



Typical Applications

- Transport
- Loyalty
- Access control
- Multi-Application

FAST, VERSATILE AND SECURE

HID Global has over 10 years of comprehensive experience in transportation chip operating system. SOMA HELIOS™ is built on this solid foundation. The CIPURSE™ open standard compatibility and the availability of KIAT™ functionalities, make it the ideal choice for transportation and secure multi-application smart cards.

MAIN FEATURES

- KIAT™ functionalities
- CIPURSE™ compatible
- ISO 7816-4 compliant data structure
- Active authentication / PIN
- Transaction Management
- Secure Messaging
- Roll back functionality

COS CRYPTOGRAPHIC ALGORITHMS

- Cipher: DES (TDES, DESX) ECB-CBC, AES
- Signature: DES MAC8
- MAC: ISO 9797, ISO 10118
- Checksum: CRC16/CRC32
- Random number: Secure Random
- Message digest: SHA-1, SHA-256
- DES Key sizes: up to 120-bit
- AES Key size: 128-bit

CIPURSE

- Open, interoperable and competitive solution
- Fast and secure sessions with AES-128 bit
- CIPURSE V2 Open International Standard:
 - CIPURSE™ L Profile support
 - CIPURSE™ S Profile support

COMMUNICATION PROTOCOLS

- Contact ISO 7816 up to 192 kbps (T=0, T=1)
- Contactless ISO 14443 type A & B up to 848kbps

SECURE MICRO-CONTROLLER

- 16-bit CPU with 6KB of RAM
- Flexible secure NVM size to choose from
- Symmetric cryptographic engine (DES, AES)
- Asymmetric cryptographic engine (RSA, ECC)
- Side channel attacks resistant
- Memory management & protection (MMU)
- Unique chip identification
- Environment sensors
- EAL5+ Common Criteria certification
- EMVCo certification

AVAILABLE PRODUCTS

- Contactless micro-modules: 0.340 or 0.260 mm thickness
- Contact modules: ISO 6 or 8 contacts
- Dual-interface modules: ISO 6 or 8 contacts
- Polycarbonate, PVC & PET contactless inlays for cards
- White and pre-printed smart cards (PVC, PET, PC)
- Other form factors



hidglobal.com

North America: +1 512 776 9000
 Toll Free: 1 800 237 7769
 Europe, Middle East, Africa: +44 1440 714 850
 Asia Pacific: +852 3160 9800
 Latin America: +52 55 5081 1650

© 2018 HID Global Corporation/ASSA ABLOY AB. All rights reserved. HID, HID Global, the HID Blue Brick logo, the Chain Design, SOMA HELIOS, CIPURSE, KIAT and HID are trademarks or registered trademarks of HID Global or its licensor(s)/supplier(s) in the US and other countries and may not be used without permission. All other trademarks, service marks, and product or service names are trademarks or registered trademarks of their respective owners.
 2018-05-01-HID-soma-helios-ss-en PLT-03860

* Complete product specifications upon request.