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Ramtron announces serial nonvolatile F-RAM devices

A [Ramtron International](#) product story

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Ramtron International Corporation has introduced two serial nonvolatile F-RAM products that offer high-speed read/write performance, low voltage operation and optional device features.

The 256Kb devices, which are part of Ramtron's V-Family of F-RAM products, include the FM24V02, a two-wire (I2C) interface, and the FM25V02 with serial peripheral interface (SPI).

The serial **I2C** and SPI V-Family devices operate at a voltage range of 2V to 3.6V in an industry-standard eight-pin **SOIC package**.

The FM24V02 and FM25V02 feature fast access, No-Delay writes, virtually unlimited read/write cycles, and low power consumption.

The devices are drop-in replacements for 256Kb serial Flash and serial **EEPROM** memories in industrial control, metering, medical, military, gaming and computing applications, among others.

The FM24V02 performs write operations up to the full I2C bus speed of 3.4MHz, while supporting legacy timing for 100kHz and 400kHz.

No write delays are incurred and the next bus cycle may commence immediately without the need for data polling.

In addition, the product offers up to 100 trillion (1E14) read/write cycles, which are orders of magnitude higher than EEPROM.

The FM24V02 exhibits much lower power during writes than EEPROM since write operations do not require an internally elevated power supply voltage for write circuits.

The FM24V02 operates at 150uA at 100kHz, with 90uA in standby and 5uA during sleep mode.

The FM25V02 consumes 3mA while running at a 40MHz SPI clock rate, 90uA during standby, and 5uA during sleep mode.

The FM25V02 offers a typical active power consumption of 38uA per MHz.

A read-only Device ID, standard on both serial devices, allows the host to determine the manufacturer, product density and product revision.

An optional read-only serial number is also available, which can be used to identify a board or system with an ID that is different from any other host in the world.

The FM24V02 and FM25V02 are guaranteed over an industrial temperature range of -40C to +85C.

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