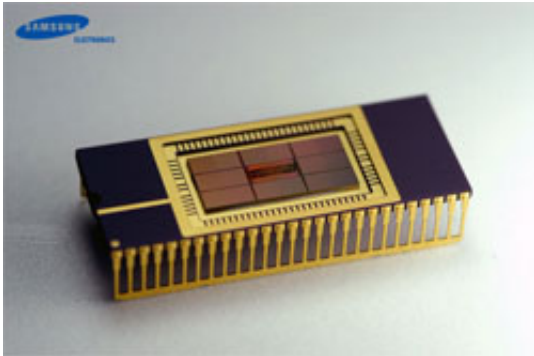


# Industry's First 2-Gigabit DDR2 SDRAM

September 20 2004

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[Samsung Electronics Co., Ltd.](#), the leader in advanced semiconductor technology, today announced the industry's first 2-Gigabit (Gb) DDR2 [SDRAM](#) utilizing 80-nanometer (nm) process technology. The high density, DDR2 solution will enhance server and workstation performance and enable faster deployment of memory intensive applications like real time video conference, remote medical service, two-way communications, and 3-D graphics.

Samsung developed the DDR2 SDRAM using an advanced 80nm process technology, overcoming the industry expectations that 2Gb DRAM manufacture would require sub 65nm circuitry.

The new DRAM technology breakthroughs include a 3-D transistor technology, recess channel array transistor (RCAT), and a new concept

architecture process.

First introduced 2003, RCAT is a technology unique to Samsung that reduces transistor area space by implementing a 3-D structural design, increasing the integration level for higher density on a given area.

To address the high performance features of the DDR2 specification, Samsung adopted a double poly gate technology, 20-angstrom level ultra thin oxide film process, and a triple-layer metal circuitry. The high speed process technology coupled with the feasible 80nm technology also advances the time-to-market availability of the new DDR2 device.

Market research firm, Gartner Dataquest forecasts that DDR2 technology's market share will grow from 11 percent this year to 50 percent by year-end 2005, making DDR2 the mainstream DRAM product.

The company expects aggregate sales of DDR2 to reach 15million units in September and will continue to dedicate more of its DDR production to the high performance technology aiming for DDR2 to comprise 32% of its DDR business by years' end

Samsung plans to launch mass production of the 80nm process, 2Gb DDR2 SDRAM in the second half of 2005. The 2Gb DDR2 devices meet fine-pitch ball grid array (FBGA) package specifications for DDR2. Even without modifications, the devices can directly drive module density levels of Gigabyte (GB) scale; 2GB, 4GB and 8GB.

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