

Fujitsu Launches WiMAX Baseband LSI for Mobile PCs

- Realizes world's smallest-level WiMAX USB dongles -

Tokyo, February 16, 2009 - Fujitsu Microelectronics Limited today announced the launch of a Mobile WiMAX(1) baseband LSI(2) targeted for the expanding mobile PC market. The new LSI features an approximate 60% size reduction compared to Fujitsu Microelectronics' previous Mobile WiMAX baseband LSI for mobile PCs. Samples of this new LSI, MB86K23, will start shipping from April 2009. By combining this new LSI with Fujitsu Microelectronics' previously-announced RF LSI(3), MB86K52, and power management LSI, MB39C316, WiMAX USB dongles featuring the smallest form-factor level in the world can be realized.

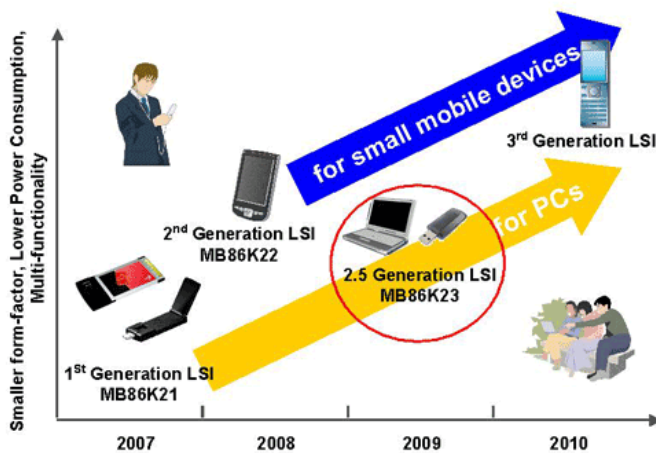


Figure 1. Fujitsu Microelectronics' WiMAX LSI Roadmap

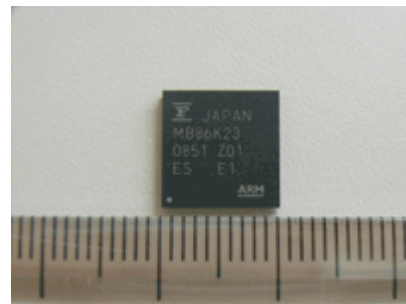


Figure 2. Mobile WiMAX LSI MB86K23 (unit: cm)

Mobile WiMAX is the highly anticipated next-generation broadband wireless technology, with service started in the United States in 2008, and planned to start in Japan and Taiwan in 2009. With the expansion of the WiMAX service area, high-speed Internet access anywhere, at any time will become a reality. In the near future, it is expected that mobile PCs will be equipped with WiMAX functionality built-in as standard.

This new MB86K23 LSI is the successor to Fujitsu Microelectronics' previously-released mobile WiMAX baseband LSI, the MB86K21, which targeted PC peripherals such as WiMAX USB dongles and PC cards, and which has been certified by the WiMAX Forum(4).

The new MB86K23 LSI allows a 60% reduction in area compared to the previous generation MB86K21, and when combined into a chipset with Fujitsu Microelectronics' RF LSI, MB86K52, and power management LSI, MB39C316, form-factors that are at the smallest level in the world (20mm x 40mm) for WiMAX USB dongles or PCI Express Half-Mini Cards (30mm x 26.8mm) containing both WiMAX and Wi-Fi functionality, can be realized. ODM vendors are planning to release such products using this WiMAX baseband LSI.

Fujitsu Microelectronics will be exhibiting Mobile WiMAX-related products at the GSMA Mobile World Congress 2009 to be held in Barcelona, Spain, from February 16-19, 2009 (Hall 2, Stand 2C126).

Press Contacts

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

Sample Pricing and Shipment

Product	Sample Price	Sample Availability
MB86K23	JPY 2,000	From April 2009

Sales Target

2.5 billion Yen by the end of fiscal year 2011 (April 2011 - March 2012)

Key Features of the New Series

1. Allows small form-factors for mobile devices

The new MB86K23 baseband LSI is manufactured in 65nm CMOS technology, which enables a small 10mm x 10mm LSI, and reduces the area by approximately 60% compared to the previous generation, MB86K21 product (16mm x 16mm). Even smaller form-factor WiMAX devices can be realized when this new baseband LSI is combined with Fujitsu Microelectronics' RF LSI, MB86K52, and power management LSI, MB39C316. The MB86K23 baseband LSI contains a USB interface, thus enabling WiMAX USB dongles in form-factors that are at the smallest level in the world (20mm x 40mm). It would also be possible to fit both WiMAX and Wi-Fi functionality into a PCI Express Half-Mini Card (30x26.8mm).

2. Low power consumption due to 65nm CMOS & power-gating technologies

The MB86K23 baseband LSI is manufactured in 65nm CMOS technology, which provides a 36% reduction in power consumption during operation compared to the previous MB86K21 product.

In addition, the power-gating technology 'CoolAdjust-PG'⁽⁵⁾, which was jointly developed with Fujitsu Laboratories Ltd., is utilized. This allows power to be switched off to circuit blocks that aren't in use. Subsequently, the standby current of the whole of a WiMAX module can be kept down to 0.5mA, which will allow a longer battery life for mobile WiMAX devices.

Glossary and Notes

1 Mobile WiMAX:

Conforms to the IEEE 802.16e-2005 Mobile WiMAX standard.

2 Baseband LSI:

LSIs that process communications protocols for wireless networks.

3 RF LSI:

RF stands for Radio Frequency. A communication device that utilizes high-frequency bands to receive and transmit wireless signals.

4 WiMAX Forum:

An industry-led, not-for-profit organization formed to certify and promote the compatibility and interoperability of broadband wireless products based upon the IEEE 802.16 standard. Fujitsu Microelectronics is a founding board member.

5 Power-gating technology 'CoolAdjust-PG':

A technology used to temporarily switch off power to blocks of LSI circuits that aren't in use, and to reduce leak current. Fujitsu Microelectronics calls its power management technologies for low power, 'CoolAdjust', with the power-gating technology, 'CoolAdjust-PG', being one of them.

Press Contact:

Public and Investor Relations
Fujitsu Limited

Inquiries

<https://www-s.fujitsu.com/global/news/contacts/inquiries/index.html>

For more information

Fujitsu Microelectronics Limited
<http://jp.fujitsu.com/group/fsl/en/>

Fujitsu Microelectronics Ltd. - Mobile WiMAX

About Fujitsu Microelectronics (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 Tokyo, 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/group/fml/en/>

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Key Specifications of the MB86K23 LSI

Package Size	10mm x 10mm
Bandwidth	3.5MHz, 5MHz, 7MHz, 10MHz, 20MHz
Modulation method	64QAM / 16QAM / QPSK
Wireless Access Method	512/1024/2048 FFT OFDMA
Antenna	2x2 STC/MIMO (Supports MatrixA & MatrixB)
OS Compatibility	Windows Vista® etc.
External Interfaces	USB, SDIO, SPI