STMicroelectronics



STMicroelectronics Samples World's Most Advanced Smart Card Chip

32-bit SmartJ™ chip with 1Mbyte Flash memory set to power new applications



Geneva, November 20, 2003 - STMicroelectronics (NYSE:STM) has announced that it is now sampling the ST22FJ1M, an advanced 32-bit smart card processor with 1Mbyte of embedded Flash memory, to key customers. The exceptionally high memory capacity opens up a host of new market opportunities in the Mobile, Pay TV, IT security and Identification markets.

The ST22FJ1M adds Page Flash and Standard Flash memory to ST's proven 32-bit SmartJ™ platform. The device

offers a large (768Kbytes) User Flash memory for storing program code and 256Kbytes of Page Flash memory, which replaces the traditional EEPROM. A Flash Loader enables application code to be loaded or updated, while an additional 128Kbytes of User ROM is available to hold fixed routine libraries. Storing application code in Flash rather than Read-Only Memory (ROM) greatly increases the flexibility of the card by allowing personalization of generic products, software upgrades and post-issuance downloads.

"The ST22FJ1M was designed to allow developers to escape the current smart card software architecture limitations and hence to enable new applications for existing and emerging markets. As a result, developers can now create open platform, multi-tasking, multi-threading solutions for web access, using multiple network protocol layers, multiple application protocol layers, and multiple security layers", said Reza Kazerounian, Group Vice President, General Manager, Smartcard ICs Division, STMicroelectronics.

Page Flash is a proprietary ST derivative of Standard Flash technology that offers the same fast programming time as Standard Flash but also allows individual data words (32-bits) to be erased in a few milliseconds and rewritten more than 100K times, thereby providing all the functional benefits of traditional EEPROM in a future-proof technology. The two types of Flash memory can be mixed on the same silicon chip at no additional cost and without any modification to the standard Flash manufacturing process.

The ST22FJ1M large memory capacity, unique combination of page and standard flash, and its high powered Java Card™ accelerated SmartJ™ core will enable end users to fully appreciate the advantages of full feature 3G/4G communications, whilst telecom operators will finally be able to have the Java/memory combination to provide a host of new customer orientated services. Other applications areas include high-end Pay TV solutions, embedded IT security and high-end ID solutions.

The technology bricks used to develop the ST22FJ1M were the fruit of the <u>EsP@ss-is</u> A302 MEDEA+ project, a leading industry-driven pan-European smart card project for advanced cooperative R&D.

About STMicroelectronics

STMicroelectronics is a global leader in developing and delivering semiconductor solutions across the spectrum of microelectronics applications. An unrivalled combination of silicon and system expertise, manufacturing strength, Intellectual Property (IP) portfolio and strategic partners positions the Company at the forefront of System-on-Chip (SoC) technology and its products play a key role in enabling today's convergence markets. The Company's shares are traded on the New York Stock Exchange, on Euronext Paris and on the Milan Stock Exchange. In 2002, the Company's net revenues were \$6.32 billion and net earnings were \$429.4 million. Further information on ST can be found at http://www.st.com.

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