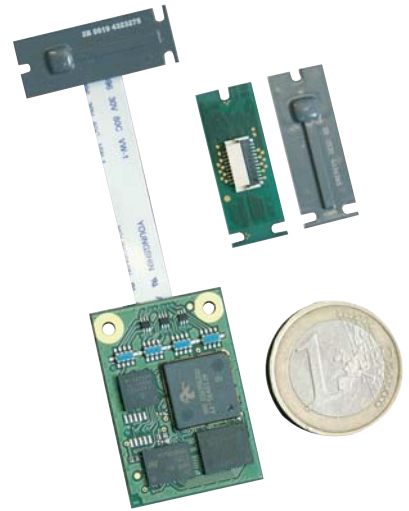


BIOModule[®] STA-Light & STA-Light-c

Stand Alone Fingerprint Recognition Module

The need for security continuously reinforces the obligation for every one to prove he is the person he claims to be. BIOModule STA-Light is a key solution as it provides an efficient solution combining biometrics and secured database. The BIOModule STA-Light enables you to manage up to 1000 fingerprints in one small form factor Module.



Overview

- BIOModule STA-Light is a stand-alone fingerprint recognition module based on a thermal swipe sensor and a dedicated cryptographic and imaging processor.
- Incorporating powerful embedded fingerprint recognition algorithm, flash memory and advanced database management capabilities, offers the best possible performance and security for embedded system applications.
- One BIOModule STA-Light can handle all required operations: Enrolment, Verification and Identification.
- The miniature sized module has a state-of-the-art low power design making it a perfect match in a wide range of applications from battery operated mobile equipments to network based security systems.

Key features

- Highly secure architecture
- Up to 1000 fingerprints database
- High speed fingerprint verification
- 4 configurable outputs
- 24 or 36 bits Wiegand output
- Asynchronous serial host interface
- Operates with a single 3.3V DC supply
- Low power consumption mode
- Operating T^o range: -10°C to +60°C
- Compact size (33 x 23 x 4 mm)

Applications

- Logical/physical access control
- Time and attendance systems
- Machine Control
- Door lock



Biometrics

- Thermal sensor, swiping type
- 500 dpi image
- 256 gray levels
- Finger motion speed: 20 cm/s max
- 2 templates size: 256 or 192 bytes
- Encrypted exportable template*
- FRR < 2 % (at FAR equal to 0.001%)
- FAR < 0.001% (can be adjusted)
- Verification time < 1s
- Identification time (200 templates) < 2s

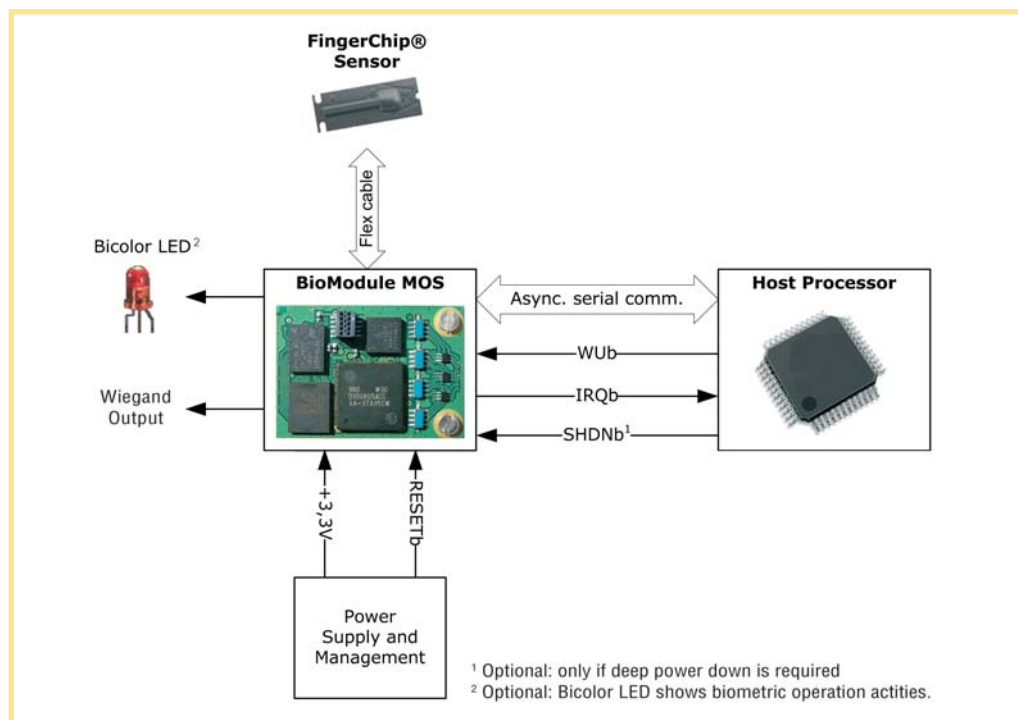
* import/export function are not available in STA-Light-c

Functionnal description



Typical architecture

The BIOmodule STA-Light must be connected to a motherboard for power supplies and interface connections.



Operating modes

Enrolment - A reference template extracted by BIOmodule STA-Light from fingerprints images is stored in its internal data base associated to an identifier.

Verification - A candidate template extracted from a live fingerprint is compared, inside the BIOmodule, against the set of reference templates associated to a previously sent identifier.

Identification - A candidate template extracted from a live fingerprint is compared, inside the BIOmodule, against the whole of reference templates contained in BIOmodule STA-Light database.

Match on Board - A candidate template extracted from a live fingerprint is compared, inside the BIOmodule, against a set of reference templates sent to the BIOmodule.

Ordering information

Item	Reference
BIOmodule STA-Light (without sensor)	086U3680
50mm flex cable and AT77C102-CB02 sensor	086U3960
BIOmodule STA-Light Evaluation Kit	086U3670
BIOmodule STA-Light Development Kit	086U3650
BIOmodule STA-Light-c (without sensor)	087V2740

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shows parity with the received data.
Numeric detector input:
is input must be connected to
Numeric output:
is the receiver's data output
I mode:
vel = 0 to 1.4 V max
vel = 1 to 4.2 V min for V_{CC} = 5 V
I mode:
vel = 1 to 1.4 V max
vel = 0 to 4.2 V min for V_{CC} = 5 V
Comparator:
increase the response in sleep mode
external resistor must be non-
resistor typical value:
470 kOhms to 1 Mohm in I mode
= NC in EM mode

Understand
Analyze
Design
Evolve

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