

# Elpida Develops World's First 2.5Gbps DDR3 SDRAM

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Elpida Memory today announced that it had developed the world's first 2.5Gbps (bit per second) 1-gigabit DDR3 SDRAM. The new memory device has an optimized design based on a copper interconnect process and new circuit technology that not only enables faster speeds but also an ultra-low voltage operation of 1.2V while conforming to DDR3 specifications.

In upgrading a system's overall performance it is important to strike a balance between the data transfer rate and power consumption. Server and PC makers who use DDR3 are increasingly demanding the freedom to choose an optimum data rate and a supply voltage that can meet various kinds of system requirements. In response to this demand

Elpida's new SDRAM can meet DDR3 standard 1.5V as well as ultra-low 1.35V and 1.2V voltage requirements. In addition, it achieves data rates of 2.5Gbps at 1.5V and 1.8Gbps at 1.2V, considerably faster than the current industry standard of 1.6Gbps at 1.5V.

Key features of the new DDR3 SDRAM:

-- Characteristics that achieve a next-generation DDR3 data rate over a range of voltages. Data rate: 667Mbps-2.5Gbps; voltage: 1.2V-1.5V

-- Common-die solution for fast operating speed and ultra-low voltage operation

One chip enables a wide range of operating voltages and operating speeds suited not only to new low-voltage/high-speed systems but is also compatible with existing standard 1.5V systems. A product that meets customer demand for all kinds of system designs.

-- 25% faster than products with aluminum interconnects and consumes as much as 22% less power.

The new DDR3 SDRAM uses a copper interconnect process that is superior to aluminum in terms of transmission characteristics. By taking maximum advantage of these characteristics during the design phase new circuitry can be developed that enables even faster products that continue to need little power. As a result, the new product's ability to operate at an ultra low voltage of 1.2V can contribute to lower power consumption, which is especially important in the case of large-memory capacity extended-use server applications. Also, for high-end PCs geared to high-speed operations an operational speed of 2.5Gbps enables a significant system performance upgrade.

The new copper interconnect-based DDR3 SDRAM is intended for applications in the areas of servers and high-end PCs. Sample shipments

are scheduled to begin by the end of August. Also, Elpida plans to use a process shrink to enable the new memory product to achieve even faster speeds and lower voltage.

Source: Elpida

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