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## Lawrence Livermore Teams with Fusion-io to Re-define Performance Density

*Innovative Collaboration Creates World's Highest Performance Storage Array  
with Just Two Racks and One Hundred Terabytes of Fusion-powered I/O*

**Salt Lake City, UT – 6/15/2010** – Fusion-io, pioneer of a new memory tier of flash-based solid-state (ioMemory) technology, today announced that Lawrence Livermore National Laboratory has created the world's highest performance storage array, standardized on Fusion-io. This array, the Hyperion Data Intensive Testbed, implements over one hundred terabytes of Fusion-io's dual 320GB enterprise MLC ioMemory modules deployed in ioSAN carrier cards that connect ioMemory over Infiniband.

LLNL created the testbed for the National Nuclear Security Administration's Advanced Simulation and Computing program's Hyperion initiative, a project designed to accelerate the development of the high-performance computing capabilities needed to ensure the safety, security and reliability of the nation's aging nuclear deterrent without underground testing.

With the addition of Fusion-Powered I/O, the Hyperion testbed will deliver over 40,000,000 IOPS and 320 GB/s of bandwidth from just eighty 1U appliances. Consuming a mere fraction of the power required by traditional memory or hard disk-based alternatives, the project demonstrates that datacenters worldwide can achieve the performance they need without the cost, sprawl and environmental impact of powering and cooling today's power-hungry data centers. For example, a comparable hard disk-based solution would require an estimated 43 racks of servers as opposed to only two racks of ioMemory-equipped appliances.

“This project demonstrates how flash that performs like memory, rather than disk, can scale to the highest levels of performance,” said Neil Carson, CTO of Fusion-io. “Equally important, it demonstrates that it is possible to accomplish this with a fraction of the infrastructure. Our customers are already capitalizing on the ioMemory's ability to let them do far more with far less, and Lawrence Livermore has just taken it to the next level.”

“The Hyperion project meets significant performance requirements for current and emerging computing,” said Mark Seager, Head of Advanced Computing Technology, Lawrence Livermore National Laboratory. “This new technology will allow us to meet the performance requirements critical to fulfilling our national security missions well into the future, while dramatically reducing power consumption and satisfying new energy conservation initiatives.”

LLNL working with Fusion-io selected Appro, a leading developer of supercomputer solutions with expertise in reducing total cost of ownership, to add Fusion’s ioMemory to commodity servers to create high-performance storage appliances.

### **About Fusion-io**

Fusion-io, the industry leader in system, application & database acceleration, is unleashing the potential of performance-starved applications, allowing companies to rethink the way they architect their data systems. With a Fusion-Powered data center, companies can increase productivity, shrink time to market and improve their customers’ experience, all with less hardware, less power, and less administration. Companies are seeing performance gains of many magnitudes and server consolidation from 3-10x. Fusion-io is powering innovation that helps companies do more with less.

### **About Lawrence Livermore National Labs**

Founded in 1952, Lawrence Livermore National Laboratory ([www.llnl.gov](http://www.llnl.gov)) is a national security laboratory that develops science and engineering technology and provides innovative solutions to our nation's most important challenges. Lawrence Livermore National Laboratory is managed by Lawrence Livermore National Security, LLC for the U.S. Department of Energy's National Nuclear Security Administration.