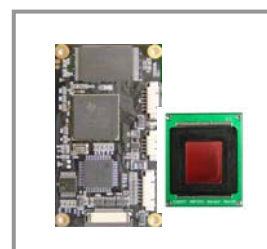


### KEY FEATURES

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



### APPLICATION

- Fingerprint based access control systems & door-lock
- Time attendance system using fingerprint
- Fingerprint based weapon control system
- Bank employee and customer identification system using fingerprint (Possibly combined with IC card)
- Fingerprint personal identification system
- Fingerprint based machine control
- Fingerprint based car locks

### DESCRIPTION

IZZIXFingerENGINE in FIModule 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, FIModule acts as a biometric subsystem with template & record data storage. FIModule 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 IZZIX FingerENGINE algorithm.

### QUICK SPECIFICATION

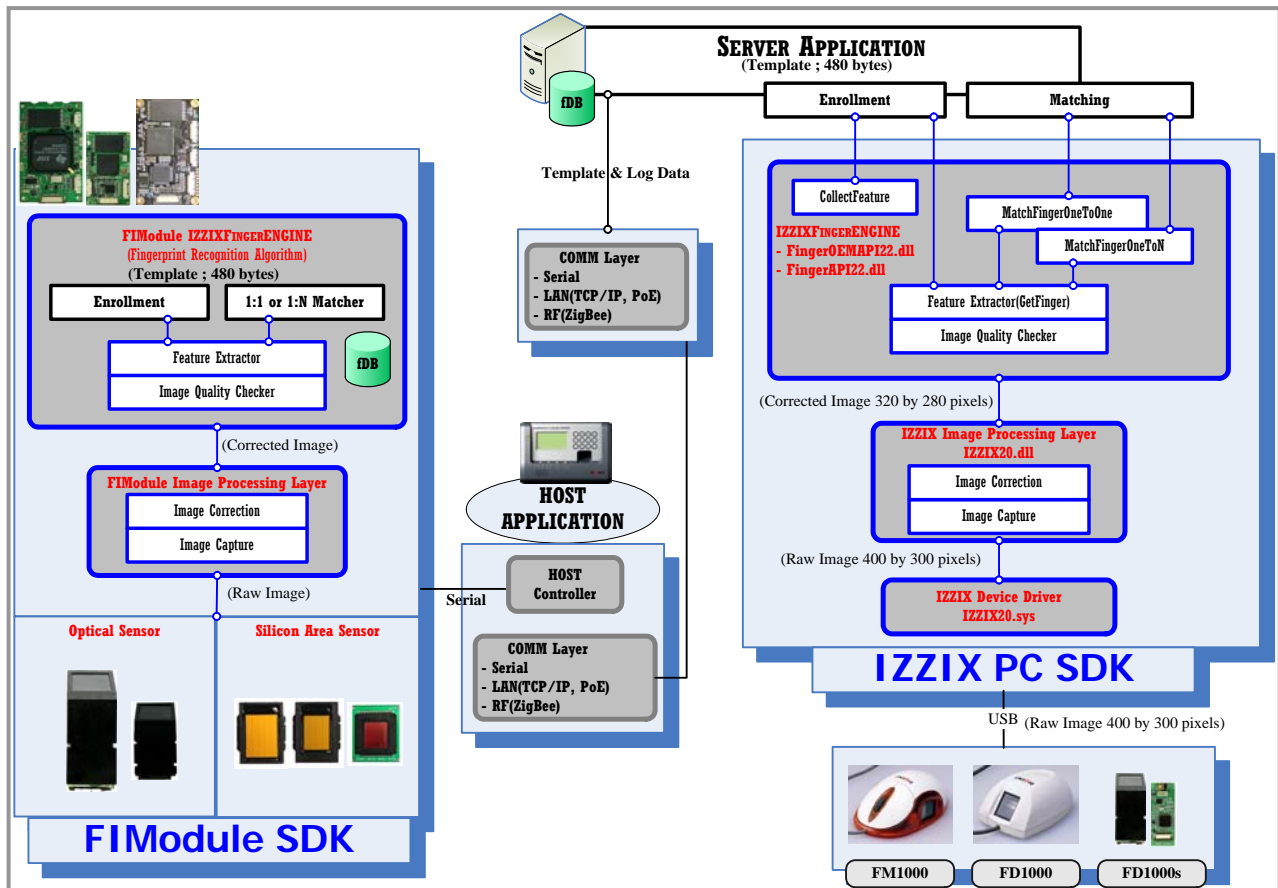
Response Time(sec)	Enrolled Fingerprints		Matching OK
	1:1 Mode		
1:N Mode		1,000	< 0.94
		2,000	< 1.04
		3,000	< 1.24
		5,000	< 1.34
		10,000	< 1.34 or < 2.7+MLTime
FAR(False Acceptance Rate)	< 0.0001 %		
FRR(False Rejection Rate)	< 0.1 %		
Matching Mode	Verification(1:1 Mode), Identification(1:N Mode)		
Times of Enrollment (E <sub>T</sub> )	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	8Mbytes FlashROM		
Number of Fingerprint & Record	FCMode	5,000 / 10,000	40,000
	FEMode (if E <sub>T</sub> = 5)	1,000 / 2,000	
User Data Size	512 Bytes (= 480 Bytes Template Data + 32 Bytes Header Data)		
Record Data Size	16 Bytes		
Start-up Time	Reset Time	> 800msec	> 600msec

Note1) MLTime ; Memory Loading Time of Secondary DB(Size = 5,000)

Digital Signal Processor	TI TMS320C6205			
Fingerprint Board	FB262BL-TCH2			
Fingerprint Sensor	MS1(MBF200), Solid State Fingerprint Sensor (FUJITSU)			
Dimensions & Weight	FB2062BL-TCH2	65 × 37 × 7 mm	< 13 gr	
	MS1 (MBF200)	34 × 28 × 5 mm (24 × 26 × 1.4 mm)	< 5 gr	
Active Area Size	12.8 × 15 mm			
Array Size(Pixels) & Resolution	256 × 300 & 500DPI			
Operating Voltage	5VDC			
Power Consumption (5VDC)	Standby	215mA	Sensing	220mA
	PowerDown1	160mA	PowerDown2	60mA
	PowerDown3	58mA	PowerDisable	< 7uA
Temperature/Humidity	0°C ~ 60°C / 15% ~ 80%			
External Interface	- 7Pin Connector : RS232C Level UART - 9Pin Through Hole Connector : RS232C or CMOS Level UART			

This specification is subject to change without prior notice.

July 2, 2007



### Ordering Information

#### •FC2062BL Module Series

FC2062BL - x1 - x2

FC20	Algorithm Version V20 series	
62BL	DSP TMS320C6205	
① x1	Solid State Fingerprint Sensor	MS1(MBF200) by Fujitsu
② x2	Total Length(TL) and Insulation Length(IL) of FFC Cable : TL(IL) L160 / L120 / L80 -> 160(150) / 120(110) / 80(70)mm	

<b>FIModule</b>	<b>Fingerprint Board</b>
FC2062B L- MS1 - L160(L120, L80)	FB2062BL- TCH2

#### •FC2062BL SDK

FC20 SDK-E2 (62BL-MS1)

