

# Mobile Payment Validation Test Tool

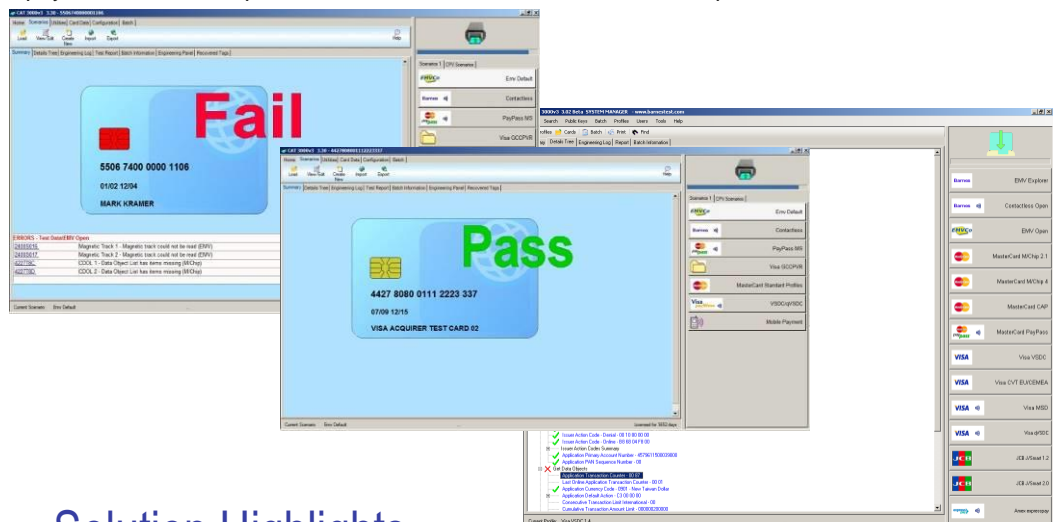
## Payment Application Testing over NFC & SWP

Speeds up development of innovative EMV mobile payment products and eliminates wasted resources from EMV device validation rejections

To achieve payment scheme certification, issuers of mobile payment applications must ensure their products comply with their chosen payment scheme's personalisation requirements. To prevent the costly production of invalid EMV cards and delays in the formal personalisation certification process required by the payment schemes, the Barnes Test Tool enables issuers to validate and pre-certify their mobile payment products against the latest payment scheme requirements, as well as their own business requirements.

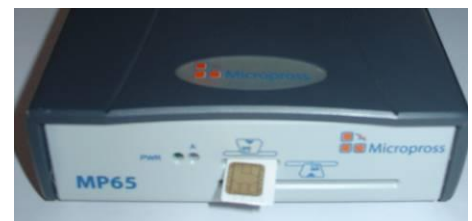
**SUPPORTED PAYMENT SCHEMES INCLUDE:**

- EMV
- American Express  
expresspay
- D-PAS / Discover  
eftpos
- Interac
- JCB J/Speedy  
JetCo
- Mastercard Contactless
- NETS
- PBOC / qPBOC
- UnionPay Quick Pass
- Visa payWave
- SERMEPA Advantis



### Solution Highlights

- Quickly tests data on the chip is correct and valid according to issuer profiles and all major payment scheme specifications.
- SWP reader allows the SIM card to be tested in an environment that closely resembles the real world, in that it allows the CPT software to simulate the handset as well as the contactless terminal and closes the testing loop.
- Testing over SWP eliminates the need for a handset. Testing over NFC incorporates the handset.
- Supports all payment devices: contact and contactless cards, mobile phones and tokens.
- Developed in collaboration with Visa and MasterCard.





## Features and Benefits

### THE BARNES ADVANTAGE

Barnes is the chosen test tool of Banks & Issuers, Card Manufacturers, Personalisation Bureaux and Test Laboratories worldwide.

Here are some reasons why:

### BUSINESS AGILITY

Barnes test tools are easy to use by both technical and non-technical users, and speed up card development and payment scheme certification.

### COST ELIMINATION

The high business costs and wasted resources of producing and issuing invalid cards is eliminated.

### RISK REDUCTION

The reputational risk of issuing invalid EMV cards to end customers is reduced.

### FUTURE PROOFED

Barnes works in partnership with all major payment schemes. As scheme rules evolve, Barnes rapidly make updated test script packs available to customers via the Barnes website.

### SERVICE EXCELLENCE

Our clients have every confidence that whatever their test requirement, the Barnes team is always on-hand to deliver expert advice and fast support.

### Multiple Application Tests

In a single card insertion or tap, the tool confirms the data on the contact/contactless chip is correct and valid according to the issuer profile. The card account number and issue / expiry dates are displayed for visual verification of the card data.

### Multi-level User Interface

The tool is designed to be easy to use for both the non-technical operator and at the same time provides detailed technical information for IT and engineering chip staff. Production control features include User Access Control, Batch Test and Event Logging, which are supplemented with intuitive data element displays for problem solving and data analysis.

### Powerful Diagnostic Tools

Data displays include Card Test Result Summary; Detailed Test Result Tree and Detailed Full Engineer's Log. Hyperlinks between the various levels of displays and directly to the EMV and payment scheme specification references allow the user to quickly identify and diagnose problems.

### PCI Security

PCI compliant masking, log-out and user controls enable full control of personal cardholder data on screen and in reports.

## Optional Solutions

### EMV PVT for Contactless - CPT 3000v3CL

Validates contactless cards and ensures that dual interface cards deliver consistent information over both interfaces.

### Host Simulation Module

Adds the ability to verify secret keys either in software or with the optional Hardware Security Module connectivity.

### Payment Scheme Certification Test Modules

Allow certification tests to be performed to accelerate payment scheme approval.

- MasterCard CPV
- Visa GPR
- Eftpos CPC
- NETS
- JCB & J/Speedy
- Discover CPV
- RuPay
- GIE CB
- BKM Troy

### Adaptable Test Scenarios and Scripts

Users can easily define "QuickTest" profiles to test their own chip data requirements, in line with, or in place of, payment scheme requirements. Test scripts are not restricted to EMV; other types of smart card application can also be tested, for example payment, GSM/3G, security and loyalty applications.

### Cryptographic Authentication

Static (SDA), Dynamic (DDA) and Combined (CDA) data authentication is fully supported by the tool. RSA algorithms are also supported.

### Key Management

Complete with a comprehensive set of Visa, MasterCard, JCB and Discover public keys. Additional keys can be imported through a key management system.

### Network Capability

The tool can be used in a networked environment with individualised user access levels and settings. All test scripts, scenarios, standard profiles, public keys and reporting for multiple tools can be managed centrally, ensuring consistency across all units.

### Remote Testing

Issuers and scheme authorities can securely evaluate and approve cards remotely, eliminating the costs and delays of sending sample cards around the world.

## Technical Specification

### Software:

- OS: Windows 7, 8 and 10 32-bit and 64-bit, Linux VM, Apple Parallels

### Card Reader:

- Barnes 3K7 (magnetic stripe, contact and contactless chip) motorised card reader  
With additional contactless reader for testing over NFC
- SWP reader – optional for MasterCard Mobile PayPass (MMPP) but necessary for full VMPA and VMCPs tests
- Alternative manual reader is available for reading metal / titanium cards.
- PC/SC reader compatible