

Fujitsu Releases Sixth Generation of Milbeaut Imaging Processors Enables stunning still images and movies

Yokohama, Japan, February 4, 2011 – Fujitsu Semiconductor Limited today announced the development of MB91696AM, the newest model in the Milbeaut[®] series of advanced imaging processors. Samples of the new model will begin shipping in April 2011.

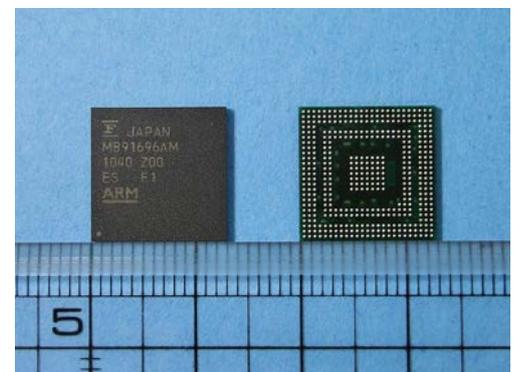
MB91696AM represents the sixth generation of the Milbeaut[®] image processing algorithm, which has been widely adopted due to its high reliability, allowing both high-speed continuous photography at 8 frames per second (at a 14 megapixel resolution) and higher video quality. Furthermore, MB91696AM is equipped with a newly-developed Full HD H.264 codec engine, enabling clear, low-noise recording of high-resolution Full Hi-Vision movies (1920 X 1080 megapixel).

By advancing the development of these proprietary technologies, Fujitsu Semiconductor has been able to achieve a balance between quality and speed for both high-resolution video and still photography, thereby enabling camera solutions to be developed using a single chip.

In recent years, the shift toward high-definition technology in the market for AV devices, including digital cameras, mobile phone cameras, and digital video cameras, has been accompanied by heightened demand for increasingly higher resolutions for capturing high-speed photographs and HD movies. Using conventional technology, however, it still remains a challenge to quickly handle dramatically-increased processing volumes of high-resolution images.

Fujitsu Semiconductor has responded to these challenges by enhancing its proprietary Milbeaut[®] image processing algorithm and H.264 Full HD codec engine, thereby meeting the high-resolution needs of photographers, from still images to HD movies, using a single chip.

MB91696AM represents the sixth generation of the Milbeaut[®] image processing algorithm. Milbeaut[®] is an image processor that has been widely adopted in digital cameras, mobile phone cameras and other devices since its release in 2000. MB91696AM features a significantly-improved image processing algorithm that enables higher image quality and processing performance. At the same time, the processor is equipped with two ARM processors, an industry-standard CPU core, and features continuous photography performance approximately five times that of



MB91696AM (13mm × 13mm)

previous Fujitsu products.

In addition, Fujitsu has performed a complete optimization of its Full HD H.264 codec engine. The new engine enables the capturing of high-resolution images through a proprietary image processing algorithm, which was developed in collaboration with Fujitsu Laboratories Limited. In addition, with an architecture that significantly reduces data-transfer volumes, the processor reduces energy consumption.

In the future, Fujitsu plans to bring the product to the global market while continuing to develop high-resolution, high-performance, and energy-efficient products.

This product was jointly developed by Fujitsu VLSI Limited, Fujitsu Microelectronics Limited, and Fujitsu Laboratories Limited.

Sample Price and Release Schedule

Product	Price	Sample release schedule
MB91696AM	3000 Yen	From April 2011

Sales Target

1 million units/Month from 2011 (Mass-product)

Features of MB91696AM

1. Sixth generation Milbeaut[®] image processing algorithm

The sixth generation Milbeaut[®] image processing algorithm improves image processing flow, performs real-time noise correction and filter processing, and achieves even higher image quality. This allows continuous photography speeds of roughly five times that of previous Fujitsu products, making possible 8 frames per second at 14 megapixels and 5.5 frames per second at 20 megapixels.

2. Enhanced Full HD H.264 codec engine developed specifically for digital cameras

Fujitsu has developed a new H.264 codec engine designed specifically for digital cameras. This engine is based on the H.264 codec engine algorithm, originally developed by Fujitsu Laboratories Limited and now employed in a large number of AV devices.

This engine produces high-quality images while removing video-specific noise, and reduces energy consumption to approximately two-thirds that of conventional products.

3. Equipped with dual ARM[®] processor cores

MB91696AM is equipped with two ARM[®] processors, which are commonly used in mobile phones and other devices, thereby enabling the parallel processing of image applications. Having separate cores capable of operating independently from each other contributes greatly to digital camera response speeds and other performance. In addition, a wide variety of middleware and development environments can be employed, helping to reduce customer development work.

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About Fujitsu Semiconductor

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/>

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ARM is the registered trademark of ARM Limited in the EU and other countries.

Appendix

Key Specification of MB91696AM

Product Name		「MB91696AM」
Process Technology		65nm CMOS Process
Power Voltage	Internal	1.2V±0.1V
	I/O	3.3V±0.3V
	SDRAM	1.8V±0.1V(DDR2) 1.5V±0.075V(DDR3)
Input Clock Frequency		48MHz
CPU Core Operating Clock Frequency (Max.)		288MHz
Image Processor area (Max.)		216MHz
Video Codec		H.264/MPEG-4 AVC
HDMI Interface		Yes
Package	Type	FBGA-385
	Size	13mm × 13mm