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Fusion-io Achieves One Terabyte per Second Sustained Bandwidth

*ioDrive Octal Dramatically Reduces Rack Space, Power and Cooling Costs
While Setting a New Standard for High Performance Storage*

Portland, Oregon November 17, 2009 – Today at SC09, Fusion-io announced that it will deploy custom installations based on its ioMemory technology at two presently undisclosed government organizations. Each deployment consists of hundreds of terabytes of solid-state storage capacity and is capable of sustaining over one terabyte per second (1TB/s) of aggregate bandwidth with access latencies under 50 microseconds. These achievements were made possible by Fusion-io's development of the ioDrive Octal, a device that once again distinguishes Fusion-io as the clear leader in solid-state storage technology.

Achieving a 1TB/s sustained bandwidth with existing state-of-the-art storage technologies requires close to 55,440 disk drives, 396 SAN controllers, 792 I/O servers and 132 racks of equipment. Fusion-io can achieve this same bandwidth with a mere 220 ioDrive Octal cards, housed in Infiniband-attached I/O servers running the Lustre parallel file system. This 1TB/s Fusion-io based solution requires only six racks or less than 1/20th the rack space of an equivalent, high-performance, hard disk drive-based storage system.

The ioDrive Octal is a custom PCI Express card designed by Fusion-io. The device holds eight ioMemory Modules - putting the equivalent capacity and performance of eight ioDrives into a single card. The ioDrive Octal fits any PCI Express x16 Gen2 double-wide slot, the same as those used for high performance graphics cards, and it is capable of saturating the full performance of that slot. The ioDrive Octal again demonstrates the flexibility, performance and scalability of Fusion's ioMemory architecture, the core technology that powers all the company's enterprise products.

"Innovative technology, like Fusion's ioMemory, will fundamentally change the way the industry architects high performance computing facilities in the future," said Mark Seager, manager of the Platforms Program for the Advanced Simulation and Computing (ASCI) Program at Lawrence Livermore. "Technologies like these will drive new and emerging HPC systems as they continue their exponential growth in performance. Only improvements in storage bandwidth at this order of magnitude can keep the floor space and power consumption requirements from becoming unmanageable and unsustainable."



“We were eager to take on the challenge of creating a device that meets the intense demands of high performance computing. With this architecture, IOPS are easy. We achieved over a hundred million (100,000,000) IOPS, more than enough performance to meet our customer’s requirements. The real power in our architecture was the ability to also scale bandwidth,” said Steve Wozniak, Chief Scientist at Fusion-io. “We look forward to productizing the ioDrive Octal in the future, and bringing the power of this solid-state storage technology from the world of HPC to the enterprise.”

ioDrive Octal Details

The following specifications describe a single ioDrive Octal:

- 800,000 IOPS (4k packet size)
- 6 GB/s bandwidth
- 5 TB maximum capacity
- x16 gen-2 double-wide PCI Express form factor

To learn more about Fusion-io or the ioDrive Octal, go to www.fusionio.com.

About Fusion-io

Fusion-io is a leading provider of enterprise solid-state technology and high-performance I/O solutions. The company's solid-state storage technology closes the gap between processing power and traditional storage, delivering a new type of application centric storage for database, application and system administrators. The result is a world of possibilities for performance-starved applications.