



MorphoSmart™ CBM

Compact Biometric Module

- Easily integrated in all types of terminals
- Available as OEM module or with casing
- Advanced embedded software for 1:1 verification and 1:N identification
- Intrinsic security features



Sagem Défense Sécurité
SAFRAN Group



MorphoSmart™ CBM

Compact Biometric Module

The MorphoSmart™ CBM is a compact optic biometric device with enhanced security features. With its optic technology, the MorphoSmart™ CBM reaches a high level of performance and robustness. The surface of the scanner is designed to optimise fingerprint reading. As such, it is ideal for a broad range of enrolment, authentication and identification applications. It is available with a casing (i.e. as a USB peripheral) or as an OEM module. Furthermore, it offers local matching on the terminal or remote matching on a host PC. The host system provides security by encrypting data and checking data integrity. It can be customised using a Software Development Kit (SDK). Whether used for off-the-shelf enrolment or in custom-made applications, the MorphoSmart™ CBM offers a flexible, low-cost solution for fast and secure processing of quality fingerprint images.

Key features

Software Integration:

The MorphoSmart™ CBM is intended for both PC-based applications and embedded solutions. With its two communication ports and its SDK, it can interface with any type of host application. The serial interface relies on an open "Morpho Host Interface" protocol.

Security:

The module captures, processes and matches fingerprints internally, thereby increasing security. In addition, it can be configured in two security operating modes, allowing data integrity check by the host (by way of a digital signature) or exchange encrypted data (using secure tunnelling). These mechanisms rely on PKI infrastructure technology: each device is loaded with its own X.509 certificate and the biometric templates are encapsulated in an X9.84 token.

Mechanical Integration:

For rapid integration, the module may either be screwed on or clipped on. With its sensor area sealed from dust and water, it allows the design of products rating "IP65 level". The casing includes a location to place a gasket.

Biometric features:

The MorphoSmart™ CBM is an unmatched device that offers in a very small volume the ability to both verify (1:1) and identify (1:N) people on a database of around 1000 templates. Verification or identification takes less than 1 second.

Applications

- Logical access control and physical access control
- Integration in notebook computers, keyboards, kiosks, point-of-sale terminals, mobile devices, safes and locks, remote controls, etc

Technical specifications

Mechanical

- Ready-to-mount plastic casing
- L=53.7; W=33.7; H=13.5mm
- Weight: 20g

Sensor

- Thin optical sensor
- 500 dpi @ 8-bit per pixel
- Active area: 14mm x 22mm

Processor

- Powered by an ARM9™ family CPU core

Power consumption

- Voltage supply: 3V to 5,5V
- Standby mode: 500µA max @ 5V
- Fully operating, sensor on: 300mA max @ 5V
- Fully operating, sensor off: 100mA max @ 5V

Interfaces

- 8-pin connector (USB and Serial)
- UART (RX-TX), Open Collector up to 5V
- USB 2.0 full speed
- Possibility of plugging in an add-on module such as a smart card reader *

Environmental

- Operating temperature: -10°C to 50°C

Software

- Compatible with Morpho™ Host Interface protocol (Serial com.) and MorphoSmart™
- SDK **

- BIOAPI compliant software suite

Operating System

- Windows® 2000, XP and 2003
- Any host using a serial communication

Algorithms

- MorphoImaging™, MorphoSoft™ Embedded

Database

- Most common operations supported
- Storage capacity: 1000 templates

Biometric features

- 1:1 and 1:N search
- Verification time < 0.8s
- Identification time < 1s
- Tunable false acceptance rate

Certification

- CE,UL and FCC15

* Please contact us for more information

** Please refer to MorphoSmart™ data sheet for more information

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