

News Fact Sheet

Intel® Solid-State Drive DC S3700 Series Engineered to Eliminate Bottlenecks for Breakthrough High Performance Computing

Nov. 12, 2012—The new Intel data center solid-state drives (SSDs) will be featured as part of an Intel press briefing at Super Computing 12, Monday, Nov. 12 from 2:00 p.m. to 4:00 p.m. During this session, Intel will discuss how exciting new Intel products and technologies are being used to push the boundaries of science and innovation in high performance computing (HPC) applications.

Rob Crooke, Intel Vice President and General Manager, Intel Non-Volatile Memory Solutions Group, will showcase Intel's newly unveiled Intel SSD DC S3700 Series, a next-generation SSD designed to meet the needs of HPC applications and pave the way to Exascale performance.

How SSDs Eliminate Computing Bottlenecks and Enhance Computing Performance

When scientific researchers, engineers and academic institutions need the highest level of processing to scale their high performance computing (HPC) environment, the solutions from Intel can provide the compute and storage requirements. As demand for parallel, multi-threaded processing grows, today's storage subsystems have struggled to support the increased demand.

The new Intel® Solid-State Drive DC S3700 Series provides the next level of storage throughput with fast, consistent performance and data assurance. The Intel SSD DC S3700 Series is designed to remove storage bottlenecks and maximize multicore CPU performance. The 6 gigabit-persecond Serial ATA (SATA) Intel SSD DC S3700 delivers enterprise-class performance and high-endurance reliability for use in high-speed storage area network HPC storage subsystems.

Engineered for HPC environments the Intel SSD DC S3700 Series includes a wide range of features including:

- Fast and consistent performance
 - o 75K Random Read IOPS¹; latencies <50μs typical, max <500μs²
- Strong Data Protection
 - o Full data path and non-data path protection
 - o Power safe write cache with built in self-test
- Intel High-Endurance Technology (HET)
 - o 10 drive writes per day over five years

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The fast and consistent performance of the Intel SSD DC S3700 delivers 2x the read and 15x write bandwidth of Intel's previous generation Intel SSD 710 Series, with up to 500Mbps sequential reads. This can cut complex HPC simulation times by nearly half, saving countless hours of compute time. This accelerated storage performance gives parallel multithreaded computing increased storage throughput to keep multicore CPUs more active. Added 256-bit AES encryption and power loss protection provides two million hours MTBF protection for data integrity not previously available from SSDs, ensuring sensitive data is accurate and reliable. Intel HET ensures years of reliable operation to meet HPC computing demands. Users can add incremental SSDs to the storage cluster in 100-, 200-, 400- and 800GB densities.

The University of California San Diego Supercomputer Center (SDSC), a leader in data-intensive computing, providing resources and services to the national research community including industry and academia, is using the Intel SSD DC S3700 to double the performance of HPC computations over Intel's previous generation data center SSD solution. When compared to hard disk drives (HDDs), calculations which used to take 67 days on HDDs now only take 18 days on Intel SSDs. See the case study: Flash Technology in High-Performance Computing Accelerates Scientific Discovery.

For more information on Intel SSDs go to www.intel.com/go/ssd or follow Intel SSDs on Twitter (@intelssd), Facebook (www.intel.com/go/ssdfacebook or communities.intel.com). To download the multimedia press kit go to www.intel.com/newsroom/ssd. Intel will demonstrate the Intel SSD DC S3700 Series at the Super Computing (SC12) Conference, Booth #2601, Nov. 12-15 at the Salt Palace Convention Center in Salt Lake City.

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