NXP Dual Interface & Contact and contactless ICs for secure, EMV compliant payment solutions

Payment Solutions without limits

The Banking Market needs secure, reliable and fast microprocessor solutions, which meet the diversity of payment requirements. NXP offers a complete portfolio of contact, dual interface and contactless ICs for leading edge payment systems – addressing simple payment, mobile and multi-applications services.

Reliable and attractive solutions

- **Variety**
  NXP allows financial institutions and card manufacturers to issue different cards to their customers according to their preferences: from simple low-cost cards to dual interface, multi-application cards – on one platform.
- **Security & Confidence**
  NXPs high security level assures end consumers and financial institutions that payment transactions are secure and prevented from fraud.
- **Convenience & Attraction**
  Multi-application cards enable consumers to have just one card for payment, public transport and loyalty schemes. Contactless and mobile payment attracts new audiences and increases customer retention.

Trusted technology

- **Large technology portfolio**
  The broad range of NXPs Smart*MX*, Automatic Fare Collection along with NFC products enables any leading edge payment and multi-application solution.
- **Certifications**
  The high level of security of our ICs results in a large range of EAL5+, EMVCo approved products.
- **Compliance**
  MasterCard® ,Visa® and EMV compliance is supported by our banking products.
- **Contactless/ Dual Interface/ USB**
  NXP is the leader in contactless technology and serves the growing market with reliable and high performance solutions.
- **Variety of form factors**
  Cards, key fobs, mobile phones, USB token.

Track record

- NXP has shipped over 4 billion ICs to date for identification solutions
- NXP secure SmartMX chips deployed in over 500 million ePassports and banking cards in 35 countries
- More than 1 billion contactless transport ticketing chips have been shipped
- Creator of NFC technology driving market creation
  - 150+ companies in the NFC Forum
  - 200+ NFC trials worldwide

NXP founded by Philips

Applications

- Debit
- Credit (MasterCard PayPass, VISA qVSDC)
- ePurse
- Convergence: Payment and Public Transport Ticketing (AFC)
- Loyalty
- Ticketing
- eSignature
- Mobile Payment (NFC)

Features Smart*MX* Platform

- Security: CC EAL 5+
- EEPROM: 6 KB – 144 KB
- ROM: 64 KB – 264 KB
- ISO/ IEC 7816 (14443)
- SDA/ DDA
- Support half size ID1 antenna
- Voltage class C, B (+ extended B) and A (1.62 V – 5.5 V)
- Optional Memory Management Unit (MMU)
- Secure_MX51 CPU (Memory extended/enhanced 80C51)
- High speed Triple DES coprocessor (64 bit parallel)
- Optional High speed AES coprocessor (128 bit parallel)
- Optional PKI (RSA, ECC) coprocessor FameXE (4096 bits)
- Broad spectrum of delivery types

Challenges

- Meeting the diversity of requirements for different consumer behaviors, regional differences and infrastructures
- High level of security requirements
- Fast transaction performance
- Cost efficiency
- Multiple Applications on one IC

Strengths

- Memories: cost optimized ROM/RAM ratios
- Crypto Library Expertise for all customers
- Leader in contactless technology
- Experienced support in customer's composite certification
- Approved long-term stability of crypto coprocessor interfacing
- Approved EEPROM initialisation (including individual support)

www.nxp.com/banking

Date of release: October 2009
Document order number: 9397 750 16833
Printed in the Netherlands