TEGRION™ SLC27PDx for payment applications

SOLID FLASH™

Description

The TEGRION™ SLC27PDx products are high-performance dual interface security crypto controllers optimized for the Payment use cases. They offer state-of-the-art CPU architecture featuring 32-bit Arm® v8-M based core and the Integrity Guard 32 dual CPU, allowing rapid communication and ultra-low power consumption. The family concept enables asset re-use, a faster time-to-market and innovative delivery forms.

Features

- High-performance 32-bit CPU based on Arm® v8-M with Main Extension and Security Extension (Arm® TrustZone for Arm v8-M)
- Integrity Guard 32 security is an architectural concept based on the Arm® v8-M instruction set, enhanced by Infineon's security technology
- SOLID FLASH™ NVM Technology with strong IP protection and EEPROM emulation support
- Cryptographic support:
  - High-speed coprocessors for symmetric (AES and 3-DES) and asymmetric cryptography (RSA and ECC) including certified libraries
  - Random Number Generator (RNG) supporting true random number generation according to the BSI AIS20/31 for class PTG.2 and PTG.3
  - Strong integrity support by mathematically modelled techniques
  - Strong confidentiality support by sophisticated cryptographic techniques, including extensive protection for the memory, caches, buses and registers
- Supported interfaces: Contact base interface UART acc. to ISO/IEC 7816-3 and contactless interface (RFI)
- Support of contactless protocols: ISO/IEC 14443 Type A/B with HBR and optionally NRG™ (ISO/IEC 14443-3 Type A with CRYPTO1 and Type B)
- Cryptographic support: RSA, ECC, AES, DES, RNG
- 400 KB / 456 KB / 584 KB user SOLID FLASH™ NVM and 20 KB RAM
- 4 KB instruction cache, 1 KB data cache
- Certification level: CC EAL6+ and EMVCo (planned for Q2/26)

Applications

- EMV CDA and DDA for contactless payment
- GlobalPlatform / Java Card / Native
- ePurse
- Transport and Ticketing applications
- New form factors like passive wearables devices

Parametrics

Product name	TEGRION™ SLC27PDx400H9 / SLC27PDx456H9 / SLC27PDx584AS
Product description	TEGRION™ SLC27PDx DIF security crypto controller for payment applications. Unique input capacitance 56pF for all delivery forms. TEGRION™ SLC27PDx[1]400H9 / SLC27PDx[1]456H9 / SLC27PDx[1]584AS: [1]L with NRG; A no NRG
Interfaces and protocols	ISO/IEC 7816, ISO/IEC 14443 A/B, ISO/IEC 18092 (NFC passive mode) Optionally NRG™ (ISO/IEC 14443-3 type A/B with CRYPTO1)
Memory	400 KB, 456 KB and 584 KB SOLID FLASH™; 20 KB RAM
Symmetrical cryptography	DES, 3DES, AES up to 256-bit
Asymmetrical cryptography	RSA up to a bit length of 4096, ECC up to a bit length of 521
Ambient temperature	-25°C to +85°C
Delivery forms	Wafer, dual interface modules
Typical applications	EMV DDA, EMV CDA, Global Platform / Java, ePurse, payment for new form factors like passive wearables devices
Certification level	CC EAL6+; EMVCo (planned for Q2/26)

For further information on technology, delivery forms and conditions please contact your nearest Infineon Technologies sales representative (www.infineon.com)

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