ST Payment Secure Solution – Java® Card platform for VISA®, MasterCard® payment and FIDO2 authentication

Features

- 40 nm flash technology
- Java® Card platform
- Up to 150 Kbytes of user NVM
- Certified payment applications: VISA® and MasterCard®
- FIDO2 authenticator application

Platform

- Java® Card 3.0.5 classic operating system
- GlobalPlatform® 2.3.1 financial configuration 1.0.2 API support
- Common personalization specification (CPS)-compliant
- ISO/IEC 7816 T = 0 or T = 1 contact protocol
- ISO/IEC 14443 Type A contactless interface

Hardware

- ST31N600 product based on a 32-bit Arm® SecurCore® SC000™ RISC core
- Advanced 40 nm flash technology
- Best-in-class RF performance

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

Application

- MasterCard® M/Chip® Advance 1.2.3
    – Data sharing single account configuration 2
    – PIN sharing
- VISA® VSDC 2.9.2
- FIDO2 authenticator compliant with CTAP protocol versions 1 and 2

Note: *The FIDO, FIDO ALLIANCE, FIDO AUTHENTICATION, FIDO CERTIFIED and FIDO2 trademarks and logos are trademarks of FIDO Alliance.*

Product status link
STPay-Topaz-X1

DB5379 - Rev 1 - October 2024
For further information contact your local STMicroelectronics sales office.

www.st.com

1   Description

The STPay-Topaz-X1 is a GlobalPlatform® 2.3.1 Java® Card platform for payment applications, based on the 40 nm flash technology with up to 150 Kbytes of user non-volatile memory.

The STPay-Topaz-X1 can be configured to support VISA® VSDC 2.9.2 and MasterCard® M/Chip® Advance 1.2.3 payment applications. It also supports an authenticator certified implementation compliant to FIDO2 specifications from FIDO Alliance.

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.*

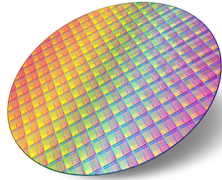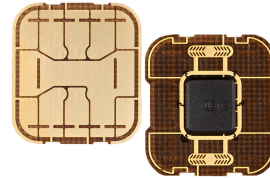Note: *Java is a registered trademark of Oracle and/or its affiliates.*

2 Certifications

3 Delivery forms

The STPay-Topaz-X1 is available as sawn wafers or micromodules, in contactless or dual-interface configuration qualified with a wide range of industry-standard inlay and antenna technologies for easy integration in plastic cards.
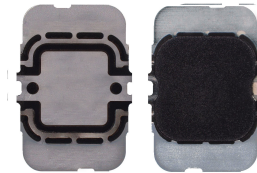

Sawn wafer

D75/D77

Dual-interface gold and silver micromodules

CB6 module

Full contactless module

4 Development tools and support

The STPay ecosystem includes tools, sample scripts and support by local STMicroelectronics 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	Revision	Changes
14-Oct-2024	1	Initial release.

Contents

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