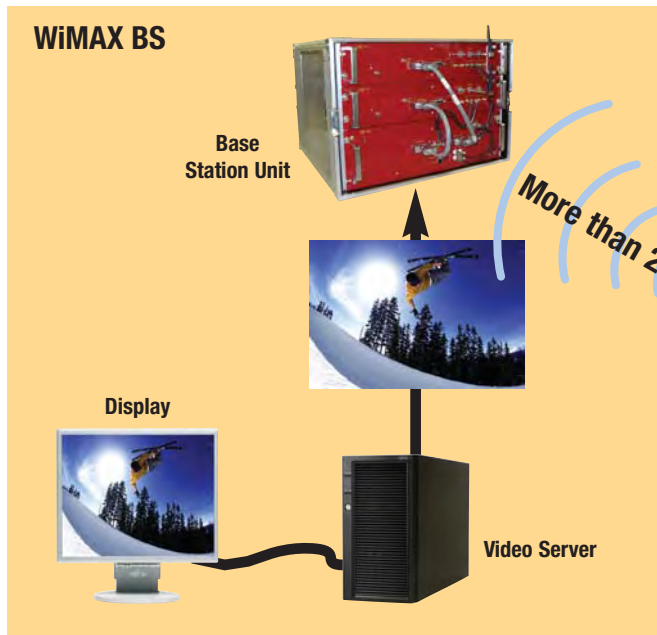




# MOBILE WiMAX solutions



Demonstration shows video stored in server being streamed to the PC through Fujitsu's mobile base station and broadband SoC used in a mobile station.

## Description

As the broadband wireless market continues to gain momentum, fixed and mobile WiMAX™ networks will co-exist throughout the world. To take advantage of a developing opportunity for systems customers and new prospects in the WiMAX mobility market, Fujitsu has developed a highly integrated baseband processor for mobile WiMAX applications.

As one of the founding members and board member of the WiMAX Forum, Fujitsu focused its initial entry into WiMAX technology development with a SoC, which is compliant with IEEE 802.16-2004. The system adopting our SoC successfully passed the first WiMAX Forum compliance test, and has moved into the mass production stage.

In April 2006, Fujitsu presented its vision of mobile broadband, which it realised with mobile WiMAX technology. As many new services have been generated upon the high-speed Internet connection at home, Fujitsu expects many innovative services to become available addressing the needs and wants of each individual. Based upon its mobile broadband vision, Fujitsu announced its development plan of a mobile WiMAX SoC.

## WiMAX 802.16e-2005 Baseband SoC

- Highly integrated 1024 FFT OFDMA PHY and full MAC processors
- Adaptive modulation schemes including 64QAM, 16QAM and QPSK.
- Support of advanced MIMO Beamforming and H-ARQ technologies
- 90nm with low-leakage process technology
- Small-footprint FBGA package
- Full reference kit for the shortest time-to-market

Fujitsu's reputation is growing worldwide as a reliable solutions provider of WiMAX technology. Fujitsu has been actively involved in IOT with many BS vendors including the Fujitsu BS team.

**FACTSHEET  
MOBILE WiMAX  
VIDEO STREAMING DEMO**

One of the most interesting applications that WiMAX will enable, is video. With limited bandwidth in the current mobile environment, most consumers will have had unsatisfactory experience with mobile video in any form. Media-rich applications, however, will be facilitated by mobile broadband, and this platform will enable many new services to develop, as demonstrated by broadband at home. Fujitsu will use its strengths to provide solutions to this new market.

For example, mobile multimedia applications utilise a special low power consumption technique to maximise battery life. Fujitsu adopted its optimised process technology and design technique for its baseband processor chip for 3G cellular phones, achieving ultra-long battery life and end-to-end network capabilities. Fujitsu also has full experience and knowledge of low power consumption technology in multimedia applications. In addition, Fujitsu essentially understands the entire mobile network system in order to realise the mobile multimedia services.

**Applications**

The demonstration shows the video clips stored in the video server being sent as a stream to the PC through the prototype of Fujitsu's mobile base station and our baseband SoC used in a mobile station (terminal). With 1024 FFT and 64QAM modulation, the video streaming achieves very high data throughput – the speed is shown in the main display in real time.

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

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

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