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

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

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

COS CRYPTOGRAPHIC ALGORITHMS
- Cipher: DES (T-DES, 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

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

* Complete product specifications upon request.