

## FS21M Fin'Lock - Fingerprint Access Control System

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 Fin'Lock can operate in both Local and Network mode. With standard Ethernet interface, Fin'Locks can be connected as a cluster in LAN under the control of a single Fingerprint Authentication Server(FAS) which is a Futronic proprietary software running on Windows 2000/XP/Vista

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

### **Specification :**

- Fingerprint image resolution: 320x480 pixel,500DPI.
- Light source: 4 Infra Red LEDs.
- Finger scanning window size: 16mm x 24mm.
- Fingerprint recognition accuracy: FAR-10<sup>-6</sup>, FRR-10<sup>-2</sup>.
- 122x32 dot matrix LCD with backlight that 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
- With lithium battery powered Real Time Clock.
- Door control: 1 Door Strike, 1 Door Switch and 12VDC/1.5A.
- Operating temperature: -10 to +55<sup>0</sup>C.
- Dimension: 140W x 110H x 41.5D
- Enclosure: 3mm thickness ABS



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## 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 Fin'Lock can be used to issue MiFare card for users.
- Six access control methods to meet different application needs:
  - 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
- Each user can register up to 3 fingerprints.
- User/Finger administration, add, delete, edit, etc, can be done in both Fin'Lock and FAS/PC.
- User/Finger database can be synchronized between Fin'Lock and FAS/PC via LAN.
- All communication between Fin'Lock and FAS is encrypted by Deffie-Hellmann algorithm.
- Can operate in local mode or network mode.
- Support Wiegand interface with 5 selectable output format.

### Local mode

- Each Fin'Lock can store up to 3000 fingerprints.
- Fingerprint recognition is done on Fin'Lock(input finger is matched to database stored in Fin'Lock). If using the MiFare card without fingerprint, the user authentication is also done locally.
- Access log is stored locally. Each Fin'lock can store up to 1 million access log records.
- Access Log in Fin'lock can be sent to FAS via LAN and then exported as Excel or text format.

### Network mode

- Unlimited number of fingerprints can be stored in Finger Authentication server(FAS).
- Fingerprint recognition is done on FAS (input finger is matched to database stored in FAS.)
- If using the MiFare card without fingerprint, the user authentication is also done in FAS.
- Access log is stored in FAS which can store unlimited number of access log records.
- Access Log in FAS can be exported as Excel or text format.
- A maximum of 99 Fin'locks can be connected to FAS to form a cluster for large-scale access control application.
- All communication between Fin'Lock and FAS is encrypted by Deffie-Hellmann algorithm.
- If LAN connection is accidentally broken, all Fin'locks will switch to operate in local mode automatically

## Fingerprint Authentication Server(FAS):

- Futronic Proprietary Software for user/finger and access log management and Fin'Lock control.
- Running on Windows 2000/XP/Vista
- 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 standard Futronic FS80 USB2.0 fingerprint scanner.
- User/Finger database can be synchronized between FAS and all Fin'Locks in LAN.
- The access log in Fin'Lock can be uploaded to FAS for further processing.
- All communication between Fin'Lock and FAS is encrypted by Deffie-Hellmann algorithm.
- Access Log in FAS can be exported in Excel and Plain Text format.



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