

Futronic FS83C

Fingerprint authentication module with serial interface



Bioidentidad Futronic FS83C (FS83CV) is a biometric module whose capture quality is certified by the FBI for Personal Identity Verification (PIV), and at the same time contains an embedded biometric processor with NIST MINEX certified accuracy, according to ISO and ANSI international biometric standards.

Its large capture window generates fingerprint images of 480 x 320 pixels and is made of a special glass that is 14mm thick, resistant to scratches and other stresses, ensuring its use in harsh environments. It has excellent performance for use with various types of leather and various environmental conditions.

The FS83C communication is by serial protocol and can be integrated with various types of hardware and software.

High-quality biometric recognition integration for serial communication systems

GENERAL FEATURES

Bioidentidad FS83C uses an advanced optical precision system with CMOS technology sensor, which meets the rigorous requirements for fingerprint image quality required by the PIV-071006 standard and is certified by the FBI.

Likewise, its hardware and embedded biometric algorithm allow to perform enrollment processes, template generation, image compression, fingerprint verification and identification locally.

Through its serial communication, it is compatible with a wide variety of hardware, including PC, microprocessor-based digital systems, microcontrollers, DSP and any electronic system that allows interaction with the serial port (RS232 or others).

The FS83C's internal memory allows up to 2,500 biometric templates to be stored and used in verification (1:1) and identification (1:N) processes.

The FS83C is a high quality, compact and robust cost-effective single fingerprint biometric module, ideal for integration into any type of hardware, including ATMs, vending machines, point-of-sale, access controllers, alarm panels, electronic projects, robots, vehicles and any hardware where biometric functionalities are required.

BIOMETRIC DEVELOPMENT KIT

The FS83C is controlled through serial commands and allows to perform:

- Automatic fingerprint capture
- Fingerprint image acquisition (RAW, WSQ formats)
- Biometric enrollment (FS, ANSI 378, ISO 19794-2 formats)
- Biometric information storage
- 1:1 biometric verification
- 1:N biometric identification



The FS83C biometric fingerprint module is internationally recognized for its high quality, which has been certified by the FBI. It is designed to be conveniently integrated with any hardware via serial interface.



PROVEN QUALITY

The high quality of the FS83C is endorsed by internationally recognized security organizations such as the FBI, NIST, among others.



HIGH PERFORMANCE

The FS83C will surprise you. Fingerprint capture is fast and fingerprinting can be processed in real time, all in ideal quality.



MAINTENANCE FREE

Made with state-of-the-art electronic technology and no moving parts, it is designed to have an MTBF of more than 50,000 hours.*
*(*MTBF: Mean Time Between Failures)*

"The safety and reliability of our systems is driven by the most demanding needs of our customers, and our goal is to exceed their expectations."



INTEROPERABLE TECHNOLOGY

Because the Bioidentidad FS83C complies with international biometric standards, fingerprints captured with it can be used in a variety of biometric systems, regardless of the manufacturer.



EASY INSTALLATION

The FS83C does not require drivers or libraries. It is controlled through serial commands, independent of the platform.



PERMANENT TECHNICAL ASSISTANCE

Bioidentidad provides specialized technical assistance, accompanied by warranty and experienced biometric consulting.

Bioidentidad® provides high performance solutions for people identification and control.

With more than two decades of experience in research, development, manufacturing, consulting, project implementation, distribution and support, it is the preferred choice of biometrics experts.

TECHNICAL SPECIFICATIONS

- Sensor type: Optical CMOS with 14mm thick high durability glass prism.
- Image resolution: 500 dpi, 256 gray levels.
- Image size: 480 x 320 pixels
- Scanner area: 24 x 16 mm
- Scanner illumination: 4 infrared LEDs
- Image quality: FBI certified according to PIV standard
- Dust and liquid ingress protection of the scanner
- Communication interface: 4-wire serial protocol (VCC, GND, TX, RX) with speeds of 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps, 230400bps, 460800bps, 921600bps, including RS232.
- Embedded processor: ADSP-BF533 Blackfin.
- On-board memory: 16MB SDRAM, 16MB Flash.
- Power supply: 5 volts
- Maximum power consumption: 200mA
- Electrostatic discharge resistance: contact 8KV, air 16kV
- Operating range: -20° a 55°C
- Dimensions: 80 x 80 x 40 mm
- Weight: 200 grams

Technical standards:

- FBI IAFIS Image Quality Specifications (IQS) Personal Identity Verification (PIV) Single Finger Capture Device Specifications
- FCC, CE, RoHS
- BMP, WSQ (IAFIS-IC-0110)
- NIST MINEX
- ANSI INCITS 378
- ISO IEC 19794-2

COMPATIBLE PLATFORMS

Any hardware (PC, laptop, tablet, smartphone, POS, ATM, PLC, microcontroller, DSP, digital system) with four-wire serial communication interface (VCC, GND, TX, RX) with speed up to 921600 bps (including RS-232).



The fingerprint obtained with the FS83C is of such high quality that even the pores located on the finger ridges can be seen.

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