Product brief

Infineon 40 nm SLC36PDx/SLC37PDx

SOLID FLASH™ 32-bit Arm® SecurCore® SC300
Dual-interface security controller for payments

With more than 10 billion security chips shipped to date, Infineon has an extensive and proven track record in the payment (e.g. EMV, CUP), identity (e.g. national eID, ePassport, eSocial card, eSignature) and transport markets.
The 40 nm SLC3x products **enhance the contactless payment** experience, offering users excellent **performance and flexibility**.

For larger payment profiles and multi-application schemes:

	Product	NVM	RAM
32-bit Arm® SecurCore® SC300 CPU	SLC37PDx448	448 KB	14 KB
	SLC37PDx400	400 KB	14 KB

For optimized memory size:

	Product	NVM	RAM
32-bit Arm® SecurCore® SC300 CPU	SLC36PDx352	352 KB	12 KB
	SLC36PDx280	280 KB	12 KB
	SLC36PCx280	280 KB	12 KB

Optimized time-to-market
The SLC3x 40 nm product series offers fastest design-in, supporting a wide range of applications running on the smallest to the most powerful chip in the market, thus optimizing R&D resources.

Excellence in converging markets
The state-of-the-art Arm® SecurCore® SC300 chip architecture of the 40 nm SLC3x series boosts contactless performance for extremely demanding payment and multi-application use cases.

Best fit for all regional variations
This product offering is designed for global markets while still supporting regional requirements and local certifications. Infineon's excellent customer support teams at regional level enable very fast time-to-market.

Innovation-enabling platform
The 40 nm platform and its enhanced feature set support emerging market trends such as biometric authentication. Innovative, ready-to-use delivery forms such as the SPA modules enable very fast design of new form factors – within just a few weeks.

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Key features

Architecture and memory
› High-performance 32-bit CPU based on Arm® SecurCore® SC300 enhanced with Infineon Technologies' the advanced cache security concept from Infineon Technologies
› Up to 512 KB SOLID FLASH™ NVM that can be freely partitioned for code/data
› Up to 16 KB RAM
› High performance with internal clock frequency up to 80 MHz
› Support for ISO14443 Type A/B, ISO18092 (NFC) contactless and ISO7816 contact-based interfaces

Certification and security features
› EMVco and CC EAL 6+ certification
› Certified SW building blocks offering maximum efficiency, e.g.:
  – HSL support for easy SW migration from 65 nm SLC32
  – Libraries for asymmetric (RSA, ECC) and symmetric (AES, 3DES) cryptography
› CIPURSE™ crypto library on request
› Instruction Stream Signature (ISS) for execution integrity

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Platform offering highest security

Featuring the most powerful chip in the market, the SLC3x platform offers **best-fit products for all security use cases, including payment, ticketing and access.**

Security is key in today's digital world and Infineon's **digital security concept** provides effective protection against extraction of sensitive data. Its reliable, certified NVM technology includes cryptographic content protection with integral encryption of RAM and NVM. Additional security features such as ISS (Instruction Stream Signature), certified SW libraries for cryptography and a robust set of sensors facilitate the development process. The secure flash loader supports the latest security policies according to PP0084, loader package 1 and 2.

Maximum flexibility and performance

Infineon's digital security concept and **third-generation SOLID FLASH™ technology** support all contactless protocols, making this family unique in the market.

The 40 nm **SLC3x 32-bit Arm® SecurCore® SC300 architecture is enhanced with Infineon's secure cache** for optimized code execution.

Infineon's energy-efficient implementation running at over 80 MHz accelerates today's **payment transaction times to achieve speeds of less than 200 ms** – even in scenarios with low reader field strength and in combination with small antenna designs. The performance-optimized **flash download process** accelerates production and personalization. Flash loading services maximize flexibility while minimizing lead times for fast deliveries.

Applications
› EMV CDA/DDA dual interface
› GlobalPlatform / Java Card™ / native
› ePurse, eSignature
› New form factors as passive wearables devices

Available packages
› Wafer bare die
› CoM (Coil on Module) (6-, 8-pin)
› Globe Top Advanced (6-, 8-pin)
› CL packages (MCC8, MSC8)
› SPA (small antenna form factor)

Excellence in converging markets

Optimized power consumption and **enhanced contactless performance** make this platform ideal for highly demanding payment and multi-application use cases, particularly those including transport. Additionally, advanced biometric system-on-card authentication supports the latest identification innovations compliant with the latest EMVCo specifications. The platform can be used for multi-application schemes worldwide as **it supports multiple standards** such as GlobalPlatform®, CALYPSO™, CIPURSE™ and the latest Java Card™ specifications.

In addition, 40 nm products are available in different delivery forms such as Coil on Module for standard card applications and new form factors such as SPA (Smart Payment Accessory) essential to deliver innovative multi-application use cases such as wearables, key fobs and rings

Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings
Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.