

Infineon, Motorola to Develop 3G Radio Frequency Chip

September 25 2007

Infineon Technologies AG today announced that it has signed an agreement with Motorola to develop a new multi-mode, single-chip 3G radio frequency (RF) transceiver based on Infineon's SMARTi UE chip.

The RF transceiver is a core component in a mobile phone or other mobile cellular device; its primary function is to send and receive digital data over the air. As consumers continue to demand more multimedia functionality from their mobile devices, the RF plays a key role in delivering the data speed and signalling needed to support mobile content and services.

Motorola selected Infineon to develop the new RF chip which will address this growing market for 3G services by offering maximum HSDPA and HSUPA performance, efficient power consumption and slim design.

"We are pleased to enter into this strategic relationship with Motorola to create an advanced 3G RF solution based on our leading SMARTi UE chip. The new chip will effectively reduce size and footprint for next generation 3G devices and offer best in class radio performance at market leading system cost," commented Stefan Wolff, Vice President and General Manager of Infineon's RF Engine Business Unit.

"Global System for Mobile Communications (GSM)-based technologies will be dominant for the early forecast period, accounting for just under 70 per cent of all production in 2006. However, the market is rapidly

switching over to 3G-based technologies of various types”, explained Alan Brown, Research Director at Gartner. “The main 3G variant is WCDMA (including HSPA and LTE), and this will be produced in high volumes worldwide in 2010, representing 56 per cent of total production.”

Terms of the development agreement were not disclosed.

Infineon’s SMARTi UE supports all global UMTS band combinations (I-VI and VIII-X) as well as quad-band EDGE. This combination enables handset manufacturers to address the various regional operator frequency requirements within the same device design. In addition to the EDGE and WCDMA analogue signal processing, the analogue baseband functionality as well as the control function of power amplifier and front-end have all been integrated.

The DigRF3.09 compliant digital baseband interface of SMARTi UE is being controlled by high level commands from the baseband. This provides less overhead than conventional RF transceiver solutions which require high control and calibration traffic from the baseband. SMARTi UE also controls the entire radio with its embedded “real – time” microcontroller. This results in less complex L1 software, faster development cycles and shorter factory calibration times as well as significantly improved network performance.

SMARTi UE is manufactured in Infineon’s high volume 130nm standard CMOS technology housed in a small 6x6mm BGA-package. Samples have been shipped to selected customers with production ramp up planned in the 2nd half of 2008.

Source: Infineon

Citation: Infineon, Motorola to Develop 3G Radio Frequency Chip (2007, September 25)
retrieved 17 April 2024 from
<https://phys.org/news/2007-09-infineon-motorola-3g-radio-frequency.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.