

RS2 Software Group has fully integrated EMV Chip Cards Acquiring within bankWORKS, its flexible Card Management System. Full integration will benefit current bankWORKS users by providing a *smooth* migration to EMV while maintaining the same level of flexibility that bankWORKS already offers.

RS2 adheres to the respective specifications developed by MasterCard and Visa, ensuring that chip card transactions are properly authorised and cleared. This minimizes acquirer risk as well as interchange fees.

Transaction Processing

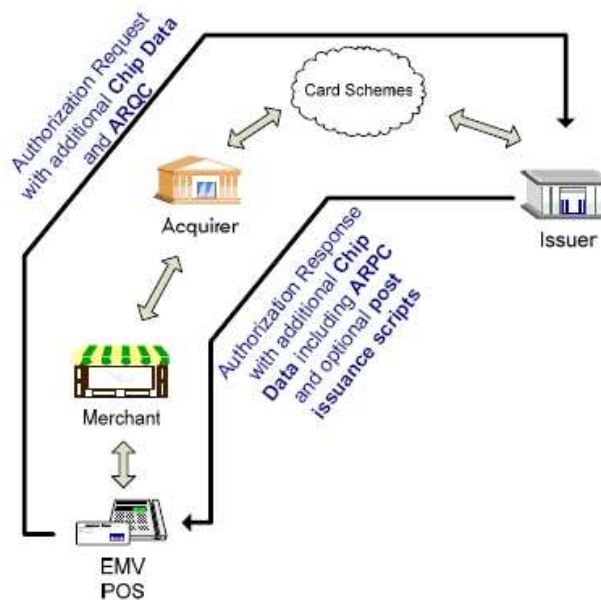
During implementation of chip card acquiring, acquirers must upgrade their Terminal Networks to 'EMV compliant' POSes. On-line and batch transactions from these EMV devices will use enhanced message protocols that include extra EMV related information.

The acquirer to card scheme network interface will also need to be enhanced to transmit EMV data when transactions are routed to issuer banks for authorisation.

Note that since magnetic stripe cards will still continue to be in use for an undefined period of time, the **bankWORKS** solution will continue to support both magnetic stripe and chip card transactions together.

Transaction Flow

A smart card transaction starts at the terminal, with a number of authentication controls carried out between the card and the terminal only. At this stage, the outcome of these validations decides whether the transaction should go online or otherwise. If the decision is for the transaction to remain offline, the transaction is approved or declined without even involving the acquirer.



If on the other hand the decision is to send the transaction online, the terminal sends a 0100 message that includes an *Authorisation Request Cryptogram (ARQC)*. This message must be routed by the acquirer to the card scheme network and therefore to the issuer and the acquirer must ensure that all the extra smart card related data is included in the message. The response from the issuer then includes an *Authorisation Response Cryptogram (ARPC)*, new data and possibly some post-issuance scripts. The acquirer must be able to forward this data intact to the terminal and therefore to the card.

The merchant must then clear all transactions to the acquirer. These clearing messages include further new data brought about by chip transactions. Authorised transactions will also include a *Transaction Certificate (TC)* that the acquirer must store and make available to the issuer upon request.

Backoffice Processing

bankWORKS EMV Acquiring with *clearing* includes updated card scheme file formats that meet the specific chip card requirements by including added information to the cleared transactions. Interchange fee calculations related to chip card initiated transactions are also supported.

Batch files from terminals may also require customisation to the bank's current format or else the bank may decide to adopt 'standardised' terminal clearing formats. In any case, **bankWORKS** is committed to support many popular and localised clearing formats.



Online Authorisation Switch

The EMV Acquiring update for the *Online Authorisation Switch (CommServer)* allows for the newly defined EMV values to be supported and transported between source and destination. This includes message format updates to card scheme networks, batch file downloading and storing of the new cryptograms required by the issuer.

The CommServer POS Channel currently supports the standard *ISO8593* format updated to include chip related data, which format is supported by many popular terminal manufacturers.



Chip Card Acquiring

Life Cycle Management

- ✓ Minimise risk and Interchange fees
- ✓ Fully EMV compliant
- ✓ Merchant and POS management
- ✓ Clearing

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