



Smart credentials

Enabling today's and tomorrow's digital identities



Opportunities

- › Strengthen national security
- › Increase administrative efficiency and deliver new government services online
- › Automate and accelerate authentication at borders through faster chips

Challenges

- › Provide secure storage for large volumes of data, such as visa details for ePassports
- › Support global interoperability of travel documents
- › Ensure that electronic ID and passport data can be read quickly at borders



Time for a smoother airport experience

Just when you needed a straight run to the airport, you hit evening traffic. When you finally get there, you're cutting it tight, so the last thing you need is to stand in a long passport queue. Thankfully, you don't have to. You quickly join the fast-track passport line, scan your electronic ID card and clear customs in a matter of minutes. You made it! And that's only the start of the new, convenient airport experience with an eID. While you wait to board, you grab a coffee and pay with the same card before you swipe it across your laptop reader to log onto your bank account and transfer a few payments that are due today. And it can do even more. When you arrive at your destination, you can use your eID card to buy a train ticket or rent a car.

As more and more government-issued ID cards and passports are being equipped with security chips, a whole new world of possibilities is opening up.

Security is key

Digitalization has the potential to improve and accelerate border security through automatic control gates, reduce identity fraud through biometrics, and bring new and convenient online services to citizens. For these possibilities to unfold, however, electronic ID cards must inspire and build trust. Fast contactless processing capabilities are also essential, particularly with multi-application schemes combining ticketing and payment functionality, for instance. Overall, the future of government ID documents hinges on the security, performance and adaptability of the enabling embedded security chips.

Success factors

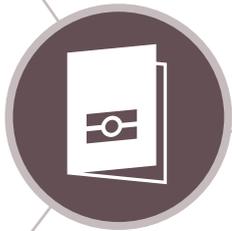
- › State-of-the-art technology delivering the right security and performance
- › Robust security over the typical lifetime of eID documents (10+ years)
- › Compliance with standards and regulations to span the full multi-application spectrum

Enabling a broad application spectrum

Security, functionality, interface and lifetime requirements can vary significantly from one ID project to another. Given the growing convergence towards multi-application schemes and the increasing adoption of cellphone-based mobile ID applications, the underlying microcontroller platform must be flexible enough to support the full spectrum of needs and evolve over time.

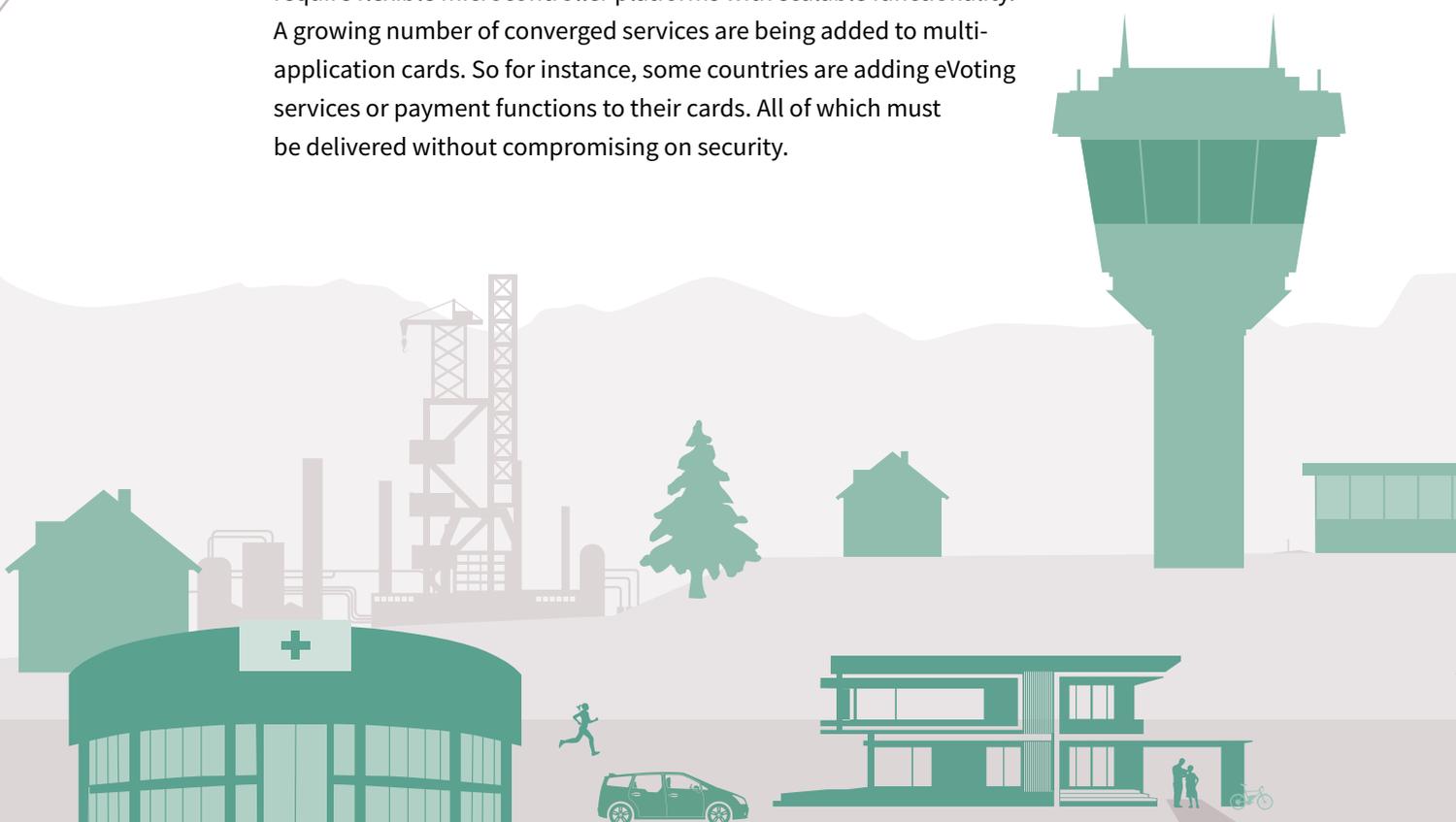
Electronic passport

Today's and tomorrow's ePassports need to support emerging standards and the latest ICAO specifications to ensure seamless interoperability while also inspiring trust for easy processing by immigration authorities. At the same time, they must be designed to last and deliver the very high bit rates (VHBR) and contactless performance needed for speedy border controls.



Electronic national ID card

Given the huge regional variations in national eID cards, card issuers require flexible microcontroller platforms with scalable functionality. A growing number of converged services are being added to multi-application cards. So for instance, some countries are adding eVoting services or payment functions to their cards. All of which must be delivered without compromising on security.



Electronic driver's license

As electronic driver's licenses are often used for car rental and even identification purposes, they must be designed to the same high interoperability standards as ePassports. Diversity is the challenge here. International standardization is imperative to manage the huge variety of licenses in place – even at national level. To achieve this and increase fraud resistance, many organizations are moving towards chip-based licenses.



Electronic health card

E-health cards have the potential to dramatically reduce healthcare costs through digitalization, and also to reduce fraud. Additionally, they improve the patient experience by storing key medical data and medication history. These cards must offer robust protection of this sensitive data. Widespread adoption also calls for ease of administration and a mature telematics infrastructure to network all players in the care continuum and enable dynamic updates of data and functionality.





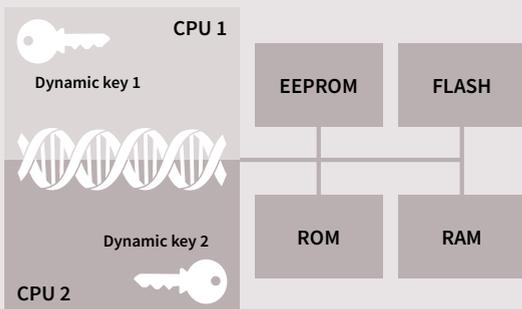
Leading technologies



Integrity Guard

Integrity Guard – the unrivalled security level for eGovernment applications

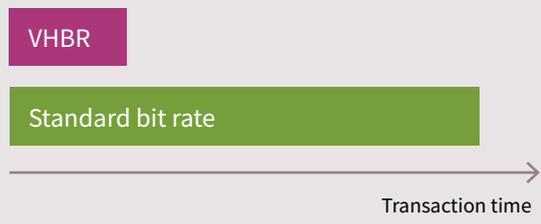
The smartest security concept in the industry, Integrity Guard features a highly sophisticated digital security architecture, including a fully encrypted data path and a self-checking dual CPU core. It provides robust protection against potential security attacks for today's and tomorrow's government ID documents.



VHBR

Very high bit rates (VHBR) for fastest transaction times

Security controllers with VHBR enable transaction times that are up to eight times faster than standard security controllers (848 kbit/s versus 6.8 Mbit/s). This speed is very important for border control documents as it has the ability to reduce delays at the airport. VHBR also supports ultra-fast personalization.



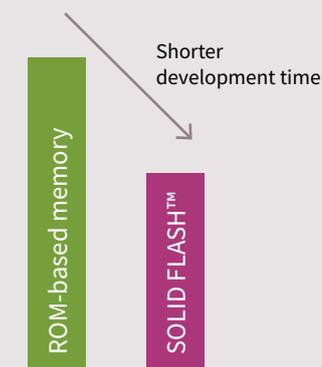
Government ID projects call for a deep understanding of security needs

We empower our customers to design and deliver credentials that are resistant to tampering and fraud, enjoy global interoperability and are certified to the highest security standards. Our innovative drive brings you the benefits of the smartest security architectures and products offering the highest performance. All of our technologies are designed for ease of implementation to reduce your design-in effort and speed time-to-market.

SOLID FLASH™

SOLID FLASH™ memory technology for fastest time-to-market

SOLID FLASH™ is the only future-proof memory technology suited to multi-application identification schemes. It supports post-issuance of new applications, dramatically accelerating software development times by eliminating ROM processing times.



Coil on Module

Go contactless with Coil on Module (CoM)

CoM technology is designed to simplify the transition from contact-based to dual-interface schemes, also supporting contactless processing. Existing manufacturing lines can simply be used without any new capital investments. With CoM, you can produce both contactless and dual-interface digital identification documents that deliver a level of robustness and reliability that cannot be achieved with any other technology.



Comprehensive product portfolio supporting all government ID project needs

The hardware innovation path to the future

With more than one billion devices sold into high-security applications since 2010, our SLE 78 family has set new standards for government ID projects, meeting all security, reliability and privacy protection requirements.

Building on the success of the SLE 78 family with its sophisticated Integrity Guard concept, the SLC 52G is our next-generation security controller family. It is custom-designed specifically for long-term use in government ID markets.

In combination with the existing SLE 78 product family, the extended SLC 52G portfolio meets all governmental identification requirements beyond 2020. Support for new standards like LDS 2.0 for ePassports and a future-proof feature set speed up transaction times during border control.





Ready-to-go solutions

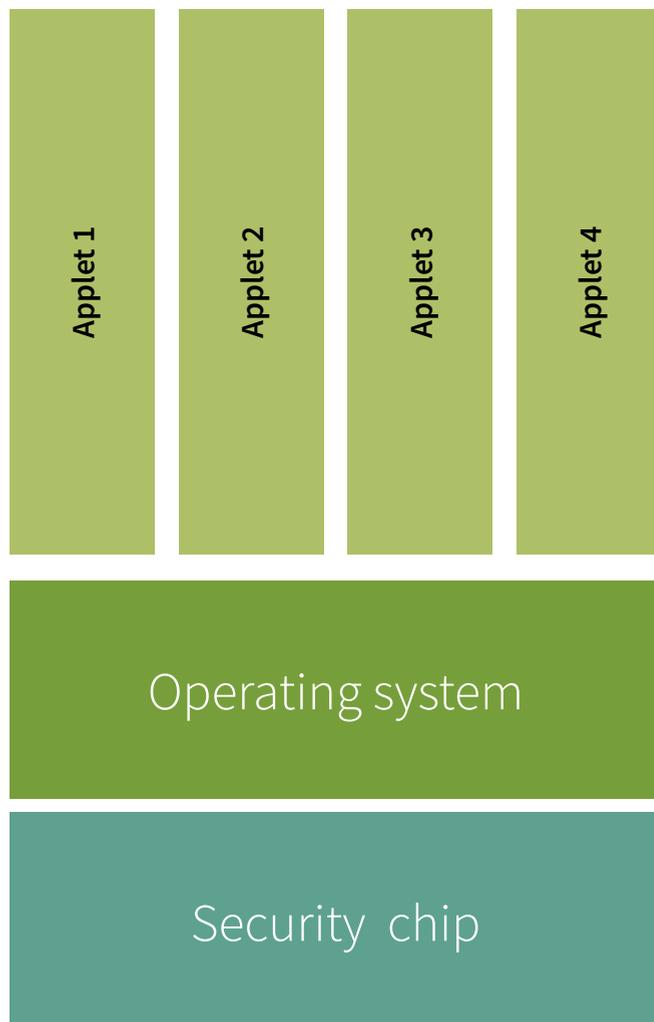
Customers the world over rely on our highly integrated, ready-to-go and certified platforms, scaling from low-end deployments to high-end multi-application schemes. Our integrated solutions offer the best combination of hardware and software for easy design-in and fastest time-to-market. Supporting both Java Card™ and native operating systems, these out-of-the-box solutions are tailored to individual needs. They are available with third-party applications for all typical eID documents. In addition, they comply with the full range of standards.

SLJ 52 family

Oracle Java Card™ platform on SLE 78, providing tailored solutions for government ID projects scaling from basic implementations to complex, feature-rich solutions.

SLN 52G family

Native generic ID platform on SLE 78, bundling the MTCOS professional OS with the highest chip performance, Integrity Guard security and flexibility.





Trusted partner with proven, global track record in eID projects

As the market-leading provider of security technologies for over 30 years, we have already delivered to over 150 successful ID reference projects worldwide. In Europe alone, more than 75% of national eID projects already rely on our chips, as do 60% of smart healthcare cards worldwide.

Through close, long-term partnerships with our customers and our global support capabilities – also through our Contactless Competence Center – we have developed in-

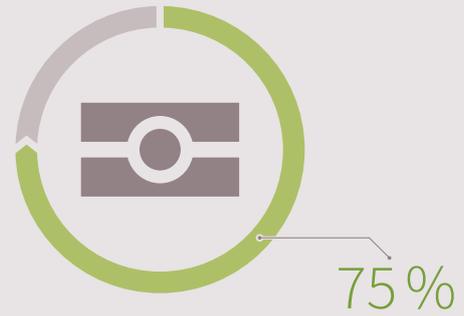
depth industry insights and the ability to develop solutions tailored to our customers' individual needs. Our success is also attributable to best-in-class, future-proof technologies, high-speed contactless performance and memory scalability to suit different ID project requirements.

In addition, we are committed to open standards such as CIPURSE™ to support the move towards flexible, interoperable multi-application schemes.

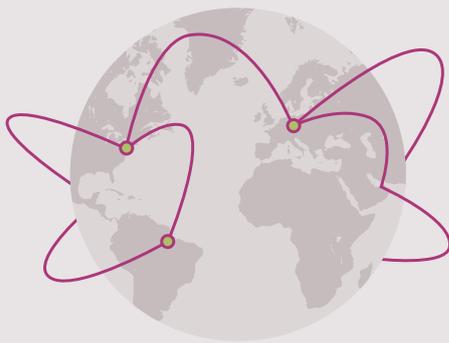
Reference projects worldwide with Infineon chips



Over 150 projects across all government ID applications, covering 75% of the world's population



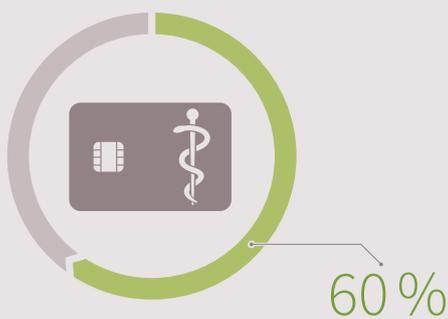
Over 75% of all ePassport projects in APAC



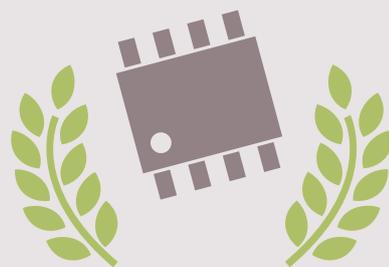
Only IC company to supply key ePassport components to the world's 5 biggest countries



Over 75% of all eID projects in Europe



60% of all smart healthcare cards worldwide



More than one billion chips sold into high-security applications since 2010

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