel S4600 960GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	Y
7SD7A05705	Intel S4600 1.92TB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	Y

Server support - ThinkServer

The following tables list the ThinkServer systems that are compatible.

Support for ThinkServer systems with E5 v4 or E3 v6 processors

Support for sd350: The drives supported with the sd350 are listed in [Table 6](#).

Table 8. Support for ThinkServer Generation 5 servers with E5 v4 or E3 v6 processors

Part number	Description	E5 v4					E3 v6		
		TD350 (E5 v4)	RD350 (E5 v4)	RD450 (E5 v4)	RD550 (E5 v4)	RD650 (E5 v4)	TS150 (E3 v6)	TS460 (E3 v6)	RS160 (E3 v6)
2.5-inch drives with hot-swap tray									
4XB0N68525	LTS 2.5" S4600 240GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	Y
4XB0N68526	LTS 2.5" S4600 480GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	Y
4XB0N68527	LTS 2.5" S4600 960GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	Y
4XB0N68519	LTS Gen 5 2.5" S4600 240GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	Y	N
4XB0N68520	LTS Gen 5 2.5" S4600 480GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	Y	N
4XB0N68521	LTS Gen 5 2.5" S4600 960GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	Y	N
3.5-inch drives with hot-swap tray									
4XB0N68528	LTS 3.5" S4600 240GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	Y
4XB0N68529	LTS 3.5" S4600 480GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	Y
4XB0N68530	LTS 3.5" S4600 960GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	Y
4XB0N68522	LTS Gen 5 3.5" S4600 240GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	Y	N
4XB0N68523	LTS Gen 5 3.5" S4600 480GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	Y	N
4XB0N68524	LTS Gen 5 3.5" S4600 960GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	Y	N

Support for ThinkServer systems with E5 v3 and E3 v5 processors

Table 9. Support for ThinkServer systems with E5 v3 and E3 v5 processors

Part number	Description	E5 v3						E3 v5			
		TD350 (E5 v3)	RD350 (E5 v3)	RD450 (E5 v3)	RD550 (E5 v3)	RD650 (E5 v3)	RQ750 (E5 v3)	TS150 (E3 v5)	TS450 (E3 v5)	TS460 (E3 v5)	RS160 (E3 v5)
2.5-inch drives with hot-swap tray											
4XB0N68525	LTS 2.5" S4600 240GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	N	N	N
4XB0N68526	LTS 2.5" S4600 480GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	N	N	N
4XB0N68527	LTS 2.5" S4600 960GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	N	N	N
4XB0N68519	LTS Gen 5 2.5" S4600 240GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	N	N	N	N
4XB0N68520	LTS Gen 5 2.5" S4600 480GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	N	N	N	N
4XB0N68521	LTS Gen 5 2.5" S4600 960GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	N	N	N	N
3.5-inch drives with hot-swap tray											
4XB0N68528	LTS 3.5" S4600 240GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	N	N	N
4XB0N68529	LTS 3.5" S4600 480GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	N	N	N
4XB0N68530	LTS 3.5" S4600 960GB Enterprise Mainstream SATA 6Gbps SSD for RS-Series	N	N	N	N	N	N	N	N	N	N
4XB0N68522	LTS Gen 5 3.5" S4600 240GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	N	N	N	N
4XB0N68523	LTS Gen 5 3.5" S4600 480GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	N	N	N	N
4XB0N68524	LTS Gen 5 3.5" S4600 960GB Mainstream SATA 6Gbps Hot Swap SSD	N	N	N	N	N	N	N	N	N	N

Server support - Flex System

The following table lists the ThinkSystem and Flex System compute nodes that support the adapters.

Tip: For the ThinkSystem SN550 and SN850, see the [ThinkSystem table](#).

Table 10. Support for ThinkSystem and Flex System compute nodes

Part number	Description	x240 (8737, E5-2600 v2)	x240 (7162)	x240 M5 (9532, E5-2600 v3)	x240 M5 (9532, E5-2600 v4)	x440 (7167)	x880/x480/x280 X6 (7903)	x280/x480/x880 X6 (7196)
2.5-inch drives with G3HS hot-swap tray								
4XB7A08499	Intel S4600 240GB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	Y	Y	N	N	N
7SD7A05713	Intel S4600 480GB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	Y	Y	N	N	N
7SD7A05712	Intel S4600 960GB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	Y	Y	N	N	N
7SD7A05711	Intel S4600 1.92TB Enterprise Mainstream SATA G3HS 2.5" SSD	N	N	Y	Y	N	N	N
3.5-inch drives with hot-swap tray								
4XB7A08500	Intel S4600 240GB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
7SD7A05710	Intel S4600 480GB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
7SD7A05709	Intel S4600 960GB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
7SD7A05708	Intel S4600 1.92TB Enterprise Mainstream SATA HS 3.5" SSD	N	N	N	N	N	N	N
2.5-inch drives for NeXtScale								
4XB7A08501	Intel S4600 240GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	N
7SD7A05707	Intel S4600 480GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	N
7SD7A05706	Intel S4600 960GB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	N
7SD7A05705	Intel S4600 1.92TB Enterprise Mainstream SATA 2.5" SSD for NeXtScale	N	N	N	N	N	N	N

Operating system support

SAS and SATA SSDs operate transparently to users, storage systems, applications, databases, and operating systems.

Operating system support is based on the controller used to connect to the drives. Consult the controller product guide for more information:

- RAID controllers: <https://lenovopress.com/servers/options/raid>
- SAS HBAs: <https://lenovopress.com/servers/options/hba>

Warranty

The Intel S4600 Mainstream SATA 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 S4600 Mainstream SATA SSDs have the following physical specifications.

Dimensions and weight (approximate, without drive tray):

- Height: 7 mm (0.3 in.)
- Width: 70 mm (2.8 in.)
- Depth: 100 mm (4.0 in.)
- Weight: 63 g (2.2 oz lb) (66 g for the 1.92 TB drives)

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

- Height: 63 mm (2.5 in.)
- Width: 174 mm (6.9 in.)
- Depth: 133 mm (5.2 in.)
- Weight: 434 g (1.0 lb)

Shipping dimensions and weight - 3.5-inch drives (approximate):

- Height: 95 mm (3.7 in.)
- Width: 257 mm (10.1 in.)
- Depth: 193 mm (7.6 in.)
- Weight: 484 g (1.1 lb)

Operating environment

The S4600 Mainstream SATA SSDs are supported in the following environment:

- Temperature: 0 to 70 °C (32 to 158 °F)
- Temperature (non-operating): -55 to 95 °C (-67 to 203 °F)
- Relative humidity: 5 - 95% (noncondensing)
- Maximum altitude: 3,050 m (10,000 ft)

Agency approvals

The Intel S4600 Mainstream SATA SSDs conform to the following regulations:

- FCC Title 47, Part 15B, Class B
- CA/CSA-CEI/IEC CISPR 22:02
- EN 55024: 1998
- EN 55022: 2006
- EN-60950-1 2nd Edition
- UL/CSA EN-60950-1 2nd Edition
- Low Voltage Directive 2006/95/EC
- C-Tick: AS/NZS3584
- BSMI: CNS 13438
- KCC Article 11.1
- RoHS DIRECTIVE 2011/65/EU
- WEEE Directive 2002/96/EC

Related publications and links

For more information, see the following documents:

- Lenovo ThinkSystem storage options product page
<https://lenovopress.com/lp0761-storage-options-for-thinksystem-servers>
- Lenovo System x storage options product page
<https://www3.lenovo.com/us/en/data-center/servers/server-options/system-x-options/server-storage/c/system-x-storage>
- Intel SSD Data Center S4600 Series product page
<https://www.intel.com/content/www/us/en/products/memory-storage/solid-state-drives/data-center-ssds/dc-s4600-series.html>
- ServerProven for SSDs
<http://static.lenovo.com/us/en/serverproven/xseries/storage/hssdmatrix.shtml>
- Lenovo Press product guides for RAID controllers
<https://lenovopress.com/servers/options/raid>
- Lenovo RAID Introduction
<https://lenovopress.com/lp0578-lenovo-raid-introduction>
- Lenovo RAID Management Tools and Resources
<https://lenovopress.com/lp0579-lenovo-raid-management-tools-and-resources>

Related product families

Product families related to this document are the following:

- [Drives](#)

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