

KEY FEATURES

- Embedded Stand-alone Fingerprint Identification Module (FIModuleX)
- Verification (One-To-One) and Identification (One-To-Few)
- Onboard Template Data Storage
- Simple Serial RS-232C/CMOS Interface
- Downloading/Uploading Template from/to Host
- Easy to integrate giving minimal Time-To-Market



FIMX-MS1

APPLICATION

- Fingerprint-based DOOR-LOCK SYSTEM
- Fingerprint-based MACHINE CONTROL
- Fingerprint-based CAR LOCK
- Fingerprint-based SAFE
- Fingerprint-based FURNITURE

DESCRIPTION

IZZIXFingerXENGINE in FIModuleX follows the commonly accepted fingerprint identification scheme, which uses a set of specific fingerprint feature points (minutiae). However, it contains many powerful algorithmic solutions, which enhance the system performance and reliability. Some of them are listed below:

- Quality Check of Fingerprint Image
- Fully Tolerant to Fingerprint Distortion and Rotation(360°)
- Classification Feature by Global Feature Vector
- Efficient Feature Extraction
- Fingerprint Enroll Mode with Feature Collection
- Suitable Algorithm to 1:1 and 1:N Mode

And, FIModuleX acts as a biometric subsystem with template data storage. FIModuleX can be used to any fingerprint application and be controlled by a host sending/receiving command via the standard serial interface. FIModule makes fingerprint templates and stores directly in flash memory. Templates can also be exported for external memory and be imported by external fingerprint device and IZZIXFingerXENGINE algorithm (ex, IZZIX FD1000).

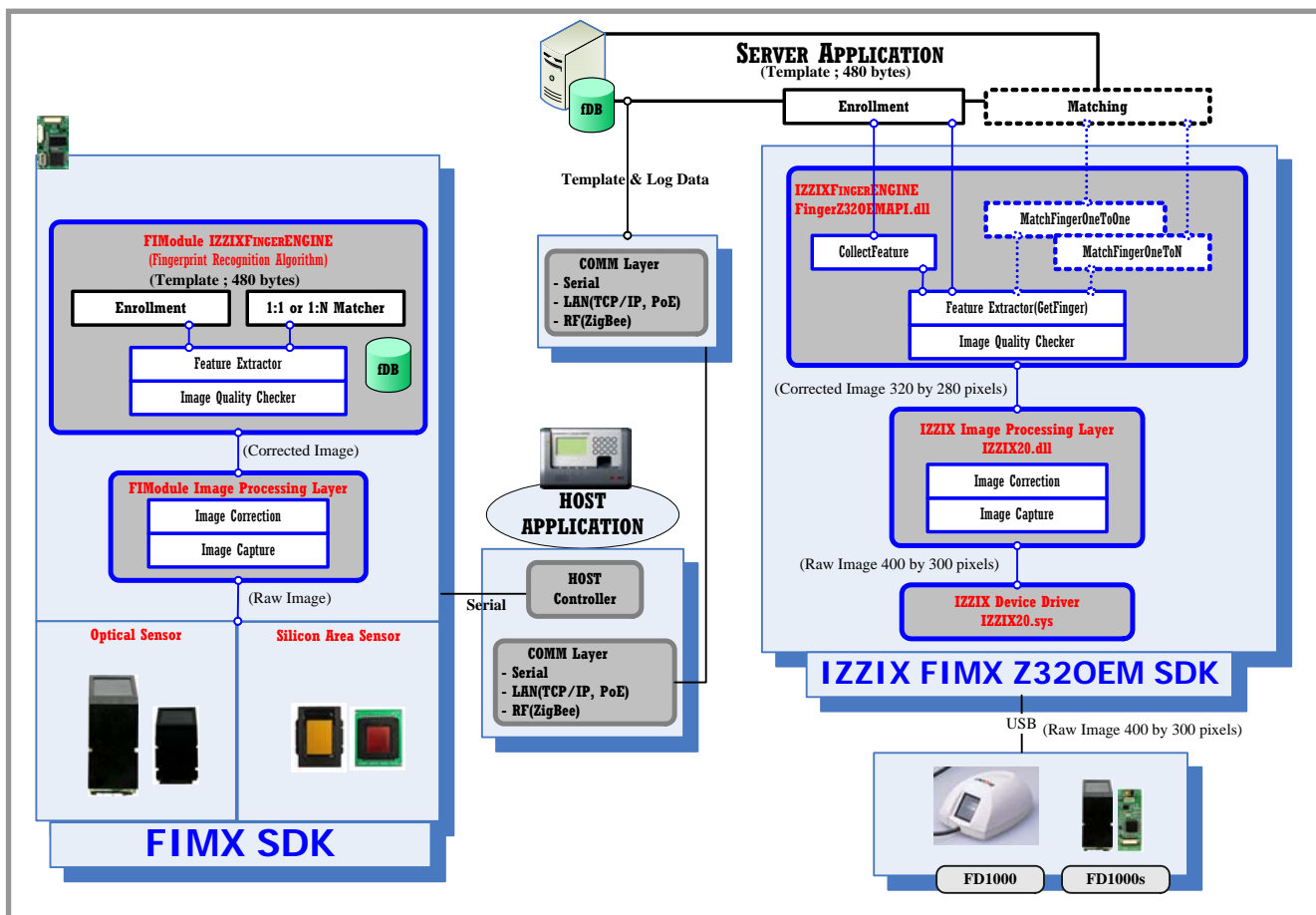
QUICK SPECIFICATION

Response Time(sec)	1:Few Mode	Enrolled Fingerprints	Matching OK
FAR(False Acceptance Rate)	< 0.0001 %	50	< 0.95
FRR(False Rejection Rate)	< 0.1 %		
Matching Mode	Verification(1:1 Mode), Identification(1:Few Mode)		
Times of Enrollment (E _T)	Feature Collection Mode, FCMode	3 times ⇒ 1 feature data/1 user	
	Feature Exclusive Mode, FEMode	n times (normally n = 5) ⇒ n feature data/1 user	
Memory Size	32Kbytes EEPROM		
Number of User	FCMode	50	
	FEMode	10 (if E _T = 5)	
User Data Size	512 Bytes (= 480 Bytes Template Data + 32 Bytes Header Data)		
Start-up Time	400ms (POWER ON State)		

Processor	Z32H, 32bit RISC with FLASH and EEPROM		
Fingerprint Board	FIMX-SIL-MS1		
Silicon Fingerprint Sensor	MS1(MBF200, Fujitsu) Solid State Fingerprint Sensor		
Dimensions & Weight	FIMX-TCH	45 × 26 × 6.6 mm	< 6 gr
	MS1(MBF200)	34 × 28 × 5 mm(24 × 26 × 1.4 mm)	< 6 gr
Window Size	12.8 × 15 mm		
Array Size(Pixels) & Resolution	256 × 300, 500 DPI		
Operating Voltage	5VDC		
Power Consumption (5VDC)	Standby	65mA	Sensing
	Extraction & Matching	148mA (<790ms)	PowerDisable
Temperature/Humidity	0°C ~ 70°C / 15% ~ 80 %		
External Interface	7Pin Connector : RS232C Level UART		

This specification is subject to change without prior notice.

June 25, 2007



Ordering Information

•FIMX Module Series

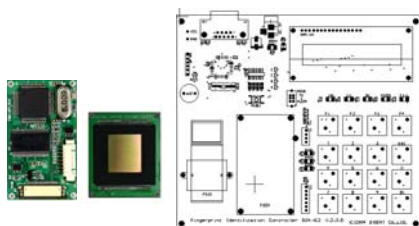
FIMX – x1 – x2 x3

FIMX	FingerZ32OEM Algorithm, Z32H RISC Processor	
① x1	Silicon Area Sensor	MS1(MBF200) by Fujitsu
② x2	Communication Interface (Hardware)	R : RS232C C : CMOS Level (Discussion)
③ x3	Total Length(TL) and Insulation Length(IL) of FFC Cable : TL(IL) L160 / L120 / L80 -> 160(150) / 120(110) / 80(70)mm	

FIModuleX	Fingerprint Board
FIMX – MS1 – RL160(L120, L80)	FIMX – SIL – MS1

•FIMX SDK

FIMX SDK-E2 (FIMX-MS1)



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June 25, 2007

DIGENT - Advanced Fingerprint Security Solution

Rev. 1.6

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Refer to Manual for details and usage specification