



Samsung Solid State Drive

BREAKTHROUGH FLASH STORAGE DEVICE



www.samsungssd.com

Samsung's SSD is available in standard versions that functionally and physically replace a hard drive, as well as in slim-sized module versions for low-cost PCs and other small form factors.

High-Performance, Low-Power Storage Device for Mobile PCs is Light, Rugged and Reliable

Samsung's Solid State Drive (SSD) is an advanced NAND flash-based solution for computer storage, leveraging the company's longtime leadership in memory technology. This next-generation product offers several advantages over rotating magnetic media such as significantly lower power consumption, remarkable ruggedness, high reliability, less weight and outstanding performance. According to iSuppli, approximately 35% of notebooks will have solid-state storage by 2012.

The Samsung SSD is currently selling as an alternative storage device for notebooks offered by many major PC manufacturers. The 128-gigabyte model provides adequate storage for approximately 95% of professionals.

The 2.5-inch SSD's weight is almost 25% less than a conventional hard drive, thus further increasing easy system portability. The device also uses significantly less power—about .43W in operational mode and .2W in standby mode. This gives users up to 10% more battery life. The drive currently comes in SATA II or PATA versions in 2.5-inch, 1.8-inch and smaller form factors.

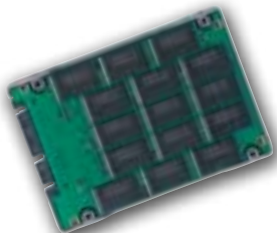
SSD vs. HDD Comparison Chart¹

SSD		HDD
100% NAND flash	mechanism type	magnetic rotating platters
75g	weight (2.5")	98g
MTBF >1 million hours	endurance	MTBF < 600K hours
1,500G/.5ms	shock resistance	170G/.5ms
0°C to 70°C	operating temperature	5°C to 55°C
.43W	active power consumption	2W

¹ Samsung 128GB MLC SSD compared to industry-leading hard disk drive



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Samsung's SSD is available in 2.5-inch and 1.8-inch form factors (top) with storage capacities ranging from 64 to 256 gigabytes and in half-slim sizes (bottom) for low-cost PCs with storage capacities of 8, 16 and 32 gigabytes.



Excellent Read/Write and Boot-up Performance

The performance of Samsung's 128GB Solid State Drive is 35% greater¹ than the fastest 7200 rpm notebook hard drives currently available. For example, the 128-gigabyte model boots up in 36 seconds versus 63 seconds for traditional hard drives. Applications launch 1.5 to three times faster, depending on the specific application. In addition, random search times are about three times faster on the SSD, which maintains its performance over time, even after fragmentation.

As a non-volatile storage device, the SSD has no moving parts such as the motor, disks and heads of a hard drive. Thus it eliminates spin-up time, seek time and rotational latency while delivering sustained high-speed data transfers. The SSD's lack of moving parts makes it noise free and its ultra-low power consumption virtually eliminates heat emissions.

The SSD is also highly rugged, standing up to shock and vibration damage while performing in extreme temperatures from 0–70°C. These performance features make it well suited to a broad range of users, including on-the-go students, busy professionals and others.

Fully Compatible with Mobile PCs

Samsung designed the SSD's footprint to be interchangeable with a hard disk drive. Standard SSDs are available in 2.5-inch, 1.8-inch and smaller form factors with storage capacities ranging from 8 to 256 gigabytes. Furthermore, because the SSD is form-factor agnostic, the flash components can be arranged to accommodate configurations in virtually any size or shape.

Key Features & Benefits

Reduced Power Requirements

- No moving parts
- Super-low operating and standby power needs
- Extends battery life up to 10%

Fast Performance

- No spin up
- No seek time
- No rotational latency
- Sustained high-speed data transfers
- 90MB/s read, 70MB/s write
- Can cut boot-up time in half

Reliable

- No moving parts to fail
- Greater resistance to shock & vibration

Improved Operation

- Noise free
- Virtually no heat emissions
- Weighs almost 25% less than conventional storage

Supports Variety of PCs

- Native SATA II (3Gb/s)
 - 64/128/256GB
 - 2.5", 1.8"
 - 90MB/s read; 70MB/s write
- Half-slim SATA II (3Gb/s)
 - 8/16/32GB
 - 70% smaller than 2.5" SSD
- Standard and module configurations

¹ Performance based on SysMark 2007 benchmark tests of 128GB MLC SSD vs. 7200rpm 2.5" industry-leading HDD. Actual performance will vary based on configuration, usage, operating conditions and manufacturing variability.

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