

News Release

27 January 2016

COBHAM ANNOUNCES QML V QUALIFICATION OF THEIR MRAMs with IP FROM EVERSPIN TECHNOLOGIES, INC.

COLORADO SPRINGS, COLORADO – Cobham Semiconductor Solutions (formerly Aeroflex) announces QML V certification of their non-volatile products using Magnetoresistive Random-Access Memory (MRAM) intellectual property from Everspin Technologies, Inc. The MRAM-based product offering includes a 64Mbit device, UT8MR8M8, offered in a 40-lead quad flatpack, and a 16Mbit device, UT8MR2M8, available in a 40-lead flatpack. Both are in production and have been designed into various future satellites.

"Customers needed dense, low power, qualified non-volatile memory solutions with guaranteed total ionizing dose and single event hardness," said Anthony Jordan, Cobham Semiconductor Solutions Vice-President Product Marketing and Applications Engineering. "Using an IP license from Everspin, Cobham has taken commercial MRAM technology and enhanced the IP for specialized aerospace and defense applications. We were able to satisfy these requirements using commercial IP and proprietary design techniques and have accessed new markets."

"We are very pleased to be Cobham's partner in bringing MRAM technology to the level required to achieve QML V," said Phill LoPresti, President and CEO of Everspin Technologies. "MRAM has become the preferred solution in demanding applications such as storage, industrial, automotive and now, with Cobham's achievement, aerospace."

MRAM technology provides a combination of fast access time, non-volatility, data retention and endurance. MRAM technology operates as an SRAM with non-volatile attributes. Cobham's HiRel MRAM solutions are used with microprocessors, DSP engines, storage systems, instruments, and reconfigurable FPGAs.

The 3V MRAMs have guaranteed operation from -40° C to $+105^{\circ}$ C, 100 krad(Si) to 1 Mrad and are SEL immune to >100 MeV-cm². As a replacement for 3.3V SRAMs, the MRAMs are



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8-bit parallel I/O solutions with data retention after each write of 20 years and virtually infinite read/write endurance. They are ideal for working memory applications that require high rates of data overwrites.

"Cobham Semiconductor Solutions is committed as a long-term supplier of memory products for harsh environments. We now offer over 30 products in our Non-Volatile and Volatile Memory Family," stated Jordan. "We plan to continue leveraging Everspin IP in future product development."

The radiation-hardened UT8MR2M8 (SMD5962-12227) and the UT8MR8M8 (SMD 5962-13207) are QML Q, Q+ and V qualified and available to Standard Microcircuit Drawings. Please call for pricing.

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For copies of the Memory Family datasheets, call 1-800-645-8862, email <u>info-</u> <u>AMS@aeroflex.com</u> or visit www.cobham.com/HiRel.

About Cobham Semiconductor Solutions

Enhancing the performance of your products with semiconductor solutions you can depend on.

We are a global supplier of Standard HiRel ICs including memory, µprocessor, interconnect and power and ASICs for space, commercial, medical and industrial markets, along with Electronic Manufacturing Services (Circuit Card Assembly, Radiation Testing, Component Upscreening and Packaging).

Our customers benefit from our complete design, manufacture and support capabilities, as well as the comprehensive inventory they depend on to enhance the quality and integrity of their products.

About Cobham

The most important thing we build is trust. We protect lives and livelihoods with our differentiated technology and know-how, operating with a deep insight into customer needs and agility. Our innovative range of technologies and services solve challenging problems in harsh environments across commercial, defense and security markets, from deep space to the depths of the ocean, specializing in meeting the growing demand for data, connectivity and bandwidth.



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We employ more than 12,000 people on five continents, and have customers and partners in over 100 countries, with market leading positions in: wireless, audio, video and data communications, including satellite communications; defense electronics; air-to-air refueling; aviation services; life support and mission equipment.

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