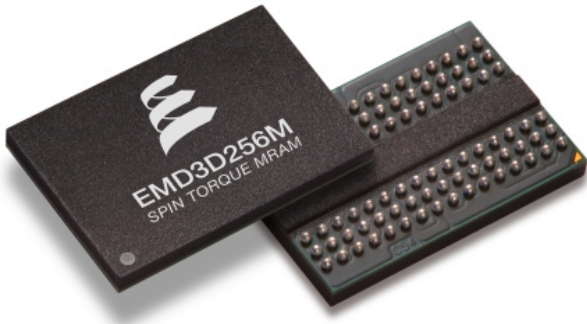


## Everspin Samples Higher Density MRAM Products

Written by Marco Attard  
15 April 2016

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Everspin starts shipping samples of 256Mb Spin Torque Magnetoresistive RAM (ST-MRAM)--the highest density commercially available MRAM products yet using MRAM-based Storage Class Memory (SCM).



According to the company MRAM is designed as a replacement for standard DRAM in write caching operation, one claimed to be 10000 faster than NAND flash. ST-MRAM is a third generation MRAM product. It operates on the DDR3/4 memory interface, requires no wear levelling and supposedly provides the highest endurance of currently available non-volatile memories.

The "spin torque" part of the name involves the changing of data bits from ones to zeroes (or vice-versa) using tiny bits of voltage to flip up or down, versus left or right used in conventional MRAM. The technology also allows for greater memory densities and uses 40-50% less power.

ST-MRAM products have been available since 2012, but only in 64Mb capacities. Everspin hopes it will start sampling of a 1GB MRAM product by end 2016, making the technology a more attractive proposition to customers. Interestingly, since production does not involve complex multi-layer lithography, ST-MRAM is produced using a 300nm process (compared to the 10nm process used by the likes of Samsung for DRAM), allowing for lower prices once volumes increase.

"We continue to bring the fastest non-volatile products to our customers, expanding our offering with a high density 1Gb DDR4 pMTJ ST-MRAM," the company says. "This will provide new and innovative approaches to the way non-volatile memory solutions can be architected."

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