



## **New Case Study from Cobham Advanced Electronic Solutions Touts Everspin's Toggle MRAM as a Highly Reliable Memory Technology for Space Applications**

*Leveraging six years of space qualified production MRAM, Cobham Advanced Electronic Solutions validates qualification and reliability of Everspin's Toggle MRAM technology*

**Chandler, Ariz., Mar. 31, 2020**— [Everspin Technologies, Inc.](#)'s (NASDAQ: MRAM) partner [Cobham Advanced Electronic Solutions](#) (CAES) recently presented a technical case study describing the versatility and performance of their jointly developed Toggle MRAM for space applications. Cobham Advanced Electronic Solutions is a worldwide leader in the space memory market and ships production-grade, space-qualified [Magnetoresistive Random Access Memory \(MRAM\)](#) based on Everspin's world-class technology to provide the space industry with radiation hardened, highly reliable non-volatile memory that is immune to Single Event Upsets (SEU), low voltage Single Event Latchup (SEL), and Single Event Gate Rupture (SEGR). The products also provide unlimited endurance and a greater than 20-year retention across the -40° C to +105° C temperature range.

"Everspin's MRAM technology has proven itself in the market with a production track record of high performance and endurance, providing superior non-volatile data retention to handle a variety of space mission-critical memory workloads," said David Meyouhas, Director of Standard Product Marketing, Space and Semiconductor Solutions, Cobham Advanced Electronic Solutions. "We are delighted by our long-term partnership with Everspin that enables us to supply space-qualified Toggle MRAM solutions to the space industry, thereby addressing their needs for high performance, radiation-hardened, persistent memory that can operate in harsh environments. Cobham Advanced Electronic Solutions' 16Mb and 64Mb Multi-Chip Module MRAM devices currently boast more than 144 space application design-ins, proven flight heritage, and coverage at over 70 customers."

The Cobham case study delves into Toggle MRAM strengths, including the following:

- Radiation Hardness (RadHard) of greater than 1Mrad (Si) TID
- Endurance cycles of greater than >20 years (i.e. unlimited)
- Data Retention rates of over 20 years , which is beyond mission lifetimes
- High speed read/write of 45ns
- QML-Q; and QML-Q+ Quality and Reliability

To read the full case study, [click here](#).

"We are pleased to be working with Cobham Advanced Electronic Solutions to deliver persistent memory solutions to the space industry," said Troy Winslow, Vice President of Sales and Marketing for [Everspin](#). "Our Toggle MRAM technology delivers unprecedented quality and reliability for a non-volatile memory, making it a key building block component for mission-critical applications."



Everspin offers a complete portfolio of [Toggle MRAM devices](#), spanning 128Kb to 32Mb in serial and parallel interfaces and several popular packaging options. These products deliver fast read and write access speeds, robust 20-year data retention, and provide unlimited cycle endurance for reads and writes across a variety of temperatures, ranging from -40° C to +125° C. They are available in both BGA and TSOP standard package types for maximum design and system flexibility. Everspin also offers 256Mb and 1Gb Spin-transfer Torque (STT) MRAM devices, see website for more details.

#### **About Cobham Advanced Electronic Solutions**

Cobham Advanced Electronic Solutions (CAES) provides a number of mission-critical and specialized solutions for harsh environments. Cobham Advanced Electronic Solutions supplies defense, aerospace, security, medical and industrial markets with critical solutions for communication on land, at sea, and in the air and space, by moving data through off-the-shelf and customized products and subsystems including RF, microwave, and high reliability microelectronics, antenna apertures and motion control solutions. Learn more at [www.cobhamaes.com](http://www.cobhamaes.com).

#### **About Everspin Technologies**

Everspin Technologies, Inc. is the world's leading provider of Magnetoresistive RAM (MRAM), delivering unprecedented performance, non-volatility, endurance and reliability for applications where data persistence is paramount. Headquartered in Chandler, Arizona, Everspin is transforming the memory market with the largest and most diverse foundation of MRAM customers. For more information, visit [www.everspin.com](http://www.everspin.com). NASDAQ: MRAM.

#### **Cautionary Statement Regarding Forward-Looking Statements**

This press release contains forward-looking statements regarding future events that involve risks and uncertainties that could cause actual results or events to differ materially from the expectations disclosed in the forward-looking statement, including, but not limited to; the anticipated market adoption of Everspin's products and technology at the rate Everspin expects; the ability for Everspin to expand the markets Everspin addresses at the rate it expects; the risk that unexpected technical difficulties may develop in the final stages of development or production of its products, or when Everspin's customers may ship in volume. Readers are advised that they should not place undue reliance on these forward-looking statements and should review the risk factors included in Everspin's Form 10-Q filed with the Securities and Exchange Commission on March 12, 2019, under the caption "Risk Factors." Subsequent events may cause these expectations to change, and Everspin disclaims any obligations to update or alter these forward-looking statements in the future, whether as a result of new information, future events or otherwise.

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