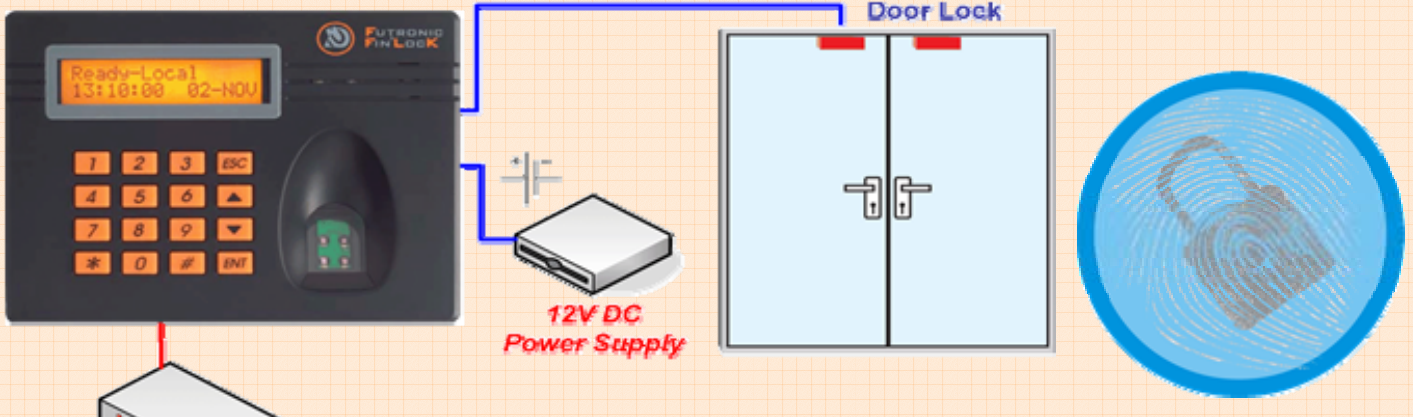# FS20 Fin'Lock-Fingerprint Access Control system

With high resolution optical system & latest biometric technology, **Futronic Fin'Lock FS20** Fingerprint Access Control System provides enterprises a secured but convenient access and attendance control solution at lower cost. It is very similar to FS21M but with less function. Please check FS20 and FS21M feature comparison for details

Futronic FS20 can operate in both Local and Network mode. With standard Ethernet interface, FS20s can be connected as a cluster in LAN/Internet 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 FS20 can store up to 500 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 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/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

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Features
- Two access control methods to meet different application needs:
  - Fingerprint only(1-to-N matching)
  - ID+ Fingerprint(1-to-1 matching)
- Each user can register up to 3 fingerprints
- User/Finger administration, add, delete, edit, etc, can be done in both FS20 and FAS/PC.
- User/Finger database can be synchronized between FS20 and FAS/PC via LAN/Internet.
- All communication between FS20 and FAS is encrypted by Blowfish algorithm and the key exchange between is done by Deffie-Hellmann algorithm.
- Can operate in local mode or network mode
- Support Wiegand interface with 5 selectable output format.
- Support Futronic's Remote Relay Unit FS30.
- There are black and silver colour enclosure for customer to select.

Local mode
- Each FS20 can store up to 500 fingerprints
- Fingerprint recognition is done on FS20(input finger is matched to database stored in FS20).
- Access log is stored locally. Each FS20 can store up to 32,000 access log records
- Access Log in FS20 can be sent to FAS via LAN/Internet and then exported as Excel/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)
- 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 FS20s can be connected to FAS to form a cluster for large-scale access control application
- If LAN/Internet connection is accidentally broken, all FS20s will switch to operate in local mode automatically

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^{-6}, FRR-10^{-2}
- Display: 2 x 16 English characters LCD.
- User input & prompt: 16 keys keypad, Buzzer, red and green LED
- 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 Degrees
- Dimension: 140mm(W) x 110mm(H) x 41.5mm(D)
- Enclosure: 3mm thickness ABS