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News Release from: Freescale Semiconductor

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Magnetoresistive RAM enters production

The first commercial magnetoresistive random access memory (MRAM) device is now in volume production and available from Freescale Semiconductor.

The first commercial magnetoresistive random access memory (MRAM) device is now in volume production and available from Freescale Semiconductor. Freescale's 4Mbit MRAM product is a fast, nonvolatile memory with unlimited endurance - a combination of characteristics not available in any other individual semiconductor memory product. The device is built on a foundation of technology protected by more than 100 Freescale patents, including togglebit switching.

'With the commercialisation of MRAM, Freescale is the first to market with a technology of tremendous possibilities and profound implications', said Bob Merritt, Semico Research. 'Competition to become the first company to market MRAM technology was fierce'. 'This is a significant achievement that certainly confirms the dedication of Freescale's engineering team'.

MRAM uses magnetic materials combined with conventional silicon circuitry to deliver the speed of SRAM with the nonvolatility of Flash in a single, high endurance device. Freescale's successful commercialisation of this technology could hasten new classes of electronic products offering dramatic advances in size, cost, power consumption and system performance.

'The commercial launch of the industry's first MRAM product is a major milestone made possible by the pioneering research of Freescale technologists'.

'It underscores our commitment to deliver breakthrough technology to our customers to address real-world challenges', said Sumit Sadana, Senior Vice President, Strategy and Business Development, and Chief Technology Officer, Freescale.

'The unique capabilities of MRAM technology have numerous exciting applications in our target markets'.

Freescale's first commercial MRAM product, called the MR2A16A, is appropriate for a variety of commercial applications such as networking, security, data storage, gaming and printers.

The part is engineered to be a reliable, economical, single-component replacement for battery-backed SRAM units.

The device also could be used in cache buffers, configuration storage memories and other applications that require the speed, endurance and nonvolatility of MRAM.

The MR2A16A is a commercial temperature range, 3.3V device featuring 35ns read and write cycle times.

It is an asynchronous memory organised as 256K x 16bit.

An industry standard SRAM pinout arrangement allows for system design flexibility without bus contention.

The device is housed in a 400mil [TSOP](#) type-II [RoHS](#) package.

It is manufactured at Freescale's 200mm Chandler Fab in Arizona.

The MR2A16A MRAM is available now from Freescale and selected distributors.