

Samsung Unveils New Powerhouse Fusion Memory Solution - OneDRAM

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Samsung Electronics today announced that it has developed a prototype fusion memory chip that can significantly increase the data processing speed between processors in mobile applications.

Samsung's new fusion solution OneDRAM is expected to be specified in the design of handsets, game consoles and in other digital applications, especially those that use 3-dimensional graphics.

The 133MHz 512Mb dice incorporates a dual-port approach to sharply increase the time that it takes to transfer data between processors. Data managed by the processors is housed in a shared bank where the space for storing data can be adjusted accordingly. This meets the JEDEC low power double-data-rate (LPDDR) memory standard.

Due to rapidly increasing demand for multimedia features in mobile applications, designers have been specifying the use of two separate processors - a communication processor and a media processor. The new OneDRAM will channel data between the processors through a single chip eliminating the need to also specify DRAM and SRAM chips for buffer memory.

Along with the faster data processing speeds between the processors, the OneDRAM reduces power consumption by 30 percent, lessens the number of chips needed and minimizes area coverage by 50 percent, resulting in a five-fold increase in the speed of cell phone and gaming console operations, longer battery life and slimmer handset designs.

A single OneDRAM can replace, at least, two mobile memories in high-end smart phones and other multimedia-rich handsets. In addition, by adjusting the hardware in the chipset, OneDRAM can cost-effectively reduce system circuitry, while maximizing overall operational efficiency.

Following the first fusion memory, OneNAND, this second generation of fusion memory technology from Samsung has effectively transformed the memory chip from a simple working memory to a component that enables dramatically improved system performance.

Samsung expects its OneDRAM to be introduced in handsets by the second half of 2007.

Source: Samsung Electronics

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