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

**SUPPORTED PAYMENT SCHEMES INCLUDE:**

EMV  
EMVCo L3  
ABI  
American Express  
ATH  
BKM Troy  
Cartes Bancaire  
CPA  
Credibanco  
Discover D-PAS  
eftpos  
Interac  
JCB  
JetCo  
mada  
Mastercard  
MCCS  
NCCS  
NETS  
NSICCSC  
PBOC  
Pure  
RuPay  
UnionPay  
Visa  
SERMEPA Advantis

**Solution Highlights**

- Quickly tests that data on the chip and magnetic stripe are correct and valid according to issuer profiles and all major payment scheme specifications.
- Supports all payment devices: contact and contactless cards, mobile phones, tokens.
- Developed in collaboration with Visa and Mastercard, and used by Visa, Mastercard, American Express, Discover, JCB, major banks and card bureaus globally.
- Essential in all EMV chip card issuing, personalisation, implementation and support operations.
Features and Benefits

Multiple Application Tests
In a single card insertion, the tool confirms the data on the chip and magnetic stripe 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 embossing indent print. Optionally, the card livery can be displayed to verify the correct card stock has been used.

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 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 Full Engineering 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.

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, security and loyalty applications.

Cryptographic Authentication
Static (SDA), Dynamic (DDA) and Combined (CDATA) 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.

Optional Solutions

EMV PVT for Mobile - CPT 3000v3ML
Validates mobile payment data over NFC plus SWP interfaces.

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 GRP
- eftpos CPC
- NETS
- JCB
- Discover D-PAS CPV
- RuPay
- GIE CB
- tippos

Technical Specification

Software:
- OS: Windows Vista, Windows 7 and 10 (32-bit and 64-bit), Linux VM, Apple Parallels

Card Reader:
- Barnes 3K7 Triple Interface reader (contact only mode)
- Alternative manual reader is available for reading metal / titanium cards.
- PC/SC reader compatible

For CPT 3000v3 CL
- Contactless card and NFC reader options
- Barnes 3K7 Triple Interface reader (Magnetic Stripe, Contact and Contactless chip)

For CPT 3000v3 ML
- SWP reader

For CPT 3000v3 BATCH
- Barnes 60H reader