

FC2062A-FS11(FS10)/FS20

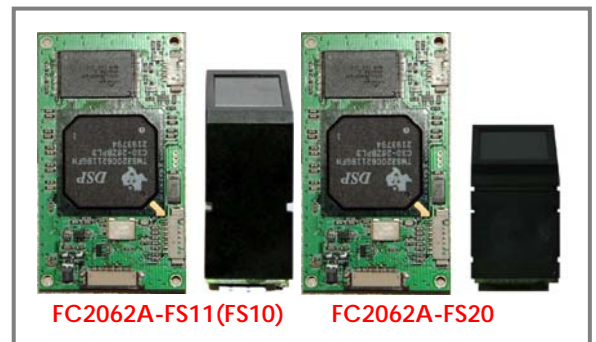
FIMODULE Product Sheet

KEY FEATURES

- Embedded Stand-alone Fingerprint Identification Module
- 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
- Fingerprint personal identification system
- Time attendance system using fingerprint
- Fingerprint based weapon control system
- Fingerprint based machine control
- Fingerprint based car locks



DESCRIPTION

IZZIX FingerENGINE 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 (ex, IZZIX FD1000).

QUICK SPECIFICATION

Response Time(sec)	Enrolled Fingerprints		Matching OK
	1:1 Mode		
1:N Mode		500	< 0.60
		1,000	< 0.80
		2,000	< 0.97
		3,000	< 1.22
FAR(False Acceptance Rate)	< 0.0001 %		
FRR(False Rejection Rate)	< 0.1 %		
Matching Mode	Identification(1:N Mode), Verification(1:1 Mode)		
Times of Enrollment	3 times ⇒ 1 feature data/1 user		
Number of User(Fingerprint) & Record		User	Record
	2M Flash ROM (Basic)	3,000	8,000
	4M Flash ROM (Option)	5,000	50,000
User Data Size	512 Bytes (= 480 Bytes Template Data + 32 Bytes Header Data)		
Record Data Size	16 Bytes		
Start-up Time	Reset Time	300 msec	300 msec

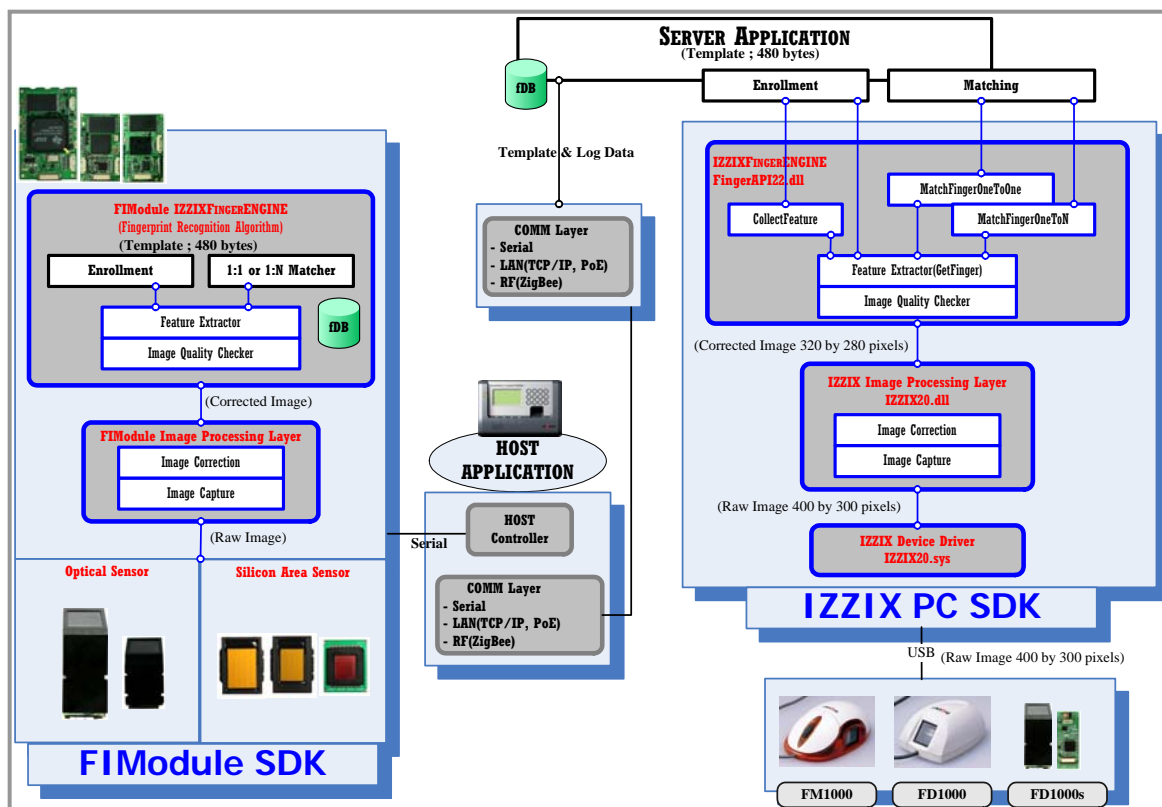
Digital Signal Processor	TI TMS320C6211		
Fingerprint Board	FB2062A-OPT1		
Optical Fingerprint Sensor	FS11(FS10)/FS20, CMOS CIF Image Sensor		
Dimensions & Weight	FB2062A-OPT1	65 × 37 × 8 mm	< 15 gr
	FS11/(FS10)	20.5 × 25 × 55 mm	< 40 gr
	FS20	20.5 × 25 × 42 mm	< 32 gr
Window Size	18.8 × 16 mm		
Resolution	500 DPI		
Operating Voltage	5V DC		
Power Consumption	240mA (Sensing Mode)		
Temperature/Humidity	0°C ~ 40°C / 15% ~ 80 %		
External Interface	7Pin Connector : RS232C Level UART		

This specification is subject to change without prior notice.

October 12, 2006

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Ordering Information

•FC2062A Module Series

FC2062A – x1 – x2 x3 x4 x5

FC20	Algorithm Version V20 series	
62A	DSP TMS320C6211	
① x1	CMOS CIF Optical Image Sensor	FS11/FS20/(FS10) by DIGENT
② x2	Communication Interface (Hardware)	R : RS232C
③ x3	Flash Memory Capacity (Number of Fingerprints)	M2 : 2M Byte (3000 Fingerprints)
④ x4	Supply Voltage	V50 : 5.0 Volt
⑤ x5	Total Length of FFC Cable: L150 -> 150mm (Basic) (IL : Insulation Length -> 140mm) (The cable length is changeable ; discussion)	

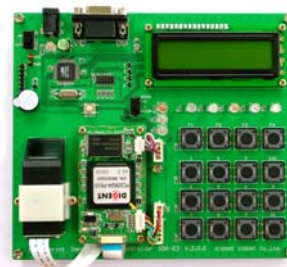
FIModule	Fingerprint Board
FC2062A – FS11 – RM2V50L150 ⇒ FC2062A – FS11	FB2062A – OPT1
FC2062A – FS20 – RM2V50L150 ⇒ FC2062A – FS20	

•FC2062A SDK

FC20 SDK-E1 (62A-FS11 or 62A-FS20)



FC20 SDK-E2 (62A-FS11, 62A-FS20)



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DIGENT - Advanced Fingerprint Security Solution

Rev. 4.1

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Refer to Manual for details and usage specification