



MorphoSmart™ Optic

- Precision optical sensor for fast, quality image capture ■
- Remote or local matching for flexible integration ■
- 1:many identification and 1:1 authentication ■
- Sculpted ergonomic design with two LEDs for user guidance ■
- Standard USB or serial (RS-232) Windows® PC application interfaces ■
- Seamless integration with Morpho® enrollment applications ■
- Offered as an OEM component (without a housing) ■
- Software developers kit available for custom applications ■



*Precision optical
fingerprint sensor*

 **SAGEM MORPHO, Inc.**

*Tomorrow's biometric technology
for today*

MorphoSmart™ Optic

Precision optical fingerprint sensor

The MorphoSmart™ Optic is a precision optical biometric fingerprint reader designed for fast capture of quality fingerprint images for registration, identification, and authentication. It is designed for either remote matching on a host PC through standard USB communications (MSO100), or local matching on the reader (MSO200) connected through a serial (RS-232) interface. It features an ergonomically sculpted housing to optimize fingerprint acquisition, or is offered without the housing, as an OEM solution for integration to manufacturer specifications. The MorphoSmart™ Optic is available in single- or 4-packs, or as a part of Morpho's ready enrollment applications, the MorphoAccess™ Enrollment Suite and the Morpho® ActiveX® Biometric Enrollment Kit. Or, for custom development, it is combined in several options with a software development kit. Whether for off-the-shelf enrollment or custom applications, the MorphoSmart™ Optic offers a flexible solution for fast, precise capture of quality fingerprint images.

Feature	MorphoSmart™ Optic	
	MSO 100/OEM	MSO 200/OEM
Application/Use	Image Acquisition only	Acquisition, Encoding, & Matching
Fingerprint Storage	Remote on PC (requires MorphoSoft™)	Up to 99, 2-Fingerprint Records
Housing	Plastic Sculpted or Metal	Plastic Sculpted or Metal
Communications	USB	Serial (RS-232)
Power	<2.5 W via USB	5 VDC, 800 mA Power Supply
“Off-the-Shelf” Morpho® Enrollment Applications	MorphoAccess™ Enrollment Suite Morpho® ActiveX® Biometric Enrollment Kit	N/A
Custom Solutions (w/SDK)	N/A	MSO Development Kit MSO Morpho® Kit MSO SDK 2.0

Technical Specifications

Fingerprint Sensor

- Scanner: Optical sensor
- Resolution: 500 dpi at 256-bit grayscale (416 X 416 pixels)
- Platen Area: 0.83 in x 0.83 in (21 mm x 21 mm)
- Distortion: <1%

Biometric Matching

- MSO100: Remote, on the host PC, up to 20,000 2-finger records in 1 database (depending on the license)
- MSO200: Local, up to 99, 2-fingerprint records in 1 database
- Authentication: <1.5 seconds
- Identification: <2.5 seconds (database of up to 3,000 people)
- False Acceptance Ratio (FAR): 1 in 10,000 or better, configurable based on customer security specifications

Mechanical

- MorphoSmart™ Optic (with Sculpted Housing):
 - * Length: 3.54 in (90 mm)
 - * Width: 3.15 in (80 mm)
 - * Height: 2.24 in (57 mm)
 - * Weight: 8.11 oz (230 g)
 - * Housing: PC-ABS or Metal
- MorphoSmart™ Optic OEM (without Sculpted Housing):
 - * Length: 2.76 in (70 mm)
 - * Width: 2.67 in (68 mm)
 - * Height: 1.97 in (50 mm)
 - * Weight: 4.59 oz (130 g)

Interfaces

- User Interface: Two LEDs
- MSO100: Standard USB
- MSO200: Standard Serial (RS-232)

Platform

- MSO100/200: Microsoft® Windows® 2000 Professional or Server
- MSO SDK: Microsoft® Windows® 2000 Professional or Server and XP

Environment

- Temperature: 32° F to 104° F (0° C to 40° C)
- ESD Protection: 15 KV

Power

- MSO100: <2.5 W via USB
- MSO200: 5 VDC, 800 mA power supply

Connections

- MSO100: 4.92 f (1.5 m) USB cable
- MSO200: 4.92 f (1.5 m) RS-232 with DB9 connector
- MSO100 OEM: 4 and 8 PIN connectors
- MSO200 OEM: 8 PIN connectors



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