

Industry first: Four gigabit LPDDR3 mobile DRAM, using 20nm-class process technology

April 30 2013

Samsung Electronics today announced the industry's first production of ultra-high-speed four gigabit (Gb) low power double data rate 3 (LPDDR3) mobile DRAM, which is being produced at a 20 nanometer class process node.

The new 4Gb LPDDR3 mobile [DRAM](#) enables performance levels comparable to the standard DRAM utilized in personal computers, making it an attractive solution for demanding multimedia-intensive features on next-generation [mobile devices](#) such as high-performance smartphones and tablets.

"By providing the most efficient next-generation mobile memory with a very large data capacity, we are now enabling OEMs to introduce even more innovative designs in the marketplace," said Young-Hyun Jun, executive [vice president](#), memory sales & marketing, [Samsung Electronics](#). "Our 20nm-class four gigabit mobile DRAM provides another example of our ability to deliver well-differentiated, high-performance, high-density memory to customers in a timely manner."

The 4Gb LPDDR3 can transmit data at up to 2,133 megabits per second (Mbps) per pin, which is more than double the performance of the preceding memory standard mobile DRAM (LPDDR2) with a data transmission speed of 800Mbps. This makes it possible to transmit three full HD videos, collectively 17 Gigabytes (GBs) in length, in one second over the new Samsung chip embedded in a mobile device.

Samsung's 20nm-class LPDDR3 mobile DRAM enables seamless display of full HD video on smartphones with five inch-or-larger screens. In comparison to a 30nm-class LPDDR3 DRAM, the new device generates more than a 30 percent improvement in performance and 20 percent savings in power consumption.

While mobile gadgets continue to scale down in height, battery packs have been increasing in size. By adopting Samsung's 4Gb LPDDR3 mobile DRAM, OEMs can have a 2GB package that includes four of Samsung's new chips in a single package that meets the memory package height of 0.8 millimeters (mm).

Representing a major growth factor in the DRAM market, Samsung plans to increase production of its advanced 20nm-class mobile DRAM later this year, solidifying its competitiveness as a memory industry leader.

According to market research firm, Gartner, the DRAM market is forecast to grow by 13 percent year-over-year to reach \$29.6 billion (US) in 2013, with mobile DRAM to exceed \$10 billion in sales, for 35 percent of the total DRAM market.

Provided by Samsung

Citation: Industry first: Four gigabit LPDDR3 mobile DRAM, using 20nm-class process technology (2013, April 30) retrieved 27 April 2024 from <https://phys.org/news/2013-04-industry-gigabit-lpddr3-mobile-dram.html>

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