

NCJ37x AUTOMOTIVE QUALIFIED SECURE ELEMENT

The NCJ37x Secure Element (SE) comes with multiple interface support (passive NFC, I²C, SPI) optimized for low-power operation. The device is therefore a great fit for Secure NFC within a smart fob and various security critical in-car applications.

OVERVIEW

The NCJ37x family is an automotive-qualified secure microcontroller with advanced cryptographic accelerators and physical and electrical attack resistance.

The powered-by-the-field ISO 14443-4 interface and high secure design of NXP's NCJ37x Automotive Secure Element makes the device a great fit for the next generation key fob combining Secure NFC, BLE and UWB technologies. Together with NCJ37x, NXP is offering a CCC Digital Key compatible key fob Java Card applet to process the digital key management within the key fob.

It is offered to customers as open Java Card platform together with the NXP Automotive JCOP 4.x operating system. Customers can also order the generic authentication applet supporting a broad spectrum of M2M authentication means, cryptographic key and data storage.

FEATURES

Core:

- NXP security hardened MRK3-SC processor

Memory:

- Flash memory module
- RAM memory for CPU and shared RAM memory for public-key coprocessor



Interfaces:

- SPI contact interface
- I²C bus target/contact interface
- ISO/IEC 14443 interface supporting NFC mode

Cryptographic hardware coprocessors:

- High-speed public key coprocessor (PKC) supporting major public key cryptography systems such as RSA, ECC and corresponding schemes
- High speed Triple-DES and AES coprocessors
- Random number generator in hardware AIS-31 compliant
- Cyclic Redundancy Check engine

Quality:

- AEC-Q100 qualified

Package:

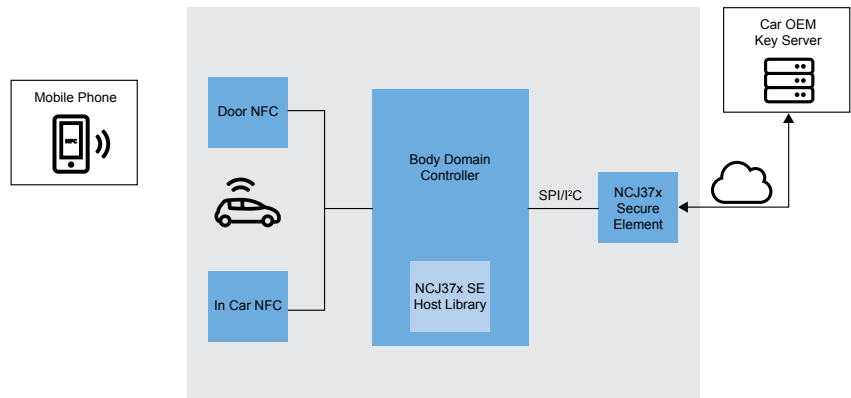
- HVQFN20 with wettable flanks

TARGET APPLICATIONS

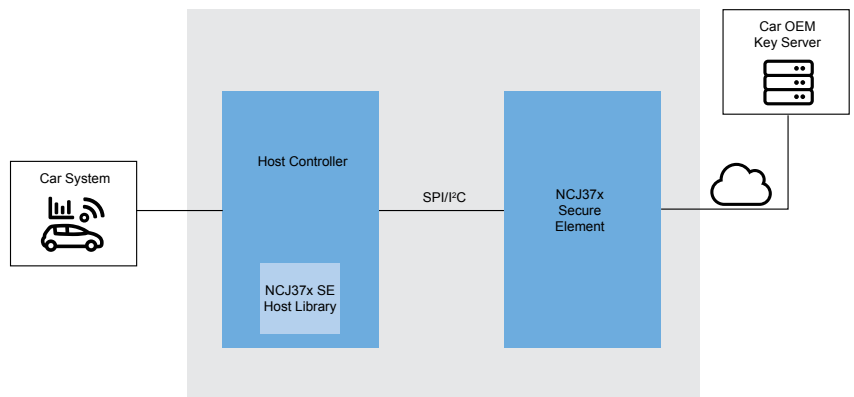
- CCC Digital Key
- Car Access
- Driver Authentication
- Car-to-cloud Communication
- Qi 1.3 Authentication Enablement
- Software Stack: NXP JCOP4.x Secure Java Card Operating Platform
- Optionally: Generic Authentication Applet
- NCJ37x Host Library Software Package
- JCOP toolchain supporting customer applet development
- HW Certification: Common Criteria EAL 6+

For more information, visit nxp.com/NCJ37x

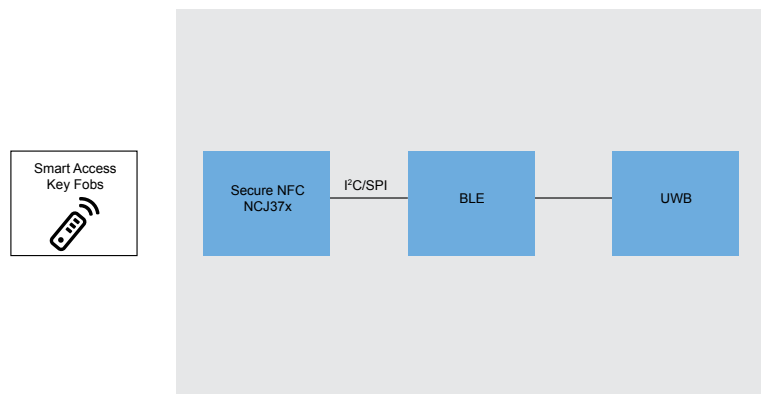
SMART ACCESS VEHICLE DIAGRAM



CONNECTED CAR



SMART ACCESS KEY FOB DIAGRAM



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