

RAMXFEED

Our Memory, Your Future.

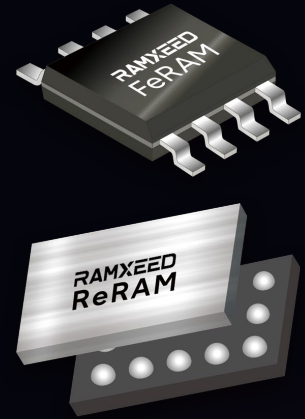


RAMXEED

RAMXEED represents our company that continues to grow and co-create in the pursuit of infinite possibilities based on Random Access Memory (RAM) technology.

"XEED" denotes SUCCEED and EXCEED, which mean success and going beyond the present respectively, while "X" signifies infinite possibilities and co-creation.

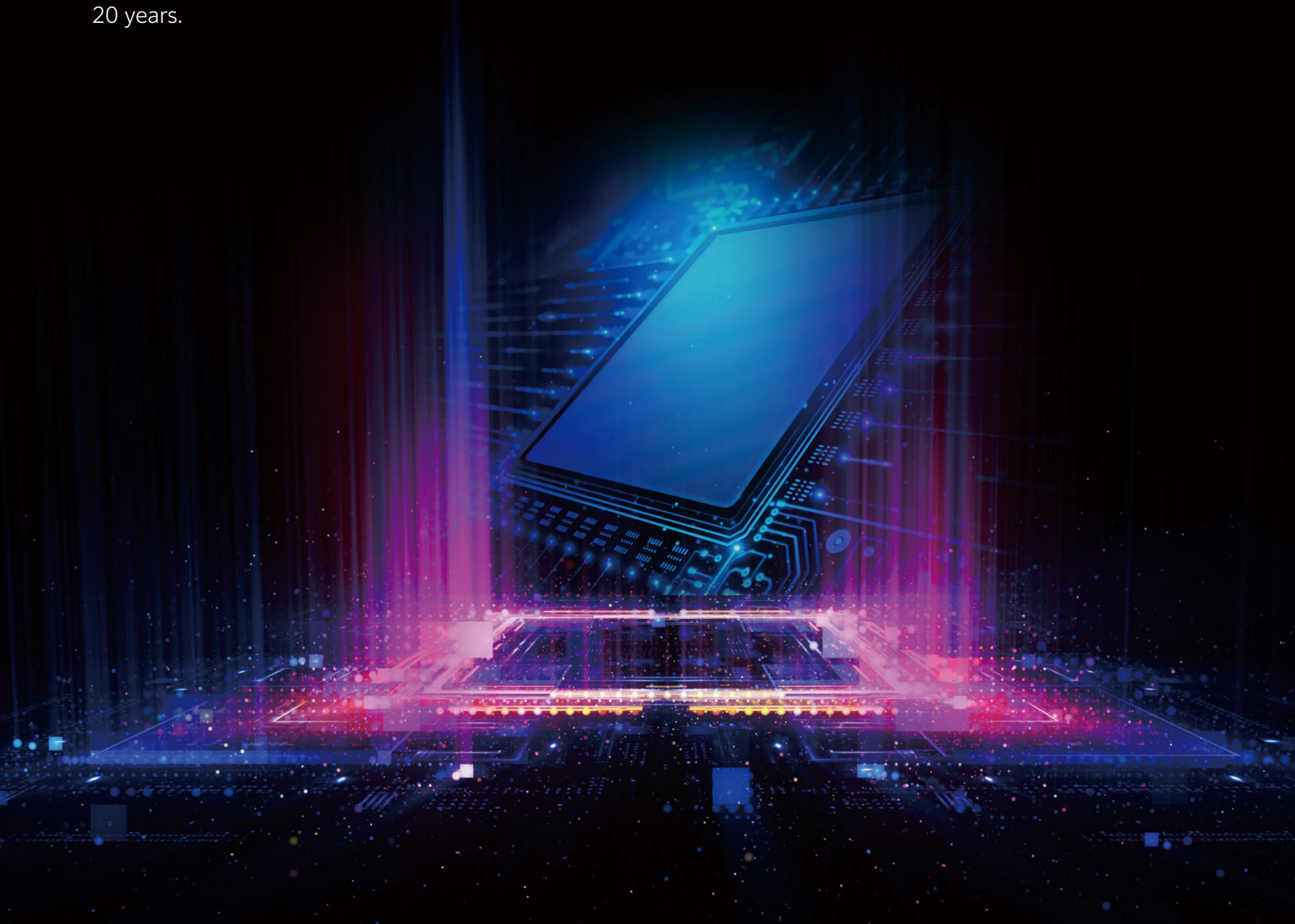
Although our company name has changed, we will continue to focus on the high reliability and unique proposal capabilities that our customers value.



PURPOSE

Realizing a future full of dreams with memory technology.

Our company name reflects our desire to continue to be a professional group for non-volatile RAM, including FeRAM, which has provided value to our customers for over 20 years.



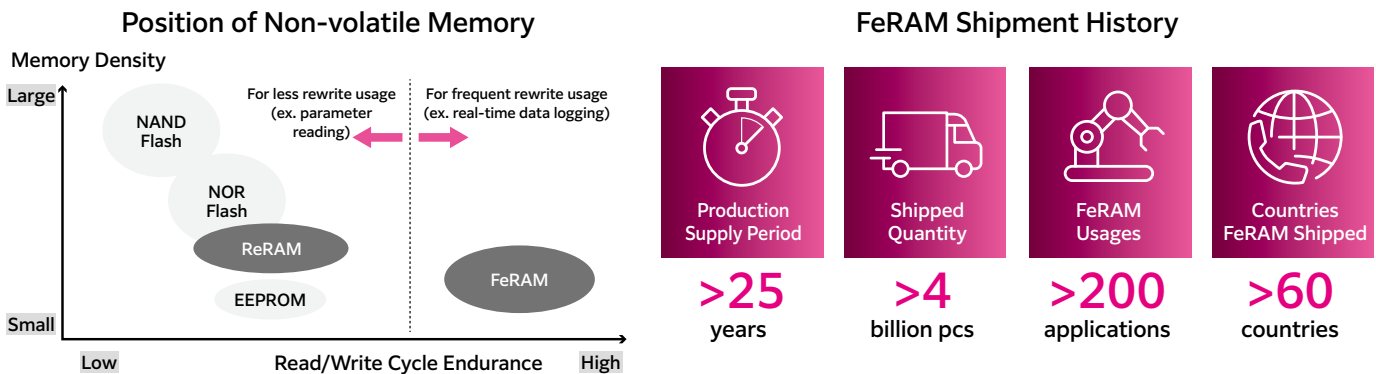
High-Performance and High-Reliability Memory

We currently offer product lines for FeRAM and ReRAM. Both are non-volatile memories with different features covering a wideriety of applications.

The greatest strength of FeRAM is the high number of data read/write cycles that it can guarantee.

Since data can be rewritten up to 100 trillion times, RAMXEED FeRAM is suitable for usages that rewrite data frequently. Thus, FeRAM memory has beenused as a memory for recording information in meters, measuring instruments, industrial robots, and automobiles.

On the other hand, ReRAM's strengths are an unlimited number of data reading times and an extremely small read current. It fits usages that first record basic information and programs required for operation while frequently reading data. In addition, choosing ReRAM as a memory in battery-operated small devices allows the extension of battery life. Therefore, this type of memory is ideal for small wearable devices such as hearing aids and smartwatches.



What we do for the global environment

By developing memory products that consume less power, we are aiming to reduceCO₂ emissions. In this way, we are contributing to the achievement of three of the 17 Sustainable Development Goals (SDGs) adopted by the United Nations by providing environmentally friendly semiconductor devices and solutions.

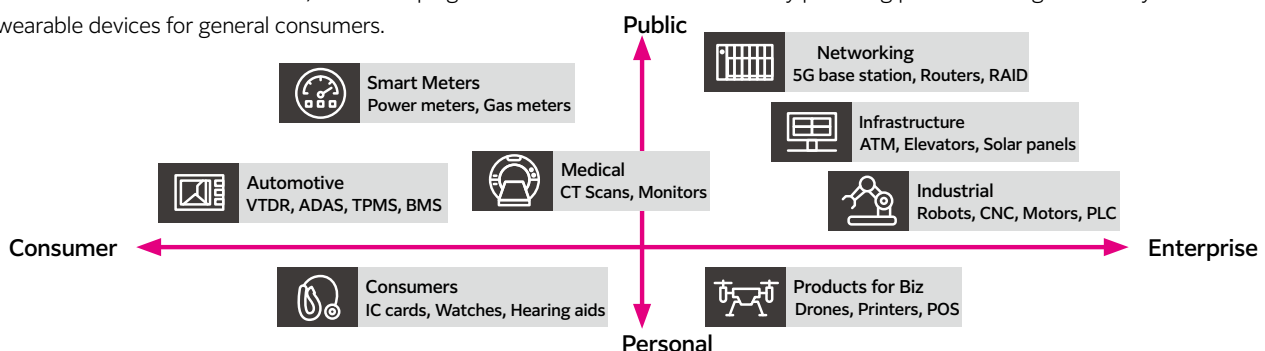
Goal	Our activities	Efficiency	Our products
Goals4: Quality education	Providing products to universities and public facility by free	Cooperate with science technology learning	Non-volatile memory "FeRAM", "RFID"
Goals7: Affordable and clean energy	Providing low power devices	Reduction of CO ₂ emission	Non-volatile memory "FeRAM", "RFID"
Goals12: Responsible consumption, production	Providing Batteryless solutions	Reduction of battery wastes	Batteryless solutions

What we do to improve life confort

Our memory products help people around the world live healthier lives when being integrated in healtchare devices. It is the case for hearing aids users who need them to improve their hearing and for people who have trouble sleeping and need continuous positive airway pressure (C PAP) devices which are working to help them sleep.

What we do for Society

Providing compact and highly performant memory products, enables the miniaturization and overall performance of social infrastructure facilities and devices. In addition, we are helping to enrich the lives of individuals by providing products being used daily such as IC cards and wearable devices for general consumers.



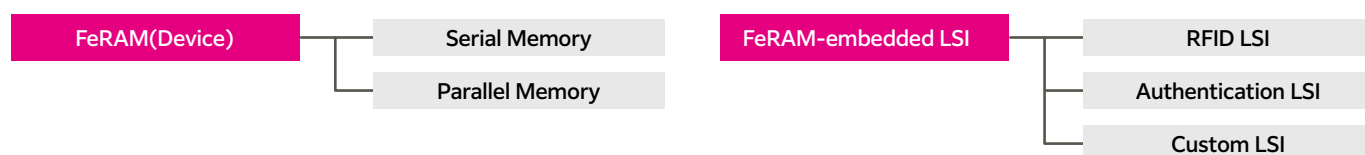
FeRAM

FeRAM Product Family

Our FeRAM products are categorized into two product families. One is “FeRAM (Device)” in the form of SOP and TSOP packages for general use, and another is “FeRAM-embedded LSI” which is an applicationspecified LSI such as RFID LSI and authentication LSI.

One type of RFID LSI provides not only high-speed wireless communications, but also features wireless power transfer, making it possible to construct a Battery-less wireless solution that consists of a FeRAM-embedded LSI and Reader/Writer device.

FeRAM Product Family



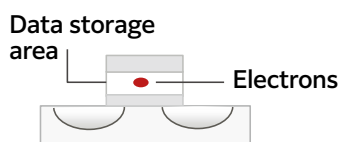
FeRAM Structure

FeRAM is a memory using ferroelectric elements. Its cell structure and method to store data are different from other conventional nonvolatile memory devices such as EEPROM and Flash memory. Of course, the judgment method of stored data “1” and “0” is also different.

EEPROM judges “1” or “0” data by the state of the memory cell being charged or discharged. While FeRAM is judged by the state of electric polarization caused by the movement of atoms in the molecule. Regarding FeRAM structure, we use PZT(lead zirconate titanate) as a ferroelectric element. The crystalline structure of PZT is shown below.

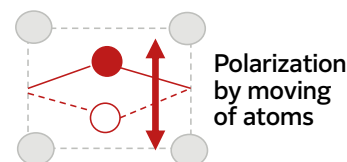
The zirconium or titanium positive ion occupies two stable positions in the lattice and can be moved between the positions by applying an external electric field. Either up or down polarization can be stored even if the electric field is removed. This means the state of “polarization” is memorized. Ferroelectric memory utilizes the characteristics of this non-volatility.

EEPROM

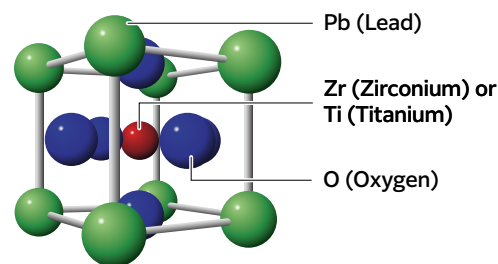


presence or absence of electrons in the data storage area forms “1” or “0”

FeRAM



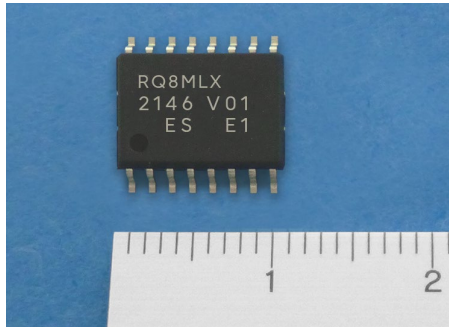
Position of atoms in center forms data “1” or “0”



Crystal structure of PZT

FeRAM Overview

The memory density of FeRAM products ranges from 4Kbit to 8Mbit. The interface has a serial interface (SPI, I²C) and a parallel interface.



8Mbit Quad SPI FeRAM

Density	16Kbit to 8Mbit (SPI interface) / 4Kbit to 1Mbit (I ² C interface) / 256Kbit to 8Mbit (parallel interface)
Operating voltage	1.65 to 1.95V / 1.7 to 1.95V / 1.7 to 3.6V / 1.8 to 3.6V / 2.7 to 3.6V / 2.7 to 5.5V / 3.0 to 5.5V
Operating temperature range	-40 to +85°C / -40 to +95°C / -40 to +105°C / -40 to +125°C
Read/Write endurance	1 trillion / 10 trillion / 100 trillion

* : Please refer to datasheet of each product in details.

FeRAM Features

FeRAM has four superior features non-volatility, high read/write endurance, fast writing speed, and low power consumption.

4 Great Features

Non-volatility

- Stored data are not disappeared at power off
- No battery is needed for data retention

Fast Writing Speed

- Enable to overwrite data without erasing operation
- No waiting time for erasing/writing operation

High Read/Write Cycle Endurance

- Guarantees 100 trillion(10¹⁴) read/write cycles
- 100 million times EEPROM's endurance

Low Power Consumption

- No booster circuit for a write operation
- Lower power consumption at writing by short writing time
- No data retention current to keep the data

Comparison between FeRAM and other memories

Item	FeRAM	EEPROM	FLASH	SRAM
Memory Type	Non-volatile	Non-volatile	Non-volatile	Volatile
Write Method	Overwrite	Erase + Write	Erase + Write	Overwrite
Write Cycle Time	120ns	5ms	10μs	55ns
Read/Write Cycles	100 trillion	1 million	0.1 million	Unlimited
Booster Circuit	No	Yes	Yes	No
Data Backup Battery	No	No	No	Yes

Serial Memory Lineup

SPI Interface *1

Memory density (bit)	Part number	Grade *2	Power supply voltage (V)	Operating frequency (Hz)	Operating temperature (°C)	Read/Write cycles	Data retention *3	Package
8M	MB85RQ8MX	Industrial	2.7 to 3.6	108M	-40 to +105	100 trillion	10 years(+105°C)	BGA-24/SOP-16
	MB85RQ8MLX	Industrial	1.7 to 1.95	108M	-40 to +105	100 trillion	10 years(+105°C)	BGA-24/SOP-16
4M	MS85RQ4MX	Industrial	2.7 to 3.6	108M	-40 to +105	100 trillion	10 years(+105°C)	DFN-8/SOP-8
	MS85RQ4MLX	Industrial	1.7 to 1.95	108M	-40 to +105	100 trillion	10 years(+105°C)	DFN-8/SOP-8
	MB85RS4MTY	Automotive/Industrial	1.8 to 3.6	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8*4
	MB85RS4MLY	Automotive/Industrial	1.7 to 1.95	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8*4
	MB85RS4MT	Industrial	1.8 to 3.6	40M	-40 to +85	100 trillion	10 years(+85°C)	SOP-8
	MB85RQ4ML	Industrial	1.7 to 1.95	108M	-40 to +85	10 trillion	10 years(+85°C)	SOP-16
2M	MB85RS2MTY	Automotive/Industrial	1.8 to 3.6	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RS2MLY	Automotive/Industrial	1.7 to 1.95	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RS2MTA	Industrial	1.7 to 3.6	40M	-40 to +85	100 trillion	10 years(+85°C)	SOP-8
1M	MS85RS1MTY	Automotive/Industrial	1.8 to 3.6	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MS85RS1MLY	Automotive/Industrial	1.7 to 1.95	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RS1MT	Industrial	1.8 to 3.6	30M	-40 to +85	10 trillion	10 years(+85°C)	SOP-8/DFN-8/WL-CSP-8*5
512K	MB85RS512TY	Automotive/Industrial	1.8 to 3.6	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RS512LY	Automotive/Industrial	1.7 to 1.95	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RS512T	Industrial	1.8 to 3.6	30M	-40 to +85	10 trillion	10 years(+85°C)	SOP-8
256K	MB85RS256TYA	Automotive/Industrial	1.8 to 3.6	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RS256LYA	Automotive/Industrial	1.7 to 1.95	50M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RS256TY	Automotive/Industrial	1.8 to 3.6	40M	-40 to +125	10 trillion	70.4years(+85°C)	SOP-8
	MB85RS256B	Industrial	2.7 to 3.6	33M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
128K	MB85RS128TY	Automotive/Industrial	1.8 to 3.6	40M	-40 to +125	10 trillion	70.4years(+85°C)	SOP-8
	MB85RS128B	Industrial	2.7 to 3.6	33M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
64K	MB85RS64VY	Automotive/Industrial	2.7 to 5.5	33M	-40 to +125	10 trillion	70.4years(+85°C)	SOP-8
	MB85RS64V	Industrial	3.0 to 5.5	20M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
	MB85RS64T	Industrial	1.8 to 3.6	10M	-40 to +85	10 trillion	40.2years(+85°C)	SOP-8*5/SON-8
	MB85RS64	Industrial	2.7 to 3.6	20M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
16K	MB85RS16N	Industrial	2.7 to 3.6	20M	-40 to +95	1 trillion	10 years(+95°C)	SOP-8/SON-8
	MB85RD16LX	Industrial	1.65 to 1.95	15M	-40 to +125	10 trillion	23.7years(+105°C)	SON-8
	MB85RDP16LX	Industrial	1.65 to 1.95	15M	-40 to +125	10 trillion	23.7years(+105°C)	SON-8*6

*1: Please refer to the datasheet of each product for details.

*2: Automotive-grade products comply with AEC-Q100.

*3: Please refer to the datasheet for data retention time at 125°C.

*4: SOP-8 is an industrial grade.

*5: Products that operate at 1.7 V are also available.

*6: Product including a binary counter.

Serial Memory Lineup

I²C Interface *1

Memory density (bit)	Part number	Grade *2	Power supply voltage (V)	Operating frequency (Hz)	Operating temperature (°C)	Read/Write cycles	Data retention *3	Package
1M	MS85RC1MTY	Automotive/Industrial	1.8 to 3.6	3.4M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MS85RC1MLY	Automotive/Industrial	1.7 to 1.95	3.4M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RC1MT	Industrial	1.8 to 3.6	3.4M	-40 to +85	10 trillion	10 years(+85°C)	SOP-8
512K	MB85RC512TY	Automotive/Industrial	1.8 to 3.6	3.4M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RC512LY	Automotive/Industrial	1.7 to 1.95	3.4M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RC512T	Industrial	1.7 to 3.6	3.4M	-40 to +85	10 trillion	10 years(+85°C)	SOP-8
256K	MB85RC256TY	Automotive/Industrial	1.8 to 3.6	3.4M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RC256LY	Automotive/Industrial	1.7 to 1.95	3.4M	-40 to +125	100 trillion	10 years(+125°C)	DFN-8/SOP-8
	MB85RC256V	Industrial	2.7 to 5.5	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
	MB85RC256VN	Industrial	2.7 to 5.5	1M	-40 to +95	1 trillion	10 years(+95°C)	SOP-8
128K	MB85RC128A	Industrial	2.7 to 3.6	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
64K	MB85RC64TA	Industrial	1.8 to 3.6	3.4M	-40 to +105	10 trillion	19.1years(+105°C)	SOP-8/SON-8
	MB85RC64A	Industrial	2.7 to 3.6	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
	MB85RC64V	Industrial	3.0 to 5.5	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
16K	MB85RC16	Industrial	2.7 to 3.6	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8/SON-8
	MB85RC16V	Industrial	3.0 to 5.5	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
4K	MB85RC04	Industrial	2.7 to 3.6	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8
	MB85RC04V	Industrial	3.0 to 5.5	1M	-40 to +85	1 trillion	10 years(+85°C)	SOP-8

*1: Please refer to the datasheet of each product for details.

*2: Automotive-grade products comply with AEC-Q100.

*3: Please refer to the datasheet for data retention time at 125°C.

Parallel Interface *1

Memory density (bit)	Part number	Grade	Power supply voltage (V)	Cycle time (ns)	Operating temperature (°C)	Read/Write cycles	Data retention	Package
8M(1M×8)	MB85R8M1TA	Industrial	1.8 to 3.6	120	-40 to +85	100 trillion	10 years(+85°C)	TSOP-44/FBGA-48
8M(512K×16)	MB85R8M2TA	Industrial	1.8 to 3.6	120	-40 to +85	100 trillion	10 years(+85°C)	TSOP-44/FBGA-48
4M(512K×8)	MS85R4M1TA	Industrial	1.8 to 3.6	120	-40 to +105	100 trillion	10 years(+105°C)	TSOP-44/FBGA-48
4M(256K×16)	MS85R4M2TA	Industrial	1.8 to 3.6	120	-40 to +105	100 trillion	10 years(+105°C)	TSOP-44/FBGA-48
256K(32K×8)	MB85R256F	Industrial	2.7 to 3.6	150	-40 to +85	1 trillion	10 years(+85°C)	TSOP-28

*1: Please refer to the datasheet of each product for details.

Customer's Issues and Solutions

FeRAM and ReRAM of non-volatility memory products have superior features compared with conventional memories such as flash memory, EEPROM, and SRAM.

Our memory products can solve the following issues arising from the use of conventional memory products.

Solutions by FeRAM 01

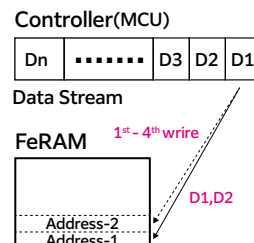
High read/write endurance eliminates the need for wear leveling

Issues with conventional memories

- Increased software complexity
- As a result, more verification hours
- It also increases the risk of buggy products entering the market

Solutions by FeRAM

- No downside to performing wear leveling because the software is simplified
- Reduced development time
- Fewer buggy products on the market, with the expectation of increased customer satisfaction



Solutions by FeRAM 02

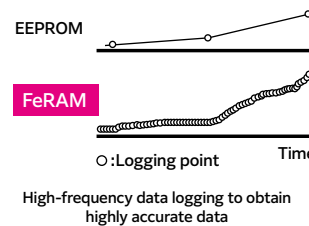
High read/write endurance and fast writing speed enable high-frequency data logging

Issues with conventional memories

- When writing data over a 10-year period, EEPROMs are limited to 11 writes per hour or 270 writes per day
- It is possible that necessary data is not collected
- More frequent data writing than that requires wear leveling and other measures that increases software complexity

Solutions by FeRAM

- FeRAM can be rewriting data up to 300,000 times/second (over 20 billion times per day)
- Enables detailed recording of data transitions to obtain real data



Solutions by FeRAM 03

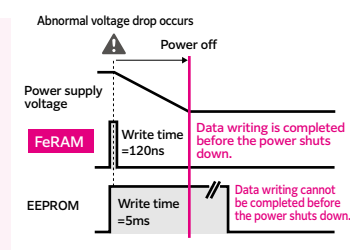
High-speed writing ensures recording of data even in the event of a power outage or temporary power failure

Issues with conventional memories

- Since the write time is on the order of ms, if the power supply stops during a write or erase operation, there is a high probability that the data that was being written will be lost.

Solutions by FeRAM

- Because data is written at 120ns, data writing is completed before power loss
- Reliable data logging even in the event of a sudden power outage



Solutions by FeRAM 04

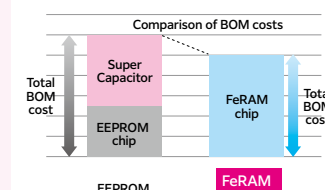
Low write energy allows power consumption to be reduced

Issues with conventional memories

- High write power consumption affects battery life

Solutions by FeRAM

- Write energy of FeRAM is 1/100th of EEPROM and 1/20,000th of Flash
- Battery life can be greatly extended in write-intensive applications
- Contributes to reducing environmental impact

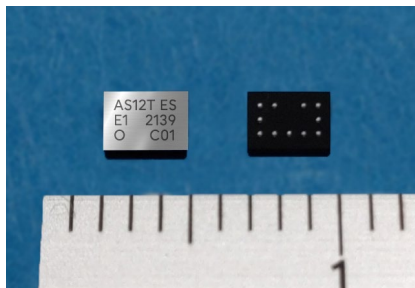


ReRAM Overview

The memory density lineup of ReRAM products is 8Mbit and 12Mbit. Their interface is SPI interface.

Density	8Mbit, 12Mbit (SPI interface)
Operating voltage	1.6 to 3.6V
Operating temperature range	-40 to +85°C
Read endurance	Unlimited
Write endurance	1 million (8Mbit), 0.5 million(12Mbit)
Package	11pin WL-CSP

*: Please refer to the datasheet of each product for details.



12Mbit ReRAM



ReRAM-embedded Hearing aids

ReRAM Features, Structure

ReRAM which stands for Resistive Random Access Memory is a non-volatile memory storing data by changing resistance in cell material. It records either "1" or "0" of data by massive changes in resistance. It has four superior features: non-volatility, very small read current, large density, and very small package. To be specific, it has an extremely smaller read current level than other non-volatile memory products as the average read current is as small as 0.15mA at an operating frequency of 5MHz. It enables to extend battery life in battery-operated end-products.

Our ReRAM product in a very small package of 2mm x 3mm is **ideal for use in wearable devices**.

4 Great Features

Non-volatility

- Stored data are not disappeared at power off
- No battery is needed for data retention

Large Density

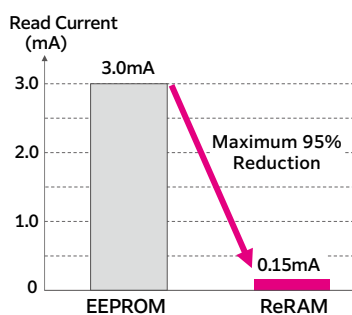
- Large density of 12Mbit as non-volatile random access memory

Very Small Read Current

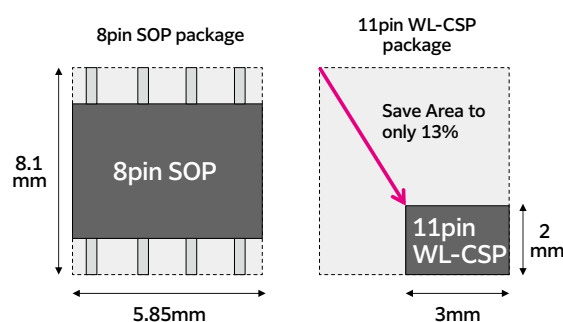
- Average read current is 0.15mA at 5MHz operation
- Maximum read current is 0.7mA at 10MHz operation

Very Small Package

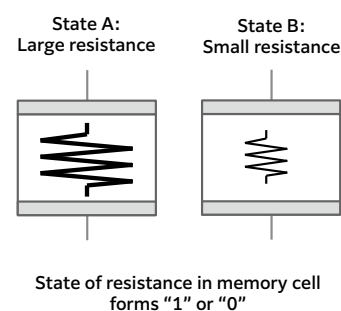
- 11pin WL-CSP in approximately 2mm x 3mm



Read Current Comparison



Mounting Area Comparison



Cell Structure of ReRAM

ReRAM Lineup

Memory density(bit)	Part number	Power supply voltage(V)	Operating frequency(Hz)	Operating temperature(°C)	Read current	Read cycles	Write cycles	Package
8M	MB85AS8MT	1.6 to 3.6	10M	-40 to +85	Max 0.7mA	Unlimited	1 million	WL-CSP-11

FeRAM-embedded ASICs/ASSPs

What is an FeRAM-embedded ASIC/ASSP?

We design and develop FeRAM application-specific integrated circuits (ASICs: custom LSI products) and application-specific standard products (ASSPs). FeRAM can be integrated into the CMOS process and combined with logic and analog circuits on a single chip. We have developed many highly reliable and high-performance system LSIs, such as LSIs for RFID and IC cards based on our know-how cultivated through more than 20 years of experience in the design and development in this field. We offer one-stop IC development services from specification design to manufacturing according to customer needs.

Do you have any of the following issues?

CASE1

Difficult product differentiation with competitors

CASE2

Low number of data read/write cycles, leading to a short product life

CASE3

Less performant
Battery life than expected

CASE4

Different chips mix, increased size and costs.

CASE5

Weakness to data loss, power outages, and shocks, resulting in an unstable system.

FeRAM-embedded ASICs/ASSPs can solve your problems!

BMS

Ensure accurate battery monitoring and extend battery life through continuous recording of voltage, current, and temperature data.



Reasons to use FeRAM

RAMXEED FeRAM enables high-frequency logging with exceptional endurance, allowing BMS controllers to continuously record battery data for cell balancing, state-of-charge analysis, and battery life optimization. We provide AEC-Q100 FeRAMS to best fit the needs of the Automotive Industry as a reliable manufacturer.

Rotary encoder

Want to count the number of motor revolutions even when there is no power supply, such as during a power failure in a factory.



Reasons to use FeRAM

Has the lowest write power consumption by far compared to other memories, enabling module design in conjunction with energy harvesting devices. Modules previously consisting of battery + SRAM can be replaced with a maintenance-free configuration of an energy harvesting device + FeRAM.

Wireless powered sensing

Want to make the sensor part wireless so it can be placed anywhere and also eliminate the need to change batteries.



Reasons to use FeRAM

Wirelessly powered sensing ICs have no batteries but can activate power at high speed by radio waves from a wireless reader/writer or weak power from an energy harvesting device to feed power to the sensor, acquire sensor data, and transmit it wirelessly. They require no batteries or wiring, making them environmentally friendly and economical.

FeRAM-embedded RFID

The advantages of our FeRAM-embedded RFID are the large memory capacity and fast data writing speed. If our RFID LSI is used in a tag to record the process history of products in a factory, the throughput time can be shortened. In addition, a product line with two interfaces, wireless and SPI, can use SPI for high-speed processing to record data and read back the written data wirelessly when the device is turned off. The products can operate fast processing by SPI interface and can read out important data using a wireless interface during power outages.

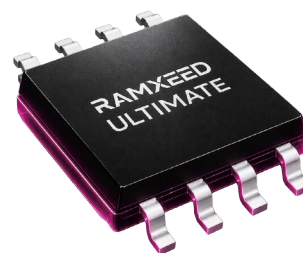
Lineup of FeRAM-embedded RFID

Part number	Operating frequency	User memory density	Commands	Interface	Read/Write cycles
MB97R8110	UHF band 860 to 960MHz	8Kbyte	ISO/IEC18000-63 EPC C1G2 Ver.1.2.0	SPI(Master/Slave)	10 trillion
MB97R8050		36byte(EPC128bit)		—	10 billion
MB89R112A	HF band 13.56MHz	8Kbyte	ISO/IEC15693	—	1 trillion
MB89R118C		2Kbyte	ISO/IEC15693	—	1 trillion
MB89R119B		256byte	ISO/IEC15693	—	1 trillion

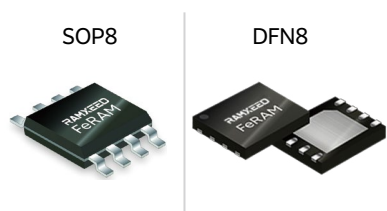
RAMXEED ULTIMATE

RAMXEED ULTIMATE FeRAM

RAMXEED ULTIMATE is a high-reliability FeRAM product line designed to protect critical data for **over 10 years at up to 125°C** while maintaining FeRAM fast write, high endurance, and low power advantages. This product line was developed to answer the specific needs of Automotive and Industrial applications.



Packages



Application examples

Automotive Equipment	Industrial Equipment
Automotive ECUs	Factory automation equipment
Sensors	PLCs
Instrument clusters	Servos
BMS, etc.	Inverters, etc.

Memory Product Line

RAMXEED ULTIMATE SPI Interface

Part number	Grade	Density	Voltage	Freq.	Operating Temperature	Endurance	Retention	Package
MB85RS4MTY	Automotive/Industrial	4M	1.8 to 3.6	50MHz	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (208mil) / DFN-8
MB85RS4MLY	Automotive/Industrial	4M	1.7 to 1.95	50MHz	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (208mil) / DFN-8
MB85RS2MTY	Automotive/Industrial	2M	1.8 to 3.6	50MHz	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MB85RS2MLY	Automotive/Industrial	2M	1.7 to 1.95	50MHz	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MS85RS1MTY	Automotive/Industrial	1M	1.8 to 3.6	50MHz	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MS85RS1MLY	Automotive/Industrial	1M	1.7 to 1.95	50MHz	-40 to +125	10 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MB85RS512TY	Automotive/Industrial	512K	1.8 to 3.6	50MHz	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MB85RS512LY	Automotive/Industrial	512K	1.7 to 1.95	50MHz	-40 to +125	10 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MB85RS256TYA	Automotive/Industrial	256K	1.8 to 3.6	50MHz	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MB85RS256LYA	Automotive/Industrial	256K	1.7 to 1.95	50MHz	-40 to +125	10 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8

RAMXEED ULTIMATE I²C Interface

Part number	Grade	Density	Voltage	Freq.	Operating Temperature	Endurance	Retention	Package
MS85RC1MTY	Automotive/Industrial	1M	1.8 to 3.6	3.4 MHz max 1 MHz Fm+	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MS85RC1MLY	Automotive/Industrial	1M	1.7 to 1.95	3.4 MHz max 1 MHz Fm+	-40 to +125	10 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MS85RC512TY	Automotive/Industrial	512K	1.8 to 3.6	3.4 MHz max 1 MHz Fm+	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MS85RC512LY	Automotive/Industrial	512K	1.7 to 1.95	3.4 MHz max 1 MHz Fm+	-40 to +125	10 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MS85RC256TY	Automotive/Industrial	256K	1.8 to 3.6	3.4 MHz max 1 MHz Fm+	-40 to +125	100 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8
MS85RC256LY	Automotive/Industrial	256K	1.7 to 1.95	3.4 MHz max 1 MHz Fm+	-40 to +125	10 trillion	10 years (125°C)	SOP-8 (150mil) / DFN-8

Global contacts

| Authorized Distributors

| RAMXEED web site
<https://www.ramxeed.com/> ▶



Americas



KAGA FEI AMERICA, Inc.



Master Electronics, Inc.



MEMPHIS Electronic Inc



Rutronik Inc.

Asia, Oceania



DTDS Technology Pte. Ltd



J.P. Electronic Devices (I) Pvt. Ltd.



KAGA FEI



MEMPHIS Electronic Hong Kong Ltd.



Memoriesolution GmbH



Rutronik Electronics



Unified Global Tech (I) Pvt Ltd



Univa Technologies Pte. Ltd.

Europe, Middle East, Africa, Central Asia



GLYN GmbH & Co. KG



KAGA FEI EUROPE GmbH



MEMPHIS Electronic GmbH



Memoriesolution GmbH



Rutronik Elektronische Bauelemente GmbH

| Distributors based in Greater China

<https://www.ramxeed.com/company/office/#china> ▼

Chinese language catalogue

<https://ramxeed-cn.com/download/> ▼

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