



By testing your card with SmartQuality, you can ensure that the card is compliant with EMV and issuer's standards.

SmartQuality

SmartQuality checks the consistency between different data elements.

Integrated Testing Solutions

SmartQuality is a PC - based application that checks the quality of an EMV card. For an EMV card to be considered a quality-card:

- All card data elements shall be consistent with EMV standards
- All card data elements shall be consistent with issuer specific rules
- All card data elements shall be consistent with each other
- The card shall respond to the commands correctly
- The data format between the card and the terminal shall be consistent with EMV standards

SmartQuality checks all of the items above to ensure that the card is genuine.

The EMV standard is a flexible standard that gives issuers the chance of making their own risk and data management.

Hence, each issuer has its own EMV risk management and data management parameters. Due to the comprehensive rule-definition language of SmartQuality, issuers can define their own rules.

%100 EMV Standard Availability

SmartQuality is a tool based on a source code that was certified by EMVCo.

Included in Visa Product Directory

SmartQuality is included in the VISA product directory. VISA recommends this tool to its members to facilitate the EMV Migration process.

Data Element Management

Issuers can define all properties of the data elements.

SmartQuality contains standard EMV data elements with standard EMV properties. Issuers can change the properties of data elements by adding new data elements and defining all of the properties. SmartQuality conducts the controls according to the properties of data elements previously defined.

Flexible Rule Management

Issuers can define their own rules to ensure that there are no problems on the card. SmartQuality contains a rule definition language that enables the issuer to define comprehensive and complex rules. Rules are defined according to the issuer's risk management strategy. Each rule points out specific issuer decisions about the card.

The flexible rule definition language enables the issuer to define very complex rules in the system. Rule examples:

- The day part of Expire Date data element (Tag 5F24) shall be one of the following values: 29, 30, 31
- Cardholder name shall not contain "." Character
- If Application is VISA, Then Application Label shall contain VISA string; If Application is MasterCard Then Application Label shall contain MASTER string

Quality Controls

SmartQuality performs the quality checking according to following criteria:

- Standard EMV rules
- Format control
- Minimum and maximum length controls
- Requirement controls
- Issuer-defined rules
- Data element specific rules
- Complex rules (Scenarios)

Certificate and Digital Signature Controls

SmartQuality checks if the card's certificate and digital signature are correctly personalized on the card. SmartQuality decrypts certificates, parses it, displays parsed data in the screen, and validates it. The rules on the parsed certificate data, such as the certificate expiration date, certificate serial number, and issuer public key length, can be defined. After getting the Issuer Public Key from the certificate, SmartQuality decrypts the digital signature and validates it as a certificate. After parsing the certificate, the content of the Static Application Data can be seen on the screen.

Cross Checks

SmartQuality checks consistency between different data elements such as Track2 and PAN.

Complex Rule Definitions (Scenarios)

To define complex rules, you can use scenarios. Scenarios have a special "language" which enables you to define any rule. Sample scenarios are:

- Application Label shall include "VISA" keyword
- Expire date shall be lower than 20070101
- 9F14 (Lower Consecutive Offline Limit) shall be lower than 9F23 (Upper Consecutive Offline Limit)
- If both 9F14 (Lower Consecutive Offline Limit) and 9F58 (Lower Consecutive Offline Limit, card internal parameter) are present in the card their values shall be equal.

Compare Utilities

SmartQuality can compare all data elements on:

- Two different cards
- One card and one card file
- Two card files

To compare two (2) different cards, you can apply following steps:

- Test the first card
- Export first card data to file
- Test the second card
- Compare second card with the file (contains first card data)

Conclusion

By testing your card SmartQuality, bit by bit, you can ensure that the card is in compliance with EMV and issuer standards.



Kartek Kart ve Bilişim Teknolojileri Tic. Ltd. Şti.
İTÜ Ayazağa Kampüsü Teknokent
ARI 2 A Blok K: 2 34469
Maslak - İstanbul / TÜRKİYE

P : +90 212 328 33 31 (pbx)
F : +90 212 285 40 93
E : info@smartsoftww.com
www.smartsoftww.com

SmartGroup-US LLC: 244 5TH AVE
#2551 NEWYORK, NY 10001-7604
P : +1 (646) 571 22 85

SmartGroup Balkans DOO:
27-th of March Street
No: 501 Skopje / MACEDONIA

