



Fingerprint smart terminal

BM5510

User's Manual
V1.2

ShenZhen Aratek Biometrics Technology Co.,Ltd.

1. Warm Tips

- (1) The manual is subject to change without prior notice.
- (2) The manual is a general guide for the device. Functions might be increased or reduced due to customized needs. Please contact local distributor for details.

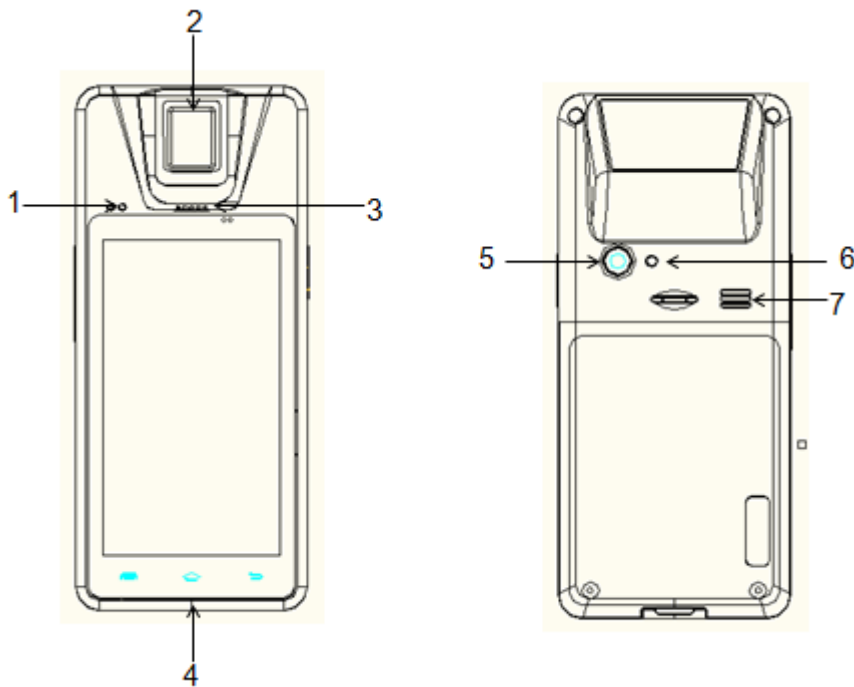
2. Warning

- ★ Unauthorized disassembly is forbidden, or else at your own risk.
- ★ Do not try to charge the battery on other chargers.
- ★ Do not dispose of the device in a fire or heat as that may cause crack and injury.

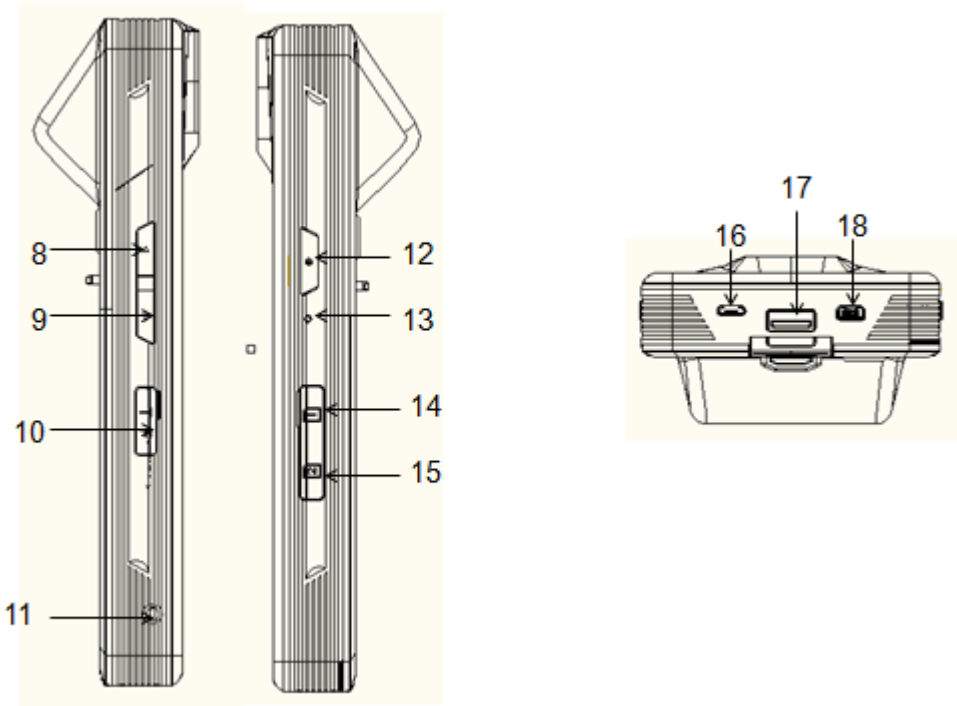
3. Product Introduction

(1) Product Photos

a).Front and Back of the device



b). Sides of the device



(2). Components

No.	Name	Function
1	Sensor	Place finger on capture area to capture

		fingerprint
2	Indicator light	Display working state
3	Receiver*	Listen to the sound (optional)
4	MIC *	Collect sound (optional)
5	Camera*	2 mega pixel (optional)
6	Flashlight	LED flashlight
7	Loudspeaker	Broadcast or call
8	Volume button+	Volume up
9	Volume button-	Volume down
10	TF card slot	32G flash memory support
11	Headphone port	3.5mm
12	Power switch	On and off the power/the screen
13	Reset button	Device restart
14	SIM slot 1*	Install Micro SIM (optional)
15	SIM slot 2*	Install Micro SIM (optional)
16	Micro USB	Communication port and charging port
17	USB interface	Insert USB device such as keyboard, mouse
18	UART port*	Reserve function

4. The Quick Start Guide

(1) Charging operation

AC adapter is USB port adapter. Plug the USB connector into adapter's USB port while the other side into the device's Micro-USB port. Plug in AC adapter for charging.

(2) On /off operation

When the device is power-off, long press the power key for 5 seconds, and the device vibration or screen-on indicates start-up. When the device is power-on, short press the power key to get into standby or wake-up. When the device is power-on but not standby mode, press the power key for over 2 seconds then pop up interface of "power off", "airplane mode" and "silent mode". Then select "power off".

(3) Please power off the device before inserting or removing the SIM card, otherwise the device may be damaged.

5. The Index

Hardware Parameters	
Items	Detailed description
CPU	1.2GHz dual core processor
Display screen	5.0 inch, 854×480 pixels

Touch screen		capacitive touch screen
RAM		1G RAM
SIM card*		Optional
Data ROM	Onboard	8G ROM
	Expansion	TF Card (up to 32G)
Camera	Rear	2 mega pixel
Audio	Decoder	Support 2.1 sound output
	Built-in Mic*	Quantity: 1
	Receiver	Optional
	Speaker	Stereo Speaker
Interface	Headphone port	3.5mm
	Mirco USB	Quantity: 1
	USB	USB OTG 2.0
	TF Card slot	Quantity: 1
	UART port	Optional
Button		Power Switch
Antenna		Built-in
Input		Virtual Keyboard
G-Sensor*		Optional
Light- sensor*		Optional
Proximity sensor*		Optional
GPS*		Optional
GSM*		GSM 850/900/1800/1900 MHz, WCDMA 2100 MHz, WCDMA 900 MHZ Optional
GPRS*		GPRS, EDGE, HSPA optional
Fingerprint	Sensor	Capacitive
	Capture size	10.64mm×14mm
	Resolution	500dpi
Wireless	WiFi	WiFi 802.11bgn
	Bluetooth 4.0*	Optional
	3G*	Optional
Power	Battery	2000mAh Li-polymer
	Power supply	DC 5V/1.5A USB cable
OS (Operating System)		Android 4.4
Accessories		AC adapter
		USB Cable
Net weight		380g
Dimension		185mm*82mm*43mm

Extensive function*	Built-in QR Code (Optional)
Operating environment	Working temperature: 0°C ~ 70°C
	Relative humidity ≤90%
Storage and transportation temperature	-40 ~ 60°C
EMC	Support
Radio frequency Specification*	★ Antenna energy output:
	Antenna surface magnetic field strength (Hmax) ≤7.5A/m(rms)
	Electromagnetic field strength at the 3cm of the antenna surface normal direction (Hmin) ≥1.5A/m (rms)
	★ Modulation output:
	Bit rate: 106Kbit/s (fc/128)
	Modulation Mode: ASK Modulation
	Modulation index: 8% ~ 14%
	Coding mode: NRZ-L
	★Subcarrier modulation input:
	Subcarrier frequency (fs): 847kHz
Modulation subcarrier mode: BPSK	

Note: “*” part is optional according to client requirement.

6. About the Battery

High-performance 2000mAh Li-polymer battery is installed in the terminal.

(1) Battery Life

Up to 5 hours for continuous work, standby for a week.

(2) Charging Method

Please charge your battery in time when the system battery alarms. A full charge to 100% is necessary.

(3) Time for Charging

A standard 2000mAh battery charge takes about 6-8 hours.

(4) Operating Notice

a. The standby time is measured in an actual environment, but the specific standby time may

vary in different areas. This is due to various factors.

b. A rechargeable battery for the device can charge and discharge hundreds of times, but it will eventually wear out. When standby times are noticeably shorter than normal, replace the original battery.

- c. Disconnect the device and unplug charger after use.
- d. If no in use for long period, battery may cause hibernation. Battery should be kept in dry environment with full charge. Charge and discharge once every 3 to 6 months is recommended.
- e. Use designated battery for replacement.

7. Genuine Accessories

- (1) USB data cable
- (2) AC adapter
- (3) Battery

8. Simple Troubleshooting Guide

phenomenon	Cause	Operation
Abnormal Charge	Not full insertion of AC adapter into household outlet	Check plug insertion
	Poor contact of USB port	Ensure good contact of USB port
Heating	Normal phenomenon under service conditions	Avoid using in a too hot environment, or stop operation for a while
Crash	Malware running or BUG in running software	Press reset button, avoid malware in usage

9. Maintenance & Repair

- (1) Keep the device dry in case rain, humidity and all kinds of liquids or moisture containing minerals will erode electronic wires.
- (2) Avoid using and storing the device in dusty and dirty place in case detachable parts and internal electronic components damaged.
- (3) Do not put the device in a too hot place because high temperature shortens the life of electronic devices, destroys batteries, deforms and melts some plastic components.
- (4) Do not store the device in a too cold place. Or else when the temperature of the device rises (to normal temperature), humidity appears inside it then destroys circuit board.
- (5) Open the device in accordance with the manual, do not try other methods.

- (6) No throw, beat or vibration allowed, because that will damage the inner circuit board and its precision architecture.
- (7) Do not clean the device with strong chemicals, cleaning agents and strong detergents.
- (8) Do not paint the device because paints affect detachable parts work smoothly.
- (9) The charger is for indoor use only.
- (10) Capacitive touch panel designation, avoid extrusion with hard objects, scratch or rude touching in case touch panel fracture or failure.
- (11) Power off while long time no use.
- (12) Abnormal situation may happen due to increasing electromagnetic interference. Please reboot system to recovery.

The suggestions above are applicable equally to the product, battery, charger and all accessories. If abnormal situation of any accessory happens, contact local authorized agents for replacement or maintenance.

FCC RF Exposure Information and Statement

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device types: BM5510 (FCC ID: 2AGUJ-BM5510) has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use at the ear is 1.079W/kg and when properly worn on the body is 1.197W/kg.

This device was tested for typical body-worn operations with the back of the handset kept 0 cm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 0 cm separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.