



# S Series BioCard Integrated Mifare Reader



Refer to Ordering Information at the back page for available models

## Overview

The BioCard Integrated Mifare Readers are part of a family of access control devices, ADC 8000/9000 series.

Fingerprint biometrics is based on the distinctive characteristics of the human fingerprint. It is estimated that the chance of two people, including twins, having the exact same fingerprint is less than one in a billion. For decades, fingerprinting has been utilized in booking procedures or conducting criminal investigations.

The fingerprint matching process can be broken into steps:

### Enrollment

- 1) The image (i.e., fingerprint) is captured.
- 2) It is converted into a template and stored into the card. ADC's fingerprint supports an additional fingerprint enrollment process which steps 1 & 2 is repeated.

### Matching (example of secured method)

- 1) ID card together with the biometric template(s) is read by the access reader.
- 2) A fingerprint template is read by the fingerprint optical module.
- 3) Using complex algorithms, the template is matched against a stored record found on the card.
- 4) If both the Card ID and fingerprint template delivers access granted access, the door shall be open.

- ▶ Aesthetic looking outlook appearance
- ▶ Card reader has a 2 lines LCD, 4x LEDs, 16 keypad with back-lighting and beeper (on/off)
- ▶ Highly reliable and consistent read range characteristic
- ▶ Card reader housing is made of highest grade industrial polycarbonate material that offers very high level of vandal resistance
- ▶ Card Reader can be used for multi-applications
- ▶ 13.56MHz Mifare ISO 14443 Type A compatible
- ▶ Suitable for interfacing with ADC TCU 8000P / 9000 backend controller

There are several version of fingerprint readers combined with a card reader controller (CRC) and different type of card readers. The available options are:

#### Secured

Card ID + Fingerprint

#### Highly Secured

Card ID + Fingerprint + PIN code

#### Max Secured

Card ID + Fingerprint A & Fingerprint B (Same sequence during enrolment) + PIN code

BioCard Integrated Mifare Reader is housed in aesthetic looking ADC's S-Series Casing. Together, it also contains the mifare reader with antenna, Card Reader Controller (CRC), LCD, LEDs, and Keypad.

The CRC Board supports 3 digital input monitoring points and 2 output points. The 3 digital input points can be connected to door status sensor, exit push button switch or to alarm sensors, while output points can be used to drive the door strikes/electro-magnetic locks, all depending on software setup.

4x LEDs for 'Power', 'Status', 'Alarm', and 'Armed' with LCD supports multi-language text and graphics and incorporate a bright background lighting. The soft-touch rubber keypads consist of standard 0 to 9 keys with additional 4x function keys.

**Hardware Specification**

**CRC Card**

Microprocessor CPU design  
 Full duplex communication to host  
 Reader interface port: Entry & Exit  
 3x Digital Input Channels  
 2x Digital Output Channels  
 Hardware watch-dog  
 Power supply input: +12VDC

**Fingerprint Reader**

Templates database: 720 / 2560 / 4000  
 Sensor type: Optical  
 Sensor resolution: 500 dpi  
 Sensor size: 16 x 14mm  
 Image size: 356 x 292 pixel  
 Template size: 400 Byte  
 Power Supply: 12-24 V DC, max 0.25A, idle 0.11A  
 Communication interface: RS485, RS232, Wiegand, TTL, Clock/Data  
 Verification Time: <1 second  
 False Accept Rate, FAR: <1/100,000  
 False Reject Rate, FRR: <1/1,000  
 Enrollment Time: <10 seconds

**Card Access Readers**

Mifare readers/writers: read range up to 7cm\*  
 \*Remark: Installation conditions may affect / reduce the read range

**Display indicators**

16 x 2 lines LCD with backlight  
 LEDs: power, status, alarm, armed/disarmed

**Operating Environment**

Operating Temp : 0 - 50 deg C (32 - 120 Deg F)  
 Humidity : 0% to 90% non condensing

**Mechanical Dimension**

Fingerprint Reader module:  
 65mm (W) x 115mm (H) x 40mm (D)  
 2.559”(W) x 4.528”(H) x 1.575”(D)

Card Access Reader module:  
 110mm (W) x 140mm (H) x 40mm (D)  
 4.331”(W) x 5.512”(H) x 1.575”(D)

**Housing Material**

ABS (UL94V-O) fully waterproof, Polycarbonate UL 94

**Color**

Metallic front and pantone charcoal base

**Mounting Method**

Surface or flush mount

**Weight**

300 grams (10.537 oz)

**Ordering Information**

**Model | Description**

ADC-24842/Entry Fingerprint + Mifare S-series Reader + Keypad + LCD using standard CSN scheme with fingerprint stored in Mifare card

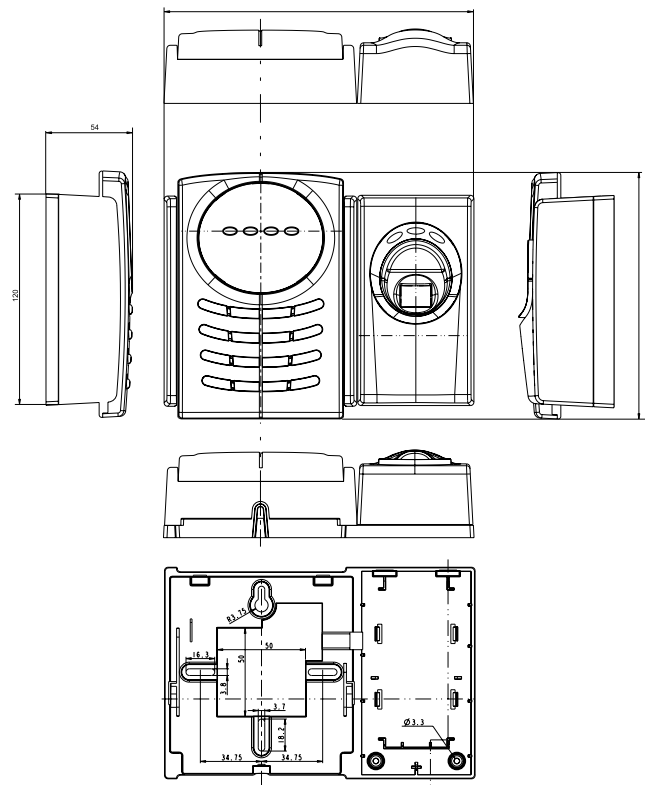
ADC-24843/Entry Fingerprint + Mifare S-series Reader + 4x LEDs using standard CSN scheme with fingerprint stored in Mifare card

ADC-23095/Exit Fingerprint + Mifare S-series Reader + 4x LEDs using standard CSN scheme with fingerprint stored in Mifare card

ADC-23752/Entry Fingerprint + Mifare S-series Reader + Keypad + LCD using secured ADC scheme with fingerprint stored in Mifare card

ADC-23759/Entry Fingerprint + Mifare S-series Reader + 4x LEDs using secured ADC scheme with fingerprint stored in Mifare card

ADC-23760/Exit Fingerprint + Mifare S-series Reader + 4x LEDs using secured ADC scheme with fingerprint stored in Mifare card



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