

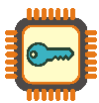
MULTIQ[®]

Version 4.2

A QILIUM MULTI-APPLICATIVE SMART CARD



MULTIQ[®] is a complete, innovative and secure smart card IC

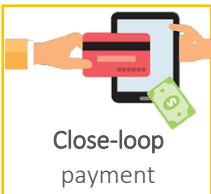


Advanced
access control

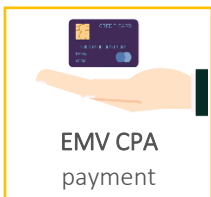
MultiQ is a card operating system (COS) ported on Flash based Integrated Circuit. Respecting the standard reference in smart card's sector (ISO7816), **MultiQ** allows card manufacturers and integrators to easily load their applications.

Either written by the integrator or Qilium's team, **MultiQ's** application will help to:

- Secure transactions
- Encrypt sensitive Data
- Authenticate people and objects



Close-loop
payment



EMV CPA
payment

MULTIQ FEATURES

- ISO 7816-4 file system
- Up to 72 kB EEPROM
- Adaptable and flexible FILE STRUCTURE
- No restriction in applications creation
- Delete of file without memory loss
- Transport key protection
- Customizable ATR
- Anti-tearing system
- Transaction protection system
- Detection of Fraudulent chips
- Anti-collision
- NFC tag type 4 compliant

MAIN SECTORS

- Advanced Access Control
- Micro Payment
- People and Object Authentication
- Identity (ICAO)
- Gift scheme
- Loyalty scheme
- Pre-paid card (EMV CPA)
- Student identification
- Public transport ticketing
- Fuel payment
- Telecommunication
- Business card



Swipe'n Trust
NDEF type 4



ICAO
identification



MNO
SIM M2M eUICC

SECURITY

- PIN CODE
 - at card level
 - at application Level
- Key File
 - at card level
 - at application Level
- Secure Messaging
 - MAC
 - MAC + ENC
- MSE (Manage security environment)

CRYPTOGRAPHIC ALGORITHMS

- DES/3DES
- AES (up to 256-bit)*
- SHA 1 & 2
- RSA (up to 4096-bit)*
- ECC (up to 521-bit)*

* Depends on semiconductor and its cryptographic library.

COMMUNICATION PROTOCOLS

Contact

- ISO/IEC 7816-3 T=0/T=1
- High speed data transfer up to 215 Kbits/s

Contactless

- ISO/IEC 14443 A/B
- High speed data transfer up to 848 Kbits/s

Dual interface

- ISO/IEC 7816-3 T=0/T=1 and 14443 A/B

AVAILABLE STRUCTURE

- ACCESS CONTROL
- PAYMENT
- ICAO
- EMV
 - Common payment application
 - Static Data Authentication
- NDEF
 - Swipe'n Trust

CONTACT

| Packaging | Standard | Certified** | Advanced Library |
|---------------|-------------|-------------|------------------|
| Sawn Wafer | Up to 72 kB | - | On demand |
| 8-pins Module | Up to 72 kB | - | |
| 6-pins Module | Up to 72 kB | - | |

CONTACTLESS

| Packaging | Standard | Certified** | Advanced Library |
|------------|-------------|-------------|------------------|
| Sawn Wafer | Up to 72 kB | Up to 24kB | On demand |
| Module | Up to 72 kB | Up to 24kB | |

** Common Criteria EAL5+ high HW

DUAL INTERFACE

On demand