

High-performance Embedded Fingerprint Modules

SFM6000 Series

The new Suprema SFM6000 Series represents a great leap forward in biometrics.

SFM6000 Series offers unrivaled matching performance, higher level of security, rich communication interfaces, improved durability and easier integration tools. Powered by the world's best, multi-award winning Suprema fingerprint algorithm, SFM6000 Series provides unrivaled matching speed(5,000 match/sec), enhanced security(30% lower FRR) larger user capacity(up to 25,000) and improved sensor durability and precision. By providing loads of integration-oriented features and 100% backwards compatibility to existing SFM5000 Series modules, SFM6000 Series offers refined fingerprint security solution to developers and manufacturers for integration with various applications including access control, time & attendance, mobile, kiosks, safes, door locks and so on.



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KEY FEATURES



World's Fastest Matching Speed

- Up to 5,000 match/sec
→ **3 times faster than previous SFM models**
- Multi award-winning Suprema algorithm
- Class-leading 1.0GHz CPU



Enhanced Security & Precision

- EER<0.1% → **30% lower FRR than previous models**
- New optical sensor: operating temperature up to 60 °C, IP65 (sensor surface), ESD surge protection
- New capacitive sensor: anti-latent fingerprint coated, IP67 (sensor surface)



Massive Memory Capacity

- Stores up to 25,000 users (16MB memory version)
→ **160% increase from previous SFM main models**



Easier Integration

- **100% backwards compatible**
→ **effortless replacement with previous SFM5000 modules**
- OSHW compatibility for IoT support
- Arduino integration: provides connection board, SDK, example code
- Android™ Debugging Bridge (ADB) support



High-speed Data Transfer

- USB 2.0 → **100 times faster data transfer than previous SFM models**
- Expandable USB interface
- Linux compatibility

SPECIFICATIONS

Models	SFM6020-OP6	SFM6030-OC6	SFM6050-T1	SFM6050-T2
Sensor				
Sensor Model	OP6	OC6	T1	T2
Sensor Type	Optical (Superior Quality/ Waterproof)	Optical (Waterproof)	Capacitive (Anti-latent fingerprint coated)	
Resolution (dpi)	500		508	
Sensing Area (mm)	16.0 x 19.0	16.0 x 18.0	12.8 x 18.0	10.4 x 14.4
Image Size (pixel)	272 x 320	288 x 288	256 x 360	208 x 288
Finger Rotation (°)	- 90° ~ + 90°			
Sensor Dimension (LxWxH)(mm)	20.5 x 25 x 52	21 x 23 x 54	20.4 x 27 x 3.5	
General				
CPU	1.0GHz(MIPs)			
Flash Memory	8MB/16MB (NOR Flash)			
Biometrics				
EER	< 0.1%			
Enrollment Time	< 330ms			
1:1 Verification Time	< 330ms			
1:1000 Identification Time*	< 400ms			
Template Type	Suprema, ISO19794-2, ANSI-378			
Template Size	Default: 384 Bytes, 256 - 384 Bytes (Configurable)			
Template Capacity	5,000 @ 8MB Flash / 25,000 @ 16MB Flash			
Encryption (Fingerprint Data)	256-bit AES			
Interfaces				
Host Communication	Asynchronous serial: CMOS level (3.3V), up to 115200 bps & USB(ADB)			
External I/O	8x Digital I/O			
Hardware				
Operating Temperature Range (°C)	-15 to 60 °C			
Supply Voltage	2..5 ~ 5.5 VDC Regulated			
Board Size (L x W x H) (mm)	55 x 40 x 8			

* Average 1:1000 genuine identification time including feature extraction



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