Chip-based mobile payment testing (USIM and Secure Element)

Functionality, security and interoperability evaluation of secure elements for mobile payment under industry standards and payment schemes

Secure Elements (SE) are a chip-based solution for mobile payment that enables secure storage of payment transactions and other sensitive credentials. Secure Elements in any of their form factors USIM cards (UICC), Embedded SE (eSE), SD cards or add-ons are one of the most secure and reliable solutions for NFC payments market.

One of the key advantages of SE is the existence of a well-defined certification scheme that includes security evaluations against malicious operations and assessment of SE compliance with functional and interoperability specifications. Industry organizations and payment schemes have developed different certification processes to evaluate Integrated Circuits (IC), platforms (SO) and payment applications. Testing and evaluation to achieve product certifications can only be carried out in independent, accredited laboratories.

Our Solution

Applus+ Laboratories offers functional testing and security evaluation services for secure elements (USIM, eSE and SD) during the various stages of the product's development:

- Development testing
- Pre-evaluation testing
- Pre-certification testing (quality analysis)
- Technical consulting in documentation
- Certification testing

Our testing capabilities include:

Functional	Security

Payment Applications (Applet)	VISA (VMPA)	VISA Chip Security Program (VCSP) MasterCard (CAST) AMEX (Expresspay Mobile) JCB (J/Speedy)
Platform (Operating System)	GlobalPlatform UICC Config GlobalPlatform UICC Contactless Extension GlobalPlatform UICC Memory Management GlobalPlatform UICC SCP81 GlobalPlatform SE Configuration GlobalPlatform SE Access Control	EMVCo Platform Security Evaluation Common Criteria (SOG-IS)
Hardware and Firmware	GlobalPlatform SWP and HCI EMV L1	EMVCo IC Security Evaluation Common Criteria (SOG-IS)

Applus+ is a recognized laboratory for mobile payment testing and evaluation by the main payment schemes EMVCo, Visa, MasterCard, AMEX and JCB. Applus+ is a GlobalPlatform full member and qualified laboratory. We are also accredited to perform Common Criteria and SOGIS certification for Smart Cards and Secure Elements up to EAL 7. Furthermore, Applus+ is recognized by EMVCo and Common Criteria to conduct site audits on the product development sites. These audits are mandatory to obtain a Common Criteria or EMVCo certificate on the product.

Benefits:

- Maximize the return on investment in mobile payment solutions
- Applus+, one-stop-shop to perform all the evaluation tests for your SE
- Speed up certification process