(intel®)

Experience the 6Gb/s hard drive alternative

Launch fast. Land safe.

Take responsiveness to new heights with the Intel® Solid-State Drive 510 Series.

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Performance Amplified!

The Intel® Solid-State Drive 510 Series accelerates SATA throughput for demanding client systems by utilizing SATA 6 gigabits per second (Gb/s) performance and proven Intel NAND Flash Memory based SSD technology. Available in a 2.5 inch form factor, the Intel SSD 510 Series supports data transfers of up to 500 megabytes per second (MB/s).

As an accelerated storage solution, the Intel SSD 510 Series makes desktops, workstations, and notebooks come alive by transferring more data in less time—expediting storage I/O and unleashing system performance!

Outperforms HDDs

Designed to deliver outstanding performance, the Intel SSD 510 Series draws from decades of memory engineering experience and compute-quality NAND Flash memory manufacturing. The drives feature the latest generation SATA 6Gb/s interface with advanced architecture employing eight (8) parallel NAND flash channels equipped with multi-level-cell NAND Flash Memory. The Intel SSD 510 Series delivers exceptional throughput—dramatically outperforming traditional hard disk drives (HDDs).

In fact, the Intel® SSD 510 Series outperforms two SATA 6Gb/s 10,000 rpm RAIDed hard disk drives![1] High-end game and workstation systems benefit from increased storage performance over mechanical hard drive configurations. Mobile workstations now experience higher performance, as well as SSD ruggedness and power savings over RAIDed dual-bay HDDs.

Solid State Means Rugged, Lower Power

Unlike traditional hard disk drives, Intel Solid-State Drives have no moving parts, resulting in a quiet, cool, highly rugged storage solution that also offers faster system responsiveness. Boot time, application launches, file loads, sleep recovery, benchmarks; each activity is faster with a 120GB or 250GB Intel SSD 510 Series device. Delivering sequential read speeds up to 500MB/s and sequential write to 315MB/s, the Intel® SSD 510 Series dramatically accelerates operating systems and application performance.

Designed to satisfy the most demanding gamers, media creators and technology enthusiasts, the Intel SSD 510 Series brings high performance storage and reliability to notebook and desktop PC systems.

Proven Support – SSD Management Tool Suite

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 FREE Toolbox also includes the System Configuration Tuner that will configure your system to take full advantage of your SSD performance. Download the toolbox at **www.intel.com/go/ssdtoolbox**

The Intel® Data Migration Software helps you install an Intel SSD. With minimal steps, this tool clones the operating system and files from a hard drive or SSD to any Intel SSD. The FREE Intel Data Migration Software supports Microsoft Windows* 7, Vista*, and XP and is available for download at **www.intel.com/go/ssdinstallation**

Capacities to Fit Your Needs

Whether you choose 120GB or 250GB capacity, the Intel SSD 510 Series provides an optimized SATA 6Gb/s storage solution, accelerating performance and making your system come alive! Experience the hard-drive alternative with a 6Gb/s Intel® Solid-State Drive 510 Series.

Intel® Solid-State Drive 510 Series

Technical Specifications

Model Name	Intel Solid-State Drive 510 Series
Capacity	120GB and 250GB
NAND Flash Memory	34nm Intel NAND Flash Memory Multi-Level Cell Compute-Quality Components
Bandwidth[2]	Sustained Sequential Reads (up to) • 450MB/s (120GB, SATA 6Gb/s) • 500MB/s (250GB, SATA 6Gb/s) • 265MB/s (120GB, SATA 3Gb/s) • 265MB/s (250GB, SATA 3Gb/s) Sustained Sequential Writes (up to) • 210MB/s (120GB, SATA 6Gb/s) • 315MB/s (250GB, SATA 6Gb/s) • 200MB/s (120GB, SATA 3Gb/s) • 240MB/s (250GB. SATA 3Gb/s)
Read Latency[3]	65 µs
Write Latency[3]	80 µs
Random I/O Operations per Second (IOPS)[4]	Random 4KB Reads: Up to 20,000 IOPS Random 4KB Writes Up to 8,000 IOPS
Interface	SATA 6Gb/s, compatible with SATA 1.5Gb/s and 3Gb/s.
Form Factor, Height and Weight	2.5 inch Industry Standard Form Factor Height: 9.5 mm thick Weight: 80 grams (± 2 grams)
Life Expectancy	1.2 million hours Mean Time Between Failures (MTBF)
Power Consumption	Active: 380 mW Typical[5] Idle: 100 mW Typical[6]
Operating Temperature	0℃ to 70℃
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] **System Configuration**: Second generation Intel® Core™ i7-2600 processor (8MB L3 Cache, 3.40 GHz) with Intel® Turbo Boost Technology and Intel® Hyper-Threading Technology on Intel® Desktop Board DH67BL, Graphics Intel® HD Graphics 2000 and driver 8.15.10.2246, BIOS BLH6710H.86A.0062, Intel® INF 9.2.0.1015, Memory 4GB (2x2GB) Dual-channel Micron* MT18JTF25664AZ-1G4F1 DDR3-1333 9-9-9-24, Intel® Rapid Storage Technology 10.1.0.1008, Microsoft Windows* 7 Ultimate 64-bit 6.1 Build 7600, DirectX 11 on NTFS, Screen resolution 1920x1200 LCD.
Storage: Intel® SSD 510 Series SSDSC2MH250A2C 250GB SATA3 6.0Gbps with FW PWX6. Western Digital* WD6000HLHX VelociRaptor* 600GB SATA3 6.0Gbps HDD 10,000 rpm and 32MB cache.

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

[3] Write Cache Enabled. Device measured using Iometer. Power On To Ready time assumes proper shutdown.

[4] Performance measured using Iometer with queue depth set to 32; measurements are performed on 8GB of logical block address (LBA) range.

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

[6] 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