



News Release

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Elpida Memory's New 1 Gigabit DDR2 SDRAMs Are Ideally Suited for Digital TV, Set Top Box and Notebook PC Applications

90 nm Process Improves Power Consumption and High-Volume Production Yield, x16 Configuration Improves Data Transfer Rate; Stacked FBGA Packages Enable High-Density Memory Modules

TOKYO, JAPAN. – March 7, 2006 – Elpida Memory, Inc. (Elpida), Japan's leading global supplier of Dynamic Random Access Memory (DRAM), today announced the availability of its second-generation 1 Gigabit DDR2 SDRAMs and six memory modules based on the new devices. The new devices are built using Elpida's state-of-the-art 90 nm process technology, and they complement Elpida's full line-up of DDR2 devices that are currently in high-volume production. The x16 devices provide a wider data path for digital consumer applications, and the FBGA packages enable thinner memory module designs. Dual In-line Memory Modules (DIMMs) based on the new devices include Registered and Fully-Buffered DIMMs (FB-DIMMs) for servers, as well as high-density Small Outline DIMMs (SO-DIMMs) for notebook PCs and Unbuffered DIMMs (UDIMMs) for desktop PCs.

"The expansion of our production based on 90 nm process technology enables Elpida to significantly improve the speed yield and packaging options of our high-volume DDR2 products," said Jun Kitano, director of technical marketing for Elpida Memory (USA) Inc.

"With this new generation of DDR2, we now offer more device configurations, including x4, x8 and x16, as well as a full line-up of memory modules, including Registered DIMMs, FB-DIMMs, UDIMMs and SO-DIMMs."

Features and Benefits of 1 Gigabit DDR2 SDRAM:

The 1 Gigabit DDR2 SDRAM devices are available in four different data rate speeds: 800 Mega bits per second (Mbps), 667 Mbps, 533 Mbps or 400 Mbps. They are organized as either 32 M words x 4 bits x 8 banks, 16 M words x 8 bits x 8 banks, or as 8 M words x 16 bits x 8 banks. The high speed data transfer rate is achieved by its 4-bit prefetch, pipelined architecture. The supply voltage (VDD) is $1.8V \pm 0.1V$, and the operating temperature range (Tc) is 0~95°C. The devices are available in 68-ball or 92-ball FBGA packages for easy mounting on DIMMs.

Summary of Device Features

Process	90 nm
Organization	32 M words x 4 bits x 8 banks, 16 M words x 8 bits x 8 banks, or 8 M words x 16 bits x 8 banks
Supply voltage (VDD)	$1.8V \pm 0.1V$
DDR2 Data Rates	800 Mbps, 667 Mbps, 533 Mbps, or 400 Mbps
Interface	SSTL
CAS Latency (CL)	3, 4, 5
Operating temperature range	Tc = 0~95°C
Packages	68-ball or 92-ball FBGA

Elpida's new 1 Gigabit devices in stacked FBGA (sFBGA) packages enable thinner module design which is critical for notebook PCs and blade servers that require high-density memory.

Elpida will offer six DIMMs based on the new 1 Gigabit devices:

- 4 Gigabyte RDIMM for servers with data transfer rate options of 5.3, 4.2 or 3.2 Gigabits per second (Gbps) (PC2-5300/4200/3200), and organized as 512 M words x 72 bits x 2 Ranks
- 2 Gigabyte RDIMM for servers, with data transfer rate options of PC2-5300/4200/3200, and organized as 256 M words x 72 bits x 1 Rank
- 4 Gigabyte Fully Buffered-DIMM for servers; with data transfer rate options of PC2-5300F/4200F, and organized as 512 M words x 72 bits x 2 Ranks
- 2 Gigabyte SO-DIMM for notebook PCs, with data transfer rate options of PC2-5300/4200, and organized as 256 M words x 64 bits x 2 Ranks

- 2 Gigabyte UDIMM (non-ECC); with data transfer rate options of PC2-6400/5300/4200, and organized as 256M words x 64 bits x 2 Ranks
- 2 Gigabyte UDIMM (ECC); with data transfer rate options of PC2-6400/5300/4200, and organized as 256M words x 72 bits x 2 Ranks

Availability

Elpida's 1 Gigabit DDR2 x4/x8 devices based on 90 nm process technology are available now in sample quantities. Registered DIMMs based on the new devices are also available now. 1 Gigabit DDR2 x16 devices, Fully-Buffered DIMMs, Small Outline DIMMs and Unbuffered DIMMs will be available in Q2 2006. Contact Elpida for pricing information.

About Elpida Memory, Inc.

Elpida Memory, Inc. is a manufacturer of Dynamic Random Access Memory (DRAM) silicon chips with headquarters based in Tokyo, Japan, and sales and marketing operations located in Japan, North America, Europe and Asia. Elpida's state-of-the-art semiconductor wafer manufacturing facilities are located in Hiroshima, Japan. Elpida offers a broad range of leading-edge DRAM products for high-end servers, mobile phones, digital television sets and digital cameras as well as personal computers. Elpida had sales of ¥207.0 billion during the fiscal year ending March 31, 2005. For more information, visit www.elpida.com.

The information contained within this news release, is current as of the date of release. Please note that the information herein may be revised later without prior notice.

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