

Infineon, Intel to Develop High-Density SIM Card Solutions

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Today at the Cartes Trade Show in Paris, Infineon Technologies announced a strategic technology collaboration for the development of optimized chip solutions for high-density (HD) SIM cards with Intel Corporation.

Under the terms of the agreement, Infineon will architect modular chip solutions with Intel offering memory capacities from 4MB to 64MB (Megabytes).

Infineon contributes its vast expertise in security hardware and will develop a 32-bit security microcontroller based on its existing SLE 88 family for use with HD SIM cards. Intel is contributing its leading-edge flash memory technologies, capabilities and manufacturing.

The close technical collaboration will allow Infineon's HD security microcontroller to be optimally calibrated with Intel's flash memory solutions for efficient integration into HD SIM cards. The initial development of the flash memory product line will scale up to 64 MB with NOR flash memory manufactured on 65-nanometer (nm) and 45-nm process technologies. The security microcontroller is currently produced on 130-nm process technology, which is state-of-the-art for chips used in smartcard applications. All HD SIM solutions operate across the voltage range of 1.8 V to 3.3 V according to ETSI specifications. The SLE 88 family concept allows the operating system software developed for existing SIM cards to be easily reused.

HD SIM cards to account for 6 to 8 percent of the total SIM card market in 2010.

U.S. market research company Frost & Sullivan predicts that in 2010 the high-density SIM cards will account for approximately 6 to 8 percent of the total SIM card market of nearly 3.8 billion units – growing from about 2.5 billion units in 2007.

“These two mobile application experts, joining forces through this technology agreement, have an opportunity to shape the HD SIM market in an exciting way,” said Anoop Ubhey, global program director, Smart Cards ICT at Frost & Sullivan market research company. “The NOR memory and microcontroller option for high-density SIM cards opens the door for new business models and a greater reach for mobile network operators.”

The SIM cards today handle network security and basic user functionality, such as standard phone book in a mobile device. By late 2008, the new USB interface of SIM cards will enable additional demanding and data-intensive mobile applications, services and over-the-air downloads. The mobile network operator (MNO) will require more memory in the SIM card than today’s typical capacities in order to launch these services. NOR flash technology is expected to be a primary memory solution for HD SIM cards. It provides low price points due to small cell size thus extending HD SIM solutions to a broader reach of subscribers. NOR flash solutions fit in the existing SIM card cavity, are customizable to a number of densities below 128MB, and require no Error Correction Code (ECC).

Samples of the Intel / Infineon HD SIM card solution will be available in the second half of 2008, with high-volume production expected in the first half of 2009. The products will be sold in die form or in a chip card IC package.

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