## Product highlights from the Flash Memory Summit

**By Dave Simpson**

**August 14, 2009** – A handful of vendors used this week's Flash Memory Summit in Santa Clara, CA to make new product announcements, or pre-announcements.

For example, STEC announced a number of next-generation SSD drives, most of which are sampling now and are expected to go into full production by the end of the year or early next year. The company announced versions of its ZeusIOPS SSDs based on (relatively) low-cost multi-level cell (MLC) NAND flash memory technology that are designed for enterprise-level applications and arrays. The drives will be available with 6Gbps SAS and 4Gbps Fibre Channel interfaces in capacities up to 800GB. Volume shipments are expected in the first quarter of 2010.

STEC also previewed 6Gbps SAS versions of its ZeusIOPS SSDs, claiming performance of 80,000 IOPS on random reads, 40,000 IOPS on random writes, and transfer rates of 550MBps on reads and 300MBps on writes. The SSDs will be available in 2.5-inch and 3.5-inch form factors in either MLC or single-level cell (SLC) versions. Volume production is expected by the end of the year.

The company also announced sampling of new versions of its 4Gbps Fibre Channel ZeusIOPS drives. Performance specs include 80,000 IOPS random read speed, 40,000 IOPS on random writes, and transfer rates of 380MBps for reads and 300MBps on writes. The 4Gbps Fibre Channel SSDs will come in a 3.5-inch form factor, in either MLC or SLC versions. As with the 6Gbps SAS SSDs, volume production is expected by the end of the year.

STEC also announced that its MACH8IOPS SSDs are available for integration into IBM's System x servers.

Intel and Micron made a joint announcement at the Flash Memory Summit around the development of three-bit-per-cell (3bpc) MLC NAND technology based on a 34-nanometer lithography process. The technology was designed and manufactured by IM Flash Technologies, a joint venture between Intel and Micron. The 32Gb chips, which are based on MLC technology, are expected to go into volume production in the fourth quarter. At least for now, the chips are positioned primarily for USB flash drives and flash cards in devices such as cameras and cell phones rather than for enterprise SSDs.

Also at the Flash Memory Summit, SandForce announced availability of the 2.5-inch SF-1000 Evaluation SSD, which is based on Micron's 34nm NAND flash devices and SandForce's DuraClass technology. SandForce has been shipping the evaluation SSDs since May, and production volumes are expected in October.

In another recent SSD-related announcement, Texas Memory Systems introduced the SLC-based RamSan-6200 SSD, claiming performance of more than five million IOPS, 60GBps throughput, and capacity up to 100TB in a 40U rack configuration with 20 SSDs.

And earlier this week, storage device testing specialist Flexstar Technology announced a service for outsourcing the testing of SSDs. The Flexstar Testing Service Solutions program is aimed primarily at SSD manufacturers.