

# Everspin Releases Highest Density MRAM Products to Create Fastest And Most Reliable Non-Volatile Storage Class Memory

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*Everspin plans production of 256Mb & 1Gb products, bringing the most advanced memory solutions to the multi-billion dollar market for persistent memory in storage devices and servers.*

**Chandler, AZ, April 13, 2016**

Everspin Technologies announced today that it is shipping 256Mb ST-MRAM samples to global customers, enabling new product solutions using a true MRAM-based Storage Class Memory (SCM). This 256Mb ST-MRAM product breaks the record for the highest density commercial MRAM currently available in the market. Everspin, having held the previous record, has consistently led the industry, delivering the highest density MRAM products. The company also plans further density increases and expects to sample a 1Gb product based on its proprietary perpendicular magnetic tunnel junction (pMTJ) spin torque technology (ST-MRAM) later this year. Everspin's MRAM has demonstrated interface speeds comparable to DRAM; the new 256Mb and 1Gb ST-MRAM products will continue this performance with DDR3 and DDR4 interfaces, respectively.

The release of pMTJ-based ST-MRAM products will enable Everspin to provide solutions for the multi-billion dollar market requiring persistent memory. Storage and server OEMs have already been evaluating Everspin's ST-MRAM products and are planning to utilize these higher density devices. Everspin will continue to scale to lower geometries, and in turn, higher densities beyond 1Gb in the years to come.

## **MRAM Revolutionizes SCM**

Everspin continues to lead in the development and production of ST-MRAM, the next generation non-volatile memory that will change the landscape of storage and server applications. These applications can now protect "hot data" in MRAM as the first tier of storage. MRAM instantly secures data in flight without the concern of data corruption due to the unreliability of power sources, as well as the slower write performance of NAND and other persistent memories. Everspin has demonstrated the ability to bring the most disruptive non-volatile memory solutions to the market, which enables the highest performance SCM. Everspin has shipped more than 60 million MRAM discrete and embedded products into data centers, cloud storage, energy, industrial, automotive, consumer, and transportation markets.

Everspin's ST-MRAM delivers the following advantages:

- Supports 100,000 times faster write speeds than NAND flash
- Operates on the DDR3/DDR4 DRAM memory interface
- Requires no wear leveling
- Provides the highest endurance of currently available non-volatile memories
- Delivers low power operation
- Enables instant on/off functionality

“We continue to bring the fastest non-volatile products to our customers, expanding our offering with a high density 1Gb DDR4 pMTJ ST-MRAM. This will provide new and innovative approaches to the way non-volatile memory solutions can be architected,” said Everspin CEO Phill LoPresti.

Everspin's 256Mb ST-MRAM with a DDR3 compatible interface is the first ST-MRAM produced utilizing the 300mm manufacturing MRAM line from partner GLOBALFOUNDRIES. Initial samples will be based on an in-plane MTJ technology and will soon transition to pMTJ ST-MRAM technology for volume production. Everspin is the only company to offer a migration path to a high density ST-MRAM that can meet the specifications required by enterprise customers. Everspin will offer both discrete ST-MRAM products and NVDIMMs for ease of adoption and system compatibility. ST-MRAM based NVDIMMs provide improved reliability by eliminating the data transfer between DRAM and NAND flash required during a power down situation. The area typically occupied by an external power pack or additional capacitors can now be made available for increased storage capacity.

### **About Everspin Technologies**

Everspin Technologies is the worldwide leader in designing, manufacturing, and commercially shipping discrete and embedded Magnetoresistive RAM (MRAM) and Spin-Torque MRAM (ST-MRAM) into markets and applications where data persistence and integrity, low latency, and security are paramount. With over 60 Million MRAM and ST-MRAM products deployed in data center, cloud storage, energy, industrial, automotive, and transportation markets, Everspin has built the strongest and fastest growing foundation of MRAM users in the world. With an intellectual property portfolio of more than 500 active patents and applications, Everspin leads the market in development of both in-plane and perpendicular magnetic tunnel junction (MTJ) ST-MRAM bit cells. Everspin has established high-quality manufacturing worldwide, along with enabling a full turn-key 300mm high-volume foundry partner for advanced technology nodes including 40nm, 28nm and beyond. In addition to launching discrete memory solutions with new densities and advanced interfaces, including the world's first commercialization and volume shipments of ST-MRAM, Everspin is delivering on the company's strategy to proliferate MRAM and ST-MRAM as mainstream embedded memories for use in MCUs, GPUs, DSPs, Application Processors, and ASICs, earning Everspin its description as “The MRAM Company”. [www.everspin.com](http://www.everspin.com)

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