

Toshiba Launches High Performance Solid State Drives With MLC NAND Flash Memory

December 10 2007



Toshiba Corp. today announced their entry into the emerging market for NAND-flash-based solid-state drives (SSDs) with a series of products featuring multi-level cell (MLC) NAND flash memory.

Offered in a range of form factors and capacities, Toshiba's solid-state drives are designed primarily for notebook PCs. They will be showcased at the Consumer Electronics Show in Las Vegas, from January 7th to 10th. Samples and mass production will follow from the first quarter (January to March) of next year.

Moving NAND-based storage architecture forward, Toshiba's first solid-

state drives offer three capacities: 32 gigabytes (GB), 64GB and 128GB, in three form factors: an embedded module, and 1.8-inch and 2.5-inch drive enclosures. SSDs realize lower power consumption, a faster boot time, higher reliability, improved performance and no mechanical sound compared to hard disk drives, but market penetration has been held back by low densities and high prices.

Toshiba's new SSDs integrate an original MLC controller supporting fast read-write speed, parallel data transfer, and wear-leveling, and achieve performance levels comparable to those of single-level cell NAND-flash-based SSDs.

By applying MLC technology, Toshiba has realized a 128GB capacity in a 1.8-inch form factor. Toshiba expects the launch of its MLC NAND-based line-up to speed up the acceptance of solid-state memory in laptops and digital consumer products and to widen the horizons of the NAND flash market.

The new products utilize NAND flash memory fabricated with 56nm process technology, along with controller chips and DRAM, on a 70.6mm (L) x 53.6mm (W) x 3.0mm (H) platform. The maximum read speed is 100MB² per second, and the maximum write speed is 40MB per second with the SATA II interface (transfer rate of 3Gbps), which is compliant with a high-speed serial interface. The rated operating life is 1,000,000 hours.

Source: Toshiba

Citation: Toshiba Launches High Performance Solid State Drives With MLC NAND Flash Memory (2007, December 10) retrieved 24 April 2024 from <https://phys.org/news/2007-12-toshiba-high-solid-state-mlc.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.