Intel ® Solid State Drives

Intel ® High Performance SATA Solid - State Drives (SSDs) are designed to deliver outstanding performance and reliability. With no moving parts, Intel SSDs offer a quiet storage solution that responds quickly and uses less power. Compared to traditional hard disk drives, Intel SSDs are significantly more responsive, much more reliable, have lower power consumption and are completely quiet.

Intel SSDs are designed and validated specifically for PC applications using Intel's deep knowledge and understanding of PC design. Details include:

- Use of high performance Open NAND Flash Interface (ONFI) working group spec flash chips
- Parallel 10 channel architecture for high sustained read/write bandwidth
- Extremely high random access speeds (I/O operations per second or IOPs) that are tuned for typical PC applications and modern operating systems

Highly efficient internal SSD controller functions, including Intel's unique wear - leveling algorithm [1] and low write amplification factor, [2] enhance the SSD reliability.

Intel offers high - performance solid - state drives in industry - standard form factors for servers and all types of PCs (desktops, nettops, notebooks, netbooks).

Comparison chart

Product news

Intel ® Data Migration Software is now available for download
A desktop installation kit is now included in pretty box versions of Intel ® solid - state drives
See the new product codes in the Product Matrix

Product information

Intel ® X25 - E Extreme SATA Solid - State Drive product brief (PDF 162.53KB)
Intel ® X25 - M and X18 - M Mainstream SATA Solid - State Drives product brief (PDF 350KB)
"What is an SSD?" animation (ZIP 29.4MB)
Learn more about solid - state drives
Product matrix

Client (desktop, notebook, netbook) applications

PC enthusiasts demand the most from their system. Differentiate your client PC offerings by using Intel ® X25 - M or X18 - M Mainstream SATA Solid - State Drives. Benefits include:

- Blazing fast responsiveness and performance
- Solid, reliable, silent operation
- Low power consumption for longer battery life

Entry desktop and netbook purchasers also appreciate the benefits of the Intel ® X25 - V Value SATA Solid - State Drive, including:

- Improved responsiveness and performance over a 5400 RPM hard drive
- Solid, reliable, silent operation
- Low power consumption for longer battery life

Enterprise (server and workstation) applications

Intel ® SSDs provide many configuration options for enterprise applications. Intel ® X25 - E Extreme SATA solid - state drives offer the highest levels of performance and reliability for servers and high - end workstations. For use with read - intensive enterprise applications, Intel ® X25 - M Mainstream SATA Solid - State Drives offer a good, cost - effective solution. [5] The Intel X25 - V SSD can be used as a fast, reliable boot drive in a multi - drive environment. In addition to using the industry standard SATA interface, Intel SSDs have been tested and validated on the latest Intel - based server and workstation platforms. View validated products (PDF 562KB).

Help remove I/O bottlenecks and lower power consumption in your customers' server and high - end workstation applications by using Intel SSDs. Your customers will get customized solutions that

- Handle more users and respond to them more quickly
- Have higher overall system reliability because of fewer drive failures
- Reduce total cost of ownership (TCO)

Intel ® High Performance Solid - State Drives Product Matrix

Product Code	Product Name	Capacity	Drive Type	Product Dimensions	Package Contents [6]	Usage Model
SSDSA2SH064G101	Intel ® X25 - E SATA Solid - State Drive	64GB	SLC	2.5" drive, 7.0mm thick	One Solid - State Drive (SSD)	Server, storage, workstation
SSDSA2SH032G101		32GB	SLC	2.5" drive, 7.0mm thick	One SSD	
SSDSA2MH160G201	Intel ® X25 - M SATA Solid - State Drive	160GB	MLC	2.5" drive, 7.0mm thick	One SSD	Desktop, notebook, and read - intensive server [3] applications
SSDSA2MH160G2C1		160GB	MLC	2.5" drive, 9.5mm thick [7]	One SSD	
SSDSA2MH160G2K5 (pretty box)		160GB	MLC	2.5" drive, 9.5mm thick [7]	One SSD + Desktop with installation kit [8]	
SSDSA2MH080G201		80GB	MLC	2.5" drive, 7.0mm thick	One SSD	
SSDSA2MH080G2C1		80GB	MLC	2.5" drive, 9.5mm thick [7]	One SSD	
SSDSA2MH080G2K5 (pretty box)		80GB	MLC	2.5" drive, 9.5mm thick [7]	One SSD + Desktop with installation kit [8]	
SSDSA2MH040G2K5	Intel ® X25 - V SATA Solid - State Drive	40GB	MLC	2.5" drive, 9.5mm thick [5]	One SSD + Desktop installation kit [8]	Boot drive, and cost sensitive applications
SSDSA1MH160G201	Intel ® X18 - M SATA Solid - State Drive	160GB	MLC	1.8" drive, 5.0mm thick	One SSD	Handheld devices, embedded applications
SSDSA1MH080G201		80GB	MLC	1.8" drive, 5.0mm thick	One SSD	

[1] Wear - leveling definition: Wear - leveling is an algorithm run by the internal SSD controller. This algorithm attempts to evenly spread the program/erase (P/E) cycles across all the pages in the NAND Flash storage of the SSD, thus increasing the overall P/E endurance of the whole drive beyond the P/E endurance of the individual NAND storage cell.

[2] Write amplification definition: Write amplification factor is the ratio of actual data written into the SSD's NAND Flash silicon as compared to the actual data that the host system attempts to write into the SSD device. Low write amplification is a measure of efficient storage and housekeeping algorithms inside the SSD. A lower write amplification factor improves overall SSD life expectancy by lowering the overall program/erase (P/E) cycles required to manage the data stored in the SSD during normal usage.

[3] IOPs and endurance specs for server - based workloads.

[4] IOPs and endurance specs for client - based workloads.

[5] Read the specifications to ensure proper fit for performance and endurance of the Intel X25 - M or X25 - V SSD in your enterprise application.

[6] These SSDs are for internal use inside a PC system or other drive enclosure.

[7] 9.5mm thickness includes plastic spacer to fit snugly in most 2.5 " notebook drive bays.

[8] Pretty box includes Desktop installation kit that contains: 3.5 " desktop drive bay adapter to 2.5 " SSD adapter bracket, screws, Desktop SATA (3Gbps) signal and power cables, installation guide, and warranty documentation.