SECORA™ Pay Bio

## Infineon's biometric payment card solution based on Java Card™

Biometric payment cards offer more convenient and hygienic payment experiences as the card holders can verify their identity by simply placing a finger on the card's sensor and tapping the card at the terminal. This allows to make the biometric payment process faster than typical PIN-based transactions. By using biometric payment cards, many of today's applications do not require an additional PIN at the point of sale (POS) in case the transaction volume is in a predefined range.

As Infineon's all-in-one turnkey solution for biometric payment card applications, SECORA™ Pay Bio extends Infineon's well-established **SECORA™ Pay** turnkey solution family to address the fast-growing biometric **smart card segment**. It relies on Infineon's enhanced **SLC39B system-on-chip (SoC)** security chip, leveraging 40 nm technology in combination with **Fingerprints' FPC1323 sensor**, integrated into the **Infineon Biometric Coil on Module (BCoM)** packaging based on inductive coupling technology. With inductive coupling technology, it eliminates the need for a wire connection between the card antenna and the module.

In addition to bringing security and convenience to contactless payments, SECORA™ Pay Bio will make biometric payment card production as simple and efficient as that of standard dual-interface payment cards.

It will significantly improve the productivity, the robustness and long-term reliability of biometric payment cards based on its three-level hardware integration:

- System-on-chip – reduces the hardware bill of material (BoM) and optimizes system performance
- System-in-package – integrates the Secure Element and fingerprint sensor into a single package with further improvements in system implementation and production yield
- System-in-module – hugely simplifies card production thanks to the Infineon Biometric Coil on Module (BCoM)
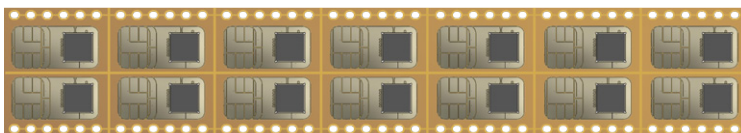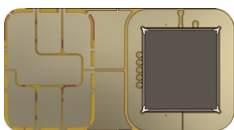
Key features

- Pre-certified biometric turnkey payment card solution for Mastercard® and VISA®
  - Java Card™ operating system compliant with Java Card™ 3.1 and GlobalPlatform card specification v2.3.1
  - Mastercard® bio-applet compliant with MCA V1.2.3
  - VISA® bio-applet compliant with VSDC2.9.2

- Card solution compliant with EMV Level 1 specification
- Communication interfaces:
  - ISO7816, ISO14443

- Cryptography implementation:
  - RSA, 3DES, SHA1, AES

- Card biometric performance:
  - False acceptance rate (FAR) of below 0.01%
  - False rejection rate (FRR) of below 3%

- Product delivery form
  - Infineon Biometric Coil on Module (BCoM) supporting dual interface communication
  - Tape on standard 35 mm film

More info about SECORA™ Pay Bio including product and enrollment videos

This innovative and seamless payment solution will simplify and standardize biometric payment card production for card manufactures. It will also enable more carefree payment experiences for many card holders.

SECORA™ Pay Bio will come with a pre-certified Java Card™ operating system including Mastercard® and Visa® bio-applets.

SECORA™ Pay Bio offers various enrollment options:
To support seamless project implementation, SECORA™ Pay Bio offers various enrollment options as a real all-in-one turnkey solution:
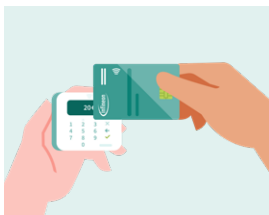
1. In-field enrollment
Supporting in-field enrollment, which is also called POS enrollment, where the cardholders perform biometric enrollments transparently during the first pre-defined number of payment transactions.

2. Sleeve enrollment
Offering an application note for building contact-based sleeve devices, where users could enroll their fingerprints into the cards by using the sleeve devices specifically for that purpose.

3. Smartphone enrollment
Supporting smartphone enrollment with a reference code for generating customer's smartphone app (iOS and Android).

SECORA™ Pay Bio turnkey solution is going to be released mid of 2024.

Key benefits

- Best-in-class contactless performance in combination with system-on-chip security chip
- Ultimate simplification of biometric payment card architecture
- Capable of hot lamination
- Significant improvements to card robustness and long-term reliability
- Compatible with existing card production equipment with minor adaptions
- A real all-in-one turnkey solution as best option for fast time-to-market

Public

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