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[Samsung Announces Mass Production of 50nm GDDR5 Memory](#)

Enables higher-performance for graphics cards



Samsung begins mass production of 50nm GDDR5 memory
Samsung

Samsung Electronics, a world leading manufacturer of high-performance memory products, has just announced that it has begun mass producing GDDR5 graphics memory, featuring 50nm manufacturing technology. With the announcement, Samsung will now be capable of delivering a faster memory solution for all of the upcoming graphics cards. In addition, with the new product, the memory maker expects that GDDR5 will account for over 20 percent of the total graphics memory market in 2009.

"Our early 2009 introduction of GDDR5 chips will help us to meet the growing demand for higher performance graphics memory in PCs, graphic cards and game consoles," said Mueez Deen, director, mobile and graphics memory, Samsung Semiconductor, Inc. "Because GDDR5 is the fastest and highest performing memory in the world, we're able to improve the gaming experience with it across all platforms," he added.

There are a series of benefits provided by GDDR5 memory, by comparison with the older GDDR4. First of all, the new memory solution will be capable of delivering a data transfer speed of 7.0Gbps (gigabits per second), while the maximum bandwidth is rated at an impressive 28GB/s, more than double the graphics memory bandwidth achieved by GDDR4 memory, of 12.8GB/s. In addition, GDDR5 solutions are much faster, as they boast a free-running clock operating mode, which doesn't require the data read/write function to be synced with the operations of the clock.

Using a better 50nm process technology, Samsung will enable GDDR5 memory to provide an improvement of efficiency of 100 percent, in comparison to the 60nm-based solution. The company's GDDR5 memory operates at 1.35 volts, a 20 percent improvement in power consumption reduction over that of the 1.8V rated for GDDR4 memory devices.

With the announcement, Samsung has also said that it plans to enable its 50nm process technology across its entire lineup of graphics memory.