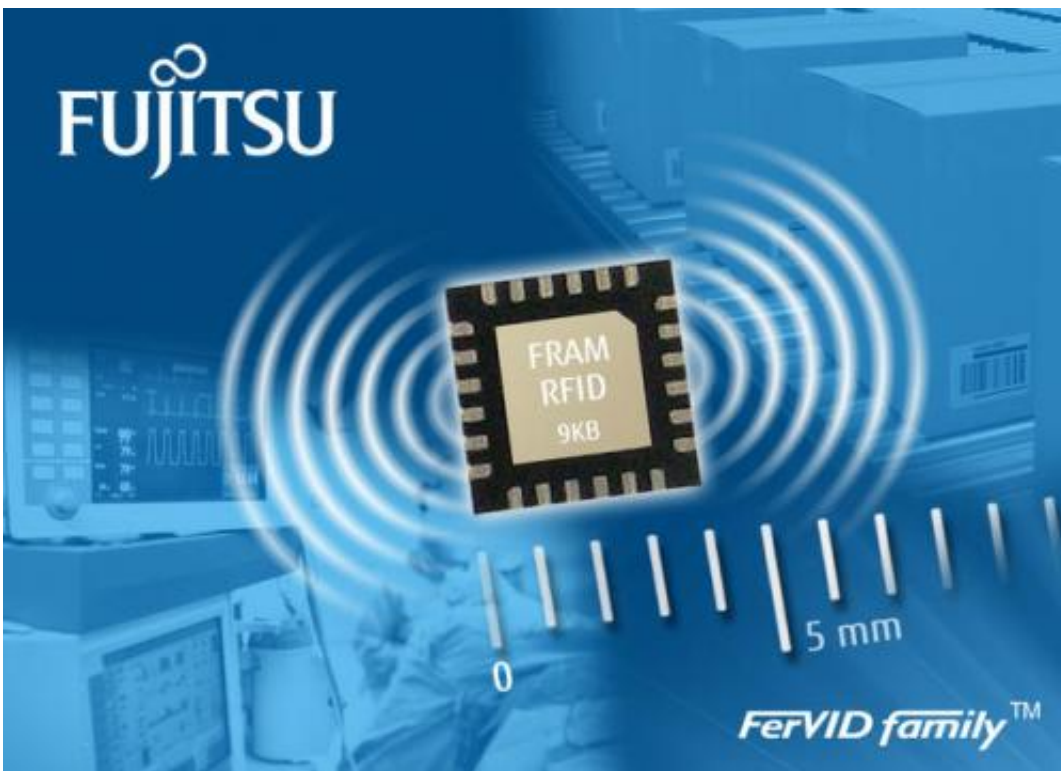


New chip for high-frequency RFID tags with industry-leading 9 KB FRAM

September 4 2012



Fujitsu Semiconductor Europe (FSEU) today announced a new arrival to its FerVID family of chips for RFID tags. As with all members of the FerVID family, the MB89R112 series uses ferroelectric memory (FRAM) for fast write speeds, high-frequency rewritability, radiation tolerance and low-power operation. With industry-leading 9 KB

memory, the series offers tailored solutions for factory automation and medical equipment as well as for embedded and industrial applications.

Since 2004, Fujitsu has developed FRAM products as part of the FerVID family with two [frequency bands](#), for use as chips in high-functionality RFID tags operating in the HF band (13.56 MHz) and UHF band (860 to 960 MHz). Today, its products serve a wide range of applications, including chips for data-carrier tags in the factory automation and maintenance sectors, chips capable of withstanding [gamma radiation](#) or electron beams for the medical and pharmaceutical sectors, and chips with serial interfaces for embedded applications.

The new MB89R112 series includes 9 KB of FRAM, the greatest density available in an RFID chip operating in the HF band as defined in ISO/IEC 15693. Of this 9 KB, 8 KB is provided as user [memory](#), enabling access by read/write operations to the entire 8 KB region as defined in ISO/IEC 15693. The series will be offered in two variants, with 24pF and 96pF input capacitance. Writing 8 KB of data takes approximately four seconds, a high-speed operation that is six times faster than speeds achieved by E2PROM products. The greater data volume available on [RFID tags](#) enables greater efficiency for applications such as product lifecycle traceability management – from manufacturing to logistics, use and disposal – or on-site data logging for equipment maintenance records.

The market is demanding higher-capacity memory, plus RFID connectivity to sensors and microcontrollers, so as to facilitate the wireless modification of product operating parameters or the logging of environmental factors during distribution. These features would benefit production control in automotive and electronics manufacturing, as well as maintenance applications in aviation, road-building, construction and civil engineering.

The MB89R112QN products enable these features by supplementing the HF RFID interface with an additional SPI serial interface for microcontroller connectivity. Since the 8 KB of user memory in FRAM can be accessed from the microcontroller via SPI, shared memory regions can be used both for data logging and as a parametric area for changing the microcontroller's operating parameters.

Application examples include logging environmental readings for logistics, detecting equipment errors, modifying electronic displays, altering sensor threshold values, changing firmware settings, plus many other novel and innovative applications that were previously unworkable.

Sample quantities of MB89R112 series products will start shipping immediately.

Source: Fujitsu

Citation: New chip for high-frequency RFID tags with industry-leading 9 KB FRAM (2012, September 4) retrieved 10 July 2024 from <https://phys.org/news/2012-09-chip-high-frequency-rfid-tags-industry-leading.html>

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