

## Infineon Makes UMTS Phones Usable Worldwide

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New features such as fast data transmission and new applications like recording, sending and receiving video clips or receiving television while on the move are generally associated with the new <u>UMTS</u> (Universal Mobile Telecommunications System) mobile radio standard. But "universal" does not automatically mean that a UMTS handset will also work anywhere in the world. A total of six frequency blocks have been defined for providing UMTS services worldwide. To make nextgeneration mobile phones "universal" in the truest sense of the word, Infineon Technologies AG recently introduced a new chip which accommodates the transmit and receive electronics for all six frequency bands in a footprint measuring only 5mm on 5mm. SMARTi 3G is the name of the smart chip, which Infineon unveiled this week at an industry conference in California.

Mobile radio devices include a radio-frequency transceiver which is responsible for transmitting and receiving the signals. The term "transceiver" is a composite formed from the two words "transmitter" and "receiver". Prior to transmission, the SMARTi 3G converts the electronic signals for voice or data into high-frequency signals and amplifies them. It converts received high-frequency signals into lowfrequency electronic signals, which are then converted into voice and data in the phone's processor.

Samples of the SMARTi 3G are already available and leading manufacturers worldwide are integrating the chip into the next generation of UMTS handsets. Infineon is a major player when it comes



to transmit and receive electronics for mobile phones. Last year the company sold more than 170 million transceiver chips. This means that roughly one in four mobile phones worldwide operates with an Infineon transceiver.

The SMARTi 3G chip is manufactured using silicon process technology with microstructures of only 130 nanometers (a human hair is 500 times thicker). At 7.2 megabits per second, it meets the requirements of nextgeneration UMTS telephones for data transmission from the base station to the mobile device. The chip was developed in Germany and Austria and is produced in France.

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