

Infineon Launches World's First Reference Design for Ultra Low-Cost Handsets Enabling Handsets with Production Cost Below

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Infineon Technologies AG (FSE/NYSE: IFX) today announced sample availability of its first reference design for ultra-low-cost handsets. Using Infineon's new ULC reference platform, which is based on a single-chip GSM solution, costs for GSM handsets with SMS functionality could be set to be reduced by nearly one half in the near future, from the current figure of around US \$35 to below US \$20.

These costs cover the entire mobile phone, including all electronic components, printed-circuit-board, connectors, casing with keypad and display, all software components, rechargeable batteries, charger, packaging and documentation.

Infineon's ULC reference platform provides all the electronic hardware and software components needed in dual-band handsets complying with the GSM900/1800 and GSM850/1900 standards. It includes a single-chip GSM radio/baseband, other RF components, power supply, memory, operating system, hardware drivers, GSM protocol stack and a reference MMI (Man Machine Interface) for simple and intuitive use of SMS and telephone functionalities. Volume production is expected to start in the first quarter of 2006, which means that ultra-low-cost handsets could be in the shops a few months later.

Strong growth in global demand for ultra low-cost handsets

Worldwide, there are currently about 1.8 billion mobile phone users. The demand for low-cost and easy-to-operate handsets with SMS functionality is increasing. Many people want to enjoy the benefits of mobile communications, but place little value on applications such as camera and video features, web browser, music player and games. Ultra low-cost handsets target at these mainstream and new mobile phone users.

“There are around 3.5 billion people living in areas with mobile phone coverage who cannot afford their own handset,” said Ameet Shah, Chief of Strategy for Emerging Markets Handsets at the GSM Association. “Ultra low-cost handsets are a key initiative to extend the benefits of communications to more of the world’s population.”

The US market-research company Strategy Analytics expects that more than 150 million ultra low-cost handsets, costing less than US \$50 wholesale, will be sold throughout the world in 2010.

Below 100 components on board: Infineon’s ULC is the world’s most highly integrated GSM platform

At present, a simple GSM mobile phone with SMS functionality needs around 150 to approximately 200 electronic components. With Infineon’s new platform the number is reduced to below 100, housed in an area of just 3cm x 3cm - only about a third of the area used today.

Infineon’s highly integrated reference platform makes it possible to use low-cost processes when manufacturing mobile phones. For example, components are placed on only one side of the board, the time taken to

carry out calibration tests is reduced from 60 seconds to just 1 second, and component logistics are simplified.

The platform's power consumption has been optimized so that cheap rechargeable batteries - such as nickel metal hydride (NiMH) AAA micro-cells - can be used to power the ultra low-cost phone. With standard rechargeable mobile phone batteries, Infineon estimates a standby time of more than ten days and talk-time of more than four hours.

Infineon's platform design for ultra-low-cost handsets supports black & white and color displays, together with different voice codecs such as Enhanced Full Rate (EFR), Full Rate (FR), Half Rate (HR), and Adaptive Multi-Rate (AMR). Network operators can therefore manage voice quality and subscriber capacity flexibly and efficiently in line with how much the network is being used - which reduces the network operator's subscriber costs.

An extremely compact and cost-efficient solution for a complete GSM system is the core element of the platform. The solution consists of the E-GOLDradio (PMB 7870) together with the E-Powerlite power-management component (PMB 6814). The E-GOLDradio, a monolithic GSM single-chip, combines a quad-band RF transceiver and a baseband processor. It enables the baseband and RF functionality to be realized on a board space which is about 30 percent less than the area previously occupied by two-chip solutions. This is because external components such as capacitors and discrete components are not needed for communication between RF and baseband logic within a mobile phone. E-Powerlite provides all necessary power supply to the processor and the entire mobile phone system including electromechanical audio components, display and keypad illumination, as well as the SIM card and regulates the use and charging of Lithium Ion and NiMH batteries.

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