SAGEM

MORPHOSMART™

Multipurpose fingerprint processing peripheral

- High end optical sensor

- A micro controller performs encoding, authentication 1 : 1, and indentification 1 : N

- Based on world-wide recognised SAGEM algorithms

- Enhanced cryptographic security

- RS 232 or USB

- Packaged or OEM device

SAGEM

Technology in action

SAGEM MORPHOSMART™

Multipurpose fingerprint processing peripheral

Taking advantage of its expertise and long experience in fingerprint recognition technology including AFIS with very large database and terminals such as MORPHOSCAN™ and MORPHOTOUCH™, SAGEM has developed the **MORPHOSMART™**. Based on a high end optical sensor and on the world-wide recognised SAGEM algorithms, the MORPHOSMART™ is the most convenient biometric peripheral for a wide range of applications.

Applications

- People registration (ID cards, immigration, voting system, access control, …)
- ID verification (add-on device for any kind of transaction terminals (PC, POS, ATM, ...), welfare, logical or network access control, e-commerce, …),
- People identification.

SAGEM algorithms

MORPHOSMART™ includes two embedded software components integrating the SAGEM algorithms:

- The MORPHOIMAGING™ optimises the image quality during acquisition and pre-processing.
- The MORPHOSOFT™ Embedded performs all the necessary functions for template extraction (processing of a fingerprint image) and fingerprint authentication or identification.

MORPHOSMART™ family

SAGEM proposes three models of MORPHOSMART™. Each model is available packaged or as a compact OEM module for easy integration.

- **MORPHOSMART™ MSO 100** is an optical fingerprint reader with USB interface, designed for PC applications. The MSO 100 is part of a MORPHOKIT™ that includes a PC software for image capture, template processing, authentication and identification, up to 1:3000 persons.
- **MORPHOSMART™ MSO 200** is a self-contained device performing template processing, verification and identification against an internal database of 100 persons.
  The RS.232 interface enables connection with a large range of hosts, PC, POS, ATM,… Two LEDs guide and inform the users about the ongoing operations. A simple SDK enables VARs to develop any kind of application.
  The MORPHOSMART™ 200 can be either connected with Windows™ platforms using dedicated DLLs or with any type of host using a simple protocol workingover a RS.232 link.

- **MORPHOSMART™ MSO 200S** is the secured version of the MSO 200. It provides functions to maintain the integrity of the biometric data, to perform mutual authentication of the host. It supports two types of certificates designed for RSA ans DSA signature.
  Each model is available packaged or as a compact OEM module for easy integration.

Technical specifications

- **Fingerprint sensor** - High end optical sensor
  - 500 dpi resolution @ 8 bit greyscale
  - 21 x 21 mm acquisition area
- **Algorithms** - MORPHOIMAGING™
  - MORPHOSOFT™ Embedded
- **Interfaces** - RS.232 or USB
  - Two LEDs
- **Environmental specifications** - Operating Temperature: 0°C to 40°C
- **Power** - MSO 200 <2.5W
- **Dimensions** - MSO L=90, W=80, H=57 mm
  - MSO OEM L=70, W=68, H=50
- **Connections** - MSO 100 1.5 m USB cable
  - MSO 200   1.5 m cable DB 9
  - MSO OEM 8 & 4 pin connectors
- **Processor** - Powered by an ARM9™ family CPU core.

	MSO 100	MSO 200	MSO 200S
OEM Version	Yes	Yes	Yes
Interface	USB	RS.232	RS.232
Windows™ Platforms	2000	NT, 98, CE, 2000	

SAGEM SA Defence and Security Division

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