



MorphoAccess™ 500

Fingerprint identification for physical access control

- 1:1 authentication & 1:N identification for up to 50,000 users
- Multi-factor authentication
- Plug & play solution for PACS
- Optional ISO 14443-A & B contactless reader (FIPS 201)
- Power Over Ethernet
- FBI PIV-IQS approved fingerprint sensor
- FIPS 201 approved template generator & matcher
- Built-in applications for Physical Access Control and Time & Attendance
- Available application software development tools



Biometrics in Action



MorphoTrak
SAFRAN Group



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The MorphoAccess™ 500 Series sets benchmarks for performance, versatility, and ease-of-development. The terminal's high performance results from its dual-core ARM9 microprocessor with multi-thread processing capabilities; its FBI IQS and FIPS 201 approved biometrics; and storage capacity for up to 50,000 records. For versatility, Ethernet, USB, RS-422, and several PACS connectivity options are included. Also, Physical Access Control, Time & Attendance, and terminal management applications are on-board. VARs and integrators will find it easy to develop programs using available software development kits for both PC and embedded applications. Finally, installation is easy and costs less using the MA500 Series Power-Over-Ethernet feature.



The MorphoAccess™ 500 series features a new range of indoor/outdoor biometric and contactless smart card terminals so versatile that it addresses a wide range of applications from legacy or new access control systems to stand-alone use and governmental programs.

All the MA500 models operate in identification mode and offer a storage capacity of two biometric templates per person from 3,000 to 50,000 individuals broken down in 5 databases of 10,000 each.

The MA520 models also offer the possibility of reading contactless smart cards for 1:1 verification. The biometric data can either be stored on the card or on the terminal. In the latter case, the card is used to screen the MA database and retrieve the corresponding biometric templates. The device can also read ISO 14443-A & B cards (Contact us for more information).

The MA521 model integrates a specific optronic sensor, based on Sagem patented technology, for fake finger detection. This may be of great interest in highly secure environments or where the terminal is left unsupervised.

The whole MA 500 range offers standard interfaces to return the ID to the host system. The terminal can be used in either stand-alone or networked mode. In stand-alone mode, it activates its own internal relay. When networked, it can operate in either proxy or application mode. In proxy mode, the terminal is

dependent on a host controller that sends commands according to the Morpho® Host System Interface protocol. In application mode, the terminal manages the operation workflow either for physical access control or Time & Attendance. In both modes, the remote terminal management is possible through TCP/IP or USB. Terminal management includes: log retrieval, terminal configuration setup, firmware upgrade, biometric database operations, etc. With the MorphoAccess™ Easy Setup, MorphoAccess™ terminals are easily configured.

Software

The MEMS application release 6.2 or higher (MorphoAccess™ Enrollment & Management System), is a complete solution for centralized management in legacy or stand-alone systems. It supports the entire MA terminal range. We also offer integrators, who develop their own systems, the Morpho Integrator's Kit (MIK).

MorphoAccess™ SDK

A Software Development Kit is available for VARs who want to develop their own embedded applications. (Contact us for more information).

Standard Features

Ergonomics

- Backlight LCD graphical display 128x64 pixels
- Backlight keypad with 12 Keys + 4 programmable function keys
- Buzzer and bi-color LEDs

Physical Characteristics

- Dimensions: 5.7 in. x 6.3 in. x 3.0 in. (145mm x 160mm x 75mm)
- Electrical connections by internal termination with locking screws, plus RJ45 and USB Host connectors.

Regulatory Approvals

- Complies with EN60950, EN55022, FCC part 15 (certification pending) and EN55024, EN300330-1 and 2, CE, UL 60950 (certification pending).

Languages Supported

- English, French, Spanish, Italian, German, and Portuguese
- Other languages may be loaded

Software Tools

- Terminal Management Software
 - Used to assist in development and ongoing maintenance.
- MorphoAccess™ Easy Setup
 - A terminal embedded assistant that allows quick configuration directly on the terminal.

Operating Characteristics

Environment

- Operating temperature: 14°F to 122°F (-10°C to +50°C)

Electrical

- Supply Voltage: 9V, 16V (250mA typical @ 12V)
- Power-Over-Ethernet (POE)

Communication Interface Capabilities

- Port for ID card management
 - Customizable Wiegand IN & OUT, RS-422, Data & Clock IN & OUT
- Ports for terminal communications
 - Ethernet 10/100 BaseT with DHCP via RJ45 connector or interface board
 - USB Host connector on motherboard
 - Physical Access Control System Interface
 - Relay: Low voltage N.O. or N.C. configurable

Security Features

- Multi-factor authentication using combinations of finger scan authentication, PIN and smart card information
- Tamper & anti-theft switches, secured screws. Status available via terminal communications ports
- Built-in SAM reader (Contact us for more information)
- SSL (Contact us for more information)
- Contactless smart card reader (Model 520)
 - ISO14443-A and B contactless smart card (FIPS 201 certification pending)
- Fake Finger Detection & Contactless smart card reader (Model MA521)

Biometric Characteristics

- Integrated 500 dpi MorphoSmart™ sensor 0.9 in x 0.9 in. (23mm x 23mm)
 - FBI PIN-IQS certified
 - FIPS 201 approved biometric algorithms
 - Template extractor and template matcher MINEX certified
- 1:1 verification time < 1sec
- Identification time (1,000 records) < 1s
- Adjustable FAR according to security requirements down to 10-8
- Manages up to 10,000 records in identification mode
- Max storage capacity: 50,000 records (5 databases of 10,000 records each)

Software Applications and Development Tools

- MorphoAccess™ Enrollment & Management System (MEMS) application release 6.2 or higher
 - MEMS a complete solution for centralized management in legacy or stand-alone systems, it supports the entire MA terminal range.
- Morpho Integrator's Kit (MIK) release 3.2 or higher
 - Used to develop Windows based applications, includes Windows DLLs.
- MorphoAccess 500 Software Development Kit (SDK)
 - Used to develop embedded applications, includes terminal based DLLs.



	MA 500	MA 520	MA 521
Contactless reader	No	MIFARE 1K & 4K	MIFARE 1K & 4K
Database Size	3k or 50K	3k or 50K	3k or 50K
Fake Finger Detection	No	No	Yes
Multi-factor Authentication	BIO, ID + BIO	card + BIO, Card + Pin, Card + BIO + PIN, card + BIOPIN + PIN	

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