NXP®
MIFARE FleX®
for SmartMX2®

Fast, flexible configuration of MIFARE® products on secure SmartMX2 smart card ICs

MIFARE FleX is a powerful feature that enables software-controlled configuration of converged-mobility applications, so it's easy to combine ecosystems and adapt to evolving requirements in the contactless infrastructure.

KEY FEATURES

▸ Comprehensive MIFARE product support
- MIFARE® DESFire®
- MIFARE Plus®
- MIFARE Classic®
▸ Options for configuring MIFARE products
- During production
- Before each transaction
▸ Configurable IDs
- 7 Byte UID
- 4 Byte Random ID
- 4 Byte NUID
▸ Options for configuring activation parameters
- ATQA
- SAK
- ATS
▸ Full flow control of card OS via "gain back control" settings

KEY BENEFITS

▸ Application flexibility with legacy compatibility
▸ Third-party OS/applet flexibility with MIFARE product support
▸ Configuration during production or per transaction
▸ Cost savings and delivery flexibility

APPLICATIONS

▸ Converged mobile transactions
▸ Smart mobility
- Mass-transit ticketing
- Car
- Road tolling
- Parking
▸ Consumer interaction
- Micropayments
- Access management (physical and logical access)
- Brand protection
- Device authentication
▸ eGovernment
- ePassports
- Health and social-security cards
- Driver's licenses
- Work permits
▸ Payment
- Debit and credit
- ePurse

NXP's MIFARE FleX gives solution providers a faster, simpler, and more flexible way to define how a specific MIFARE product-based scheme will perform. MIFARE FleX also provides the maximum capacity for compatibility between MIFARE product-based and other applications, along with full compliance with the existing infrastructure based on MIFARE products.

The configuration of MIFARE products can take place in production, during the personalization process, or during each transaction. The solution adapts to different application needs while ensuring compatibility with the legacy infrastructure. It also supports third-party operating systems (OSs) and applets while ensuring interoperability with MIFARE as a whole.

Flexible delivery options lead to cost savings. Since one product can be used to support several different projects, inventory costs go down because there's less stock to carry. Implementing several applications in a single scheme also reduces the development effort and lowers the cost of implementation, and results in faster time-to-market.

All this makes it easier to develop multi-application smart card functionality, and results in solutions that offer the maximum flexibility and ease of use when addressing different ecosystems needs – today and tomorrow.

| Product | MIFARE Implementations | | | | | | | Features | | | | | | |
| | MIFARE functionality | | | | | | | UID options | | | Parameters | Exit on | | MIFARE select |
	MIFARE Classic with 1K memory	MIFARE Classic with 4K memory	MIFARE Plus X with 2K memory	MIFARE Plus X with 4K memory	MIFARE DESFire EV1 with 2K memory	MIFARE DESFire EV1 with 4K memory	MIFARE DESFire EV1 with 8K memory	7 Byte UID	4 Byte FNUID	4Byte Random ID		incomplete SAK	Time out UART RF-Field	
P5Cx145/ CD128Cx081/ CD051/ CD041/ CD021/CD016	√	√						√	√	√	ATQA,SAK,ATS		√	N/A
P5Cx081V1D/CD041V1D/ CD021V1D/ CD016V1D					√	√	√	√			ATS			N/A
P5Cx144/ Cx080/CD040/ CD020/CD012	√	√						√			ATQA,SAK,ATS		√	N/A
P5Cx145/ CD128	√	√			√	√	√	√	√	√	ATQA,SAK,ATS		√	N/A
P60D144M	√	√	√	√				√	√	√	ATQA,SAK,ATS	√	√	
P60D080M	√	√	√	√				√	√	√	ATQA,SAK,ATS	√	√	
P60D024M	√	√	√	√				√	√	√	ATQA,SAK,ATS	√	√	
P60D144D					√	√	√	√	√	√	ATQA,SAK,ATS	√	√	
P60D080D					√	√	√	√	√	√	ATQA,SAK,ATS	√	√	
P60D024D					√	√	√	√	√	√	ATQA,SAK,ATS	√	√	
P60D144J	√	√	√	√	√	√	√	√	√	√	ATQA,SAK,ATS	√	√	√
P60D080J	√	√	√	√	√	√	√	√	√	√	ATQA,SAK,ATS	√	√	√

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