



MorphoSmart™

Multipurpose fingerprint processing unit

- *Micro-controller for encoding,
1 : 1 authentication and 1 : N identification*
- *Enhanced cryptographic security*
- *Packaged or OEM device, RS 232 or USB*
- *Fake finger detection on option*
- *FBI PIV-IQS certified optical sensor*
- *FIPS 201 approved template generator and matcher*



Sagem Défense Sécurité
SAFRAN Group



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The MSO 200 and 300 models are available packaged or as a compact OEM module for easy integration. The MSO 350 is only available in the packaged version.

A multipurpose device

The MorphoSmart™ range of biometric terminals integrates smart fingerprint sensors capable of both image capture and embedded fingerprint image processing. They are suited to a wide range of applications:

- Registration: ID cards, immigration, voting and welfare system, access control, etc.
- ID check —as an add-on device for any kind of transaction terminal, PC, POS, ATM, etc.
- Computer and network access control, e-commerce, etc.
- OEM version easily integrated in physical access control or time & attendance terminals

The MorphoSmart™ family

• **MorphoSmart MSO 200 & MSO 300** are two self-contained devices designed for template processing, verification and identification against an internal database managed by the MSO. The MSO 200 offers a RS.232 interface that enables connection with a large range of hosts such as PC, POS terminals, ATMs. The MSO 300 offers a USB interface which is more suited to PC environments. The MSO 300 is supported by the MorphoKit™ which includes PC software for image capture, template processing, authentication and identification. A Software Development Kit (MorphoSmart SDK) enables VARs to develop any kind of application carried out on PC platforms.

• **MorphoSmart MSO OEM** is the OEM version of the MSO 200 and MSO 300

• **MorphoSmart MSO 350** features a PC/SC smart card reader (ISO format) in the same small package as the other models.

• **MorphoSmart MSO 201, MSO 301, MSO 351 and MSO OEM FFD** offer a solution to fake finger detection. Indeed, in some situations, such as when the terminals are left unsupervised or when the security requirements are very high, it is important to detect fake fingers.

Biometric features

The MorphoSmart™ includes two embedded software components integrating the SAGEM algorithms: MorphoImaging™ and MorphoSoft™ Embedded. They support INCITS 378 and ISO 19794-2 interoperable minutiae formats and are approved by the GSA FIPS201 Evaluation Program.

All MSO terminals are able to manage a local database.

Fingerprint sensor technology

Sagem is committed to offering the best and most affordable technology for industry and governmental applications. The MSO product range now meets and exceeds FBI PIV-IQS requirements.

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Security features

Equipped with the security option, the MorphoSmart combines in one device the technologies of biometric authentication and Public Key Infrastructure (PKI) to offer a truly secure solution for positive person authentication. The security layer offers a solution to the problems of data integrity control and privacy protection. This technology is compatible with existing X.509 PKI. The certification path and private key are loaded in the MSO via a secure token generated by a Key Management System (KMS). All biometric data are encapsulated in an X9.84 biometric token.

Technical specifications

- **High-end fingerprint sensor**
 - FIPS 201 approved
 - 21 x 21 mm acquisition area
- **Biometrics**
 - Template generator and matcher FIPS 201 approved
 - Verification time <1s
 - Identification time (10000 templates) <2s
- **Operating Temperature**
 - 0°C to 40°C
- **Power consumption**
 - Less than 2.5W
- **Dimensions**
 - MSO L=90, W=80, H=57 mm
 - MSO OEM L=70, W=68, H=50 mm
- **Connections**
 - MSO 300/350: 1.5 m USB cable
 - MSO 200: 1.5 m DB 9 cable
- **Processor**
 - Powered by an ARM9™ family CPU core.
- **Software**
 - The SDK operates on Windows 2000, 2003, XP and Vista Platforms.

	MSO 200	MSO 201	MSO 300	MSO 301	MSO 350	MSO 351	MSO OEM	MSO OEM FFD
Security Layer	On option							
Interface	RS 232	RS 232	USB	USB	USB	USB	USB and RS 232	USB and RS 232
Smart card reader	No	No	No	No	Yes	Yes	No	No
Embedded database	Up to 10000 templates in identification mode (on option)							
Fake Finger Detection	No	Yes	No	Yes	No	Yes	No	Yes

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