

# Japan's Toppan Printing Chooses ARM for Next Generation IC Card

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TOKYO, JAPAN and CAMBRIDGE, UK - July 7, 2004 - Toppan Printing Co., Ltd. the world's second largest printing company, and ARM, today announced that Toppan has developed an IC card with high-speed cryptographic processing capabilities using ARM® SecurCore™ microprocessors. Toppan's IC card is ideal for SIM cards for mobile phones, and fits with government and corporate ID cards where supporting biometric authentication is essential.

The Toppan IC card takes full advantage of the 32-bit RISC ARM SecurCore processing power for number crunching operations such as encryption or biometrics match-on-card algorithms. The SecurCore processors include tamper-resistant technology to help prevent against unauthorized intrusion and physical tampering at the hardware and software levels.

"Toppan is using ARM's market-leading technology to offer a fast and secure IC card to the high-end security market," said Tomo Togawa, General Manager, IC Business Division of IC R&D Dept., at Toppan Printing Co., Ltd. "We believe our card offers all the features that customers-whether they are governments or corporations-require to protect their highly valued assets."

While most IC cards to date have used 8- and 16-bit microcomputer solutions, demand is increasing for cards that efficiently support more complex transactions with greater security to protect an ever increasing amount of data. This is making 32-bit IC cards that can encrypt, create

signatures, perform biometrics algorithms, and support the Java Card platform -- quickly and securely with minimal power consumption -- essential.

"Toppan's IC Card, which is the first smart card developed in Japan that integrates SecurCore technology, is an excellent example of how ARM is expanding its presence in the rapidly growing smart card market," said Hiroyuki Uchimura, managing director, ARM K.K. "ARM is committed to developing secure processing solutions, from our TrustZone technology to our SecurCore microprocessors, which enable our Partners to address a full range of security issues for their applications."

### Key Features of Toppan's ARM Powered High-Speed Encryption IC Card

Powerful 32-bit ARM processor, combined with cryptographic capabilities, generates ultra-high transaction speeds

Secure ARM architecture includes anti-tampering features, optimized to prevent external attacks

First IC card to support all expanded hash versions (SHA-128/384/512)

Industry-proven, 16-bit Thumb® code enables minimum power consumption at time of execution, as less memory is required

High-performance Java hardware accelerator makes the card significantly faster than cards using software only JVM (Java Machine)

The original press release can be found [here](#).

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