



Secure automotive solutions



Secure automotive applications

Digital key system



- Secure car access
- NFC door & console readers
- In-vehicle SE
- CCC R3 implementation

Wireless device charging



- Safe phone charging
- Trusted authentication
- NFC card protection
- WPC Qi 1.3, Qi2 compliant

Electric vehicle charging



- EV Plug & Charge
- Trusted authentication
- ISO 15118 implementation

Secure infotainment



- Secure data & password storage
- Applet verification

In-car security & connectivity



- eSIM (emergency call)
- V2X

A complete offer for trusted & connected cars



**Secure element
hardware**

**Secure element
system-on-chip**

NFC reader

**A complete NFC and
secure MCU offer able
to support multiple
automotive use cases,
for security and
convenience**

Making driving smarter and safer



SE
hardware



SE system-
on-chip



NFC reader

- Ensure secure car access to authorized users
- Ensure secure engine start
- Ensure confidentiality and integrity of sensitive data
- Ensure secure communication & infotainment systems

INTEGRITY

- Root of Trust
- Platform integrity
- Secure firmware update

CONFIDENTIALITY

- Secure communication
- Secure storage

AUTHENTICATION

- Device compatibility
- Brand protection

ST solutions for automotive security

ST33-A

Tamper-resistant hardware



- Secure MCU for SE & eSIM
- AEC-Q100 & CC EAL6+ certified
- Available in 3 delivery forms
- Set of software libraries

STSAFE-V

SoC solution based on ST33-A



- Digital key for car access & start
- WPC Qi, EV charging
- Secure in-vehicle infotainment
- Secure network connectivity





ST25

High-performance NFC reader



- Digital key for car access & start
- NFC card protection
- NFC Forum & CCC compliant
- Supporting requirements of major phone OEM

Security & Connectivity solutions by application

		Security		Connectivity	
		Hardware	System-on-chip		NFC
		ST33-A	STSAFE-V100	STSAFE-V500	ST25
<div>Digital key</div> <div>Qi charging</div> <div>EV charging</div> <div>Infotainment</div> <div>eSIM</div>				✓	✓
			✓	✓	✓
			✓	✓	✓
				✓	
		✓			

ST33-A hardware secure MCU overview

A certified secure element

Robust flash technology

- In-house embedded Flash 80 & 40 nm
- Target low ppm without HW wear leveling
- Continuous Improvement Program (CIP) strategy

Proven field quality with more than a billion ST33 MCU deployed


Set of software libraries (cryptography & flash management)

Certified Common Criteria EAL6+
Automotive grade (AEC-Q100 grade 2 and 0)



STSAFE-V solution overview


Family of scalable secure solutions for connected vehicles

- 
- Complete ecosystem solution with in-house factory personalization
 - Based on proven CC EAL5+ and EAL6+ ST33-A Secure MCU hardware
 - Automotive AEC-Q100 grade 2 qualified
 - STSAFE-V family offers dedicated and multi-application solutions for connected vehicles:
 - Digital key compliant with CCC R2/R3 specifications
 - Wireless device charging compliant with WPC Qi 1.3 & Qi2 specifications
 - Standardized automotive TPM solution based on TCG 2.0 specification
 - PKI solution for EV plug & charge compliant with ISO 15118
 - Secure infotainment domain solution



ST25R NFC readers overview

High-performance NFC readers for an enhanced user experience



Large detection range
thanks to higher receiver sensitivity and up to 2W peak output power

Range of package sizes
optimized for automotive applications

Fast time-to-market
CCC Digital Key and NFC Forum compliant

Secure automotive solutions takeaways



ST offers a full portfolio of secure solutions for connected cars

ST33-A: certified secure MCU hardware for eSE and eSIM applications

STSAFE-V: a scalable secure element family from secure hardware to flexible system-on-chip

ST25: NFC reader family provides the best user experience and performance for automotive applications



Our technology starts with You



Find out more at st.com/secure-auto

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