BARNES
SMART SOLUTIONS

P3®
Personalisation Preparation Process

Contact/Contactless EMV® Data Preparation Solution

Keep control of your Master keys
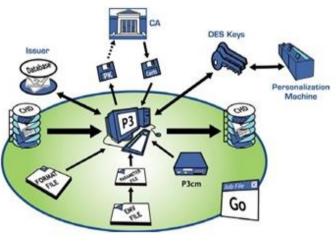
PAYMENT SCHEME SUPPORT

mastercard.

VISA

AMERICAN EXPRESS

DISCOVER NETWORK

JCB

UnionPay 银联

P3 is a turnkey solution comprising of a Windows-based application and a FIPS 140-2 Level 3 approved hardware security module (HSM) It provides a simple low cost EMV data preparation solution for issuers to migrate from magnetic stripe cards to EMV smart cards.

All the EMV card keys and data required for the various card association applications are created and managed in-house by the issuer in a range of output formats, delivering flexibility in choosing one or more bureaux for the card personalisation process

Key Benefits

> Delivers 100% in-house control over cryptographic keys

> Supports all major card association payment applications

> Generates keys and EMV parameters from existing magnetic stripe files

> Supports instant issuance and on-demand replacement of cards

> RSA key generation with key caching

> Flexible output format to support personalisation of MULTOS, GlobalPlatform and proprietary single/multi-application cards

Business Impact

Maximise security by retaining control of Master keys
P3 links to a secure database of cryptographic keys, to an EMV certificate authority and to hardware security modules that ensure the highest levels of protection for card data and keys. - All cryptographic processing and keys are kept in-house

Freedom to choose the right card for the Job
P3 supports all major open standard and proprietary cards – It is kept up to date with latest versions of payment scheme applications

Easy integration and automation
The P3 preparation solution is front and back end agnostic – it works with all popular CMS and personalisation systems
An easy to use API interface supports the automation of Issuer setup and key management prior to job submission

Cost effective
Users can do everything in-house or shop- around for the lowest cost production bureau

P3®
Technical specifications

Applications supported

P3 supports the following major association's card applications:

- American Express – AEIPS, Expresspay, Expresspay Mobile
- Discover – D-PAS, ZIP
- JCB – J/Smart 1.0, J/Speedy 2.0
- MasterCard – M/Chip Lite, M/Chip 2 Select, M/Chip 4, M/Chip Flex, M/Chip Advance, Contactless, PayPass, PayPass Mobile
- Saudi Arabian Monetary Agency (SAMA) – SPAN2
- Union Pay – PBOC
- Visa – VSDC (SDA, DDA), qVSDC, MSD, VMPA, payWave

P3 supports the following EMV authentication applications:

- MasterCard – CAP (chip authentication program)
- Visa – DPA (dynamic passcode authentication)

P3 supports other applications through GlobalPlatform scripting language

- P3 uses an extended version of the GlobalPlatform scripting language to support data generation for MULTOS applications

Card Platforms supported

P3 is card platform independent and as such supports the following card platforms:
- GlobalPlatform
- MULTOS
- Proprietary single and multi-application cards

Operating systems supported

The latest version of P3 V1.9.2 has been tested on the following Windows operating systems:
- Windows 2019 Server:
- Windows 2016 Server:
- Windows 2012 Server R2- x64
- Windows 2012 Server: x64
- Windows 2008 Server R2: SP 1 x64

Minimum hardware configuration

- Computer: Processor 2GHz, 4GB RAM, 256GB HD,

P3 Advance vs P3 Server

P3 Advance is a medium volume solution for Mid-sized centralised issuing banks and small volume bureaux
P3 Server is a scalable volume solution for large scale Issuers and Bureaux that also offers the following functionality:

- Instant and Post Issuance support
- Caching of RSA keys (KeyCaching)
- Support multiple Hardware Security Modules (HSMs)
- Job submission via Multiple channels TCP/IP MSMQ

Thales HSM support

P3 V1.9.2 operates with the following crypto modules

- payShield 9000 with the PAC907 (P3CM – ESP) license / firmware version 1122:0922 or above

Export restrictions

Both P3 Advance and P3 Server software are exempt from UK export restrictions (excluding known restricted countries) when sold to financial organisations for predominately financial application usage.

For a non-financial application, such as digital ID, it may be necessary to obtain a specific export license.

Please contact your local Barnes representative for details.