



MorphoSmart™ Optic

Multi-Purpose Fingerprint Processing Unit

- FBI approved high-end optical sensor
- Self-contained device for template storage (up to 2000 records), processing, verification, identification
- Match-On-Card optional
- Enhanced cryptographic security
- RS 232 or USB
- Packaged or OEM device



Biometrics in Action



Sagem Morpho Inc.
SAFRAN Group



MorphoSmart™ Optic

Multi-purpose fingerprint processing unit

Sagem Morpho (Morpho) has drawn on its in-depth experience in fingerprint recognition to design the MorphoSmart™Optic (MSO) a wide range of biometric terminals. These technologies cover large AFIS systems, terminals, and sensors.

Applications

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

The MSO™ family

• **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 PCs, POS terminals, ATMs. A straight forward protocol makes communication possible, and it can easily be implemented by the host. The MSO 300 offers a USB interface that 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 of up to 1:20,000 persons. Both products integrate 2 LEDs to guide and inform users about ongoing operations. A Software Development Kit (MorphoSmart SDK) enables VARs to develop any kind of application carried out on PC platforms.

- **MSO 200 OEM** is the OEM version of the MSO 200.
- **MSO 300 OEM** is the OEM version of the MSO 300.
- **MSO 350** features a PC/SC smart card reader (ISO format) in the same small package as the other models.

Biometric features

- The MSO includes two embedded software components integrating the Sagem algorithms:
- The MorphoImaging™ optimizes 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.

All MSO terminals are able to manage a local database of 100 records in identification. When the MorphoSmart IDENTLITE license is loaded, the MSO can manage up to 2000 records in identification mode.

Security features

Equipped with the security option, the MSO 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

- **Fingerprint sensor**
 - High-end optical sensor
 - 500 dpi resolution @ 8-bit greyscale
 - 0.86 in x 0.86 in (21 x 21 mm) acquisition area
- **Biometrics**
 - Verification time <1sec
 - Identification time (2000 records) <2sec
- **Operating Temperature**
 - 32 F to 104 F (0°C to 40°C)
- **Power consumption**
 - Less than 2.5W
- **Dimensions & Weight**
 - MSO 3.6x3.1x2.3in (9.1x8.0x5.9cm), 10.0 oz (284g, PC-ABS)
 - MSO OEM 2.9x2.7x2.0in(7.5x6.8x5.0cm), 3.8 oz (108g)
- **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**
 - Microsoft® Windows 2000, and XP Platforms.

	MSO 200	MSO 300	MSO 350	OEM 200	OEM 300
Security Layer					
Interface	RS 232	USB	USB	RS 232	USB
Smart card reader	No	No	Yes	No	Optional
Embedded database	Up to 2000 in identification mode (on option)				

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