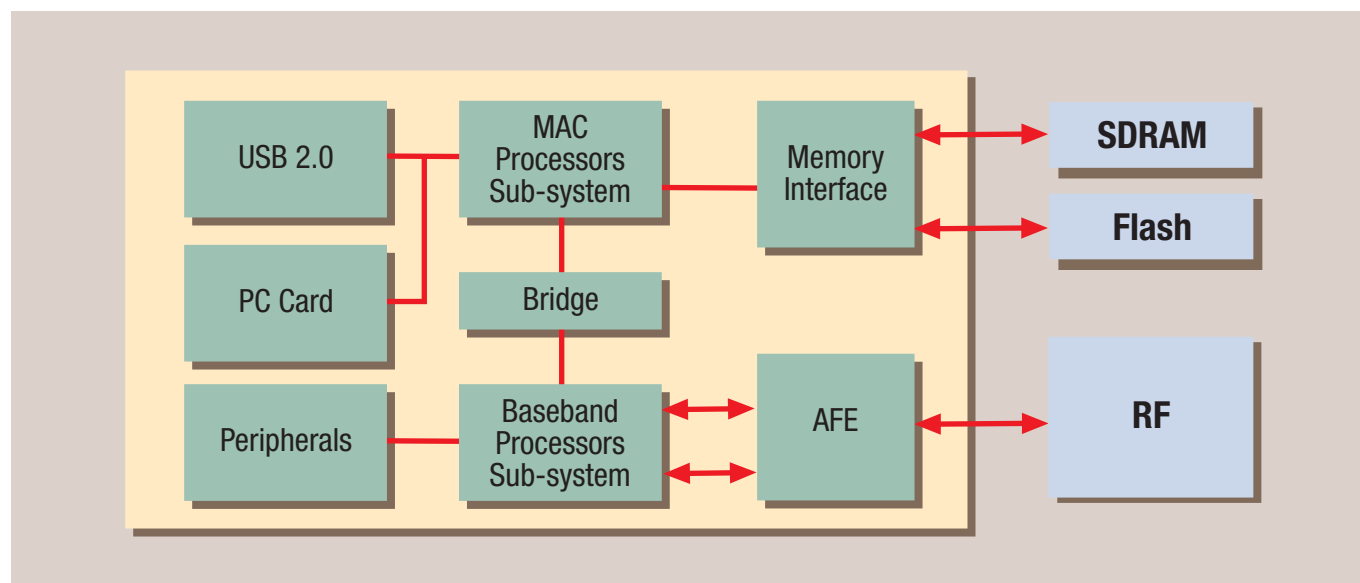




# MOBILE WiMAX 802.16e-2005 SoC



A simplified block diagram of Fujitsu's Mobile WiMAX SoC with highly integrated 1024 FFT OFDMA PHY and full MAC processors.

## Description

To continue the progression from fixed to mobility, Fujitsu has developed a one-chip, highly integrated, MAC and PHY, mixed signal, baseband processor for mobile WiMAX™ applications.

This baseband SoC is designed to optimise power consumption using Fujitsu's 90nm with low-leakage process technology. The Fujitsu WiMAX SoC is fully compliant with the IEEE 802.16e-2005 Mobile WiMAX standard. Performance enhancement can be realised with the on-board MAC processor engines embedded into the SoC. The 1024 FFT OFDMA PHY is carefully designed and optimised to provide the high performance that is essential for successful mobile applications.

## Features

- Highly integrated 1024 FFT OFDMA PHY and full MAC processors
- Adaptive modulation schemes including 64QAM, 16QAM and QPSK
- Interface for MIMO RF modules
- 90nm with low-leakage process technology
- Small-footprint FBGA package

## Applications

- PC cards
- Mobile devices

Fujitsu's mobile WiMAX SoC will be designed into subscriber systems to be used along with 802.16e-2005 compliant base stations in supporting end-to-end mobile wireless networks. One of Fujitsu's key differentiators is its proven ability in offering networking products ranging from the core and edge networks to the last mile. Fujitsu's total WiMAX programme will adopt a similar market engagement strategy by offering a rich line-up of products that will enable mobile operators and market-oriented service providers to quickly deploy their networks and realise time-to-revenue benefits.

**FACTSHEET**  
**MOBILE WiMAX 802.16e-2005 SoC****Reference design**

A reference design will be available and systems using the Fujitsu mobile WiMAX SoC will be submitted to the WiMAX Forum for certification, starting the third quarter of 2007. The system includes all the required software and hardware for a cost-effective system solution. Hardware consists of a baseband board and low-power RF module. Software includes MAC, BSP and devices drivers.

**Certification and compliance**

Fujitsu has designed the WiMAX SoC to comply with the IEEE 802.16e-2005 standard.

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

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

**Availability**

Engineering samples will be available in Q2 2007. Systems using the Fujitsu mobile WiMAX SoC will be submitted to the WiMAX Forum for certification in Q3 2007. Fujitsu plans multiple releases to match customers' needs. Its initial release will provide the broadband SoC to deliver MIMO Wave 2 certification compliance. Second and third releases will follow to support full mobility, VoIP and multimedia applications over mobile appliances.

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