

P3® Personalisation Preparation Process

Contact/Contactless EMV® Data Preparation Solution

Keep control of your Master keys

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 bureaus 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

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

PAYMENT SCHEMES SUPPORTED



THE BARNES ADVANTAGE

Barnes Smart Solutions is an international technology-driven, solutions company responsible for onward development and servicing of the P3® turnkey data preparation solution, as well as research and development of security applications for the IoT market.

OUR PROMISE

We provide a powerful and mature set of tools enabling card issuers to prepare data for smart card personalisation and for use in a wide range of applications, both financial and non-financial.

EXPERIENCE

Our team has over 20 years of experience in payment card personalisation and security provisioning of mobile applications and Internet of Things (IoT) devices.

PEACE OF MIND

We ensure high quality and conformance to industry standards. Customers can maximise security by retaining control of Master keys while having the freedom to choose the appropriate partner for provisioning / personalisation of cards.



P3® Technical Specifications

Applications supported

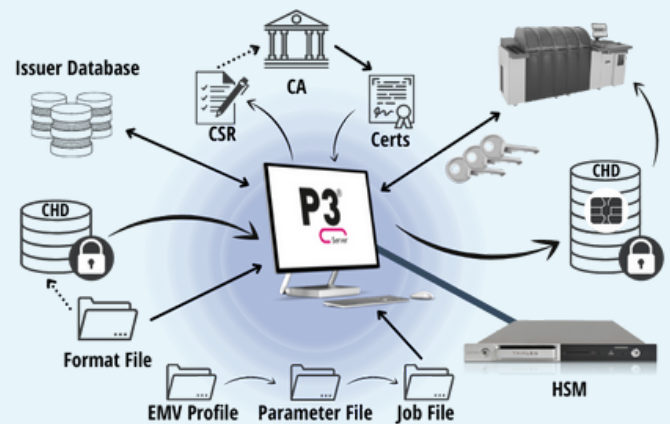
P3® supports the following major association's card applications:

- 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, VMPPA, payWave
- Custom In-country Debit Card Schemes i.e. Dina Card and Meeza scheme

P3® supports the following EMV® authentication applications:

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

P3® support an extended version of GlobalPlatform scripting language to enable data generation for non EMV® applications.



P3 Advance vs P3 Server

P3® Advance is a medium volume solution for Mid-sized centralised issuing banks and small volume bureaus.

P3® Server is a scalable volume solution for large scale Issuers and Bureaus 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
- Support MasterCard Profile Advisor (MPA) & Visa Personalization Assistant (VPA) files

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 1.9.2/3 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

Min. Hardware Configuration

- Computer: Processor 2GHz, 4GB RAM, 256GB HD, 10/100/1000MB Ethernet NIC required
- Display: 1024 x 768 resolution

HSM Support

P3® v1.9.2/3 operates with the following crypto modules

- payShield 9000 with P3CM firmware (1122.0922 or above) and PAC907 license (EOL Dec 2022)
- payShield 10K with P3CM firmware (1122.0001 or above) and PS10-P3M license
- Support TLS connection to HSM
- Support payShield Trusted Management Device (TMD)

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.