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# Digital key system for secure NFC car access



# ST's ecosystem for an end-to-end digital key system

## ST is everywhere to ensure Secure NFC Car Access



**ST54** combines an eSE and an NFC Controller in a mobile phone



**ST31** eSE enables NFC-A card emulation and energy harvesting

**In the digital key**



**ST25R3920B** Automotive NFC Reader detects and communicates with the key

Information is transmitted to Automotive MCU

**In the door handle**



**SPC58** Automotive MCU receives information from the door handle

**STSAFE-V500** Secure Element authenticates the user

**ST25R3920B** communicates with the key in the center console

**In the car**





# STSECURE solutions for smartphones & smartcards

## A complete offer for digital keys



a smartphone based on **ST54**



an NFC card based on **ST31**

### **ST54** NFC/eSE (+eSIM) for multiple applications and devices

- A reference solution in Android ecosystem
- #1 Felica, MIFARE® integration in Android framework
- Best-in-class RF performance, reduced bill of material & power consumption

### **ST31** eSE enables NFC-A card emulation

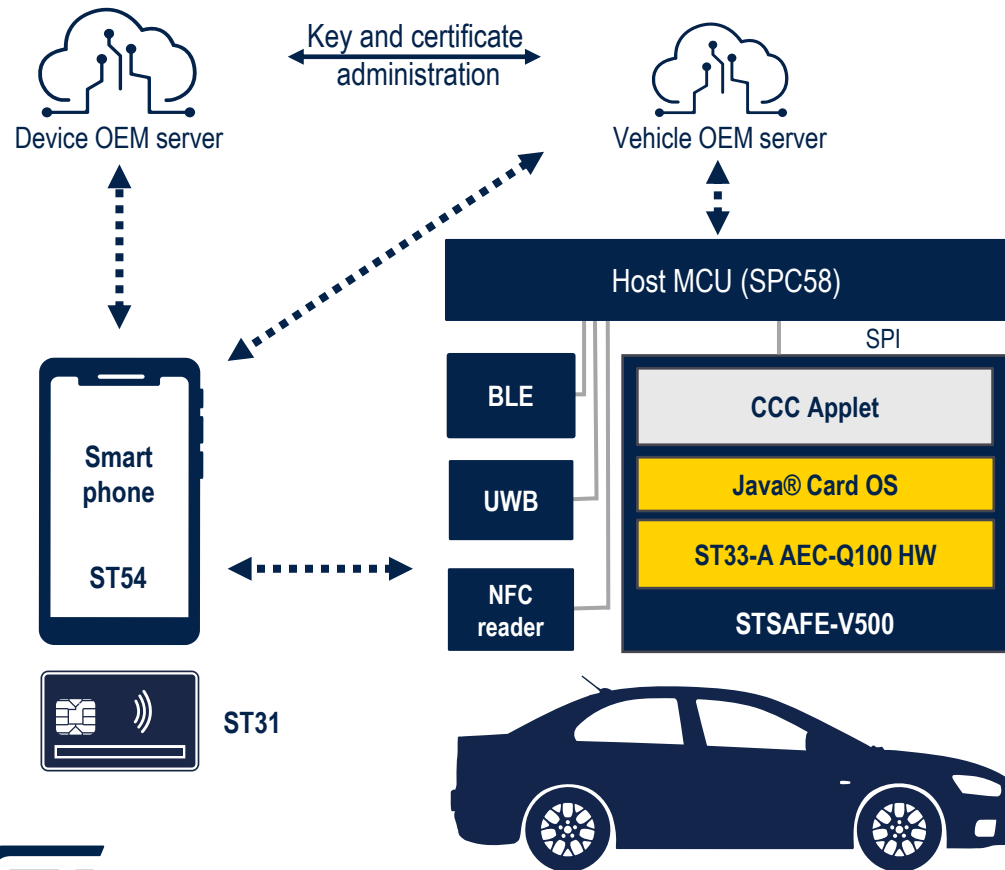
- Common criteria, EMVCo®, CUP, FIPS security certified
- Low power design and energy harvesting enabled
- An enhanced performance and fully interoperable with market readers



# STSAFE-V500

## Flexible solution for secure car access & car start

### A discrete eSE in the vehicle's center console



- SoC solution based on Java Card™ (3.0.5 classic edition, GP 2.3)
- CCC R2 and R3 specification compliant
- Based on ST33-A hardware / AEC-Q100 Grade 2, CC EAL6+ certified
- Password verifiers and digital key secure storage
- Owner pairing secure protocol / Mutual authentication car to phone
- Secure OTA software update following SCP03 or SCP11.c protocol



# ST25R3920B

## High-performance NFC reader

### High NFC performance for an improved user experience



#### Low-power consumption

- Inductive low-power wakeup for key detection

#### Large key detection range

- High output power for large communication range
- Dynamic power output
- Highest sensitivity in the market

#### Fast time-to-market

- MISRA-C: 2012-compliant software library
- Low-noise output drivers
- Excellent noise immunity to pass injection tests
- CR13 compliance (required by CCC)
- Development kit available



# SPC58

## Automotive microcontroller

### The ideal MCU for keyless access solutions



#### Unprecedented scalability

- From Single core 64 Mhz up to Triple core 200 MHz
- 512K Flash up to 10M Flash
- QFN48 and QFP64 up to BGA386

#### Isolated hardware security module

- Secure boot
- Crypto accelerator (sym and asym algos)
- Evita Medium and Full

#### Full support ecosystem

- Dedicated software packages for security

# Our technology starts with You

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