Press Release

Fujitsu Microelectronics Limited

Fujitsu Expands Line-Up of Low Pin Count 8-bit Microcontrollers

-Adds brushless DC motor control function -

Yokohama, Japan, March 3, 2010 - Fujitsu Microelectronics Limited today announced the new "MB95330H series" to expand its line-up of low pin count microcontrollers, for its "F^{2}MC-8FX family"(*1) of high-performance 8-bit microcontrollers with flash memory. The new series features a brushless DC motor(*2) control function, and starts with six new products. This will satisfy the needs for low pin count microcontrollers with brushless DC motor control for consumer appliances and small electric tools, such as electric drills.
Samples of the new series will be available from the end of March 2010 and mass-production in June 2010.

In recent years, there has been rapidly-increasing demand in Japan and other parts of Asia for 8-bit microcontrollers with brushless DC motor control for small system control use, for home applications, OA equipment and industrial instruments. In response to these needs, Fujitsu Microelectronics has added the "MB95330H series" which features a brushless DC motor control function with only 32 pins, to its "F^{2}MC-8FX family".

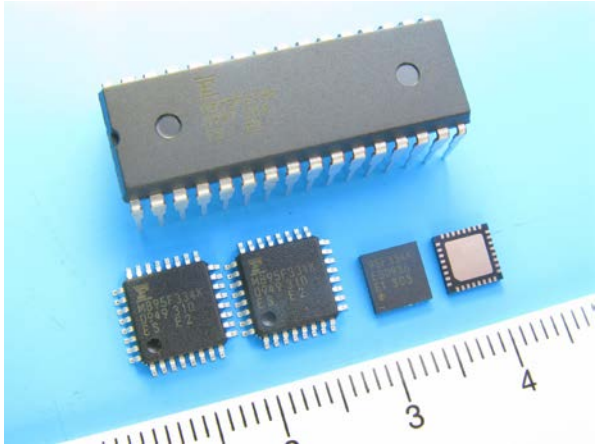

Figure 1. MB95330H series

This new series features various timers for general-purpose and communication functions, besides the brushless DC motor control function. Thus, it is suitable for use not only as a main microcontroller, but also as a sub-microcontroller which covers lack of features of the existing system configuration.

In addition, the series employs 1-line on-chip debug which uses only one pin on the microcontroller and embedded oscillation circuit, etc. These enable maximizing the number of pins to be used freely, and reduction of total system cost for customers.

Sample Price and Release Schedule

Series	Price	Sample release schedule
MB95330H Series	JPY 300	End of March 2010

Press Contacts
Fujitsu Semiconductor Limited Public and Investor Relations Department
Inquiries : https://www-s.fujitsu.com/jp/group/fsl/en/release/inquiry.html

Line-up

Product	ROM capacity	RAM capacity
MB95F332H, MB95F332K	8Kbyte	240byte
MB95F333H, MB95F333K	12Kbyte	496byte
MB95F334H, MB95F334K	20Kbyte	1008byte

Sales Target

3 million units in FY2010 (April 2010 - March 2011)

Key Features of the New Series

1) Brushless DC motor controller

The new series enables formation of suitable three-phase waves for brushless DC motor control, for use ranging from pump motors in dishwasher machines, to air-cooling fans in PCs.

2) High-performance flash memory

The microcontrollers embed high-performance flash memory which can be rewritten/read 100,000 times even while running a program, and is guaranteed to retain the data for 20 years. Furthermore, a flash security function protects the customer's software from unauthorized external programming.

3) Reduced system cost

By embedding CR oscillating, a low voltage detection circuit and watchdog timer, the microcontrollers successfully reduce required external components, such as an oscillator and reset IC. This helps to cut down customers' overall system cost.

For More Information

http://jp.fujitsu.com/group/fml/en/（Fujitsu Microelectronics）

Glossary and Notes

(1) F^2MC-8FX Family:
Product family name of 8-bit microcontrollers by Fujitsu Microelectronics

(2) Brushless DC Motor:
Synchronous electric motor powered by direct-current electricity (DC) and which has an electronically controlled commutation system, instead of a mechanical commutation system comprising brushes and a commutator.

Press Contact:
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https://www-s.fujitsu.com/jp/group/fml/en/release/inquiry.html

About Fujitsu Microelectronics Limited (FML)

Fujitsu Microelectronics Limited designs and manufactures semiconductors, providing highly reliable, optimal solutions and support to meet the varying needs of its customers. Products and services include ASICs/COT, ASSPs, power management ICs, and flash microcontrollers, with wide-ranging expertise focusing on imaging, wireless, automotive and security applications. Fujitsu Microelectronics also drives power efficiency and environmental initiatives. Headquartered in Yokohama, Fujitsu Microelectronics Limited was established as a subsidiary of Fujitsu Limited on March 21, 2008. Through its global sales and development network, with sites in Japan and throughout Asia, Europe, and the Americas, Fujitsu Microelectronics offers semiconductor solutions to the global marketplace.

For more information: http://jp.fujitsu.com/fml/en/

Appendix

Specifications of "MB95330H Series"

SPEC	MB95F332H	MB95F333H	MB95F334H	MB95F332K	MB95F333K	MB95F334K
ROM capacity	8Kbyte	12Kbyte	20Kbyte	8Kbyte	12Kbyte	20Kbyte
RAM capacity	240byte	496byte	1008byte	240byte	496byte	1008byte
Low-voltage detection reset	No			Yes		
Reset input	Dedicated			Selected by software		
Operating volt.	2.4V~5.5V					
Clock	Selectable from external OSC clock, or On-chip CR OSC (after implementation: accuracy assurance ±2%)					
Motor control	Output 3-phase waves for brushless DC motor control					
Timers	8/16-bit composite timers(selectable from PWC,PWM, Capture), 8/16-bit PPG timer,16-bit reload timer, time-base timer					
Communication	LIN-UART,UART/SIO,I^2C					
A/D converter	8ch (8-bit/10-bit resolution)					
Package	LQFP,32 pins SH-DIP,32 pins QFN,32 pins					

Road Map