SanDisk Launches 32-Gigabyte Solid State Drive Targeting Hard Disk Replacement In Notebook Computers

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SanDisk Corporation today introduced a 32-gigabyte (GB), 1.8-inch solid state drive (SSD) as a drop-in replacement for the standard mechanical hard disk drive. Initially aimed at enterprise users as the first step toward mass consumer adoption, SanDisk SSD offers field-proven durability to keep mobile PCs working in the toughest of conditions and improves the overall user experience.

Previously, large capacity flash-based drives had been used primarily by the military, aerospace and telecom industries, which demanded high

performance and reliability under challenging environmental conditions. But now the declining cost of NAND flash memory has made SSD a viable and economically attractive alternative to existing technologies in a wider variety of applications, including mobile PCs aimed at enterprise and consumer users.

“This is an important milestone for SanDisk in our relentless quest to create new large-scale markets for flash storage solutions for consumers in the personal computing space,” said Eli Harari, SanDisk CEO. “The 32-gigabyte SSD that we are announcing today represents the fifth generation of flash-based solid state drives developed by msystems, which we recently acquired. The 32GB SSD has been made commercially viable through SanDisk’s technology leadership coupled with msystems’ tremendous experience and IP, which are captured in the high-performance, low-cost system controllers that distinguish this product.

“Once we begin shipping the 32GB SSD for notebook PCs, we expect to see its increasing adoption in the coming years as we continue to reduce the cost of flash memory. When these SSD devices become more affordable, we expect that their superior features over rotating disk drives will create a new consumer category for our retail sales channels worldwide,” said Harari. It is projected that inclusion of the SanDisk 32GB SSD in a notebook PC could increase the end-user price by around $600 in the first half of 2007, he added.

Using NAND flash enhanced by SanDisk’s patented TrueFFS® flash management technology, SanDisk SSD delivers two million hours mean time between failures (MTBF). With no moving parts, it does not need to spin into action or seek files in the way that conventional hard disk drives do. These characteristics, combined with SanDisk's advanced flash management technology, make it possible for SanDisk SSD to deliver excellent performance compared with hard disk drives and

competing solid state drives.

The SanDisk SSD announced today achieves a sustained read rate of 62 megabytes (MB) per second and a random read rate of 7,000 inputs/outputs per second (IOPS) for a 512-byte transfer – more than 100 times faster than most hard disk drives. Taking advantage of this performance, a laptop PC equipped with SanDisk SSD can boot Microsoft Windows Vista Enterprise in as little as 35 seconds. It also can achieve an average file access rate of 0.12 milliseconds, compared with 55 seconds and 19 milliseconds, respectively, for a laptop PC with a hard disk drive.

Another advantage of SanDisk SSD is its extremely low power consumption rate compared to the hard disk drive: 0.4 watt during active operation versus 1.0 watt. This is particularly important to extend the battery life for the benefit of enterprise road warriors. These results enable new operating systems, such as Microsoft Vista, to provide mobile PC users with a superior overall system experience.

"There has been a huge increase in demand for NAND flash memory over the past few years from consumer devices such as digital cameras, MP3 players and mobile phones," said Robert Gray, analyst with IDC, based in Framingham, Massachusetts. "There are dramatically higher bit capacities and lower prices, so the technology is now well positioned to be the foundation for new generations of potentially disruptive solid state drives. Enterprise mobile PC users will find the high performance and low power consumption especially attractive," he added.

SanDisk SSD 1.8-inch 32GB solid state drive is now available for original equipment manufacturers. It is the first in a range of solutions that SanDisk will be offering to bring flash to the mainstream mobile PC market.

Source: SanDisk Corporation