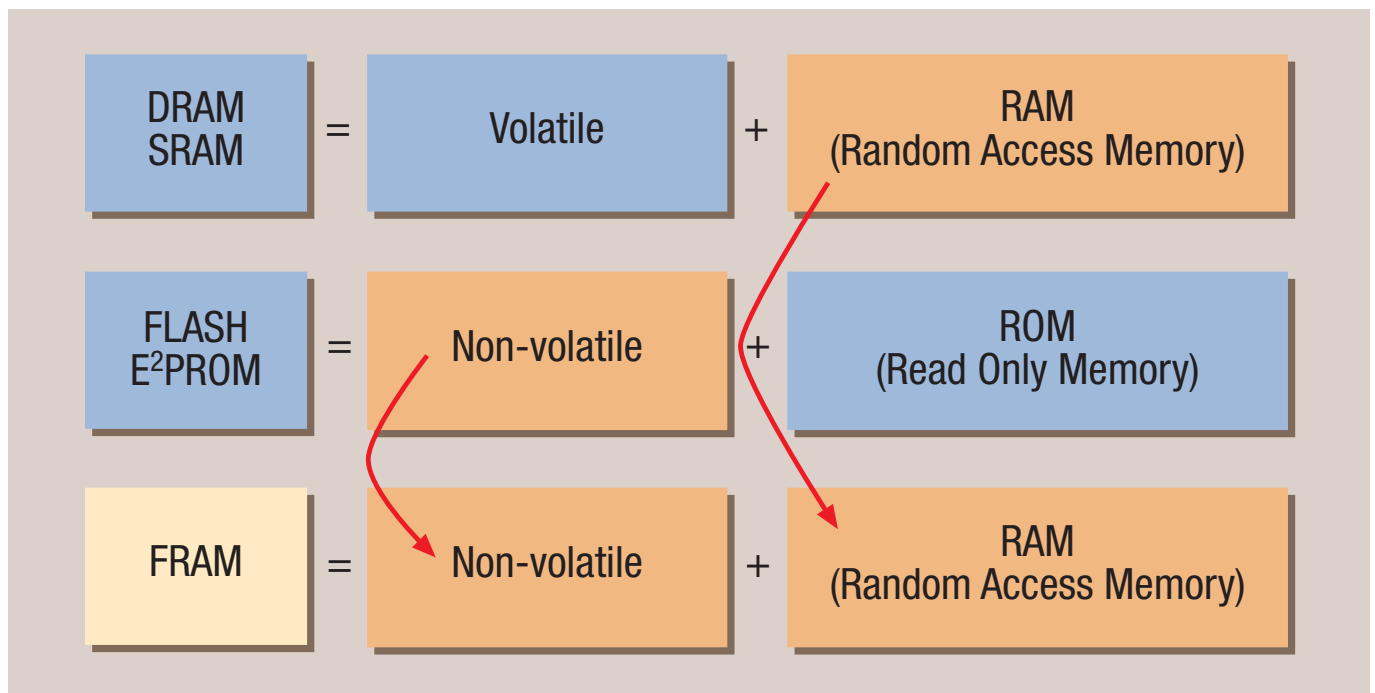


FACTSHEET
FRAM STAND ALONE MEMORY
PRODUCTS

FRAM - Stand alone memory products

'FRAM' combines advantages of both RAM and ROM



FRAM = Ferroelectric Random Access Memory

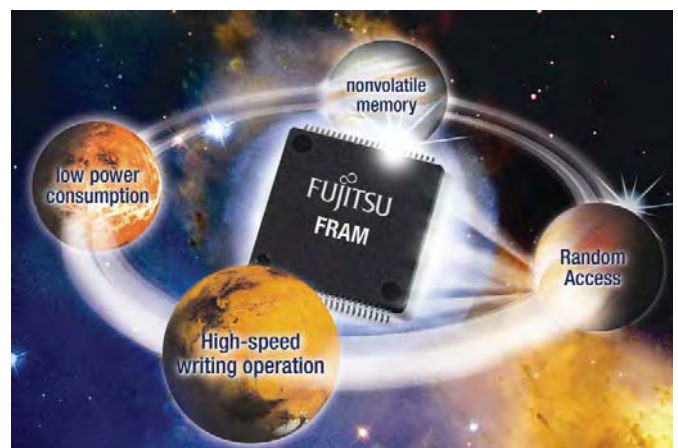
Description

FRAM (Ferroelectric Random Access Memory) is the 'non-volatile' 'random access' memory, which uses ferroelectric film as a capacitor for storing data. (Fujitsu utilises PZT as ferroelectric material). Combining the advantages of both ROM and RAM devices, FRAM can achieve high-speed read/write and also retain data even after the power is turned off.

FRAM retains data for minimum of 10 years while eliminating the reliability concerns, functional disadvantages and system design complexities of battery-backed SRAM. Its fast write and high write endurance as well as its low power consumption makes it superior to other types of non-volatile memory i.e. EEPROM or FLASH.

Fujitsu - FRAM technology leader

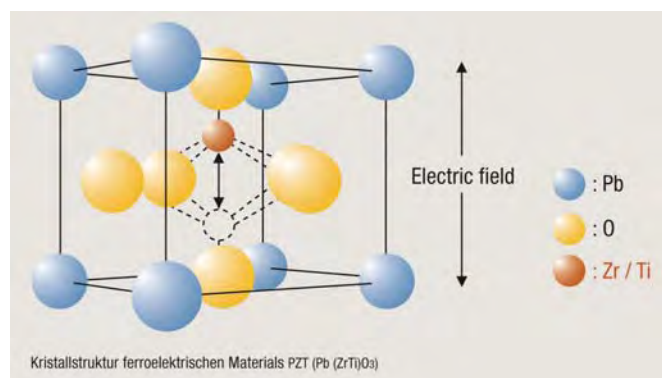
Fujitsu is a leader in FRAM technology, with more than 10 years' experience, and was the first semiconductor manufacturer to establish an embedded FRAM process.



**FACTSHEET
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Features

- High endurance (10^{10} read/write cycles)
- High-speed writing (150ns access, 235ns cycle)
- Low power consumption (10 μ A standby, 5mA operating)
- Non-volatility
- 3.3 Volt operation voltage
- -20 to 85°C std. (-40 to 85°C for MB85R256H) temperature range



Product overview:

Part number	Memory size	Interface	Package
MB85RS256	256 kbits (32k x 8)	SPI	SOP-8P
MB85R256H	256 kbits (32k x 8)	Pseudo SRAM	SOP-28P, TSOP-28P
MB85R1001	1 Mbits (128k x 8)	Pseudo SRAM	TSOP-48P
MB85R1002	1 Mbits (64k x 16)	Pseudo SRAM	TSOP-48P
MB85R2001	2 Mbits (256k x 8)	Pseudo SRAM	TSOP-48P
MB85R2002	2 Mbits (128k x 16)	Pseudo SRAM	TSOP-48P

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