

# 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, optical		
CPU	400 MHz DSP	400 MHz DSP	400 MHz DSP		
Flash Memory	1 MB (expandable up to 4 MB)	4MB	512 KB (expandable up to 4 MB)		
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**

Model No.	SFM3020-OP SFM3520-OP SFM4020-OP	SFM3030-OD SFM3530-OD	SFM3040-OL SFM3540-OL	SFM3010-FC SFM3510-FC	SFM3050-TC1 SFM3550-TC1	SFM3050-TC2 SFM3550-TC2	SFM3050-TC2S	SFM4000-TS4
Sensor Type	Optical	Optical	Optical	Swipe type	Capacitive	Capacitive	Capacitive	Swipa typa
	Optical		(Secugen sensor)	thermal	Capacitive	Capacitive	(steel coated)	Swipe type capacitive
Resolution (dpi)	500	500	500	500	508	508	508	508
Sensing Area (mm)	16.0 x 19.0	16.0 x 18.0	12.9 x 15.2	14.2 x 0.4	12.8 x 18.0	10.4 x 14.4	10.4 x 14.4	9.6 x 0.2
Image Size (pixel)	280 x 320	288 x 288	256 x 302	280 x 8	256 x 360	208 x 288	208 x 288	192 x 4



#### **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

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