et.s Karten Autorisierung

# Central debit card authorisation system

et.s CardAuthorisation is a debit card authorisation system available 24/7.
It supports for the following functions the communication protection, card and account validation and backend interface processing for the banks own cards.

- **Withdrawals** at own and other domestic and international ATM's
- **Deposits** at own ATM's
- **Payments** at domestic and international POS as well as ecCashOffline terminals
- **Transfer of money to the "Geldkarte"** (prepaid debit card) at own and other terminals
- **Transfer of money to a prepaid mobile phone card** at ATM's
- **Display of account balances**
- **Processing of self service terminal requests**
- **Processing of advice messages**

Currently the authorisation of magnatic strips and chips version SECCOS 5.0 and SECCOS 6.0 is supported.

## Request processing

The incoming messages, from own terminals as well as from acquirer gateways, are checked and authorised.
To document the authorisation, technical and account related log files are kept during processing.
The ISO converter, which is a central input and output component for all messages, converts different message formats (ISO 8583, etc.) to one internal working structure. At the end of processing, this structure contains all relevant information to create outgoing message in the desired output format.
The customized Repository contains the base information upon which authorisation components are to be processed.
This centrally controlled authorisation process as well as the modular construction of the

## Card- and account validation

Parts of the card- and account validation are:

- **Card, account and disposition checks** against the backend system,
- Card, account and usage **lock checks,**
- **Set locks** depending on the PIN validation and retry counter
- Withdrawal limit checks depending on the card and account as well as
- **Validation of information relevant to the chips** of EMV and ecCashOffline

## Backend processing

The existing central components can be economically and easily combined through the open interfaces of the system (parametric user exits). e.g.

- **Access to the card and account data base**
- **Disposition**
- **Cryptography** (PAC/MAC)
- **Transaction logging**
- etc

et.s CardAuthorisation also initializes the following data base updates:

- the card- and account limits
- the retry counter
- the locks
- etc

## Response

et.s CardAuthorisation sends back a positive or negative response depending on the validation. The EMV response can be customized according to the issuer's requirements.

authorisation system easily facilitates an extension and redesign of the functions. Designed as a service oriented architecture (SOA), our system economically adjusts to the requirements of the future.

## Transaction security

As a part of the transaction security, et.s CardAuthorisation manages

- the **symmetric cryptography according to the DES algorithm** (single and triple DES)
- the **asymmetric cryptography** for the signature / HBCI
- **hash value calculation based on MD5 / ZIV**
- the **key translate** to and from the issuer and acquirer gateways,
- the **PIN verification** as per ISO
- the **security of the bitmap subentries** for chip based transactions such as a “Geldkarte” (prepaid debit card), EMV and ecCash offline
- **Scripting for SECCOS 5 and 6 cards** and EMV transactions (e.g. updates of the chip risk parameters and/or the retry counter reset)

et.s CardAuthorisation logs all incoming and outgoing messages according to the legal audit requirements.

## Advice messages

Relevant information about limits and locks is provided to the gateways for independent offline authorisation.

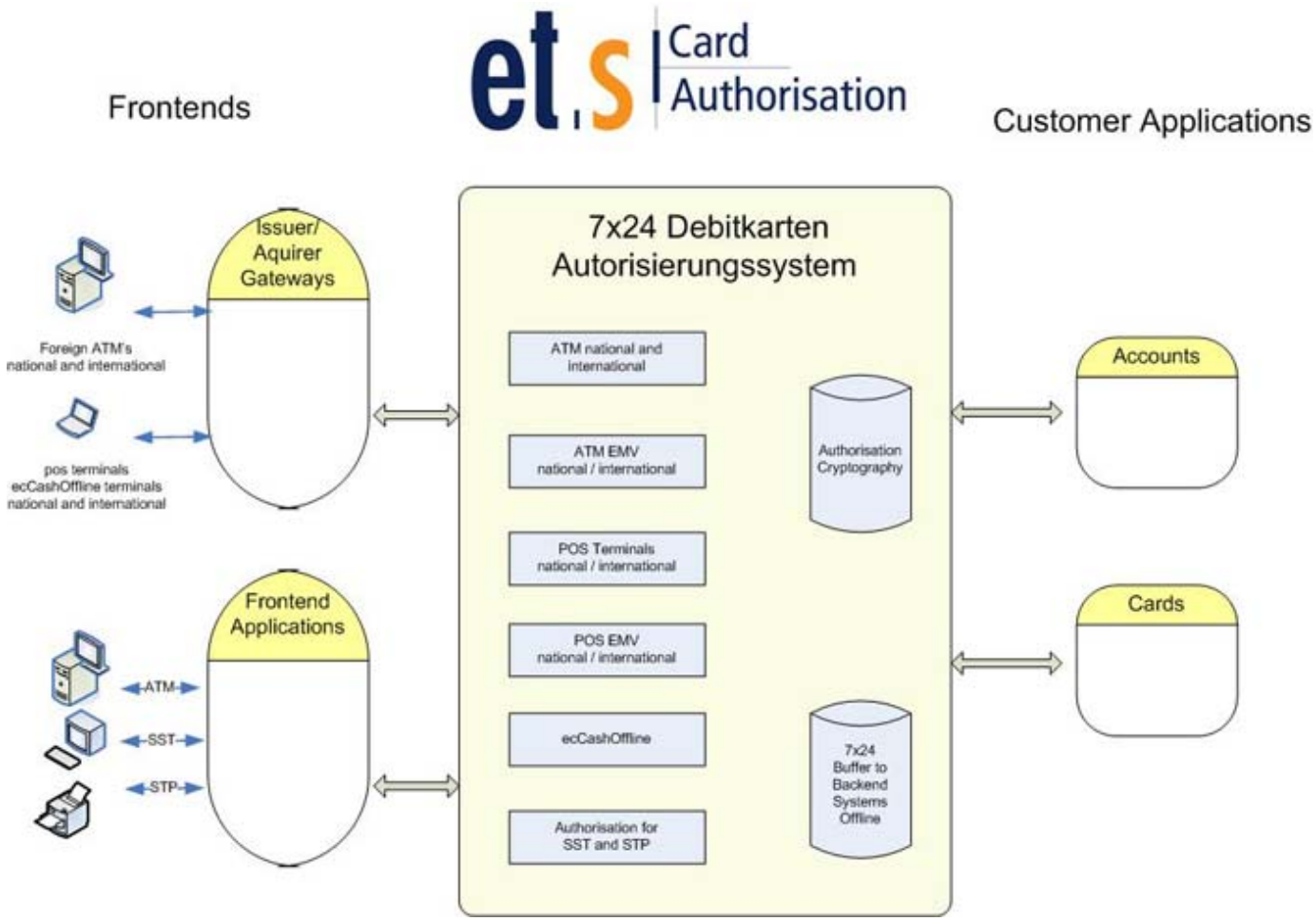
## What are the benefits of et.s Karten Autorisierung

- optimized and **service oriented** business processes
- **short lead times** for new functions and business transactions and therefore
- **high flexibility** considering the changing market requirements
- **quick, smooth and simple** integration into your existing system with its open architecture
- **reduced running costs**
- **liability shift** with chip based transactions
- **SEPA** (single euro payments area) processing
- **Routing to different issuer gateways**.

et.s Karten Autorisierung in use.

Courrently processes

- About **8.8 debit cards and**
- up to **28.5 million authorisation transactions** per month.


Frontends
et.s Card Authorisation
Customer Applications
Issuer/
Aquirer
Gateways
Foreign ATM's
national and international
pos terminals
ecCashOffline terminals
national and international
Frontend
Applications
ATM
SST
STP
7x24 Debitkarten
Autorisierungssystem
ATM national and
international
ATM EMV
national / international
POS Terminals
national / international
POS EMV
national / international
ecCashOffline
Authorisation for
SST and STP
Authorisation
Cryptography
7x24
Buffer to
Backend
Systems
Offline
Accounts
Cards

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