Samsung to Unveil First Commercial Hybrid Hard Disk Prototype for Windows Vista

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Samsung Electronics today announced that it is exhibiting the first commercial prototype of a Hybrid Hard Disk (HHD), the much-anticipated next generation hard drive for notebooks and PCs that integrates NAND flash memory with rotating magnetic storage. The HHD will be exhibited with two cache densities, 128MB and 256MB, at the Windows Hardware Engineering Conference in the Seattle, WA Conference Center May 23-24, 2006.

“We see the HHD as the most advanced and cost-effective means of improving the performance of a notebook computer's storage functionality,” said Jon Kang, senior vice president, technical marketing group, Samsung Semiconductor. “The Samsung HHD addresses the two biggest consumer desires: extending battery life and improving boot and resume performance.”

The hybrid storage device leverages the benefits of both magnetic and solid state storage without compromising the cost of the computer housing it.

The high densities of magnetic storage technology are preserved, while the exceptionally low power, high reliability and fast read/write access of advanced NAND flash technology enhance overall value at minimal additional cost. With an HHD, consumers receive a system that boots or resumes up to twice as fast as conventional HDDs, lasts 20-30 minutes longer on battery and is up to five times more reliable.

“Hybrid hard disks and Windows ReadyDrive Technology are integrated advancements that improve the performance and reliability of computers using Windows Vista, especially notebook computers,” said Mike Sievert, corporate vice president, Windows Client Marketing at Microsoft. “We are very pleased to see Samsung moving so rapidly with HHD technology to prepare for high-volume production in time for the Windows Vista launch.”

The Hybrid Hard Disk eliminates the need for the hard disk to constantly spin whenever a computer is operating on battery power, and is less susceptible to damage from jarring or being dropped since it is idle most of the time.

Every time the cache is filled, the rotating drive spins to “flush out” or transfer data from the cache, spinning only a few seconds every 10-20 minutes. The Samsung HHD architecture uses the fastest flash device on the market as cache, Samsung's OneNAND flash with 108MB/s read and 18 MB/s write data-rates. The functionality of the H-HHD is automated by the high performance HDD SOC which supports 3.0G Native Command Queuing SATA and an OneNAND TM interface. The HHD saves between eight and 25 seconds of boot-up time and extends battery life by about 8-10 percent depending on the model of computer.

In addition, the HHD allows PC manufacturers to deploy value-added features, such as direct media experiences with instant-boot functionality and accelerated processing for specified applications .

Samsung will sample its HHD with customers beginning next quarter and it will ship in large quantities by January, in conjunction with the Windows Vista rollout.

Source: Samsung