ARM® Cortex™-M3-based Microcontrollers with Advanced Flash Memory Technology

Fujitsu Semiconductor America, Inc. (FSA) introduces the initial offerings of the Fujitsu FM3 MCU family of 32-bit general-purpose RISC microcontrollers based on the ARM® Cortex™-M3 CPU core. The High-Performance MB9BF500/400/300/100 and Basic MB9AF100 Series are the first products from the Fujitsu FM3 family and are targeted at high-performance motor-control applications in industrial automation and consumer appliances. Initial samples will be available starting in late November 2010.

With the FM3 MCU family, Fujitsu builds on the industry's leading-edge Cortex-M3 core architecture by integrating the company's highly reliable and high-speed secure embedded flash technology and robust peripheral features. The FM3 family also provides communication and control macros, along with custom enhancements such as high-precision motor control and a wide range of operating voltages, enabling system designers to use the FM3 family to meet a full range of design requirements.

The High-Performance MB9BF500/400/300/100 Series is designed to provide the full range of integrated advanced peripheral functions and the higher-speed and greater memory density required by the 32-bit market. The devices operate at 80MHz, with up to 512KB high-speed flash memory and up to a 64KB SRAM. The MCUs in the series are capable of supporting USB, CAN, UART, SIO, I2C, and LIN communications protocols, and will be available in LQFP120, LQFP100, QFP100, and BGA112 packages.

The Basic MB9AF100 Series features the lower cost, power-saving technology and compact design required by the 16-bit market. The Basic Series, which includes limited versions of the advanced peripheral functions of the High-Performance Series, is optimized for use primarily in major home appliances, digital consumer devices and office automation devices. The Basic Series devices operate at 40 MHz, support up to 256KB high-speed flash memory and up to 32KB SRAM, and are available in LQFP120, LQFP100, QFP100, and BGA112 packages.

The MCUs incorporate Fujitsu's highly reliable, high-speed NOR flash memory. Designed to deliver 100,000 write cycles with data retention up to 20 years, the Fujitsu single-cycle flash memory with ECC and data-protection functionality can operate with a zero wait cycle at up to 60 MHz, and offers among the fastest memory access in its class.

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