

Face Recognition Terminal BA8200 Series

User Manual

Thank you for purchasing Aratek product. In order to ensure that this product is used safely. Please read this User Manual carefully before using the product. It also will help product to improve product life and have excellent performance.

By reading the User manual, you can understand the performance characteristics and technical parameters of the product in more detail, and clear understand the appearance structure of the product, the installation process of the device, and the installation points that need be mentioned.

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1、 Tips

This manual is only for reference and do not have any commitment. The product appearance and function should be based on the actual object. We reserve the right to modify any information in this document at any time. The content of the modification will be added to the new version of this document.

2、 Warning

- ★ It is strictly forbidden to disassemble the product privately.
- ★ Do not put the product into fire or heat, otherwise it may break.
- ★ In the event of a malfunction, it may only be replaced or repaired by the manufacturer or a local authorized agency. Do not dispose of it yourself.

3、 Product Overview

The smart device terminal BA8200 face recognition access control is developed by Aratek, which integrates face recognition, fingerprint recognition and access control solution together. It's equipped with a high dynamic range camera which can support live facial recognition powered by Aratek algorithm. The Aratek facial recognition algorithm can realize 1:1 or 1:N online or offline verification.

The BA8200 is equipped with a professional-level face recognition GPU, which greatly improves the deep learning and face recognition efficiency.

It is widely used in community, school, bank, and government as gate control and time & attendance.

4、 Features

Aratek Face Recognition Algorithms: The BA8200 has patent face recognition algorithm that the recognition rat is 99.72% in international face database LFW.

Live detection: Support live detection, can detects photo, video or 3D models which are not live characters.

High facial recognition accuracy: Integrates Aratek patented TrustFace algorithm that achieves 99.72% accuracy rate from the world renowned LFW international facial recognition database.

2M Dual HDR cameras: Allows clear facial image capture under strong or against the light to match against the photo on the citizen ID card.

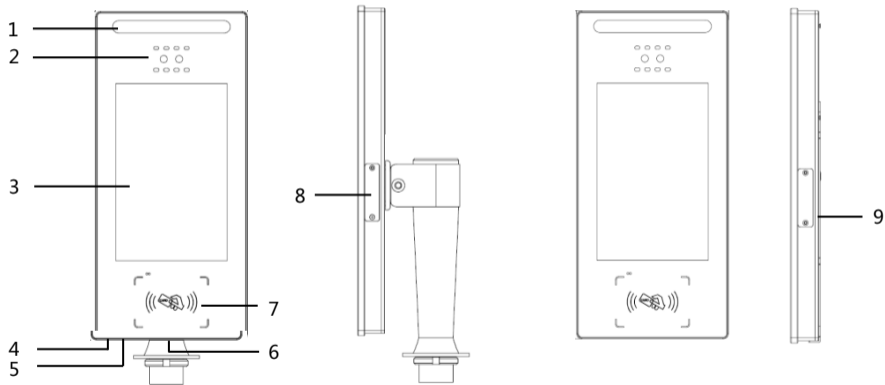
Black list: Connects with the police database to monitor, detect and report any entry of blacklisted persons.

Access control: Automatically send gate open command once identity successfully.

light tips : Fill light can be set in 7 different colors, The default white indicates fill light, blue indicates normal operation, green indicates pass, red indicates no pass, other colors can be customized.

5、 Illustration

5.1 Pictures



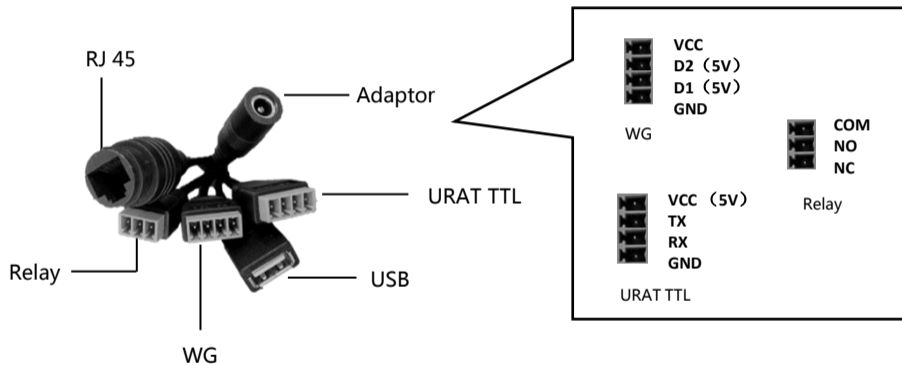
(Access Control With Turnstile)

(Access Control)

5.2 Component

Number	Name	Function
1	LED	Fill-in Light
2	Dual HDR cameras	Face Acquisition
3	Screen	8" IPS touch screen
4	Microphone	Microphone
5	Reset button	Initialization
6	Speaker	Speaker
7	NFC	IC Card Reader
8	USB	USB * 2
9	Vertical bracket	Vertical bracket

5.3 Interface



6.Installation

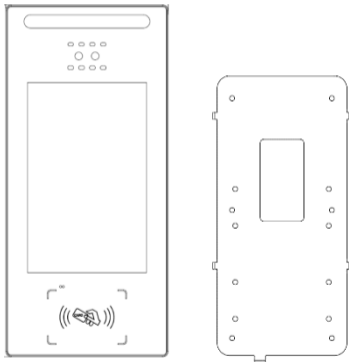
6.1 Access Control

(1) Remove the bracket: Slide the bracket down and take it out.

(2)Install bracket: Fix the bracket to the wall.

(3)Connect the power, wire, access control relay.

(4)fix the back chute of the equipment on the bracket, tighten the bottom screw, and fix the BA8200.



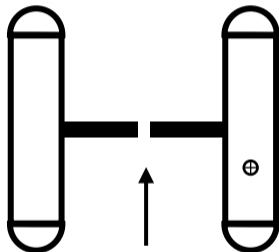
6.2 Access Control With Turnstile

(1) Drilling

Open a hole with a 32mm diameter near the entrance or middle of the turnstile for installing the BA8200. (See the position shown on the right ⊕)

(2) Installing

- a. Unscrew the bottom nut of the equipment bracket.
- b. Pass the column and cable through the hole.
- c. Tighten the nut on the inside of the turnstile and fix the BA8200.
- d. Connect the power, wire, access control relay.



7、Parameter

Physical Parameter	
OS	Android 7.1
CPU	Quad core ARM CPU + ARM Mali-T76x GPU
Frequency	1.8GHz
Display	8" IPS touch screen
Resolution	800*1280
RAM	2G (option: 4G)
ROM	8G (can support up to 64G)
TF card	Maximum support 128G
Dimension	148*268.5*33.5(Wall-mounted) 148*377.8*95.5(Gate type)

Facial Recognition	
Camera	1080P Dual HDR Camera with fill light, 105dB wide dynamic
Distance	0.3-1.5m
Accuracy	≥99%
Response time	≤1s
Live detection	Support
Stranger detection	Support
Fake face alarm	Support

Fingerprint recognition	
Fingerprint Capture	Optical Press
Platen size	47.5*26.5*15.5 mm
Sensing Area	16*22 mm
image size	256*360pixel
image resolution	500dpi
Gray Scale	256 level

Other	
WiFi	802.11b/g/n (option to 802.11a/b/g/n)
Bluetooth	Bluetooth 4.0
Interface	Relay; RJ45; RS232; WG; Ethernet; USB
Adaptor	12V/3A
Lighting	Comply with IEC 62471、IEC60825-1
Working humidity	5%~95%
Working Temperature	-10℃ ~50℃
Installation	Gate type installation or Wall-mounted installation

8、 Maintenance

To ensure your safe and efficient use of this product, please read the following precautions first:

- (1) Do not store equipment in overheated places. High temperatures shorten the life of electronic devices, deform or melt some plastic parts.
- (2) Do not store the equipment in an overcooled place. When the equipment temperature rises to normal temperature, moisture will form inside and destroy the circuit board.
- (3) Please open the device according to the instructions in this manual, and do not try any other methods.
- (4) Do not throw and knock equipment. It can avoid equipment internal circuit boards is destroyed.
- (5) Do not use strong chemicals, detergents to clean equipment.
- (6) Due to the increasing electromagnetic interference, sometimes it may cause abnormal operation. Please turn it off and restart it to normal.
- (7) If BA8200 is not used for a long time, please turn off the power.

9、Description of the name and content of toxic and hazardous substances

Name	Harmful substances or elements					
	Pb	Hg	Cd	Cr ⁶⁺	PBB	PBDE
Shell	○	○	○	○	○	○
Mainboard	×	○	○	○	○	○
Screen	○	○	○	○	○	○
Camera	○	○	○	○	○	○
Adapter	×	○	○	○	○	○
Others	○	○	○	○	○	○

○: Indicates that the content of the toxic substance in all homogeneous materials of the component is below the limit specified in SJ/T 11363-2006.

×: Indicates that the content of the toxic substance in at least one homogeneous material of the component exceeds the limit specified in SJ/T 11363-2006.



The "environmental protection service life" of this product is 10 years. Its logo is shown on the left.

FCC Statement

- 1. 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.
 - (2) This device must accept any interference received, including interference that may cause undesired operation.
- 2. Changes or modifications not expressly approved by the party responsible for compliance 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.
- To comply with RF exposure requirements, a minimum separation distance of 20mm must be maintained between the user's body and the handset, including the antenna.