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Intel Ships Enterprise-Class Solid-State Drives

New Drives Break Performance Barriers, Lower Storage Infrastructure, Cooling, Energy Costs

SANTA CLARA, Calif.--(BUSINESS WIRE)--

Intel Corporation has begun shipping its highest-performing solid-state drive (SSD), the Intel(R) X-25E Extreme SATA Solid-State Drive, aimed at server, workstation and storage systems. Unlike mechanical drives, the SSDs contain no moving parts and instead feature 50nm single-level cell (SLC) NAND flash memory technology. Systems equipped with these drives will not suffer from the performance bottlenecks associated with conventional drives. By reducing the total infrastructure, cooling and energy costs, SSDs can lower total cost of ownership for enterprise applications by more than five times.

"Hard disk drive performance has not kept pace with Moore's Law," said Kirk Skaugen, general manager, Intel Server Platforms group. "Intel's high-performance SSDs unleash the full performance of the latest Intel Xeon processor-based systems while increasing reliability and lowering the total cost of ownership for a broad range of server and storage workloads."

The Intel X25-E increases server, workstation and storage system performance by 100 times(1) over hard disk drives as measured in Input/Output Per Second (IOPS), today's key storage performance metric. A storage model which includes SSDs can also lower energy costs by up to five times, an added benefit for businesses focused on electricity savings.

"Solid-state drive technology will change the economics of enterprise data centers," said John Fowler, executive vice president, Systems Group, Sun Microsystems. "SSDs, along with our systems and Solaris ZFS with hybrid storage pools, are important components of the Open Storage initiative. Sun expects to offer enterprise storage solutions that will exploit the breakthrough performance of Intel's High Performance Solid-State Drives and deliver significant performance gains while consuming a fraction of the energy of traditional spinning disk arrays."

The product was designed for intense computing workloads which benefit primarily from high random read and write performance, as measured in IOPS. Key technical performance specifications of the 32 GB Intel X-25E SATA SSD include 35,000 IOPS (4KB Random Read), 3,300 IOPS (4KB Random Write) and 75 microsecond read latency. This performance, combined with low active power of 2.4 watts, delivers up to 14,000 IOPS per watt for optimal performance/power output. The product also achieves up to 250 megabytes per second (MB/s) sequential read speeds and up to 170 MB/s sequential write speeds, all in a compact 2.5-inch form factor.

Intel achieves this breakthrough performance through innovations such as 10-channel NAND architecture with Native Command Queuing, proprietary controller and firmware efficient in advanced wear-leveling and low write amplification. The 32GB X25-E is capable of writing up to 4 petabytes (PB) of data over three-year period (3.7 TB/day), and double that for the 64GB version - delivering outstanding data reliability.

The 32GB capacity drive is in production and priced at $695 for quantities up to 1,000. The 64GB version is expected to sample in the fourth quarter with production estimated for the first quarter of 2009. For more information go to www.intel.com/go/ssd.

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Source: Intel Corporation