

suprema
BIOMETRICS & SECURITY

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SUPREMA NEWSLETTER



Suprema launched SFM6000 Series embedded modules for premium fingerprint access control devices



Suprema launched its new SFM6000 Series fingerprint embedded modules.

Loaded with the range-leading 1GHz CPU and latest Suprema algorithm, the new SFM6000 Series achieves the world's fastest matching speed of up to 5,000 matches per second and massive user capacity of up to 25,000 fingerprint templates.

For developers, the new SFM6000 Series now allows the easier integration by supporting open source hardware platforms including Arduino and Raspberry pi.

SFM6000 Series is designed to provide optimal fingerprint authentication solution for various areas including access control terminals, time attendance devices, door locks, alarm panels, safes, vending machines automotive, ATMs and fast-growing IoT applications.

Moreover, SFM6000 Series brings significant improvements on hardware side to provide a robust solution for applications with harsh environment. The new improved optical sensor structure now provides IP65-rated ingress protection and operating temperature is also extended from -15°C to 60°C.

SFM6000 Series also provides complete backward compatibility by maintaining SFM5000 & 3000's form factor and sensor types. This allows existing customers of SFM5000 & 3000 Series to put minimal effort in adoption of improved benefits of SFM6000 Series fingerprint modules.

“Suprema’s new SFM6000 Series is our answer to dynamic market demands from leading global manufacturers. SFM6000 Series will be the first choice for those who aims to build a best-of-breed fingerprint terminals and will also address growing demand from open source hardware applications,” said Brian Song, CEO at Suprema. ““With biometrics becoming more popular for IoT, SFM6000 Series will provide our customers better opportunity to penetrate their business into this emerging market,” Song added.

Comparison between SFM6000 and SFM5000 series' optical sensor models

Model name	SFM6020-OP/SFM6030-OC	SFM5020-OP/SFM5030-OC
Sensor Type	Optical	Optical
Sensor Option	OP6/OC6	OP5/OC4
Image Size (pixel)	272 x 320	272 x 320
Finger Rotation (°)	+/- 90°	+/- 90°
Sensor Dimension (L x W x H) (mm)	20.5 x 25 x 52	20.5 x 25 x 52
IP Rating	IP65	IP65
CPU	1GHz (MIPs)	533MHz DSP
Flash Memory	8MB/16MB (NOR Flash)	1MB (4MB Option)
EER	< 0.08%	< 0.1%
Enrollment Time	< 330ms	< 600ms
1:1 Verification Time	< 330ms	< 600ms
1:1000 Identification Time*	< 400ms	< 760ms
Template Capacity	5,000 @ 8MB Flash 25,000 @ 16MB Flash	1,900 @ 1MB Flash 9,500 @ 4MB Flash
Host Communication	Asynchronous serial: CMOS level (3.3V) (up to 921600 bps) USB 2.0 (up to 2M bps)	Asynchronous serial: CMOS level (3.3V) (up to 460800 bps)
Operating Temperature Range (°C)	-15 to 60 °C	-15 to 50 °C
Supply Voltage	3.3/5.0VDC Regulated	3.3 VDC Regulated
Board Size (L x W x H) (mm)	55 x 40 x 8	55 x 40 x 8

Capacitive sensor version SFM6050-T series will be available from 4Q, 2017

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Suprema's new Ultra-slim FAP20 fingerprint module SFM Slim is coming up soon



Now Suprema prepares world's slimmest FAP20-certified fingerprint module featuring an array of cutting-edge technologies. Along with its 13.5mm-slim optical sensor, SFM Slim will offer flexibility to create a new and innovative system design with its reduced form factor that will distinguish from competitors. Powered by 1GHz CPU and MINEX-certified algorithm, SFM Slim also will feature best-in-class performance (5,000 match/ sec) and FBI PIV-compliance. SFM Slim provides Live Finger Detection (LFD) technology by applying a machine-learning method that analyzes and categorizes image patterns according to optical characteristics. It also features Suprema's advanced MDR technology that allows capturing high quality fingerprint images even under direct sunlight up to 100,000 LUX.

FEATURES



- World's Slimmest 13.5 mm FAP20-certified Optical Fingerprint Module



- FBI PIV and FBI Mobile ID FAP20 Certificates
- Image Compression Standard: WSQ



- Multi Dynamic Range(MDR) Technology
- Operates under direct sunlight up to 100,000 LUX



- Live Fingerprint Detection(LFD) Technology
- Distinguishes fake fingerprints made from various materials including clay, rubber, silicon, glue, paper, film and more



- Easy Integration
- SFM SDK for easy application development
- Android, MS Windows & Linux compatible

SPECIFICATION

CPU	1.0 GHz (MIPs)
Flash Memory	16MB
Supply Voltage	3.3/5.0 VDC Regulated
Interface	UART, USB 2.0 High Speed
Template capacity	22,000
Operating Temperature(°C)	-10~50°C
Operating humidity	10 ~ 90% RH
Dimensions (W x L x Hmm)	59 x 32 x 13.5 mm
Enrollment Time	< 330ms
1:1 Verification Time	< 330ms
1:1,000 ID Time	< 400ms
EER	< 0.08%
WSQ Image Compression	Yes
SDK	Windows, Linux and Android
Template Type	Suprema, ISO19794-2, ANSI-378
Live Finger Detection	Yes
Auto-on	Yes
Sensor Type	Optical
Resolution	500 ppi
Gray Scale	256 level
Platen Size (W x L mm)	16.5 x 21.0
Sensing Area (W x H mm)	15.24 x 20.32

* Average 1:1000 genuine identification time including feature extraction

SFM Slim is scheduled to launch at 1Q, 2018. And evaluation samples will be released from 4Q, 2017.

Introducing video clip: <https://www.youtube.com/watch?v=He09LObJZYI>

Suprema opens “SFM Developer Center” for quicker and easier technical communication with customers.

What is SFM Developer Center?

SFM Developer Center is an online space that provides technical information and technical communication with customers. In SFM Developer Center, Suprema provides open various open source projects using SFM to provide the opportunity to utilize fingerprint recognition technology not only for fingerprint recognition experts but also for those interested in hobbies such as start-up companies or DIY.

Visit at

BioSign 2.0

Samsung Selects Suprema BioSign Mobile Fingerprint Solution for Its Latest Galaxy J5 and Galaxy A7 Smartphones



Suprema, a global leader in biometrics and identity solutions, announced that the company’s BioSign mobile fingerprint authentication algorithm has been loaded in Samsung Galaxy J5 2017 and Galaxy A7 (for SK Telecom) smartphone models. Partnering with Egis Technology, a Taiwan-based sensor provider, Suprema provides its integrated solution to global smartphone manufacturers. Earlier in February 2017, Suprema introduced BioSign 2.0 at Mobile World Congress at Barcelona. Enhanced by latest AI technology, BioSign 2.0 supports small fingerprint sensors and offers robust authentication performance over time and environment. Moreover, BioSign 2.0 provides exceptional versatility in integration as it supports different shapes and types of fingerprint sensors. Especially, BioSign 2.0 is essential solution for mid-to-low range smartphones as it reduces production cost by supporting smaller sensors and provides higher fingerprint authentication performance with low-end processors. BioSign 2.0 achieves 50ms authentication speed in high-end smartphones with high performance processors and 100ms speed with low-end processors while guarantees maximum of 0.0005% FAR. Moreover, smartphones users experience decreasing fingerprint authentication performance over usage time, but BioSign 2.0’s self-learning algorithm increases accuracy over usage. BioSign 2.0 can process authentication with small area (2mm x 2mm) of fingerprint information and provides consistent performance with different shapes of sensors including bar, square and slim shapes.



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