

MOBILE WiMAX

802.16e-2005 2nd generation chip-set

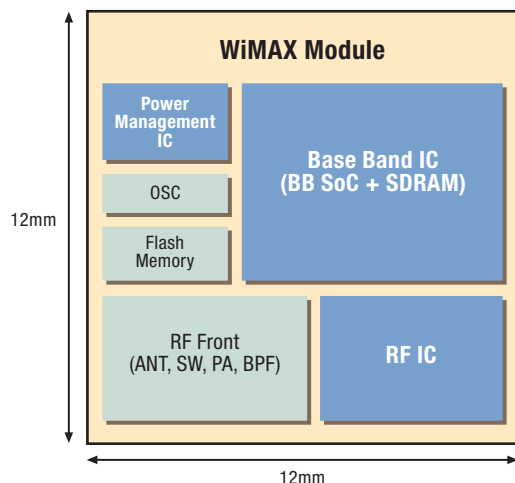


Diagram shows Fujitsu's new chip-set located in a typical WiMAX module.

Description

Mobile WiMAX™, next-generation wireless technology will become reality in regions all over the world, starting 2008. The initial service available in the market will be PC-based mobile broadband access. At the same time, the development of attractive terminals such as handsets, smartphones, PDAs, portable games and navigation systems are strongly expected to aid the rapid and successful growth of mobile WiMAX technology.

Fujitsu's WiMAX chip-set is optimised for small embedded modules targeting mobile WiMAX devices. The chip-set includes a Baseband device (MB86K22), an RF device (MB86K52) and a Power Management device (MB39C316), which are the essential components required for competitive WiMAX modules. With this chip-set, module vendors can offer competitive products with the necessary features for mobile WiMAX in a small form factor.

Features

Baseband IC MB86K22

- Supported bandwidth 3.5MHz, 5MHz, 7MHz, 10MHz and 20MHz
- Modulation 64QAM / 16QAM / QPSK
- FFT Size 512/1024 FFT OFDMA
- Antennae 2 x 2 STC/MIMO (Matrix A and Matrix B)
- OS Windows® Mobile / Embedded Linux

- Host interface SDIO, SPI
- Reduced power consumption in operating and idle modes
 - 65nm advanced CMOS low-leakage process technology
 - Power gating technology shuts down the power supply in unused blocks

RF IC MB86K52

- 90nm CMOS process technology
- Supports 2.3GHz, 2.5GHz and 3.5GHz
- Supports MIMO technology
- RF frequencies 2.295GHz - 2.405GHz / 2.491GHz - 2.695GHz / 3.295GHz - 3.620GHz
- Bandwidth 3.5MHz, 5MHz, 7MHz, 10MHz and 20MHz

Power Management IC MB39C316

- Eliminates all complex and time-consuming power management design
- Minimises peripheral components outside of the module
- Control and manage the module's power schemes at the system level
- Power supply voltage 2.7 - 4.9V
- 1 cell lithium ion battery
- Output DC/DC 3 channel, LDO 4 channel
- Power voltage activation / inactivation
- Interface I²C

Applications

- Small embedded modules targeting mobile WiMAX devices such as:
 - Handsets
 - Smart phones
 - PDAs
 - Portable game consoles
 - Navigation systems

Availability

Samples will be delivered to major module manufacturers starting in July 2008.

<http://www.fujitsu.com/emea/services/microelectronics/wimax>

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