adesto®
TECHNOLOGIES

RM24EP Series

Code and Data Storage for Intelligent Medical Designs
Sterilization-Tolerant Mavriq™ Memory

Embedded or stand-alone Mavriq EP-Series memory maintains data integrity across sterilization modes, enabling designers to expand the horizon of intelligent medical designs

Intelligent medical devices are on track for double-digit growth, promising advances in treatment and quality of life. Memory in these products is used to ensure product authenticity, enforce expiration, track usage, store unique device identification (UDI/GUDID) and to record calibration values.

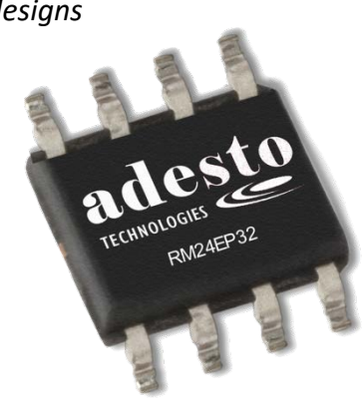
While standard Flash, EEPROM and other memories are traditionally used in these products, these technologies cannot survive the harsh thermal and radiation conditions imposed by sterilization processes, resulting in corrupted or missing data critical to your system operation.

To address these issues, Adesto introduces the RM24EP series product family; a robust, embedded or stand-alone storage technology that survives the extreme conditions of sterilization.

With high reliability and excellent operating performance, Adesto's Mavriq code and data storage solutions are perfectly matched to the sterilization requirements of the medical and healthcare industry.

RM24EP Code and Data Storage — Features and Benefits

- **Ultra-low power operation extends system battery life**
- **Reduced product manufacturing steps and costs**
- **Protection against system errors due to data loss**
- **Ultra-fast programming**
- **Qualified to 200 kGy Gamma exposure**
- **Available in I^2C protocol**



Adesto's RM24EP series products have passed both Gamma (200 kGy) and E-Beam (200 kGy) sterilization testing and are compatible across the sterilization conditions of heat, pressure and irradiation

Gamma Sterilization Tolerance

DOSE	Adesto Mavriq[1]	Traditional FLASH[2]
1.3 kGy	●	●
4.5 kGy	●	●
25 kGy	●	●
50 kGy	●	●
200 kGy	●	●

[1] *Mavriq serial memory: Passed all exposure doses*
[2] *Flash memory: Unrecoverable damage to factory bit configuration in the standard memory device*

For more information on embedded and stand-alone Mavriq serial memory and radiation case study, please visit: www.adestotech.com

Features

- Memory array: 32Kbit and of EEPROM-compatible boot memory
- 2-wire I^2C interface
- Single supply voltage: 2.7V - 3.6V for Write
- Gamma Radiation Tolerance (TID) ~5M Rad (Si)
- Page size: 32 byte / 64 byte, Byte and Page Write from 1 to 32 or 64 bytes, fast Byte Write within 100 µs, Byte Write energy consumption: ~60 nJ
- Random and Sequential Read modes
- RoHS-compliant and halogen-free packaging
- 1.0mA Read current, 1.5mA Write current
- Compatible with I^2C bus modes: 100KHz, 400KHz, 1MHz
- Write protect of the whole memory array
- High temperature tolerance; code and data safe during solder reflow

Description

The RM24EP series products are a family of I^2C EEPROM-compatible gamma-tolerant boot memory solutions. Available in 32Kb and 64 Kb densities, the devices utilize Adesto's Mavriq serial memory to provide high data retention and low power performance with a single low-voltage supply ranging from 2.7V to 3.6V.

All devices have both byte write and page write capability. Write operations are internally self-timed and the devices also feature a whole-chip erase function.

Adesto Technologies is a leading supplier of value-added semiconductor solutions for code and data storage. Its product portfolio includes DataFlash®, Fusion Serial Flash, Mavriq™ and Moneta™ serial memory products. Adesto is based in Santa Clara, California (USA). For more information, visit http://www.adestotech.com.

adesto® TECHNOLOGIES

3600 Peterson Way
Santa Clara, CA 95054
Phone: (+1) 408.400.0578
Email: contact@adestotech.com
Web: http://www.adestotech.com