Crocus launches the Multismart project to develop the first ever Multibit technology for secure applications

Coupling its Magnetic Logic Unit technology with Multibit architecture, Crocus will double the memory density per unit area of a single chip, enabling twice as much data and applications for any given chip

Crocus partners with Gemalto and French research laboratories LIRMM and IM2NP on this new secure microcontroller

Grenoble, France, October 23, 2014 - Crocus Technology, a leading provider of magnetically enhanced semiconductor technologies and products, today announces it will develop a Multibit Magnetic Logic Unit® (MLU) technology for secure transaction applications and the Internet of Things (IoT). This will be the first secure microcontroller designed with a Multibit MLU architecture. By expanding the density of memory with no trade-off in the size of the die, customers will gain two important advantages. One is greater flexibility to offer additional features and functions. The other is the benefit of a more compact product that will ease integration in complex devices.

Today, secure elements are based on flash memory or EEPROM, which are single bit per cell memory only. Crocus will be the first in the smart card and secure element market to release a product integrating a multibit per cell memory. Multibit per cell memory exists in standalone NAND and NOR storage applications, which always need larger density.

Crocus' engineering teams at its security division based in Rousset, France, will develop this new enhanced capacity secure microcontroller through the Multismart project consortium. The Secured Communications Solutions (SCS) competitiveness cluster, which focuses on contactless, M2M and mobile services, digital security and identities, the French Government and regional authorities are all supporting this collaborative project.

Multismart project partners include Gemalto, the world leader in digital security, LIRMM, a microelectronic design and security skills laboratory and IM2NP, a specialist in semiconductor memory design and characterization.

Gemalto plans to develop a new operating system to address Multibit's distinctive performance features. LIRMM and IM2NP will test, qualify and characterize the end-product, a secure microcontroller featuring a secure element.

Crocus targets NFC (Near Field Communication), secure transactions and IoT applications. It is strengthening its positioning in the secure element market that is expected to reach 900 million units by 2017 for NFC applications up from 245 million units in 2013, according to ABI Research.

"Crocus is thrilled to join a major global player like Gemalto and leading research laboratories LIRMM and IM2NP on a future development that will deliver a highly advanced product to help customers accelerate the deployment of multiple applications for mobile transactions and IoT," said Alain Faburel, VP of the security business unit at Crocus Technology. "We have yet to fully exploit the full potential of our Magnetic Logic Unit (MLU) technology. On top of existing MLU performance and security benefits, the Multibit technology brings even greater density. This means the ability to deploy more

applications securely and provide our global security market customers with more available user data."

Crocus' MLU is a nonvolatile magnetic technology offering significant advantages in performance, security and cost-effectiveness. MLU only requires the addition of three to four masking layers to standard CMOS, whilst bringing powerful benefits, including the unique ability to embed MLU-based secure memories and magnetic sensors into SoCs.

About Gemalto
Gemalto (Euronext NL0000400653 GTO) is the world leader in digital security with 2013 annual revenues of €2.4 billion and more than 12,000 employees operating out of 85 offices and 25 research and software development centers, located in 44 countries.
It is at the heart of the rapidly evolving digital society. Billions of people worldwide increasingly want the freedom to communicate, travel, shop, bank, entertain and work – anytime, everywhere – in ways that are enjoyable and safe. Gemalto delivers on their expanding needs for personal mobile services, payment security, authenticated cloud access, identity and privacy protection, eHealthcare and eGovernment efficiency, convenient ticketing and dependable machine-to-machine (M2M) applications. It develops secure embedded software and secure products which it design and personalize. Gemalto's platforms and services manage these products, the confidential data they contain and the trusted end-user services made possible. Its innovations enable its clients to offer trusted and convenient digital services to billions of individuals. Gemalto thrives with the growing number of people using its solutions to interact with the digital and wireless world.

For more information visit: www.gemalto.com, www.justaskgemalto.com, blog.gemalto.com, or follow @gemalto on Twitter.

About LIRMM
The Montpellier laboratory for Informatics, Robotics and Microelectronics (LIRMM) conducts research in association with Montpellier University (Université Montpellier 2) and the French National Center for Scientific Research (CNRS). LIRMM's research activities focus on information and communication sciences and technologies. In addition to its scientific activities, LIRMM is actively involved in developing innovations for technology transfer.

About IM2NP
The IM2NP is a microelectronics and nanotechnology material institute based in Provence, France. It has more than 320 scientists, engineers, technicians and PhD students in physics, chemistry and microelectronics. It supports a wide range of programs including modelling, design, architecture, processes, materials and their physico-chemical properties. IM2NP is under the joint authority of the CNRS (French National Center for Scientific Research) and two Universities: Université d'Aix-Marseille and Université de Toulon. It is also associated with two Schools of Engineering: Ecole Polytechnique Universitaire de Marseille (Polytech Marseille) and Institut Supérieur d'Electronique et du Numérique (ISEN).

About Crocus Technology
Crocus Technology is a leading provider of magnetically enhanced semiconductor technologies and products for application in sensors, mobile security, nonvolatile memory, embedded microcontrollers and harsh environment electronics.

Crocus Technology has pioneered Magnetic Logic Unit™ (MLU), a disruptive CMOS-based rugged magnetic technology. MLU brings important advantages to devices needing greater security and robust high-speed performance at a lower cost. MLU enables Crocus' sensor products to exhibit high sensitivity, low-noise and high temperature tolerance (250˚C), making them well-suited for a wide range of consumer and industrial applications. Fast read-write capabilities also allow small-footprint MLU-based products to enhance the performance and security of chips used in smartcards, mobile phones and data servers. Crocus Technology also licenses its MLU technology and processes to select foundries and industry partners.

Founded in 2004, Crocus Technology is led by a senior management team with high-level industry experience forged at Motorola, AMD, Intel, Texas Instruments and Gemalto. It has US operations in Santa Clara, California, and offices in Grenoble and Rousset, France. It jointly owns Crocus Nano Electronics, a Russian-based advanced magnetic semiconductor manufacturing facility, with investment firm Rusnano.

For more information, please visit http://www.crocus-technology.com.

About Pôle SCS cluster
The Secured Communicating Solutions (SCS) World Class Cluster is based in the Provence-Alpes-Côte-d'Azur Region, France. It has European Gold Label for the performance of its management. Focused on Contactless technologies, Networks, M2M & Mobiles Services, Security & Digital Identities technologies, more than 250 key players comprising industrials leaders, SMEs and research players are part of a rich ecosystem recognized at an international level.

Acting as a booster of innovation and cooperation with more than 410 collaborative R&D projects representing 1.4 Billion euros investments, the SCS world-class Cluster supports SMEs growth.

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