FSM 9000

| :: Applications | :: Module Sub-systems | :: Basic tasks |

:: Applications

- Time Attendance recorders
- Fingerprint door locks
- Access control devices
- Lockers, safes
- Car locks
- Secure control and activation systems
- Smart cards
- POS/ATMs.

:: Module Sub-systems

- Optical fingerprint sensor
- Embedded dsp/arm/risc based image
- processing/fingerprint matching engine
- Memory to store fingerprint templates
- Communication interface for external embedded system
- Datasheet

:: Basic tasks

- Fingerprint scanning
- Fingerprint image processing
- Fingerprint storage
- Fingerprint registration
- Fingerprint matching
- Other functions…

:: Product Development Process

- Purchase Standalone Fingerprint module with datasheet or associated development kit
- Design and develop your own control board (also called microcontroller boards, single board computer, SBC), this board is responsible for controlling the standalone fingerprint module through communication interface, giving power supply to it and support other features of your product.
- Program your system
- Design and develop housing for your product
- Assemble your products

FSM -9000 is a is a low cost stand-alone fingerprint module supporting robust optical fingerprint sensor suitable for wide range of applications. It can store 1000(expandable) fingerprints and Asynchronous serial interface.

Technical Specifications FSM 9000

CPU	ARM7TDMI, 75MHz
FLASH	1MB (extendable)
EER	< 0.1%
Enrollment time	< 1.0sec
Verification time	< 1.0sec
Template size	384 Bytes
Template capacity	1000 at 1MB Flash
Host communication	Asynchronous serial, 3.3V CMOS level
External I/O	8 ports, configurable digital I/O
Encryption	256 bit AES
Supply voltage	3.3V regulated
Power consumption	160mA (peak) / 50mA (idle)
Power-on time	< 260msec
Size	55x40x8mm (LxWxH)
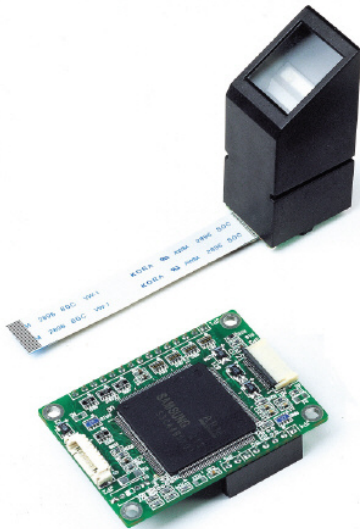
Features

- Low cost fingerprint module
  - ARM7 core processor
  - Optimized authentication speed and performance
- Optical fingerprint sensor
  - 500 dpi resolution
  - Solid sensor surface
  - High quality fingerprint image
- Outstanding authentication performance
- Fingerprint data encryption
- Compact size
- Low power consumption
- Simple host interface protocol

Single Board Computers/Control board

Standalone Fingerprint Modules does not directly provide standard input/output interfaces like LCD, Keypad, Digital I/Os and needs to be controlled by and external device like Single Board Computer. It has its own processor and memory but this is only for fingerprint related operations. Hence for complete standalone operation it should be supported by external SBC (single board computer or microcontroller board).

Microcontroller based SBCs with industry standard interfaces for LCD, Keypad, Relays, card readers, RS232, RS485, TCP/IP LAN etc. can be developed. We can assist you in developing them and provide you with reference designs. Complete functioning and application of the product depend on the Firmware developed and loaded into the SBC.

ADP5000

ADP5000 is a interface adapter that allow your to connect Standalone Fingerprint Module to your PC for simulation and testing, before integrating it with your SBC.
ADP5000 provide power supply and converter for direct communication with PC. ADP5000 can help you in rapid development of your product and help you test and diagnose response of Standalone Fingerprint module for various commands.

Why optical scanner?

Optical fingerprint scanners provide robust fingerprint scanning, scratch resistance, long life and no effect of electrostatic current. They are suitable for large scale use and support thousands of scans per day. support for chip based sensors is also available if required.