



LINE-UP BROCHURE
AUTHENTICATION SCANNERS

SUPrema
BIOMETRICS & SECURITY

WHY SUPREMA?

1 Suprema's multi-award winning fingerprint algorithm is at the heart of every Suprema product. Suprema's highly sophisticated fingerprint technology has been recognized by numerous competitions and compliances including FBI IQS, STQC, FVC and NIST MINEX.

The World's Best Performing Fingerprint Algorithm

2 Suprema's biometric technology is used across wide areas of applications including physical access control, public/civil ID projects, fintech, forensic science and mobile authentication. Suprema's biometrics is one of the most widely used technology and supports over 1 billion people globally providing protection, security, and convenience.

The World's Most Widely Used Biometric Technology

Product Quality & Reliability

3 When it comes to the security solutions, our focus is on delivering the best quality products that offer high performance and reliability throughout their lifecycle. At Suprema, ISO9001/14001 standards are applied to ensure quality throughout the manufacturing process. Suprema operates South Korea's largest dedicated biometrics research and manufacturing facility to ensure precise quality control.

Quality

Global Sales Channel

4 Suprema has established strong sales channels and network in over 133 countries and over 75% of revenue is derived from authorized sales channels. Suprema provides structured/bespoke product trainings, webinars, marketing supports with our partnership programs to support our partners extend their competency and revenue.

5 Suprema developed alliance with influencing global security technology partners to provide extensive application possibilities to fulfill each customer's unique requirements. In order to maximize user benefits with superior features and solutions, we have integrated over 70 of the best-of-breed leading solutions from the world's leading security vendors.

Technology Partnerships

End-to-end Solution Provider

6 Suprema is uniquely suited to offer versatile biometric-based security solutions for wide array of applications. From, telecommunication, banking, healthcare, BVR (Biometric Voter Registration) & national ID, Suprema is committed to providing innovative, superior-quality products that help businesses of any kind meet their security needs.

7 Commitment to research and development has always been a key element of Suprema's success. Over 40% of Suprema's employees are engaged in R&D efforts and Suprema invests more than 16% of turnover to R&D every year. With our years of expertise in biometrics and security, Suprema owns over 100 technology patents and continuously introduces technology initiatives to the industry.

Beyond Technology

AUTHENTICATION SCANNERS

Faster, Smarter & Versatile
Fingerprint Security Solutions

Suprema's fingerprint-based security solutions provide high level biometric security for desktops as well as complex network environments. Our latest range of high-performance fingerprint USB scanners are supported by powerful software development kit (SDK) which features the world's best Suprema fingerprint algorithm. Suprema offers an unrivalled versatile development platform for leading security companies, system integrators and hardware manufacturers.



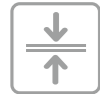
BioMini Slim 2

Ultra-slim FAP20 Authentication Scanner

BioMini Slim 2 is FAP20 certified fingerprint scanner featuring an array of cutting-edge technologies. Along with its 13.5mm slim optical sensor, BioMini Slim 2 features Suprema's proprietary Multi-dynamic Range(MDR) technology, FBI PIV and Mobile ID FAP20 compliance and Android device support.

BioMini Slim 2 also provides developers more physical flexibility with its reduced form factor and the ultra-slim optical sensor ensures robust operation over time. BioMini Slim provides new and advanced Live Finger Detection(LFD) technology by applying a machine learning method that analyzes and categorizes image patterns according to optical characteristics.

Features



- World's slimmest FAP 20 optical sensor



- FBI PIV and FBI Mobile ID FAP20 certificates
- Image compression standard: WSQ



- Capturing high-quality fingerprint images even when the finger is dry & wet.
- 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



- Automated power saving by smart sleep mode
- BioMiniSlim 2 now consumes up to 95% less power than competitors



- Easy Integration
- BioMini SDK for easy application development
- Android, MS Windows & Linux compatible
- Multi-threaded code design for multi-core CPU utilization



BM-Slim2 (OEM Module)

BioMini Slim 2S

Ultra-slim FAP20 Standalone Authentication Scanner

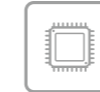
BioMini Slim 2S is a FBI PIV and Mobile ID FAP20 certified fingerprint scanner that provides a number of industry-leading features under its sleek design. Featuring range-leading powerful 1.0GHz CPU, BioMini Slim 2S provides high-speed extraction and matching of fingerprints within the scanner.

BioMini Slim 2S also supports true plug-n-play by featuring HID(human interface device) protocol. BioMini Slim 2S is a versatile identification solution for both public and civil ID applications.

Features



- True plug-n-play operation
- HID(human interface device) protocol



- Standalone operation
- 1.0GHz MIPS-base Xburst Core CPU
- On-device fingerprint extraction and matching
- O/S independent fingerprint scanner



- Enhanced Security
- On-device template encryption
- On-device template extraction



- World's slimmest FAP 20 optical sensor



- FBI PIV/FIPS201 and FBI Mobile ID FAP20 certificates
- Image compression standard: WSQ



- Capturing high-quality fingerprint images even when the finger is dry & wet.
- 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



- Automated power saving by smart sleep mode
- BioMiniSlim 2 now consumes up to 95% less power than competitors



BM-Slim2S (OEM Module)

BioMini Plus 2

PIV Certified Authentication Scanner

Suprema BioMini Plus 2 has been designed to provide high level security solution with its proven reliability of FBI-PIV certification. BioMini Plus 2 features industry's most advanced MDR(multi dynamic range) technology to capture exceptional image quality even under extreme lighting conditions(operates under direct sunlight up to 100,000 LUX).

The scanner also features cutting-edge live fingerprint detection(LFD) technology for improved security against spoofing, and the latest version of multi award-winning Suprema algorithm for better performance. Combined with ergonomic design, high speed USB 2.0 interface and comprehensive SDK solution, BioMini Plus 2 offers superb biometric authentication solution for both public and commercial applications.

Features



- FBI PIV and FBI Mobile ID FAP10 certificates
- Image compression standard: WSQ



- Capturing high-quality fingerprint images even when the finger is dry & wet.
- 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



- New Improved Optical Sensor
- 500dpi optical fingerprint sensor
- Scratch proof IP65 sensor surface



- Easy Integration
- BioMini SDK for easy application development
- Android, MS Windows & Linux compatible
- Multi-threaded code design for multi-core CPU utilization



SFU-550 (OEM Module)

BioMini Combo

Contact/ Contactless Smart Card Reader with Authentication Scanner

Suprema BioMini Combo has been designed specially to provide high leveled dual-authentication security solution for desktop PC and complex network environments. With its proven reliability, BioMini Combo features advanced live finger detection(LFD) technology. Packed in an ergonomic design, it features FBI PIV certified optical sensor with large platen size for easier capturing and contact smart card reader for stronger authentication.

Features



- Two factor authentication security solutions for authentication purposes.



- Android support
- Smart card SDK for Android
- Versatile solution with custom-made Android apps



- FBI PIV/FIPS201 and FBI Mobile ID FAP20 certificates
- Image compression standard: WSQ



- Capturing high-quality fingerprint images even when the finger is dry & wet.
- 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



- Interface with NFC-enabled devices
- ISO/IEC 14443 A&B(NFC), Mifare, Felica
- Compliant with ISO 7816 Contact Smartcard and EMV 2000 version 4.1
- Transmission rate : 2 Kbps to 500 kbps
- Supports 5V (55mA), 3V (50mA), 1.8V (20mA) Smart Card
- Supports SAM Slot (Optional)



* Available Variants



Contact



Contactless



Dual

BioMini

High Performance Authentication Scanner

Suprema's fingerprint-based PC solution has been designed specially to provide high level biometric security for desktops as well as complex network environments. Our latest range of high-performance fingerprint USB scanners are supported by powerful software development kit(SDK) which features Suprema's award-winning algorithm and ranked top in FVC and NIST MINEX tests. Suprema PC solution provides unrivalled versatile platform for development to leading security companies, system integrators and hardware manufacturers.

Features



- World's best performing fingerprint algorithm
 - : Top results in NIST MINEX tests and FVC
 - NIST certified interoperable image & template format standards (ANSI-378/ISO 19794-2, ISO 19794-4)
 - Image Compression Standard (WSQ)
 - Fast matching speed : 100,000 match / second (with Intel Core2Duo)



- USB 2.0 high speed interface
- Supports multiple device handling



- New Improved Optical Sensor
 - 500dpi optical fingerprint sensor
 - Scratch proof IP65 sensor surface



- Easy Integration
 - BioMini SDK for easy application development
 - Android, MS Windows & Linux compatible
 - Multi-threaded code design for multi-core CPU utilization



SFU-300 (OEM Module)



BioMini SDK

BioMini SDK is suitable for applications where fingerprint enrollment and recognition can be done on PC or network based systems with Suprema BioMini , BioMini Combo and SFU series scanners.

Windows / Linux



Key Features

- World's best performing fingerprint algorithm
 - : Top results in NIST MINEX tests and FVC
- FIPS 201 certified template extractor and matcher
- Fast matching speed : 100,000 match / second (with Intel Core2Duo)
- Supports MS Windows and Linux
- Supports multiple programming languages: VC++, VB, VB.NET, C#, Java
- Multi-threaded code design fully utilizing multi-core CPU power
- Fingerprint templates compatible with Suprema Products

Specifications

- Template Size : 1024 Bytes (Configurable)
- Enrollment Time : < 0.1 second
- Verification Time : < 0.1 second
- Identification Time : 100,000 matches / second (with Intel Core2Duo)
- Programming Languages : VC, VB, C#, VB.NET, JAVA
- Database : Microsoft Access (Sample)
- Encryption : 256 bit AES
- Operating System : Windows 8 / 7 / Vista / XP, Linux

Android



Key Features

- Fingerprint algorithm library for Android
- Sample application program with source code (Java library with JNI)
- BioMini series

System Requirements

- Android Version : Android 4.1 (Jelly Bean / API Level 17) or above
- H/W Requirement : Quad-Core 1.7GHz, RAM 2GB
- Supported platform : ARMeabi / ARMeabi-V7a / x86
- Supported programming language : Java (Java library with JNI)
- Supported scanner : BioMini Slim, BioMini, SFU-S20, SFU-300

Specifications

- Version : SDK for Android
- Template Size : 1024 Bytes (Configurable)
- Enrollment Time : > 0.3 sec
- Verification Time : > 0.1 sec
- Matcher : 1:1
- Supported Platform : Android Version 4.1 / Jelly Bean/API Level 17 or above

Image SDK

Image SDK is a software development kit for PC based fingerprint application development. Unlike BioMini SDK that works with Suprema scanners, Image SDK does not depend on a specific scanner hardware but works with general fingerprint images captured by different fingerprint sensor devices.

Key Features

- World's best performing fingerprint algorithm : Top results in NIST MINEX tests and FVC
- FIPS 201 certified template extractor and matcher
- NIST certified interoperable template and image format standards(ANSI-378/ISO19794-2/ISO19794-4)
- Image Compression Standard (WSQ)
- Fast matching speed : 100,000 match / second (with Intel Core 2 Duo)
- Multi-threaded code design fully utilizing multi-core CPU power
- Multiple Devices handling support
- Supports fingerprint images captured by 3rd party scanners
- Supports different image resolution and quality
- Supports multiple programming languages : Visual C++, Visual Basic, C#, VB.NET, Java

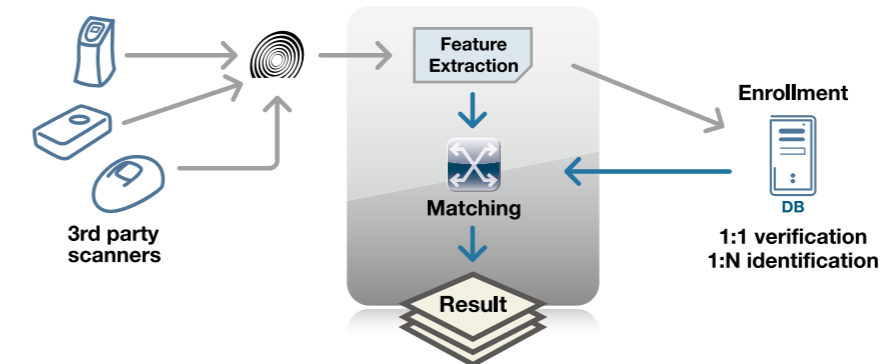
Functions



- Enroll (Image to Template)
- Verify (1:1)
- Identify (1:N)
- Get Enrollment Quality

Contents

- Fingerprint algorithm library for PC Windows
- Sample application program with source code in VC, VB, C# and VB.NET
- Technical documents
- HSM(USB dongle) for license control





Operation Flow



Scanner Specifications						
Product Name		BioMini Slim 2	BioMini Plus 2	BioMini Combo	BioMini	BioMini Slim 2S
Sensor	Image Quality Standards	FBI PIV / FBI Mobile ID FAP20	FBI PIV / FBI Mobile ID FAP10	FBI PIV / FBI Mobile ID FAP20	-	FBI PIV / FBI Mobile ID FAP20
	Live Finger Detection	O	O	O	X	O
	Sensor Type	Optical				
	Resolution	500 ppi				
	Gray Scale	256 level				
	Platen Size (W x L mm)	16.5 x 21.0	16.0 x 19.0	18.0 x 25.4	16 x 18	16.5 x 21.0
	Sensing Area(W x H mm)	15.24 x 20.32	16.0 x 18.0	16.2 x 24.3	14.6 x 16.2	15.24 x 20.32
Image Size (W x H pixels)	300 x 400	315 x 354	320 x 480	288 x 320	300 x 400	
H/W	Interface	USB 2.0 Hight Speed				USB HID
	Operating Temperature(°C)	-10~50°C				
	Operating humidity	10 ~ 90% RH				
	Ingress Protection	IP65(Sensor Surface)	IP65(Sensor Surface)	IP65(Sensor Surface)	IP65(Sensor Surface)	IP65(Sensor Surface)
	Dimensions (W x L x Hmm)	72.8 X 40.7 X 18.5	66 x 90 x 58	95.7 x 114.8 x 52.6	66 x 90 x 58	72.8 X 40.7 X 18.5
S/W	Weight(Kg)	0.09	0.17	0.28	0.12	0.09
	Windows	Windows XP, Vista, 7, 8, 8.1, 10 32/64bit				Standalone Operation
	Linux	Ubuntu, Debian, Fedora, OpenSUSE, Cent OS 32/64bit				Standalone Operation
	Android Android 4.1(Jelly Bean) and Above	O				Standalone Operation
	Image Format	RAW, BMP, WSQ, ISO 19794-4				
Certification	Template Type	Suprema, ISO19794-2, ANSI-378				
	CE	O				
	FCC	O				
	KC	O				
	UL / CB	O	O	O	X	O
	IEC62471	O	O	X	X	O
	WEEE	O	O	X	X	O
WHQL	O	O	O	O	X	

BioMini Combo Smart Card Specifications	Contact	Contactless	SAM slot	etc.
	Support ISO 7816-1,2,3,4;Integrated circuit cards Support EMV Level 1:EMV2000 specifications version 4.2	Support ISO 14443 Part 4 Type A and B cards(up to 848 kbps) Support MIFARE encryption(up to 106 kbps) Support PCD mode for FeliCa protocol(up to 424 kbps)	Single SAM slot Dual SAM slot (Optional)	CCID Compliance, Support PC/SC

*BioMini Slim 2S - MIPS-Base Xburst Core [Up to 1.0 Ghz], RAM : 32Mbyte LPDDR, Flash Memory : 32Mbyte NOR Flash Memory

Module Specifications					
Product Name		BM-Slim2	SFU-550	SFU-300	BM-Slim2S
Sensor	Image Quality Standards	FBI PIV / FBI Mobile ID FAP20	FBI PIV / FBI Mobile ID FAP10	-	FBI PIV / FBI Mobile ID FAP20
	Live Finger Detection	O	O	X	O
	Sensor Type	Optical			
	Resolution	500 ppi			
	Gray Scale	256 level			
	Platen Size (W x L mm)	16.5 x 21.0	16.0 x 19.0	16 x 18	16.5 x 21.0
	Sensing Area(W x H mm)	15.24 x 20.32	16.0 x 18.0	14.6 x 16.2	15.24 x 20.32
Image Size (W x H pixels)	300 x 400	315 x 354	288 x 320	300 x 400	
H/W	Interface	USB 2.0 Hight Speed			
	Operating Temperature(°C)	-10~50°C			
	Operating humidity	10 ~ 90% RH			
	Dimensions (W x L x Hmm)	59 x 32 x 13.5 mm	20.5x25.0x54.5(Sensor) 42x24x8(Board)	21.0x23.0x53.4(Sensor) 42x24x8(Board)	59 x 32 x 13.5 mm
	S/W	Windows	Windows XP, Vista, 7, 8, 8.1, 10 32/64bit		
Linux		Ubuntu, Debian, Fedora, OpenSUSE, Cent OS 32/64bit			Standalone Operation
Android Android 4.1 (Jelly Bean) and Above		O	O	O	Standalone Operation
Image Format		RAW, BMP, WSQ, ISO 19794-4			
Template Type		Suprema, ISO19794-2, ANSI-378			
Certification	CE	O			
	FCC	O			
	KC	O			
	UL / CB	O	O	X	O
	IEC62471	O	O	X	O
	WEEE	O	O	X	O
	WHQL	O	O	O	X

*BM-Slim2S- MIPS-Base Xburst Core [Up to 1.0 Ghz], RAM : 32Mbyte LPDDR, Flash Memory : 32Mbyte NOR Flash Memory

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BIOMETRICS & SECURITY

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