Product Brief

Card applet for electronic ID and travel documents

eMRTD applet combining Oracle's Java Card™ and Infineon's SLE 78

Infineon releases the latest version of its eMRTD applet, a flexible and versatile Java Card applet for electronic ID and travel documents. The applet is part of a complete smart card integrated solution from the world-leading chip manufacturer.

The eMRTD (electronic Machine Readable Travel Document) applet is embedded into an integrated solution consisting of Infineon's SLE 78 – the industry's most advanced security controller using Integrity Guard security technology, and Oracle's latest Java Card implementation. This platform is certified to CC EAL5+ (high). It offers the most advanced open environment for electronic ID and travel documents for eGovernment and enterprise applications.

This eMRTD applet is fully compliant with the ICAO Doc 9303 standards and the technical guidelines TR-03105 part 3.2 version 1.4.1. issued by the German BSI, making it a perfect fit for interoperable **electronic passport** or **electronic ID** solutions. It provides a robust foundation for biometric passports and **electronic residence permits** for several countries. Supported authentication protocols include Basic Access Control (BAC), Active Authentication (AA), Extended Access Control (EAC) and Supplementary Access Control (SAC).

Other application scenarios include **electronic driver's licenses**, as this applet is fully compliant with the ISO/IEC 18013 standard series and the EU Directive 2006/126/EC. It enables secure storage of and access to personal data with BAP, EAP, AA, EAC and SAC.

In addition, this eMRTD applet is designed to be highly configurable, so it can easily meet local and domestic requirements without software modifications. Thus, the eMRTD applet can be for other use cases, e.g. **electronic health card**, electronic IDs.

The underlying platform supports both contactless and contact-based communication interfaces with ISO/IEC 7816 and ISO/IEC 14443 type A/B compliance.

Key features

Typical applications
- Electronic passports
- Electronic IDs
- Electronic driver's licenses
- Electronic residence permits
- Electronic health cards

Platform compliance
- Java Card 3.0.1, classic edition
- GlobalPlatform 2.2, ID config 1.0

Cryptographic and arithmetic functions
- RSA up to 1536 bits
- ECC up to 384 bits
- 3DES, and AES up to 256 bits
- SHA2 up to 256 bits
- Extended length APDU

Supported international standards
- ICAO Doc 9303
- TR-03105 part 3.2 v1.4.1
- ISO/IEC 18013

Communication interfaces
- Contact based ISO/IEC 7816 up to 312 kbps
- Contactless ISO/IEC 14443 type A/B up to 848 kbps

Certification
- Infineon SLE 78 – CC EAL 6+
- Oracle's Java Card™ OS – CC EAL 5+

Further applets for Oracle's Java Card™ operating system based on Infineon's SLE 78

The flexibility of our fully certified Java Card platform, supporting state-of-the-art cryptography, enables the deployment of various applets with different configurations.

Complementing our eMRTD applet, we also offer other applets for other use cases. These are outlined below.

PKI applet
This applet is designed for secure electronic signature creation and secure authentication of online services. It supports state-of-the-art authentication protocols for best data privacy. This applet can be used for Windows or web service log-on.

Match-on-card (biometric API) **library**
The Match-on-Card (MoC) library supplied by Neurotechnology together with the PKI or eMRTD applet offers an ISO/IEC 19794-2 compatible MoC solution, enabling fast biometric authentication in addition to traditional PIN authentication.

Infineon offers a **ready-to-go applet portfolio** supporting long-lasting, secure eGovernment and enterprise services.

Thanks to post-issuance functionality, these applets can be updated or loaded after the ID card has been issued so the electronic document does not need to be replaced each time.

We partner with approved Java developers, who have already qualified applets for our platform, to deliver customer-specific use cases. These partners also develop customized software on demand.

Sample evaluation

Product	User memory [kB][1)]	Features	Order code
SLJ 52GLA080AR	80	Contactless preloaded SAC/BAC/AA/EAC ePassport	SP001505786
SLJ 52GLA080BR	80	Contactless preloaded EAP eDriver's license	SP001505962

1) Memory sizes depend on configuration

Infineon Technologies AG
Infineon is an innovative and long-standing supplier of hardware-based secure ID solutions, and has led the chip card controller market for 15 consecutive years. More than 150 reference projects across all government ID applications, covering 75 percent of the world's population, trust Infineon's solutions.

MaskTech GmBH
MaskTech is the leading independent provider of high-security operating systems and related embedded applications.
The company's products, including secure travel and ID documents as well as strong authentication solutions, are used in more than 65 countries worldwide.

Neurotechnology
Neurotechnology provides recognition algorithms and SDKs for different biometric modalities and licenses more than 2,500 system integrators and hardware providers in more than 100 countries.

MASKTECH

NEUROtechnology
Biometric and Artificial Intellignece Technologies

Java

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Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings
Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.

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