2cqr

DESFIRE CARD

HRC - 3000

FEATURES:

RF interface: ISO/IEC 14443 Type A

- Contactless transmission of data and powered by the RF-field (no battery needed)

- Operating distance: up to 100 mm (depending on power provided by the PCD and antenna geometry)

- Operating frequency: 13.56 MHz

- Fast data transfer: 106 kbit/s, 212 kbit/s, 424 kbit/s, 848 kbit/s

- High data integrity: 16/32 bit CRC, parity, bit coding, bit counting

- True deterministic anticollision

- 7 bytes unique identifier (cascade level 2 according to ISO/IEC 14443-3 and option for random ID)

- Uses ISO/IEC 14443-4 protocol

ISO/IEC 7816 compatibility

- Supports ISO/IEC 7816-3 APDU message structure

- Supports ISO/IEC 7816-4 INS code 'A4' for SELECT FILE

- Supports ISO/IEC 7816-4 INS code 'B0' for READ BINARY

- Supports ISO/IEC 7816-4 INS code 'D6' for UPDATE BINARY

- Supports ISO/IEC 7816-4 INS code 'B2' for READ RECORDS

- Supports ISO/IEC 7816-4 INS code 'E2' for APPEND RECORD

- Supports ISO/IEC 7816-4 INS code '84' for GET CHALLENGE

- Supports ISO/IEC 7816-4 INS code '88' for INTERNAL AUTHENTICATE

- Supports ISO/IEC 7816-4 INS code '82' for EXTERNAL AUTHENTICATE

Non-volatile memory

- 2 kB or 4 kB or 8 kB NV-Memory

- Data retention of 10 years

- Write endurance typcial 500 000 cycles

- Flexible file system

- Up to 28 applications simultaneously on one PICC

- Up to 32 files in each application (standard data file, back-up data file, value file, linear record file and cyclic record file)

- File size is determined during creation

FEATURES:

Security

- Common Criteria Certification: EAL4+ (Hardware and Software)

- Unique 7 bytes serial number for each device

- Optional "RANDOM" ID for enhance security and privacy

- Mutual three pass authentication

- Mutual authentication according to ISO/IEC 7816-4

- 1 card master key and up to 14 keys per application

- Hardware DES using 56/112/168 bit keys featuring key version, data authenticity by 8 byte CMAC

- Hardware AES using 128-bit keys featuring key version, data authenticity by 8 byte CMAC

- Data encryption on RF-channel

- Authentication on application level

- Hardware exception sensors

- Self-securing file system

- Backward compatibility to MF3ICD40: 4 byte MAC, CRC 16

Special features

- Transaction oriented automatic anti-tear mechanism

- Configurable ATS information for card personalisation

- Backward compatibility mode to MF3ICD40

- Optional high input capacitance (70pF) for small form fact or design (MF3ICDH 21/41/81)