

**Proc. ISSCC, IEEE International Solid-State Circuits Conference,
February 2008**

**An 11 mm², 70 mW Fully Programmable Baseband
Processor for Mobile WiMAX and DVB-T/H in
0.12 μ m CMOS**

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Abstract

Rapid evolution of wireless standards and the increasing demand for multi-standard products make traditional fixed-function hardware for baseband processing too rigid. Programmable solutions are needed. At the same time, traditional DSP architectures cannot meet cost and power requirements in handheld devices. As a response to this, a new processor architecture dedicated for baseband processing has been developed. In this paper a fully-programmable baseband processor enabling standards such as mobile WiMAX and DVB-T/H is presented. This processor outperforms comparable fixed-function circuits for DVB-T/H.