STPay-Sapphire-1

Data brief

ST Payment Secure Solution – Java Card™ platform for VISA®, MasterCard®, *Interac*®, Discover®, AMEX® and JCB® applications

Product status link
STPay-Sapphire-1

Features

- 40 nm Flash technology
- Java Card™ platform
- Up to 60 Kbytes of user NVM
- Certified payment applications: VISA, MasterCard, Interac Flash, Discover, AMEX and JCB
- Common Personalization Specification (CPS) personalization

Platform

- Java Card 3.0.5 classic operating system
- GlobalPlatform® 2.2.1 MG 1.0.1 API support
- CPS-compliant
- ISO/IEC 7816 T = 0 or T = 1 contact protocol

Hardware

- ST31 product based on a 32-bit Arm® SecurCore® SC000™ RISC core
- Advanced 40 nm Flash technology
- Best-in-class RF performance
- Up to 60 Kbytes of user non-volatile memory

Cryptography

- NESCRYPT cryptographic RSA coprocessor
- Enhanced DES accelerator (EDES)

Personalization

- Enhanced personalization performance for very fast personalization
- EMV® CPS v1.1 compliant
- VISA smart debit/credit (VSDC) Personalization Specification v2.0
- M/Chip® Advance 1.2.3 Common Personalization Specification

Applications

- MasterCard M/Chip Advance 1.2.3
  - Data sharing single account configuration 2
  - PIN sharing
- VISA VSDC 2.8.1g1 or 2.9.1
- *Interac* Flash 1.6
- Discover 1.1
- AMEX AEIPS 4.4, XP 4.0.2
- JCB D.1.1

1 Description

The STPay-Sapphire-1 is a GlobalPlatform 2.2.1 Java Card platform for payment and loyalty applications, based on the 40 nm Flash technology and up to 60 Kbytes of user non-volatile memory.

The STPay-Sapphire-1 can be configured to support VISA VSDC 2.9.1 or 2.8.1g1, MasterCard M/Chip Advance 1.2.3, *Interac* Flash 1.6, Discover 1.1, AMEX AEIPS 4.4 and JCB D.1.1 EMV® payment applications.

The STPay system-on-chip solution is a family of products that come ready for embedding in smartcards and loaded with payment applications that run on certified Java Card platforms. They meet all required security and payment-scheme certifications.

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.*

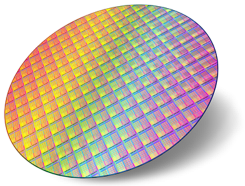
Note: *Java is a registered trademark of Oracle and/or its affiliates.*

2 Certifications

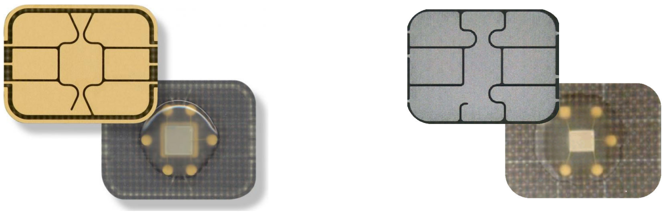
VISA MasterCard Interac DISCOVER JCB AMERICAN EXPRESS

3 Delivery forms

The STPay-Sapphire-1 is available as sawn wafers or micromodules, qualified with a wide range of industry-standard inlay technologies for easy integration in plastic cards.



Sawn wafer



6-contact D17 gold and D12 silver micromodules

4 Development tools and support

The STPay ecosystem includes tools, sample scripts and support by local ST engineers who provide assistance in script development, validation and personalization, ensuring optimum flexibility and fast time to market.

Revision history

Table 1. **Document revision history**

Date	Version	Changes
16-Mar-2020	1	Initial release.
27-May-2020	2	Removed reference to "ISO/IEC 14443 Type A contactless interface" in Section Features. Replaced JCB D1.2 with JCB D1.1 in Section Applications and Section 1 Description.

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