

Product Brief

ePasslet Suite

Java Card Framework for eID documents

ePasslet Suite is a Java Card framework that contains a complete set of applications for implementing electronic ID cards, travel documents, driver's licenses and other similar electronic documents. It supports many international standards.

MANAGEMENT SUMMARY

ID cards, passports, driving licences and other identification documents can be equipped with a small computer chip. The result is called an electronic identity card (eID). The embedded chip increases security and can be used for many interesting applications, e.g. for computer login, automated age verification and proof of identity on the internet.

Electronic identity documents have become very popular in recent years. There are more than 100 states and non-state entities (i.e. United Nations) currently issuing ePassports, and over 490 million ePassports in circulation. Many countries also issue electronic identity cards.

To realize eID applications, it is necessary to implement them on the ID chip. The ePasslet Suite, a product developed by cryptoVision, is ideally adapted for this purpose. The suite consists of a collection of Java Card applets, each of which implements a special eID functionality, making working with these chip-secured documents easy and secure.

The ePasslet Suite is delivered either as a solution embedded in the ROM or pre-installed in the flash memory of a Java Card enabled smart card. The ePasslet Suite provides applets for various eID document applications, including electronic passports, eIDAS compliant signature cards, ISO 18013 electronic driver's licenses, electronic health cards, custom national eID cards, and more. The solution also allows for post-issuance activation of applets, and new applets can be developed using an internal core library API that provides a comprehensive set of functional blocks, reducing memory requirements and time to market.

The ePasslet Suite is the ideal solution for government agencies looking to add functionality to eID documents.

What is an electronic identity card?

An electronic identity card or electronic identity document (eID) is a passport, identity card, driving licence or similar document that is equipped with a smart card chip. This chip can be contact-only or contactless. Electronic identity documents can be used for many applications, including proof of identity on the internet, automated age verification, digital signatures, encryption, physical and logical access, digital payment and even the storage of health insurance information. Electronic identity documents have become the de facto standard. Since 2004, the majority of countries have been issuing machine-readable travel documents (MRTD) as required by the International Civil Aviation Organization (ICAO).

Many countries such as Austria, Belgium, France, Germany, Malaysia, Saudi Arabia, Spain and the UAE have introduced electronic ID documents and dozens more countries are planning to introduce them in the near future. Several countries have already started planning or implementing projects for electronic health cards. Since identity documents generally have a long validity period, it is essential to plan applications thoroughly and establish adaptable solutions.

BASICS

ePasslet Suite

The ePasslet Suite from cryptovision is a flexible solution to implement applications on electronic documents comfortably and cost-effectively. The ePasslet Suite supports contact, contactless and dual interface smart cards. Due to this flexibility, the ePasslet Suite can be used for many different purposes, such as: national identity cards, signature cards, driver's licenses, security access cards, travel documents or health cards.

Electronic identity cards

ePasslet Suite provides applets for eIDAS-compliant eID cards, with support for various profiles. These include the profile used in Germany, for example. In addition, ePasslet Suite makes it easy to implement proprietary national ID cards.

Java Card

The ePasslet Suite is based on the Java Card standard. It offers a large collection of Java Card applications for all common requirements and enables multi-application cards and documents that support multiple applications.

ICAO

The ePasslet Suite enables the complete implementation of a Machine Readable Travel Document (MRTD) according to the International Civil Aviation Organization (ICAO) specification. The ePasslet Suite supports the MRTD protocol standards, Basic Access Control (BAC), Password Authenticated Connection Establishment (PACE) and Extended Access Control (EAC).

Further applications

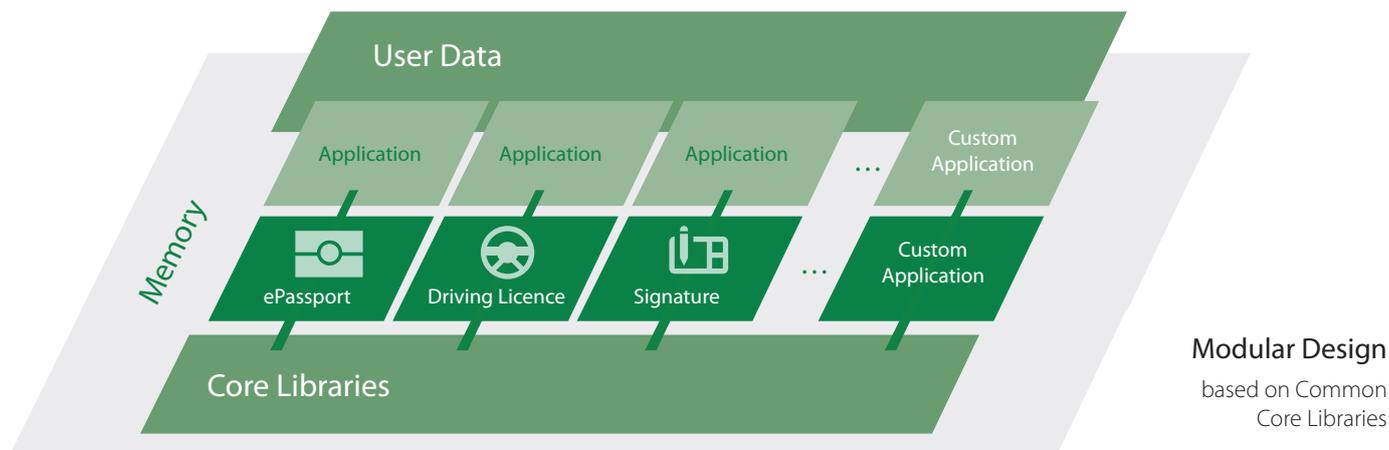
Electronic health cards and electronic driving licences are already in use in some countries. The ePasslet Suite ena-

bles, among other applications, both the International Driving Licence (IDL) and a European Health Insurance Card (eHIC). With the ePasslet Suite, several applications with common resources can be realized on the same card. If additional functions are required, further applications can be instantiated and new applets can be developed and even loaded retrospectively onto already issued cards.

Certified security

Two versions of the ePasslet Suite have been certified to Common Criteria (ISO 15408) on EAL 4+, each with four configurations and corresponding protection profiles. The latest product version has already been certified twice to CC EAL5+.

PRODUCT ARCHITECTURE



ePasslet Suite is based on the Java Card standard. It consists of a collection of Java Card applets implementing a wide range of eID functions.

ePasslet Suite Editions

ePasslet Suite is available in three editions.

Edition 1

- ICAO MRTD with Basic Access Control (BAC) and Password Authenticated Connection Establishment (PACE)
- ISO 7816 File System
- ISO Driving License with Basic Access Protection (BAP) and PACE

Additionally in Edition 2

- ICAO MRTD with EACv1 (including BAC and PACE)
- ISO Driving License with EACv1 or EAP (including BAP / PACE)
- ePKI / Secure Signature Creation Device
- Vehicle Registration
- Health Insurance
- Fingerprint Match-on-Card (based on 3rd party matching package)

Additionally in Edition 3

- Customized eID
(Reference: German eID Card with EACv2)
- Residence Permit
(Reference: EU Residence Permit)
- Citizen Card
(Reference: European Citizen Card)
– identification, authentication, signature –

Additional applications

ePasslet Suite applications can be freely customized through various configuration options. In addition, cryptovision can develop new applets that are tailored to the customer's needs.

SUPPORTED SYSTEMS

The ePasslet suite can be used on any GlobalPlatform-compliant executable Java Card. A performance optimized version is available on NXP JCOP, Veridos Sm@rtcafé and Infineon SECORA ID X.

Reference project

With approximately 30 million inhabitants, Ghana is the second most populous country in West Africa. The National Identification Authority (NIA) of Ghana and its private partner Identity Management Systems Ltd II (IMS II) will issue over 16 million national eID cards. The Ghana Card is the primary means for connecting citizens and foreign residents to government ministry

services. Both the citizen card and the foreign resident card are based on cryptoV^{ision}'s ePasslet Suite and are configured with multiple applications including a custom national eID applet, an ICAO applet valid for travel within the ECOWAS subregion, a digital signature PKI applet and biometric fingerprint Match-on-Card functionality.

cryptoV^{ision}

cv cryptoV^{ision} GmbH is one of the leading specialists for modern, user-friendly cryptography and secure electronic identities. With its solutions, over 250 million people worldwide and a multitude of institutions in the digital world protect themselves against hacker attacks, manipulation, misuse of identities and espionage.

cryptoV^{ision} addresses various industries such as public administration, health, automotive, finance & insurance, energy or IT. Its customers include countries such as Nigeria, Ghana and Ecuador, institutions such as the German Armed Forces, the German Federal Office for Information Security (BSI), the city of New York and companies such as E.ON, VW and Allianz.

CUSTOMERS

The ePasslet suite is used by the following customers, among others:

- **Germany:** The German security printing company, Bundesdruckerei, uses the ePasslet Suite to expand its eID portfolio.
- **South American country:** A country with more than 10 million inhabitants in South America is now using the ePasslet Suite for both the electronic passport and the national electronic ID document.
- The ePasslet Suite has also been used for ePassports, eID cards, eHealth cards, eVoting cards, driver's licenses and many other applications in more than 25 international projects worldwide.



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