life.augmented

Banking & ID solutions

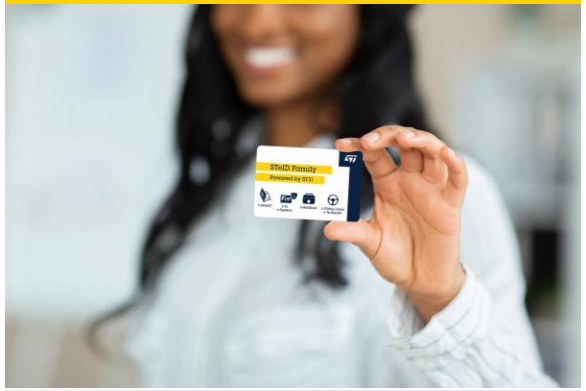
STSECURE

Smartcards market applications
A strong expertise in Smartcard Industry

Banking

- Banking cards
- Biometry
- dCVV
- Wearables

Identity



- (National) eID
- ePassport
- eSignature
- eDriving License
- eHealthcare
- eTachograph

Transport

- Calypso®

PayTV

life.augmented

A full range of banking solutions

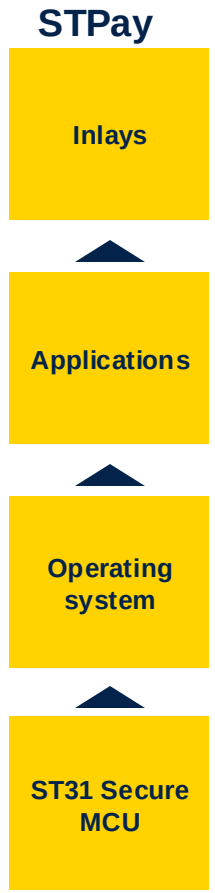
Contact, dual Interface ICs and system-on-chip solutions

ST31 Secure MCU

- Dual core 32-bit ARM SC000 CPU
- Multiprotocol (ISO7816, ISO14443 A/B, ISO18092, VHBR)
- EMVCo® & Common Criteria-certified

STPay ST Secure Payment solution

- Ready-to-use proven banking offer
- Multiple International & Domestic Payment schemes supported
- Contact and dual IF offers
- Widely used by > 40 customers worldwide
- Advanced EMV portfolio for innovative cards: BSOC / dCVV



life.augmented

STPay ST Secure payment solution

A ready-to-use banking solution

>**3 Bu** delivered for >10 years

10+ payment schemes certified

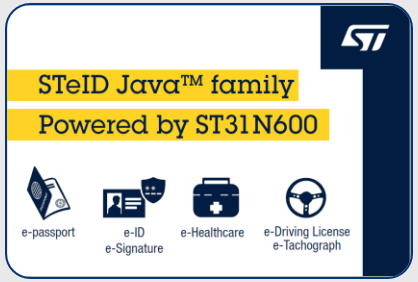
40+ customers on 5 continents

- 40 nm Flash technology
- Best-in-class RF and low-power performance
- Improved user experience
- Wide range of packaging solutions
- Calypso & MIFARE® technologies supported
- Multiple end applications (cards, wearables)

life.augmented

STeID
Secure identity solutions

Open Java Card™ solution for single and multi-applications identity cards



Native solutions developed in cooperation with Masktech GmbH (Germany)

Based on ST31 Secure Hardware Microcontroller

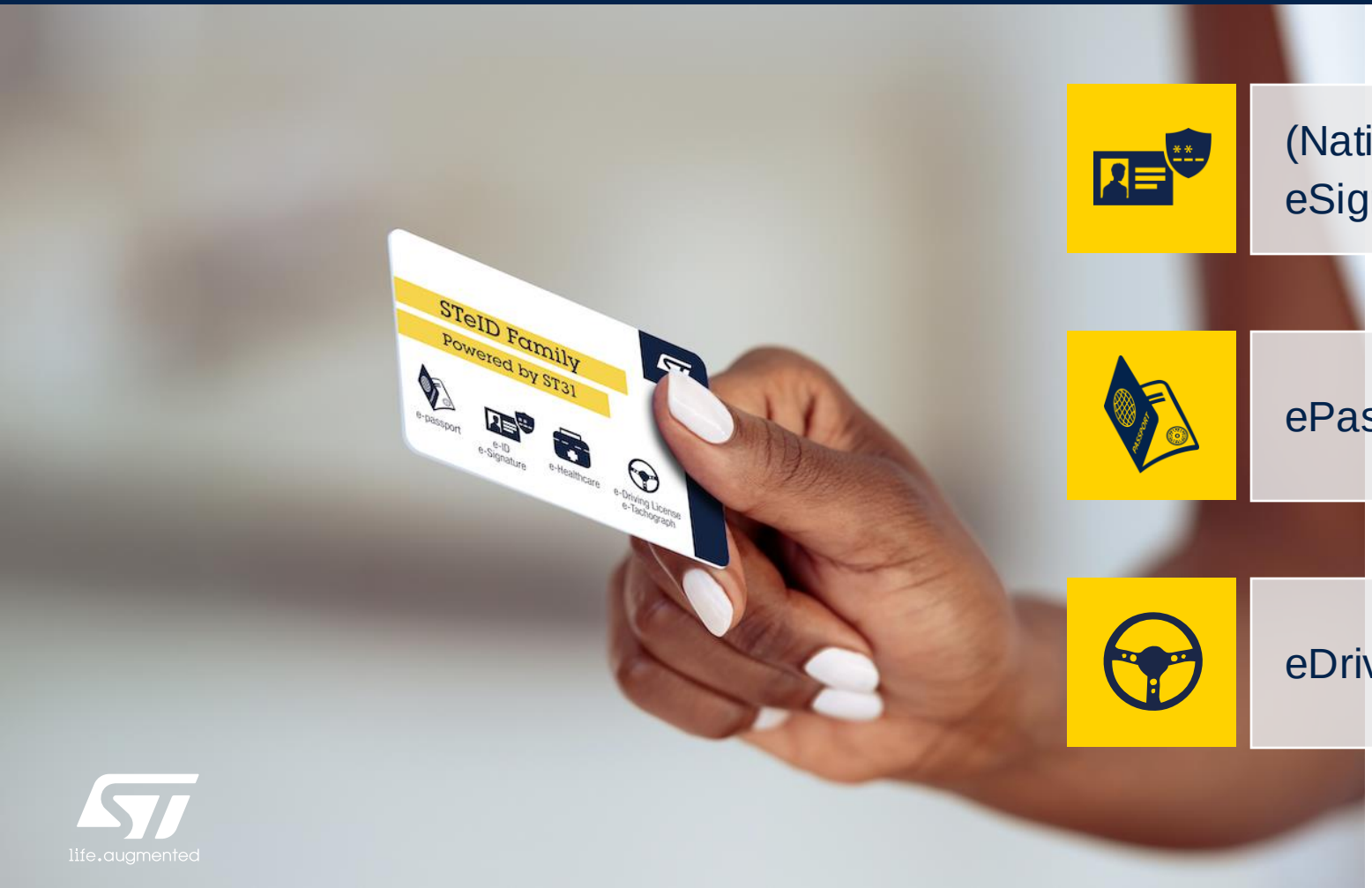
High performance dual core 32-bit ARM SC000 + Dedicated cryptographic engines

Common Criteria Certified

Data retention >25 years, Erase/Write cycling > 500K cycles

STeID
Secure identity solutions

Application Targets



- (National) eID, eResidence permit, eHealthcare eSignature (SSCD, QSCD eIDAS)
- ePassport
- eDriving license, eTachograph

life.augmented

Biometric system-on-card (BSoC)

Market

- Estimated biometrics payment cards TAM 37 Mu in 2028 (ABI)
- Expected Market deployment in 2024
- Multiple application segments supported (banking, ID, Health, Access control)

A combined solution

Sensors + MCU + Secure element + Inlay + Card

Solution

- Enhanced secure & easy to use
- Unicity granted
  (Not transferable, Not duplicable)
- Suitable for PIN-less operations
  Toll gate, health cards, contactless transactions
- Usable in conjunction with PIN code
- Easy to use
  Multiplatform technology, nothing to remember

life.augmented

Biometric system-on-card: key challenges

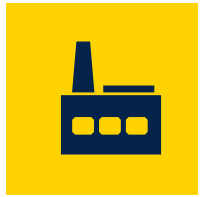
New technology, better performance, state-of-the-art product

Market maturity
- User acceptance
- Card cost

System interoperability & security
- Components isolation
- Agnosticism vs. technology choices

Technical requirements
- Transaction performances
- Power management (without battery or super capacity when RF)
- Standardization

Card lifecycle
- Strongly depends on daily transactions amount (unpredictable) and power management type



Card manufacturing
- Size and thickness (ISO 0.76 mm)
- Flexibility (ISO / CQM compliancy for resistance to mechanical stresses)
- Lamination

Performance
- From Capture to Verification / enrollment in 1 sec (Match-on card)

life.augmented

Secure smartcard takeaways

- Based on ST31, using an innovative 40 nm Flash technology
- STPay, a complete and proven worldwide secure payment solution
- ST biometric system-on-card solutions, the leading edge of technology
- STeID, trusted identity for everyone

life.augmented

Our technology starts with You

Find out more at st.com/banking-biometry

© STMicroelectronics - All rights reserved.
ST logo is a trademark or a registered trademark of STMicroelectronics International NV or its affiliates in the EU and/or other countries.
For additional information about ST trademarks, please refer to www.st.com/trademarks.
All other product or service names are the property of their respective owners.

life.augmented