

# suprema

## Standalone Fingerprint Modules



### Cutting-edge technology, easy integration

Suprema SFM fingerprint modules are designed to provide biometric security solution to developers and manufacturers for integration with various applications as access control, time attendance, mobile device, kiosks, safes and so on. Loaded with multi award-winning Suprema Algorithm, SFM modules offer powerful verification performance and versatile external interfaces.

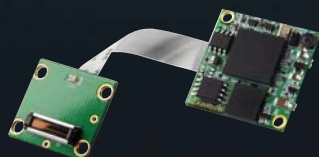
### Suprema Algorithm

Suprema Algorithm is the world's best fingerprint algorithm which showed top performance in NIST MINEX test and ranked No.1 in FVC2004 & 2006.

### SFM4000 Series

#### Compact size with power saving features

SFM4000-TS4 is a compact, power efficient module that is simple to integrate with various system applications. The module offers flexible supply voltage, integrated power management, small footprint, and voltage detector functions. SFM4000 TS4 is specially designed for lock and safe manufacturers look for an inexpensive, reliable biometric solution with extra low power-consumption and compact size.



### SFM3500 Series

#### Engineered to perfection, unrivaled performance

SFM3500 is a high-end standalone fingerprint module equipped with versatile external interface including RS232, RS422/485, Wiegand and LED control, readily applicable to access control applications. SFM3500 offers comprehensive functionalities and interfaces to be used as a complete standalone fingerprint access reader by itself.






### SFM3000 Series

#### Core features, world class technology



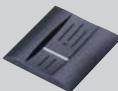



SFM3000 is a cost effective fingerprint identification module equipped with essential part for fingerprint identification and template storage. SFM3000 is suitable for most of the applications where it processes fingerprint recognition and host controller is used to handle other operations. The communication between SFM3000 and host controller is done by packet protocol through CMOS level serial interface.



### Specifications

	SFM3000 Series	SFM3500 Series	SFM4000 Series
Image			
Sensor Types	Optical, capacitive, thermal swipe	Optical, capacitive, thermal swipe	Capacitive swipe
CPU	400 MHz DSP	400 MHz DSP	400 MHz DSP
Flash Memory	1MB (expandable up to 4MB)	4MB	512 KB
EER	< 0.1%	< 0.1%	< 0.1%
Enrollment Time	800 msec	800 msec	800 msec
1:1 Verification Time	800 msec	800 msec	800 msec
1:1000 Identification Time	970 msec	970 msec	970 msec
Template Size	256 ~ 384 bytes (configurable, 384 bytes default)	256 ~ 384 bytes (configurable, 384 bytes default)	256 ~ 384 bytes (configurable, 384 bytes default)
Template Capacity	1,900 (9,500 at 4MB)	9,000	300
Host Communication	Async. serial (3.3V CMOS level)	RS232 or RS422/485	Async. serial (3.3V CMOS level)
Aux Communication	N/A	Async. serial (TTL level) or RS232	N/A
Wiegand Interface	N/A	1 x input port 1 x output port	N/A
External I/O	8 ports configurable digital I/O	3 x TTL input 3 x TTL output 3 x LED output	8 ports configurable digital I/O
Encryption	256 bit AES	256 bit AES	256 bit AES
Supply Voltage	3.3 Vdc regulated	5 Vdc regulated	3.3 Vdc regulated, 4 ~ 10 Vdc
Board Size(L x W x H)	55 x 40 x 8 mm	63 x 43 x 10 mm	26 x 26 x 6.4 mm

### Selection Guide

	SFM3020-OP SFM3520-OP	SFM3030-OD SFM3530-OD	SFM3010-FC SFM3510-FC	SFM3050-TC1 SFM3550-TC1	SFM3050-TC2 SFM3550-TC2	SFM4000-TS4
Sensor Type	 Optical	 Optical (waterproof)	 Swipe type thermal	 Capacitive	 Capacitive	 Swipe type capacitive
Resolution (dpi)	500	500	500	508	508	508
Sensing Area (mm)	16.0 x 19.0	16.0 x 18.0	14.2 x 0.4	12.8 x 18.0	10.4 x 14.4	9.6 x 0.2
Image Size (pixel)	280 x 320	288 x 288	280 x 8	256 x 360	208 x 288	192 x 4



SFM3550-TC1 EVK

#### Evaluation Kit

Evaluation kits are testing devices for users to evaluate the core functionality of modules quickly and easily. Bundled with software tools and technical documents, the kit enables efficient design & development of application systems.

#### Components

- \* SFM module and sensor
- \* Evaluation board
- \* Software development kit
- \* PC interface program with source codes
- \* Technical documents

#### Applications

- \* Access control
- \* Safe/Locker
- \* Door lock
- \* POS
- \* Time attendance
- \* Vault
- \* ATM
- \* Kiosk

### Suprema Inc.

16F Parkview Office Tower, Jeongja, Bundang, Seongnam, Gyeonggi, 463-863 Korea

Tel : +82-31-783-4502, Fax : +82-31-783-4503

E-mail : sales@supremainc.com Homepage : www.supremainc.com

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