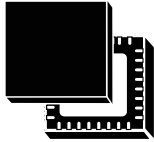
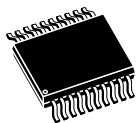


Open Java® Card secure element for CCC digital key, Qi and in-vehicle infotainment on automotive-qualified hardware



UFQFPN32 WF (5 × 5 × 0.55 mm)



TSSOP20 (6.5 × 4.4 mm)

Product status

STSAFE-V500



Features

Hardware features

- AEC-Q100 grade 2 qualified
- Arm® Cortex®-M35P SecurCore®
- Operating temperature range -40 °C to 105 °C
- Available in a TSSOP20 and UFQFPN32 wettable flank package
- Interfaces:
 - SPI support at up to 48 MHz
 - I2C support at up to 1 MHz
- Power range 1.8 V to 3.3 V
- CC EAL 6+ certified

Software features

- Java® Card 3.0.5 classic operating system
- GlobalPlatform® 2.3 support
- Support for GlobalPlatform Amendment D (SCP03), F (SCP11 a,b,c) & H
- Support for GlobalPlatform® ELF upgrade
- Dynamic memory management
- APDU communication over I2C/SPI based on the GlobalPlatform® APDU Transport over I2C/SPI specification
- Firmware upgrade mechanism
- Support of multiple logical secure element for hypervisor support
- In certification CC EAL5+ according to Java® Card open protection profile

Applications

STSAFE-V500:

- Open Java® Card able to host any third party and any Java® Card applet
- Digital car key
- In-vehicle infotainment application
- In car Qi wireless power charging (WPC)

1 Description

The **STSAFE-V500** device is based on Arm® Cortex-M35P core.

The STSAFE-V500 is an Arm® Cortex M35P 32-bit RISC based system-on-chip, that runs GlobalPlatform® 3.0.5 Java® Card. It is intended for automotive applications.

The STSAFE-V500 offers, on top of the Java® Card Open Platform, applets that support the requirements of CCC Digital Key, Wireless Power Consortium (WPC) Qi wireless charging, as well as for in-vehicle infotainment applications (IVI).

The STSAFE-V500 offers customers the flexibility to also integrate custom applets to support additional automotive applications.

For detailed configuration data, contact your local ST sales office.

Note: Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.

Note: Java is a registered trademark of Oracle and/or its affiliates.

arm



Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Jul-2023	1	Initial release.
26-Feb-2025	2	<p>Added:</p> <ul style="list-style-type: none"> Product status information <p>Updated:</p> <ul style="list-style-type: none"> Section Features Section Applications Section 1: Description Title of the document <p>Removed Section 1. General information and Section 3. Ordering information.</p>

Glossary

APDU Application protocol data unit

CC Common Criteria

CCC Car Connectivity Consortium®

ELF Executable load file

I²C Inter-integrated circuit

JC Open Java® Card platform

SCP Secure channel protocol

SE Secure element

SoC System on chip

SPI Serial peripheral interface

WPC Wireless power consortium

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