Press Release

Fujitsu Semiconductor Limited

Fujitsu Releases RF Transceiver LSI for Multimode, Multiband Communication with SAW Filter-less

- World's first such LSI for next-generation LTE standard -

Yokohama, Japan, June 2, 2010 – Fujitsu Semiconductor Limited today announced the development of MB86L10A, a new RF transceiver LSI device for the LTE (Long Term Evolution) (*1), the next-generation mobile phone standard in Japan. Sample shipments of the new LSI will start from August 2010.

Fujitsu is currently shipping MB86L01A, a multiband RF transceiver LSI that has a built-in interface conforming to the MIPI Alliance's (*2) DigRF Ver4 (4G-DigRF) (*3) specification and that supports the LTE next-generation communication standard. The MB86L10A features two receiver circuits in a highly-integrated single-chip package, enabling stable reception. Use of the MB86L10A enables mobile phone systems for the LTE communications standard to be rapidly deployed with a compact footprint.

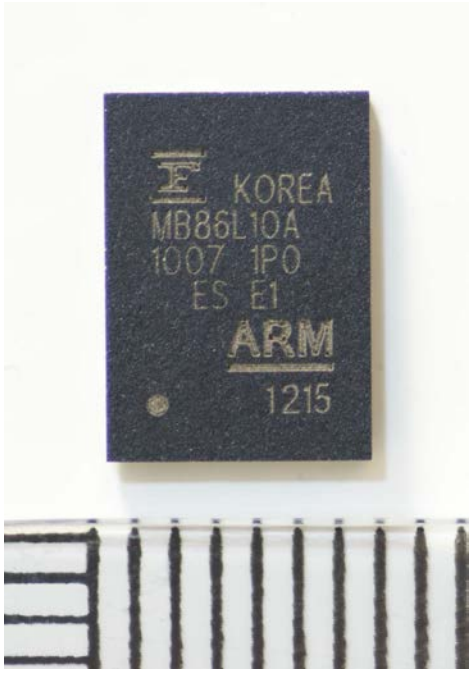

Figure-1. MB86L10A

With the current 2G and 3G mobile phone networks, it takes time to download large video files and other heavy files. The LTE next-generation communications method has been adopted as a standard specification by 3GPP (*4) in order to offer a communications method able to deliver Internet services with greater speed and stability.

Starting at the end of 2010, countries around the world will begin to offer services using the LTE standard, enabling smooth Internet use outdoors that is equivalent to the broadband Internet services used inside the home. Mobile phone services using the LTE standard are attracting considerable attention and are expected to transform the mobile phone market as people use mobile phones the same way computers are used now, opening up the potential for a variety of new services. On the other hand, mobile phones simultaneously need to be compatible with current 2G and 3G communication standards. In the face of increases in both the functionality and the components required in order to accommodate the LTE communications standard, there is a desire for mobile phone handsets that are even smaller and lighter, and that operate without consuming too much power.

Fujitsu was quick to develop an RF transceiver LSI that could accommodate LTE communications, the MB86L10A, which also combined functions enabling compatibility with 2G communications methods, such as GSM/GPRS and EDGE (*5), as well as 3G methods, such as W-CDMA and HSPA (*6), all within a highly-integrated single chip, resulting in a cutting-edge RF transceiver LSI device that reduced the power consumed by mobile phones.

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With the MB86L10A, for the baseband LSI interface, it is equipped with both DigRF Ver3, which is the previous MIPI specification, as well as DigRF Ver4, which is for LTE, and just with the DigRF Ver4 interface is able to control 2G, 3G, or LTE baseband LSI devices because of compatibility with baseband LSI devices that have DigRF Ver3. Moreover, it has two receiver lines, enabling stable communication and highly-sensitive reception.

With the LTE communications method, because the various different bandwidth frequencies that have been divided up among different countries and the different communications modes are supported simply with firmware, the time and effort required to develop mobile phone systems can be dramatically reduced.

Fujitsu Semiconductor will continue to deliver cutting-edge RF solutions for the latest communications specifications and methods with technology and functions designed to reduce power consumption and simplify the development of mobile phone systems.

Sample Availability
MB86L10A: From early August, 2010

Sales Target
1 million units per month during the first fiscal year (ending March 31, 2011)

Product Features

1) Supports legacy communications methods (2G, 3G) as well as leading-edge LTE
The adjustments required for the different frequencies used by mobile phones in different countries and the different versions of LTE can all be handled through firmware. The product supports a variety of frequency bands, including GSM, UMTS, LTE, and TDD-LTE.

2) Has built-in leading-edge, high-speed baseband interface conforming to the MIPI DigRF Ver4 specification
With respect to baseband interfaces, the MB86L10A is equipped with both the DigRF Ver3 as well as the DigRF Ver4 interfaces, so it is compatible with baseband LSI devices having the 3G-DigRF for 2G and 3G systems, and for LTE it has the 4G-DigRF interface. It is also possible to control 2G, 3G, or LTE baseband LSI devices with just the 4G-DigRF interface. Moreover, through the DigRF interface, from the baseband LSI device it is possible to control, using built-in SPI (*8) and GPO (*9) interfaces, the output of external parts, such as the power amplifier, the power source IC for the power amplifier, and the timing of the antenna switch.

3) Designed to accommodate upgrades to transmission and reception features, while reducing parts counts and conserving space
For the transmission component of the MB86L10A, there is no need for the SAW filters, and it is equipped with 8 output ports that are directly able to drive the power amplifier, enabling a streamlined configuration of the RF system component, including peripheral components. In addition, it is also able to support multimode power amplifiers, which are expected to become more prevalent. In building systems that will remain on the cutting edge, these features enable further reductions in parts counts while conserving space.

4) Field trials in RF transceivers already successfully completed
The MB86L10A has already completed field trials that tested each bandwidth and mode for 2G, 3G and LTE using the DigRF interface, and the high performance of the product has been confirmed.

With the upcoming addition of LTE mode to mobile phones, advanced new methods for verifying the smooth handover (*10) performance between 2G, 3G, and LTE have dramatically reduced the time required to develop and verify LTE-compatible mobile phone handsets with high-speed, stable handover performance as well as other related equipment.

Glossary and Notes

*1. LTE (Long Term Evolution):
A next-generation high-speed mobile communications standard. Representing an advancement over the HSDPA third-generation mobile phone high-speed data communication specification, it is designed to achieve an ultra-high-speed transmission rate of 150 Mbps downstream and (theoretically) 50 Mbps upstream.

*2. MIPI Alliance
Mobile Industry Processor Interface Alliance, a non-profit standard-setting body focused primarily on hardware and software specifications for mobile terminals.

3. DigRF Ver4
An interface standard from the MIPI Alliance for the baseband-RF interface. Designed to handle high-speed data transmissions for LTE, it is a high-speed advancement over the previous DigRF Ver3 interface.

4. 3GPP
3rd Generation Partnership Project, a standards-setting body focused on standardizing systems for 3G mobile communications systems.

5. GSM, GPRS, EDGE
GSM (Global System for Mobile Communications), GPRS (General Packet Radio Service), and EDGE (Enhanced Data Rates for GSM Evolution) are all second-generation mobile phone standards.

6. HSPA
A standard for higher-speed data communications that build on the 3G W-CDMA mobile phone standard. HSPA is an amalgamation of HSDPA (High Speed Downlink Packet Access) and HSUPA (High Speed Uplink Packet Access).

7. TDD-LTE
A standard that implements LTE using TDD (Time Division Duplex) that is expected to be deployed in China and other countries.

8. SPI
Serial Peripheral Interface, an interface that enables fewer number of connecting terminals to be required when devices used within a piece of equipment are connected to each other.

9. GPO
General Purpose Output, an interface for general purpose output.

10. Handover
The process of switching the communications connection from one base station to another as a mobile phone handset moves.

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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.
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