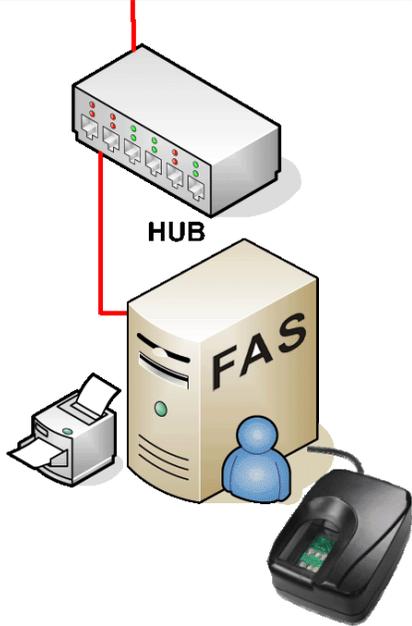


**Specification**

- Fingerprint image resolution: 320x480 pixel,500DPI
- Light source: 4 Infra Red LEDs
- Finger scanning window: 16mm x 24mm
- Fingerprint recognition accuracy: FAR-10<sup>-6</sup>, FRR-10<sup>-2</sup>
- 122x32 dot matrix LCD with backlight and supports English and Chinese character.
- User input & prompt: 16 keys keypad with backlight, Buzzer, red and green LED
- MiFare card sensing range: 30mm.
- Interface to PC: Ethernet
- lithium battery powered Real Time Clock
- Door control: 1 Door Strike, 1 Door Switch and 12VDC/1.5A
- Operating temperature: -10 to +55 Degrees
- Size: 140mm(W) x 110mm(H) x 41.5mm(D)
- Enclosure: 3mm thickness ABS



With high resolution optical system & latest biometric technology, **Futronic Fin'Lock FS21M** Fingerprint Access Control System provides enterprises a secured but convenient access and attendance control solution. It supports MiFare card(a contactless smart card technology developed by Philips) so that any combination of fingerprint, MiFare card and PIN can be used for access and attendance control. If necessary, fingerprint can also be stored in MiFare card to eliminate any possible privacy issue.

**Futronic FS21M** can operate in both Local and Network mode. With standard Ethernet interface, FS21Ms can be connected as a cluster via LAN/Internet under the control of a single Fingerprint Authentication Server(FAS) which is Futronic proprietary software running on MS Windows.

In network mode, fingerprints can be stored and recognized in the FAS which can handle unlimited number of fingerprints. In local mode, each FS21M can store up to 3000 fingerprints itself and can be used as a standalone access and attendance control device.

**Fingerprint Authentication Server(FAS):**

- Futronic Proprietary Software for user/finger and access log management and Fin'Lock control
- Running on MS Windows
- It can match fingerprints sent from all connected Fin'Locks with its own user/finger database and then send the result back to the particular Fin'Lock
- User/finger can be registered to FAS by using Futronic USB fingerprint scanners FS26, FS80H, FS82, FS88H.
- User/Finger database can be synchronized between FAS and all Fin'Locks in LAN/Internet.
- The access log in Fin'Lock can be uploaded to FAS for further processing.
- Access Log in FAS can be exported in Excel and Plain Text format

**FS21M** is a high performance device. It uses powerful Digital Signal Processor for fingerprint recognition. It can do full-match for 500 fingerprints in one second. Full-match means the device matches the input fingerprint to all fingerprints stored in the database before giving result. That is, the matching does not stop even after getting preset matching score but will continue to match all fingerprints and return the fingerprint that has the highest score. This is a major advantage of Fin'Lock products comparing with most other similar products available in the market which stop the matching when preset score is reached. It is because Full-Match is the most accurate way of fingerprint recognition and can reduce the False Acceptance Ratio (FAR) to almost zero. It is a perfect solution for application that needs to do 1-to-many matching with a large fingerprint database.

**Main features**

- FS21M supports Futronic proprietary [Live Finger Detection\(LFD\)](#). If this function is activated, only live fingers can be used to access and FS21M will not capture the image from fake fingers. So fake fingers made from silicone and rubber can't be used to access.
- With MiFare card reader and writer. That is, all FS21M can be used to issue MiFare card for users.
- Support various access control methods to meet different application needs, some examples are:
  - Fingerprint only(1-to-N matching)
  - ID+ Fingerprint(1-to-1 matching)
  - MiFare card+Fingerprint(1-to-1 matching)
  - MiFare card+Fingerprint stored on card(1-to-1 matching)
  - MiFare card+PIN
  - MiFare card only
  - PIN only
- Each user can register up to 3 fingerprints
- User/Finger administration such as add, delete, edit, etc, can be done in FS21M and FAS/PC.
- User/Finger database can be synchronized between FS21M and FAS/PC via LAN/Internet
- All communication between FS21M and FAS is encrypted by Blowfish algorithm and the key exchange between is done by Diffie-Hellman algorithm.
- Can operate in local mode or network mode
- Support Wiegand interface with 5 selectable output formats.
- Support Futronic's [Remote Relay Unit FS30](#).
- There are black and silver colour enclosures for customer to select

**Futronic Technology Co. Ltd.**

Rm1016A, Profit Industrial Bldg. 1-15,  
Kwai Fung St. Kwai Fong, N.T, Hong Kong.  
Tel : 24087705 Fax : 24082572  
web-site : [www.futronic-tech.com](http://www.futronic-tech.com)  
e-mail : [inquiry@futronic-tech.com](mailto:inquiry@futronic-tech.com)