



Product Brief

SLE 78CLFX500VPH

SOLID FLASH™ Dual-Interface/Contactless Security Controller

The SLE 78CLFX500VPH is a new member of Infineon's SLE 78 SOLID FLASH™ dual-interface and contactless 16-bit controller family. With its 16-bit dual CPU, the digital security concept Integrity Guard with fully encrypted data path, the integration of ISO 14443 Very High Bit Rates and a total memory size of up to 700kByte, High-End Government Identification and Multi-Application markets are enabled.

SLE 78CLFX500VPH enables 4th generation ePassports

- With its unrivalled total memory size of up to 700kByte, the SLE 78 is able to support multi-application use cases and the upcoming standard for 4th generation ePassports storing additional biometric information, eVisa and hundreds of eStamps. These auxiliary data can be written and read even years after the document has been issued.
- The superior processing power of a cache-based 16-bit controller architecture permits the fast execution of cryptographic protocols.
- The support of the latest ISO 14443 standard increases the contactless transaction speed up to 6.8Mbit/s (Very High Bit Rates). Even large amounts of data can be processed and read out in a very short time.

Trusted and sustainable security for Government ID with Integrity Guard

- With its digital security concept Integrity Guard, the SLE 78 perfectly matches governmental targets in security, reliability and privacy protection.
- It features amongst others self-checking, dual CPUs and a fully encrypted data path leaving no plaintext on the chip. Data processing in the CPU itself is carried out in encrypted form.

The SOLID FLASH™ memory enables upcoming Government ID applications

- The unique data memory of up to 500kByte more than triples the available space for user data in comparison to today's controller used in Government ID.
- Additionally the SOLID FLASH™ memory offers fast lead times and a significantly shortened time to market.

Key Features

Architecture

- SLE 78 SOLID FLASH™ controller with Integrity Guard
- High-performance 16-bit controller with 1kByte cache

Interfaces and Peripherals

- ISO 14443 Type A/B & ISO 18092 (NFC) contactless, ISO 7816 contact based interfaces
- Fast contactless transactions with Very High Bit-Rates (6.8Mbit/s)
- Asymmetric (RSA, ECC) and symmetric (AES, 3DES) coprocessors

Memory & Certification

- Total memory up to 700kByte
- Up to 500kByte SOLID FLASH™ memory area for data storage
- 12kByte RAM
- Common Criteria EAL 6+ (high)

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SOLID FLASH™ Dual-Interface/Contactless Security Controller


Applications

- High-end Government ID (e.g. National eID, ePassport, eHealthcard/eSocial card, eResidence Permit, eTachograph, eSignature).
- 4th generation ePassports (supporting the LDS 2.0 specification including eVisa and eStamps).
- Multi Application & Government ID, including the support of the open standard for transportation CIPURSE™.

SLE 78 Family Concept

The SLE 78 SOLID FLASH™ security controller family offers several derivatives covering the Government ID market from Basic ID to High-end Government as well as Multi-Application. Offering the free choice between the main types of the relevant contactless communication standard – ISO 14443 Type A/B, Infineon respects public procurement rules such as non-discrimination.

Selected SLE 78 SOLID FLASH™ Product Derivates

Product	 SOLID FLASH™ [KB]	Interface	Cryptography	Certification Level	Additional Features
SLE 78CLFX500VPH NEW!	500	ISO 14443 A/B, ISO 18092 (NFC), ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	Very High Bit Rates (6.8MBit/s), Supporting CIPURSE™
SLE 78CLX500VPH NEW!	500+182 ROM	ISO 14443 A/B, ISO 18092 (NFC), ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	Very High Bit Rates (6.8MBit/s), Supporting CIPURSE™
SLE 78CLFX400VP	404	ISO 14443 A/B, ISO 18092 (NFC), ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	Very High Bit Rates (6.8MBit/s), Supporting CIPURSE™
SLE 78CLFX4000P	404	ISO 14443 A/B, ISO 18092 (NFC), ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	Supporting CIPURSE™
SLE 78CLFX3000P	300	ISO 14443 A/B, ISO 18092 (NFC), ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	Supporting CIPURSE™
SLE 78CLFX2400P	240	ISO 14443 A/B, ISO 18092 (NFC), ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	Supporting CIPURSE™
SLE 78CFX5000PH NEW!	500	ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	–
SLE 78CFX4000P	404	ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	–
SLE 78CFX3000P	300	ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	–
SLE 78CFX2400P	240	ISO 7816	AES, 3DES, ECC, RSA	CC EAL 6+, EMVCo	–

All products are available in several delivery forms (Dual-interface, contactless and contact based packages) and as sawn wafer. Additional derivatives are available on request.

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