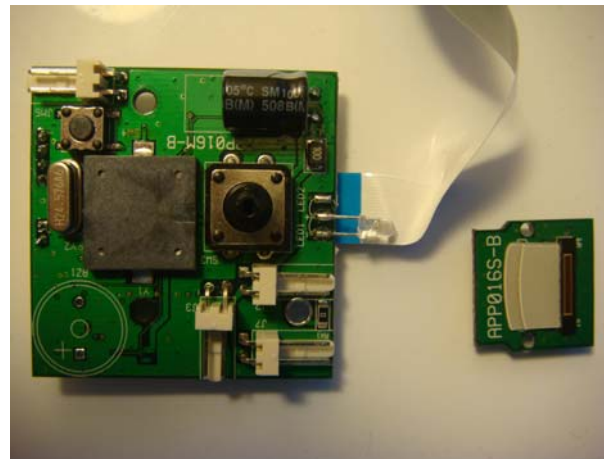


## General Description

The MB8132-ATW300 family is a complete bio-crypto module with built in Bio-Crypto controller SIB8132L (32-bit MCU with two 8k byte cache, one 512k byte flash memory, system SRAM) and swipe sensor ATW300 from ATRUA Technologies with a proven finger print extraction algorithm (Patent Pending). By itself, it can function with 4 AA batteries to activate 2 solenoids, 2 color LED and 2 buttons. Customized requirement can be catered for etc with Public Key Infrastructure (PKI), use password as backdoor via UART.

## Features

- 1 FFC (20 pins) connectors for interfaces with sensor
- Enrolment/ De-enrolment and Authentication can be performed Via build in buttons
- Up to 20 finger prints can be enrolled
- Ideal for simple battery powered devices such as:
  - Safe
  - DIY door lock
  - Jewelry box
  - Cabinet
  - Drawer
  - Locker
- Low power consumption of 75mA without solenoid
- Can supply up to 1000mA to drive high power low resistance solenoid
- Informative buzzer indicator
- Effective LED indicators
- Provide a set of protocol through UART for external control (customized requirement)
- Swipe sensor spec:
  - Size: 0.56 X 8.73mm active
  - Acquisition rate >3700 fr/sec
- 2 level Power management for maximizing battery life for mobile devices
- Size 45mm X 45mm X 25mm



## Functions

The two basic functions:

- **Basic Stand Alone:** Capable to perform biometric control system (Read a finger print image from sensor, search and remove the related finger print data; Read the finger print image and match with the stored template)
- **External Control:** capable to interface with external MCU/PC to communicate the finger print authentication result, upload and download on finger print template via an USB/RS232/RS485 Adaptor



## Interface Configuration

Physical Interface	Physical Interface
Power supply Button	FFC to sensor
Solenoid	Software select pin
Control Button	UART for adaptor
Buzzer	LED

## Finger Print Verification Specification

Finger print template size	360 byte / fingerprint template
Optimum finger print templates (1 to n)	20
Sensor ESD protection	20KV
False Acceptance rate (FAR)	< 1 in 10000
False Rejection rate (FRR)	< 1 in 1000
Verification time (20 templates)	< 1 sec

## DC Parameters

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Supply Voltage	$V_{IO}$	Normal	4.5	6	6.3	V
Low Voltage Warning	$V_W$	Normal	4.8	5.0	5.2	V
Cut Off Voltage	$V_C$	Normal	4.5	4.7	4.9	V
Typical Current	$I_{typ}$	Normal	60	70	75	mA
Peak Current	$I_{peak}$	Normal	90	95	110	mA
Solenoid Driving Current	$I_{drive}$	Normal	400	600	1000	mA
Clock Frequency	$F_C$	Normal	18.0	20	22.0	MHz
Temperature Range	$T_{mod}$	Normal	-10	25	75	C



## Sales Offices

### Singapore

**BlueChips Technology Pte Ltd**

No. 18 Boon Lay Way  
TradeHub 21 #09-94/95  
Singapore 609966

Tel : +65 6501 0511  
Fax: +65 6501 0515

Email: [info@bluechipstech.com](mailto:info@bluechipstech.com)

### Hong Kong

**BlueChips Technology (HK) Ltd**

Unit 1101-1103, 11/F, Yardley Comm. Bldg.,  
3 Connaught Road West, Sheung Wan,  
Hong Kong

Tel: 852 2776 7968  
Fax: 852 2776 8997

Email: [info@bluechipstech.com](mailto:info@bluechipstech.com)

### Malaysia

**BCT Technology Bhd (HQ)**

Lot G4, Incubator 3  
Technology Park Malaysia  
Bukit Jalil, 57000 Kuala Lumpur  
Malaysia

Tel: 603 - 8996 8088  
Fax: 603 - 8996 8087

Email: [info@bluechipstech.com](mailto:info@bluechipstech.com)



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