

# 1 GENERAL INFORMATION

## 1.1 Product description

The Biothetic device is smart card reader combined with a fingerprint reader.

When authentication is requested, the card bearer is invited to sweep his “main” finger on the Biothetic reader. The reader sent the scanned result inside the card for authentication process.

The embedded authentication algorithm compares the received data with the one stored inside the card. If they match, the card grants the rights of all applications for which it was designed and secured transactions can operate.

Application:

- E-commerce,
- Immigration card
- Citizen card
- Access card to sensitive site
- Bank card
- Voter card
- Jail access card
- E-signature of documents...

The Biothetic is a product developed by the ID3 Semiconductors Company.

For more information, see product's data sheet at section 1.6.

## 1.2 Related Submittal(s) / Grant(s)

All host equipment used in the test configuration are FCC granted, when relevant.

## 1.3 Tested System Details

The FCC IDs for all equipment, plus description of all cables used in the tested system (including inserted cards, which have grants) are :

See test report file : 3511-FCC

## 1.4 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4-2000, CISPR22-2003 and EN55022:1998+/A1:2000+/A2:2003.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

## 1.5 Test facility

Tests have been performed on September 19<sup>th</sup>, 2005.

The test facility used to collect the radiated and conducted data is the **LCIE** (Etablissement Voiron) facility, located ZI des Blanchisseries, 38500 VOIRON, France. This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4-1992 in a letter dated July 14, 2005 (registration number 94821).

This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-1633 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.

## 1.6 Data sheet of the product

### MAIN CHARACTERISTICS

#### BIOMETRICS

- Imaging system 500 dpi - FingerChip™.
- Finger motion speed : 15 cm/s max.,
- Finger Rotation angle : +/- 15°.
- False rejection rate (FRR): 1.5% max.,
- False acceptance rate (FAR): 0.001% max.

#### SMART CARD SUPPORT

- Comply to ISO/IEC 7816.
- Comply to 3V / 5V - 1.8 V on request.
- Protocol T=0 and T=1
- Communication speed : up to 161 Kbits/s
- Clock speed : 2.5 MHz, 5 MHz and 10 MHz

#### CARD INTERFACE

- 8-contacts connector (emplacement ISO).
- Protection against unexpected card withdrawal, short-circuits and over-consumption.

#### POWER SUPPLY

- 5V DC, 300 mA through USB port or PC Keyboard port (RS232)

#### RELIABILITY

- Card Connector : 500,000 cycles min. insertion and withdrawal of card.
- reader : 50,000 hours min. / 5 year at 25°C.

#### MISCELLANEOUS

- Second ISO7816 internal interface for enrolment with SAM in option ,
- 1 to 10 fingerprint templates,
- Reference templates and matching inside the card.

#### AGREEMENTS

- FCC
- CE

#### MECHANICAL SPECIFICATIONS

- Depth 84 mm
- Length 133 mm
- Height 40 mm

### PARTICULARITIES

#### SECURITY

- Architecture based on proprietary Crypto processor,
- No biometric data is ever sent to any computer,
- Full respect of privacy,
- Fingerprints are transmitted by the Crypto processor to the smart card through an encrypted and secured protocol.



#### HUMAN DEVICE INTERFACE

- One LED bicolour (Red/green) close to the sensor for the biometrics operations follow up,
- One LED bicolour (Red/green) on the front side of the device for smart card application follow up.

#### COMMUNICATION PROTOCOL (PC, HOST)

- USB 1.1 full speed (12 Mbits/s)
- RS232 based on id3NET ©™ (proprietary protocol- 38400 and 115200 Bauds).

#### SOFTWARE INTERFACE

- API PC/SC for Microsoft©™ Windows©™ 98SE, 2000 and XP.

Symbol	Characteristics	Min.	Max
VCC	Power supply	-0.5V	7V
OT	Running T°	0°C	+50°C
ST	Storage T°	-10°C	+70°C

Applications	Minimum	Maximum
Biometrics verification	128 bytes	256 bytes
Fingerprint digitisation	400 bytes	800 bytes
Card bearer information	100	200