



TYPICAL APPLICATIONS

- Transportation
- Loyalty
- Access Control
- Multi-application

FAST, VERSATILE & SECURE

HID Global has over 10 years of comprehensive experience in transportation chip operating system (COS). SOMA ATLAS™ V1.C1 is built on this solid foundation. The full compliance to Calypso Specification for Ticketing – Card Application Rev. 3, the availability of KIAT™ functionalities and the CIPURSE™ open standard compatibility make it the ideal choice for transportation and secure multi-application smart cards.

MAIN FEATURES

- Calypso Rev. 3.1 certified
- KIAT™ functionalities
- CIPURSE™ functionalities
- 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

CALYPSO SECURITY MECHANISMS

- Session MAC (SMAC)
- Stored Value MAC (SV-MAC)
- Signed Encryption (SMAC)
- PIN Encryption for presentation

COMMUNICATION PROTOCOLS

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

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

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 & 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



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*Complete product specifications upon request only.