

Fujitsu Expands Line of New 8FX 8-bit Microcontrollers for DC Motor Control

Optimized for applications in appliances such as microwaves, washing machines, dryers, and electric razors

Yokohama, Japan, May 31, 2012 – Fujitsu Semiconductor Limited today announced the addition of new products to its “New 8FX” family of high-performance 8-bit microcontrollers, including 9 products from the 48-pin MB95690 Series, which includes brushless DC motor control functionality, and 6 products from the 64-pin MB95810 Series, which features analog comparator technology. Sample quantities of these new products will begin shipping from June 2012.

The MB95690 Series and MB95810 Series are being offered as low-cost, low-power main microcontroller options for a wide range of applications in both Japanese and foreign products, including applications such as cooking appliances, home electronics, personal care products, power tools, and office automation equipment.

Brushless DC motors are employed in cooking appliances, such as microwaves and food processors; office appliances, such as printers and photo copiers; and personal care products, such as hair dryers and electric razors. While superior in terms of both noiselessness and long life expectancy, these motors account for a significant percentage of a product’s overall cost, and there is significant demand for lower cost microcontrollers for controlling brushless DC motors.

In addition to brushless DC motor control, there is also considerable need for supporting relatively high-end products that require fine-grained system control, such as temperature sensors, light sensors, and other applications that monitor a variety of environmental parameters surrounding a device.

Moreover, with increasing focus in recent years on lowering the electric power consumed by electronics products, there is growing demand to reduce power consumption as much as possible during normal operation and standby.

The MB95690 Series meets these demands. It is a power-efficient microcontroller in a 48-pin package with 60KB of built-in flash memory that, in addition to brushless DC motor control functionality, includes various timers and communications functions that are useful for general-purpose applications as well as peripheral circuits, such as an analog comparator with reference voltage. The MB95690 Series enables a reduction in the number of system components and can also run large scale processing programs. It can be used as a power-efficient system management microcontroller for system and power management, or it can be used as a sub-microcontroller for added functionality in response to specification changes. Samples of the 9 new products in this Series will begin shipping in June.

At the same time, samples of 6 new products in the MB95810 series will also begin shipping in June. With 60KB of flash memory capacity in a 64-pin package, it is also equipped with

peripheral circuits, such as up to 12 channels of high-precision A/D converters and an analog comparator with reference voltage.

Product Overview

1. Built-in DC brushless motor controller (MB95690 Series)

A multi-pulse generator (for DC motor control) enables the generation of a three-phase PWM waveform for controlling a brushless DC motor. It can be used for a variety of brushless DC motors.

2. Embedding external components reduces number of components

Because the internal CR oscillating circuit that runs the operating clock, the low-voltage detection circuit that detects a drop in voltage, and an analog comparator with reference voltage are built into the microcontrollers, the need for an external oscillator, reset IC, and operational amplifier is eliminated, thus contributing to a reduction in external components. The CR oscillator has a precision level of $\pm 2\%$.

3. High-performance flash memory with industry-leading re-write/read ability

The microcontrollers are embedded with industry-leading high-performance flash memory that can be re-written/read 100,000 times. Furthermore, a flash security function protects the customer's software from unauthorized external program reading.

Sample: Reference Price and Release Schedule

Product Name	Price (With TAX)	Delivery
MB95F698KPMC-G-SNE2	150 Yen	From June 2012
MB95F818KPMC1-G-SNE2	170 Yen	From June 2012

Sales Target

1,800,000 pieces per month when in mass-production. (Total of 2 series)

For More Information:

<http://jp.fujitsu.com/group/fsl/en/> (Fujitsu Semiconductor)

Press Contact:

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Inquiries: <https://www-s.fujitsu.com/jp/group/fsl/en/release/inquiry.html>

About Fujitsu Semiconductor Limited

Fujitsu Semiconductor Limited designs, manufactures, and sells semiconductors, providing highly reliable, optimal solutions and support to meet the varying needs of its customers. Products and services include microcontrollers, ASICs, ASSPs, and power management ICs, with wide-ranging expertise focusing on mobile, ecological, automotive, imaging, security, and high-performance applications. Fujitsu Semiconductor also drives power efficiency and environmental initiatives. Headquartered in Yokohama,

Fujitsu Semiconductor Limited (formerly named 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 Semiconductor offers semiconductor solutions to the global marketplace.

For more information: <http://jp.fujitsu.com/group/fsl/en/>

[Line-up]

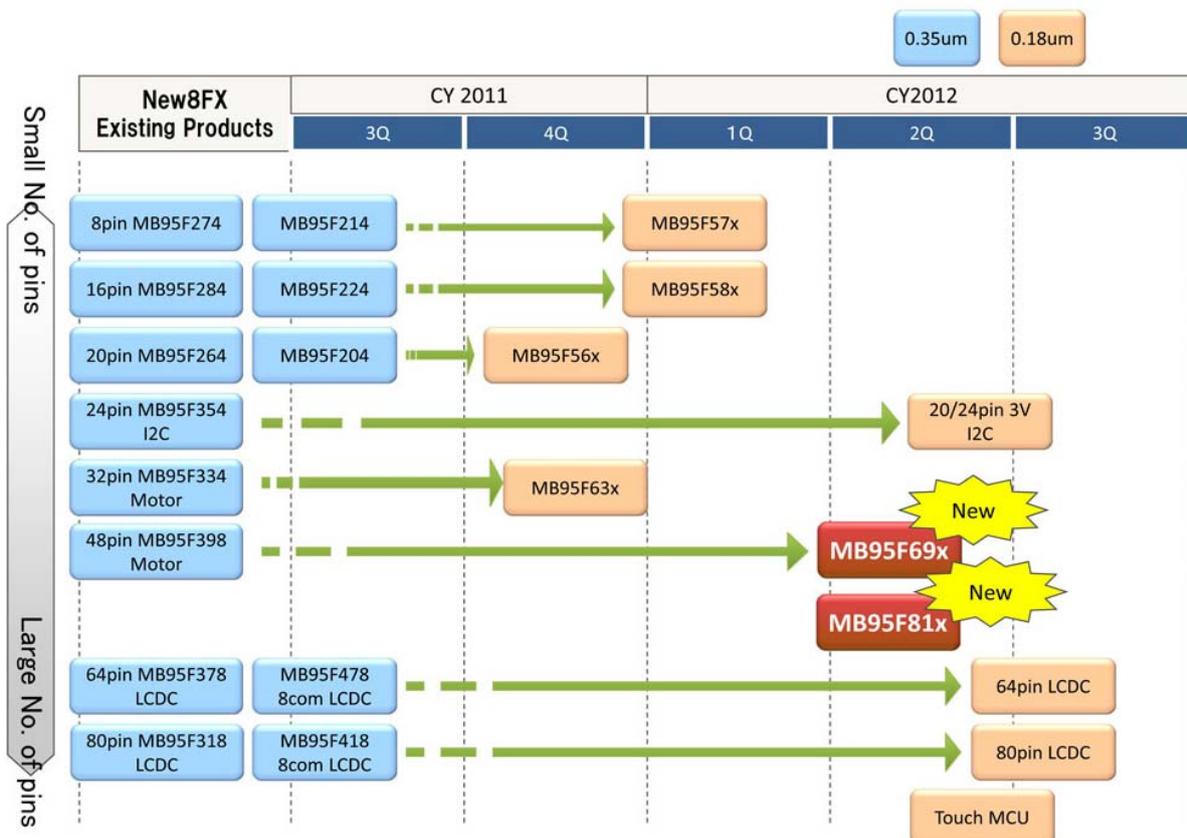
MB95690 Series (9 Products)

Operating Frequency (Max.)	Package Lead-pitch / Size	Flash Memory/RAM		
		20KB/512B	36KB/1024B	60KB/2048B
16.25MHz	LQFP-48pin 0.5mm, 7.00mm x 7.00mm	MB95F694KPMC-G-SNE2	MB95F696KPMC-G-SNE2	MB95F698KPMC-G-SNE2
	LQFP-52pin 0.65mm, 10.00mm x 10.00mm	MB95F694KPMC1-G-SNE2	MB95F696KPMC1-G-SNE2	MB95F698KPMC1-G-SNE2
	QFN-48pin 0.5mm, 7.00mm x 7.00mm	MB95F694KWQN-G-SNE1	MB95F696KWQN-G-SNE1	MB95F698KWQN-G-SNE1

MB95810 Series (6 Products)

Operating Frequency (Max.)	Package Lead-pitch / Size	Flash Memory/RAM		
		20KB/512B	36KB/1024B	60KB/2048B
16.25MHz	LQFP-64pin 0.5mm, 10.00mm x 10.00mm	MB95F814KPMC1-G-SNE2	MB95F816KPMC1-G-SNE2	MB95F818KPMC1-G-SNE2
	LQFP-64pin 0.65mm, 12.00mm x 12.00mm	MB95F814KPMC-G-SNE2	MB95F814KPMC-G-SNE2	MB95F814KPMC-G-SNE2

[Products Roadmap]



[Figures]

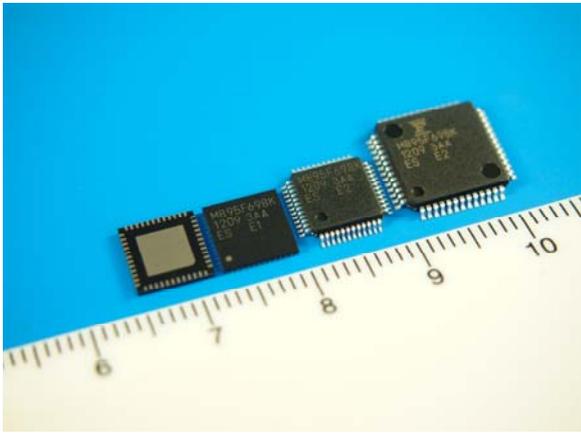


Figure 1. MB95690 Series

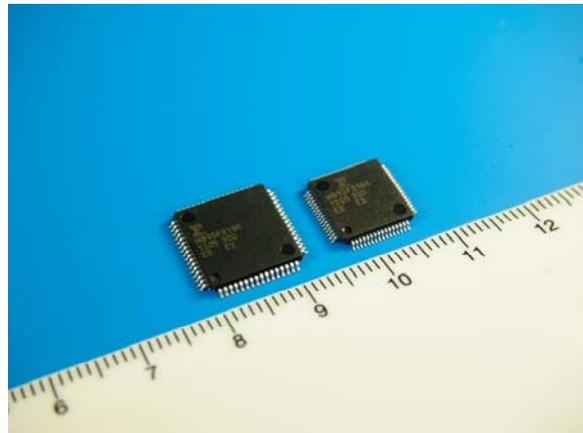


Figure 2. MB95810 Series