Micron Introduces a New Way to Increase Server Memory Capacity and Improve Performance

July 30, 2009 at 12:00 AM EDT

Boise, Idaho , Thursday, July 30, 2009 – Micron Technology, Inc. today announced that it has produced the industry's first DDR3 load-reduced, dual-inline memory module (LRDIMM) and will begin sampling 16-gigabyte (GB) versions this fall. By reducing load on the server memory bus, Micron's LRDIMMs provide the option to support higher data frequencies and significantly increase memory capacity.

The new LRDIMMs will be manufactured using Micron's leading-edge 1.35-volt, 2-gigabit (Gb) 50-nanometer DDR3 memory chips, allowing the company to easily and cost-effectively increase server module capacity because of the chips' high-density and industry leading small die size. Micron's 2Gb 50nm DDR3 product is currently in qualification with customers and is ramping toward high volume production.

Most midrange enterprise servers today utilize approximately 32GB of DRAM per system but this is expected to more than triple by 2012, according to a recent report from Gartner, Inc. (May 2009). With server manufacturers continuing to take advantage of multi-core processors and data centers opting for efficient virtualization technology, memory requirements are being driven ever higher. By increasing the available memory a server system has, it is able to run more programs concurrently, handle larger data files more efficiently, and generally exhibit better overall system performance.

Micron's LRDIMMs currently use Inphi's recently announced isolation memory buffer (iMB) chip in place of a register to reduce the bus load when transferring data between the memory and processor. Micron's new **LRDIMMs reduce this load by 50 percent** for a dual-rank module and **75 percent for a quad-rank module**, when compared to today's standard DDR3 server modules – registered DIMMs (RDIMMs). By reducing the load on the bus, Micron's LRDIMMs enable servers to handle higher frequencies of data to improve overall system performance and support increased number of modules for greater system memory capacity.

Today, using RDIMMs, a typical server system can accommodate up to three quad-rank 16GB RDIMMS per processor. However, that same system can support up to nine quad-rank 16GB LRDIMMS per processor, pushing the memory capacity from 48GB to 144GB. Measuring performance levels, Micron's 16GB LRDIMM offers an increase of 57 percent in system memory bandwidth, when compared to an RDIMM. And as server power consumption continues to be a top concern for customers, Micron's LRDIMMs will also operate at the industry's lowest 1.35-volts.

"With the rise in virtualization, our new 16GB modules allow customers to easily expand their memory capacity. While traditional RDIMMs limit the amount of memory that can be accommodated due to their loading profile, LRDIMMs eliminate that problem by reducing the module load," said Robert Feurle, vice president of DRAM marketing at Micron. "And because our **LRDIMMs are designed using Micron's new low-power 2Gb-based 50nm DDR3 chips**, which reduces module chip count, we are providing customers with a more cost-effective and efficient means to scale server memory capacity and performance, while also reducing the power levels."

"Adoption of this approach to memory technology will further enable server virtualization and cloud computing," said Paul Washkewicz, vice president of marketing at Inphi. "This technology delivers the much needed higher bandwidth and memory capacity demanded by data center servers."

"As the leading supplier of low power memory interface devices such as AMB+ and DDR3 register/PLLs, IDT is excited to once again leverage our industry-proven technology and expertise into this new class of memory buffers targeting DDR3 LRDIMMs," says Mario Montana, vice president and general manager of the IDT Enterprise Computing Division. "We are pleased to work with Micron and our ecosystem partners to enable innovative solutions for the high performance computing market."

Product Availability
Micron is currently sampling an 8GB LRDIMM with select enablers. Mass production of its 16GB LRDIMMs is expected to begin in 2010.

Relevant Links
There are other ways to stay up-to-date on Micron news:

- Micron Innovations Blog: http://www.micronblogs.com/
- Micron on Twitter: twitter.com/microntechpr
- Micron RSS: www.micron.com/about/news/rssfeeds/aspx

About Micron

Micron Technology, Inc. is one of the world's leading providers of advanced semiconductor solutions. Through its worldwide operations, Micron manufactures and markets DRAMs, NAND flash memory, other semiconductor components, and memory modules for use in leading-edge computing, consumer, networking, and mobile products. Micron's common stock is traded on the New York Stock Exchange (NYSE) under the MU symbol. To learn more about Micron Technology, Inc., visit www.micron.com/.

This press release contains forward-looking statements regarding the production of Micron's LRDIMMs and 2Gb 50nm DDR3. Actual events or results may differ materially from those contained in the forward-looking statements. Please refer to the documents the Company files on a consolidated basis from time to time with the Securities and Exchange Commission, specifically the Company's most recent Form 10-K and Form 10-Q. These documents contain and identify important factors that could cause the actual results for the Company on a consolidated basis to differ materially from those contained in our forward-looking statements (see Certain Factors). Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. We are under no duty to update any of the forward-looking statements after the date of this press release to conform to actual results.

Related Links

Micron Media Center

Contacts

Kirstin Bordner
Micron Technology, Inc.
+1 (208) 599-0184/mobile
+1 (208) 368-5487/direct
kbordner@micron.com