



Channel Banking Innovation

Flexible card production system

Customers are demanding easier ways of paying for items without having to carry cash. As a result, there has been a massive growth in debit and credit card usage over the last few years.

According to EMVCo, 65 million EMV-compliant cards were issued worldwide during the first half of 2005. This brings the total to approx 330 million EMV cards. However this only constitutes one-sixth of the total cards in use.

Customer demand for the increased security provided by EMV chip and PIN cards creates the need for banks to have more control over the card production process.

Functions

CardWorld Producer is fully EMV compliant and enables financial institutions to:

- produce plastic cards using encryption
- generate PINs and print PIN mailers
- emboss and encode cards

It is compliant with Visa, MasterCard, Diners Club and JCB and also provides facilities for:

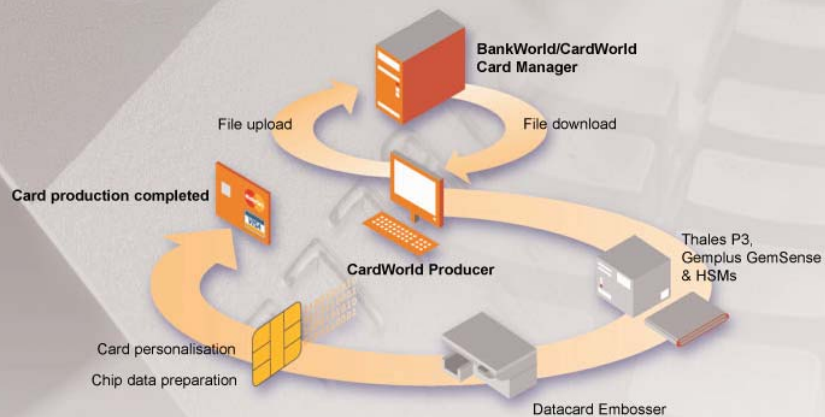
- Data import/export
- Data encryption
- Card embossing
- Magnetic strip encoding
- PIN mailer printing
- Address label printing
- Card carrier printing
- Card re-issuing
- PIN re-issuing
- Stock control
- Data entry
- Layout control

CardWorld Producer

CardWorld Producer is a flexible card production system that gives financial institutions the ability to physically produce credit and/or debit cards from either a central location or distributed localised production points. CardWorld Producer operates over a network, enabling the card production process to be fully integrated with a bank's operational processes.

It is also fully integrated with CR2's BankWorld and CardWorld suite of products with the majority of CR2's customers using this solution. However it can also operate as a standalone system and can be integrated with any card management system.

For instant card issuing, CardWorld Producer may be installed in each branch and networked to a central location (controlling security and data backup). This enables individual branches to issue cards immediately.



Card production process

Data entry and encryption

The cardholder's details are entered into batches within CardWorld Producer. They are then encrypted using, for example, a Thales HSM.

Card production

The expanded data file is read into the embosser and the cards are produced. CardWorld Producer also can generate an additional export file which is used to update the financial institution's card management system.

Card and PIN mailer design

CardWorld Layout Editor enables the user to visually design the layout of both card and PIN mailers at the same time applying card regulations related to embossing and indenting positioning. The Layout Editor can also be used to define the address labels and covering letter. These defined layouts are stored as a template for use in future card production runs.

PIN mailer production

PIN mailer production and distribution can be configured separately from card production. The PIN remains encrypted during the process and only decrypted at the time of PIN mailer printing. CardWorld Producer also supports PIN mailer printing directly from the HSM. This means that the PIN remains encrypted throughout the entire process.

Chip data personalisation process

The chip data personalisation process associated with EMV card production is performed by third party EMV chip data preparation systems. CR2's CardWorld Producer can export to both Thales P3 (Personalisation Preparation Process) and Gemplus GemSense.

An export file is generated by CardWorld Producer containing all the base data for card production in accordance with industry standards. This file is imported into the chip data preparation package which, in turn, expands the data in preparation for embossing.

Features

- **Networked processing**

Card production may be carried out at each branch in order to enable instant card issuing. The application is installed in each required location and linked together over a network. Installations can then share configuration batches and event and audit logs.

- **Configurable card production schedules**

Banks may assign different user groups for separate stages of card production. For example, the embossing process could be assigned to one person, PIN generation to another, while the EMV export facility can be assigned to a third.

- **Reporting and auditing**

Full auditing can be performed at any stage providing details of processed cards. Batch listing or summary reports may also be produced at any time for reference or filing.

- **Multiple card types**

The solution supports multiple card types including debit or credit cards for Visa, MasterCard, Diners Club etc.

- **Application configuration**

This facilitates the easy addition of new drivers to the main application. CR2's system can quickly and easily expand functionality or support for new devices (for photos, signature etc) by the addition of plug-ins or drivers.

- **Stock level monitoring**

CardWorld Producer has a monitor that enables users to keep an account of stock levels. This assists with the planning and purchasing of card production materials.

- **Multi-currency**

Banks can configure CardWorld Producer to support as many currencies as the organisation requires.

- **Import/export compatible with BankWorld and Sparrow**

- **Secure**

CardWorld Producer has a robust and flexible user security control based on password access. It gives individual user IDs, supervisor facilities and user groups selective access to functions and optional dual-password control for sensitive menu options. A full audit trail of all user activities is maintained, enabling the organisation to verify authenticated use of the system. It can also support PIN process through HSM.

Benefits

Bank

- **Revenue generation**

The solution enables financial institutions to act as a bureau and provide card production services to neighbouring banks and organisations thereby generating additional revenue.

- **Cost reduction**

The multi-bank support feature can decrease card production costs. This feature provides banks with the ability to share the costs associated with the card production cycle across multiple banks.

- **Cost management**

The built-in monitor enables banks to keep an eye on the level of remaining card stock thus ensuring that new stock is only purchased as needed.

- **Speed to market**

When CardWorld Producer is fully integrated with the institution's card management system (particularly with CR2's BankWorld or Sparrow) then "Instant Card Issue" service is possible. Cards and PIN mailers are produced locally, while the customer waits, and can be used immediately.

- **Integrated with other channels**

CardWorld Producer is fully integrated with BankWorld and so is included in the bank's complete channel management system driving down costs and providing convenience to customers.

- **Flexible**

- Can be tailored to suit a number of business needs eg debit cards, charge cards and company branded cards.
- Compatible with all card management systems so extra expenditure is not required and costs can be controlled.

- **Secure**

When CardWorld Producer is connected directly to the printer, the PIN is only decrypted at the time of PIN mailing. When connected directly to HSM, the PIN remains encrypted throughout the entire process.

- **Supports HSM**

Requirements

Hardware

- Windows Server (if master/remote installation adopted)
- Standard desktop PC
- Embosser
- PIN mailer printer
- Thales 8000 HSM (optional)
- Serial swipe (optional)

Software

- Windows software
- Thales P3 or Gemplus GemSense

Case study

A European based multi-national bank has been using CardWorld Producer for over 8 years. The bank produces 90 segmented Visa and MasterCard products and has issued more than 100,000 cards.

The bank's initial strategy for its card production environment included bureau-based services for several partner banks across Europe. These services required a solution which supported deployments in multiple institutions operating across many regions. The bank also needed:

- a flexible card production environment which adopts new support modules and drivers
- a card production solution which adapts new industry standards and compliance mandates

In 2005, the bank began issuing chip-based cards which conformed to EMV industry standards. The roll out of these cards was achieved through the addition of CR2's CardWorld Producer EMV Export Driver. This driver interoperates with the bank's chip card personalisation system.

Today the bank is EMV certified for Visa and MasterCard and provides chip card production bureau services for multiple banks. CardWorld Producer was key to delivering the bank's strategy and keeping up-to-date with regulations because of its modular design and open architecture.