

MRAM: A DRAM Beater?

Written by Marco Attard
26 January 2012

Will Magnetoresistive Random Access Memory (MRAM) become the memory of choice for the future? Everspin Technologies certainly hopes so, announcing record 300% Y-o-Y growth in 2011 MRAM product shipments.



The Everspin customer list contains major OEMs such as Dell and LSI using MRAM in RAID storage solutions. The company says it has over 300 active customers, with around 100 MRAM products in 3 markets.

Everspin is currently the only commercial producer of MRAM products. IBM and Toshiba have been working on the technology for years, but so far the companies only show off research results.

In theory, MRAM combines the best of RAM and Flash technologies-- storing data in a magnetic state (instead of an electric charge), allowing for faster performance, near-infinite endurance and non-volatility. The only problem with MRAM? Storage densities. The current limit for the technology is 16MB... much, much lower than standard flash memory.

Everspin remains hopeful-- it hopes to sell 4-6 million MRAM devices during 2012, and believes its next-generation product will even manage to replace DRAM by 2016. Called Spin-Torque RAM (ST-RAM), the technology stores more data while providing nanosecond-class latencies at gigabyte-per-second bandwidth. Either way, expect to hear more about MRAM in the next few years...

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