

# Fujitsu introduces new FRAM product series with extended voltage range

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The new Fujitsu Semiconductor FRAM V Series offers greater efficiency in design and logistics for the industrial and metering sectors

Fujitsu Semiconductor Europe today introduces a new FRAM (Ferroelectric Random Access Memory) product series with an extended voltage range of 3.0V - 5.5V, offering significantly greater design flexibility for customers in the industrial and metering sectors. With this product series, Fujitsu not only supports 3V systems, but 5V systems as well. The higher operating voltage enabled by the product series leads to a higher signal/noise ratio, making the overall system more robust. In addition, by minimising the number of components that need to be qualified and stocked at customer sites, the V series makes the design and logistic process more efficient.

The new FRAM "V Series" will offer products ranging from 16kbit to 256kbit, covering both I<sup>2</sup>C and SPI interfaces. The first two offerings from the new product series, MB85RC16V and MB85RC64V, feature I<sup>2</sup>C serial interfaces at an operating frequency of max. 400 kHz, covering the densities of 16kbit and 64kbit respectively. In comparison to 3V products, MB85RC16V and MB85RC64V deliver a reduced active current consumption of 40µA (typical at 400kHz), while

maintaining the ultra low 5µA typical standby current. With regards to reliability, [Fujitsu](#) has achieved significant improvements in the V series. The new products deliver 10 years' data retention at 85 degrees Celsius as well as an endurance of 1 trillion (10<sup>12</sup>) read/write cycles giving a guaranteed operation over the industrial temperature range of -40°C to +85°C. The V series has been specifically tailored for the industrial and metering sectors and therefore meets the main requirements of these markets, namely low [power consumption](#), robustness and high reliability. In fact there are many 5V systems operating in parallel to 3V systems, where a different set of components would have to be applied due to the voltage difference.

FRAM is a special form of Non-Volatile Memory, which combines the advantages of SRAM and EEPROM with fast writing access, extremely low power consumption and virtually unlimited read/write endurance. It has become an alternative to EEPROM in applications such as power meters, factory automation, monitoring systems etc., where frequent logging functions and low power consumption are required, and where it is essential to prevent any data loss even at sudden power shutdown. Apart from the V Series, Fujitsu already offers a wide variety of FRAM devices operating between 2.7 - 3.6V, which are equipped with I<sup>2</sup>C, SPI or parallel interface. Density levels vary from 16kbit to 4Mbit.

MB85RC16V and MB85RC64V are now in mass production. Following launch, Fujitsu is going to release the third device MB85RS64V with SPI interface in May 2012. Additional devices incorporating 256kbit with I<sup>2</sup>C or SPI interfaces will also be launched in 2012. All products of this series are or will be available in EEPROM compatible 8-pin plastic SOP packages.

Source: Fujitsu

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