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# NEWS RELEASE

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## RFID Device With 64-bit Embedded Cryptographic Engine

*The only reliable way to protect against counterfeiters –  
locking product authenticity in hardware*

**San Jose, CA, December 4, 2007** . . . Atmel® Corporation (Nasdaq: ATML) announced today CryptoRF®, the world's first 13.56 MHz RFID devices with a 64-bit embedded cryptographic engine, mutual authentication capability, and up to 16 individually configurable zones. These devices prevent product counterfeiting; a problem assessed at over \$600 billion in seized fakes in 2007. One of the most reliable ways to protect against counterfeiters is to lock product authenticity in hardware. Atmel's CryptoRF devices create unique "signatures" based on information that is never transmitted or allowed to be accessed in any way.

CryptoRF product labels and tags are virtually impossible to copy. These devices are ideal for applications that are 1) prone to counterfeiting such as high value consumer items and software, 2) require a permanent record of the chain of ownership such as pharmaceutical tracking, or 3) represent cash transactions like bus passes, loyalty or campus cards.

**Secure Dynamic Mutual Authentication Capability.** Conventional RFID tags can be copied using a low cost RFID tag reader, the information is then used to create phony tags for counterfeit products. In contrast, CryptoRF devices have a 64-bit embedded hardware cryptographic engine; with 64 Kbit keys that are completely inaccessible. CryptoRF supports a mutual authentication protocol to establish a trusted link between itself and a host reader. The CryptoRF device and the host reader demonstrate knowledge of respective non-readable secrets stored within them without actually transmitting the secrets. A unique cryptogram is generated for each transaction, so a cryptogram intercepted during a transaction cannot be used to effect a second transaction. The likelihood of a "fake" device creating the appropriate cryptogram is about one in a quintillion. Each CryptoRF device has its own set of authentication keys therefore every device is unique. Fuse bits are blown to permanently lock the security information within the device.

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**Chain of Ownership Tracking.** A complete history of a product's ownership, distribution, and disposition can be contained on a single device. CryptoRF devices are available with densities from 1-Kbit to 64-Kbits of user memory to accommodate a wide range of information storage. The user memory itself may be divided into as many as 16 separate zones, each of which can be customized to allow different levels of read and write access, including read and write, read-only, one-time-programmable or requires authentication.

**ISO14443-B Standard.** Atmel's CryptoRF devices integrate a 13.56 MHz RF interface with a range up to 10 cm.

**Development Tools.** Atmel offers a comprehensive range of CryptoRF reference designs, libraries, demonstration kits and application software that simplifies the implementation of CryptoRF into existing products.

#### **Availability and Pricing**

CryptoRF devices are now available. Pricing for the CryptoRF devices starts at US\$0.75 in quantities of 25,000 units.

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#### **About Atmel**

Atmel is a worldwide leader in the design and manufacture of microcontrollers, advanced logic, mixed-signal, nonvolatile memory and radio frequency (RF) components. Leveraging one of the industry's broadest intellectual property (IP) technology portfolios, Atmel is able to provide the electronics industry with complete system solutions focused on consumer, industrial, security, communications, computing and automotive markets.

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#### **Information:**

Atmel's CryptoRF product information may be retrieved at:

<http://www.atmel.com/products/SecureMem/>

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