

# EMV Triple Interface Personalisation Tester

The EMV Triple Interface Personalisation Tester (TPT) is a tool to ensure the logical correctness of personalised EMV cards. It tests issuer data, optional loyalty applications and the congruence between all data stored on a card.

- Support of contact, dual interface and contactless cards
- MasterCard® *PayPass*™ and Visa *payWave*™ support

## Test Tool for EMV SDA/DDA/CDA Cards

The following tests are implemented according to EMV 2000 v. 4.1:

- Correlation between magnetic stripe data and EMV smart card data
- Offline SDA/DDA/CDA-tests
  - Application selection
  - PSE selection
  - Initiate application processing
  - Read application data
  - Offline data authentication
  - Offline plain PIN verification
  - Offline encrypted PIN verification
  - iCVV support
  - VISA VLP transaction
- Test of multi-application cards



Illustrations are not binding

## Strictly Hierarchical User Concept

The EMV-TPT provides a multi-user concept to map all prevalent roles of industrial personalisation processes.

- Manager:
  - Test set-up
  - Maintenance of CA public keys
  - Maintenance of issuer master keys
  - Definition of test scenarios
  - Set-up of terminal data
  - Implementation of tests
- Developer:
  - All features of the Manager plus extended debug logging
- Operator:
  - Execution of tests only

## Contactless EMV Transactions

- MasterCard *PayPass* M/Chip
- MasterCard *PayPass* Mag Stripe
- Visa MSD
- Visa qVSDC
- Visa contactless VSDC

## Simulation of Issuer Host

The simulated issuer host generates issuer scripts, verifies cryptograms returned by the card and produces cryptograms for issuer authentication.

- Input mask for issuer master keys
  - Derivation of card-specific or session keys
- Selection of issuer scripts
  - MAC generation for issuer scripts
  - Message encryption for issuer scripts
    - Application Block
    - Application Unblock
    - PIN Unblock
    - PIN Change
    - PUT Data
    - Update Record
    - Update EF-CRM (M/Chip Lite 2.1)
    - TC and ARQC validation
- ARPC generation
- Simulation of the Authorization Request Codes
- VSDC+ (Issuer Discretionary Data)

## Technical Data

The EMV Personalisation Tester can be connected to a Windows PC using an USB or TCP/IP interface.

The offline EMV Personalisation Tester contains:

- Hybrid motor-move-in card reader for
  - Magnetic stripe
  - Contact chip
  - Contactless chip
- Power supply (prim.: 100–240 V~, 50/60 Hz)
- Complete installation software
- Documentation
- Cabling

## Congruence of Magnetic Stripe and Chip Data

The EMV-TPT retrieves magnetic stripe and chip data from the card. It performs analyses and a comparison with all corresponding smart card data objects.

## Support of Multi-Applications

Smart cards can contain EMV applications and/or non-payment functionalities and/or a customer individual application code. The EMV-TPT covers all combinations.

## Analysis Display

The EMV-TPT produces test analysis output

- in tree views for easy interpretation by untrained users
- in a detailed EMV transaction trace for expert analysis

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