The fast hard drive alternative that protects your data

Smart meets fast.
The PC performance you've dreamed of.

Shift your PC's performance into high gear

Intel® Solid-State Drives (Intel® SSDs) just got better. The next generation Intel SSD 320 Series offers built-in data protection features, better performance, larger capacities and more value for your money.

Built with 25 nanometer (nm) compute-quality Intel® NAND Flash Memory, the Intel SSD 320 Series accelerates PC performance where it matters most. With random read performance up to 39,500 input/output operations per second (IOPS)[1] and sequential read performance of up to 270 megabytes per second (MB/s), your PC will blaze through the most demanding applications and will handle intense multi-tasking needs. Couple that performance with random writes up to 23,000 IOPS and sequential writes up to 220MB/s to unleash your system.

Superior built-in data protection features

The new Intel SSD 320 Series contains built-in features to help protect your data from external threats and internal system snags.

The Intel SSD 320 Series comes pre-configured with Advanced Encryption Standard (AES) 128 bit encryption capabilities[2]. In the event of theft or loss of your computer, you have the peace of mind

that your personal data is secured by an advanced encryption technology.

Additionally, two new data protection features guard your data from internal system mishaps. To reduce potential data loss, the Intel SSD 320 Series detects and protects from an unexpected system power loss. The drive saves all cached data in the process of being written before shutting down, thereby minimizing potential data loss.

The Intel SSD 320 Series also improves reliability by providing an array of surplus NAND flash. If the controller encounters a faulty NAND array, the Intel SSD 320 Series automatically reconfigures itself to reduce the prospect of data loss.

Capacities to fit your needs

Available in a wide range of capacities, the Intel SSD 320 Series provides you with the flexibility to choose an SSD that best fits your need and budget.

Whether you choose the 40 gigabytes (GB), 80GB, 120GB, 160GB, 300GB or 600GB capacity, the Intel SSD 320 Series delivers the highly responsive PC experience you desire.

SSD Management Tool Suite

Install and manage the Intel SSD 320 Series with two FREE Intel utilities—the Intel® Data Migration Software and the Intel® SSD Toolbox with Intel® SSD Optimizer.

Intel Data Migration Software

The Intel Data Migration Software helps you install an Intel SSD in an existing PC system. With minimal steps, this useful tool replicates the operating system and all files from a PC's hard drive or SSD to any Intel SSD. The Intel Data Migration Software supports Microsoft Windows* 7, Vista*, and XP. Download this utility, free of charge, at **www.intel.com/go/ssdinstallation**

Intel SSD Toolbox with Intel SSD Optimizer

The Intel SSD Toolbox with Intel SSD Optimizer provides a powerful set of management, information, and diagnostic tools to maintain the health of your Intel SSD and optimize performance to "fresh-out-of-the-box" levels. The toolbox offers options to securely erase your SSD or access the System Configuration Tuner that helps your system take full advantage of your Intel SSD's performance. Download the toolbox, free of charge, at **www.intel.com/go/ssdtoolbox**

World-Class reliability – better by design

As the third generation of the SSD that changed the industry with its overall performance, value and reliability, the Intel SSD 320 Series draws from decades of memory engineering experience, and new industry leading, compute-quality Intel 25nm NAND Flash memory manufacturing processes. The Intel SSD 320 Series features an advanced architecture that employs 10 parallel NAND flash channels[3] equipped with multi-level cell NAND flash memory. With powerful Native Command Queuing that enables up to 32 concurrent operations; the Intel SSD 320 Series drastically outperform traditional hard disk drives.

The Intel SSD 320 Series also features low write amplification and a unique wear-leveling design for higher reliability; meaning Intel SSDs not only perform better, they last longer.

Thrust your PC's performance into overdrive with an Intel SSD 320 Series!

Intel® Solid-State Drive 320 Series

Technical Specifications	
Model Name	Intel Solid-State Drive 320 Series
Capacity	40GB, 80GB, 120GB, 160GB, 300GB, 600GB
NAND Flash Memory	25nm Intel NAND Flash Memory Multi-Level Cell Compute-Quality Components
Bandwidth[4]	**Sustained Sequential Reads (up to)** • 40GB: 200 MB/s • 80GB: 270 MB/s • 120GB: 270 MB/s • 160GB: 270 MB/s • 300GB: 270 MB/s • 600GB: 270 MB/s **Sustained Sequential Writes (up to)** • 40GB: 45 MB/s • 80GB: 90 MB/s • 120GB: 130 MB/s • 160GB: 165 MB/s • 300GB: 205 MB/s • 600GB: 220 MB/s
Read Latency[5]	75 µs
Write Latency[5]	90 µs
Random I/O Operations per Second (IOPS)[1]	**Random 4KB Reads (up to)** • 40GB : 30,000 IOPS • 80GB: 38,000 IOPS • 120GB: 38,000 IOPS • 160GB: 39,000 IOPS • 300GB: 39,500 IOPS • 600GB: 39,500 IOPS **Random 4KB Writes (up to)** • 40GB: 3,700 IOPS • 80GB: 10,000 IOPS • 120GB: 14,000 IOPS • 160GB: 21,000 IOPS • 300GB: 23,000 IOPS • 600GB: 23,000 IOPS
Interface	SATA 3Gb/s, compatible with SATA 1.5Gb/s

Form Factor, Height and Weight

Form Factor	Capacities	Height / Weight
2.5 inch	40GB, 80GB, 120GB, 160GB, 300GB, 600GB	7.0mm / 82 grams 9.5mm / 88 grams
1.8 inch	80GB, 160GB, 300GB	5.0mm / 49 grams

Life Expectancy	1.2 million hours Mean Time Between Failures (MTBF)
Power Consumption	Active: 150 mW Typical[6] Idle: 100 mW Typical[7]
Operating Temperature	0°C to 70°C
RoHS Compliance	Meets the requirements of European Union (EU) RoHS Compliance Directives
Product Health Monitoring and Data Migration	• Intel® Data Migration Software at www.intel.com/go/ssdinstallation • Intel® Solid-State Drive Toolbox with Intel® SSD Optimizer at www.intel.com/go/ssdtoolbox • Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T.) commands

[1] Performance measured using Iometer with queue depth set to 32; measurements are performed on 8GB of logical block address (LBA) range. Write Cache enabled. One KB equals 4,096 bytes.

[2] Requires BIOS level password setup to enable user-unique encryption.

[3] The 40GB Intel SSD 320 Series offers five (5) channels.

[4] Performance measured using Iometer* with queue depth equal to 32.

[5] Device measured using Iometer workload based on sequential 4KB at queue depth 1. One KB equals 4,096 bytes.

[6] Active power measured during execution of BAPCo MobileMark* 2007 Workload with Device Initiated Power Management (DIPM) enabled.

[7] Idle power defined as SSD in idle mode with Device Initiated Power Management (DIPM) enabled.

Solid-State Computing Starts with Intel Inside® For more information, visit www.intel.com/go/ssd