

# Product Instruction

Product Name : ALL IN ONE

Product Model : GEO-080R5B250C700-I-MBVM-PG 020-AT

Product Version : V2.2

**Please read this manual carefully before using**

# Warning

1. The Device is not a medical device
2. Temperature accuracy is  $\pm 0.5^{\circ}$
3. The temperature threshold to define if an user has fever is set by SW to  $37.5^{\circ}$ . Make sure that the threshold is set correctly.
4. After reboot, wait 15min for Ambient temperature calibration of the device
5. The device works only in indoor or semi indoor environment. Avoid direct sunlight or rain
6. Elevated body temperature in the context of use should be confirmed with secondary evaluation methods (e.g., an NCIT or clinical grade contact thermometer)

## 7. Contact information

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## FCC WARNING:

### FCC 警告语

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

# Product description



(Reference legend)

This product is aimed at the needs of large capacity, high performance, wide application, and customization in the face recognition application process. It introduces a face recognition intelligent temperature measurement hardware that can be combined with face recognition algorithms without user cooperation. Realize living body detection, human face dynamic recognition, body temperature induction measurement, warn of abnormal body temperature and remind users to put on masks to provide users with a safe environment for use.

The product is based on Rockchip RK3399, dual-core Cortex-A72 (2.0 GHz) and quad-core Cortex-A53 application processor (1.4 GHz), 200W RGB + IR binocular camera, supports WIFI + Gigabit networking and rich peripheral security interfaces, Meet the needs of user access control management, body temperature detection and identification.

The product is suitable for office areas, hotels, passage gates, office buildings, schools, shopping malls, shops, communities, public services and management, etc. where facerecognition and temperature measurement are required.

## Features



High performance



Binocular camera



Distance sensing



Tricolor lamp



Infrared temperature measurement



Security interface



Multiple installation

| NO. | Features            | Content  |
|-----|---------------------|--|
| 1   | Perfomed            | Combined with face recognition algorithm and infrared sensor temperature measurement, it supports 10,000-level human face database |
| 2   | Algorithm           | Support the testing of domestic top AI algorithm manufacturers.  |
| 3   | Speed               | Combined with face recognition algorithm, face recognition and body temperature detection can be completed quickly.                |
| 4   | Anti-counterfeiting | Binocular face recognition, support infrared live detection.   |
| 5   | Interactive         | Using TOF human detection, 8-inch ultra-clear touch screen + sound + LED light interactive prompt.                                 |
| 6   | Surroundings        | Super environmental adaptability, under low light and strong backlight, all have good performance.                                 |
| 7   | Stable              | Android or Linux system, server-level stability.   |
| 8   | Open                | Provide development Kit, Satisfy SI / ISVThe manufacturer's secondary development needs.   |

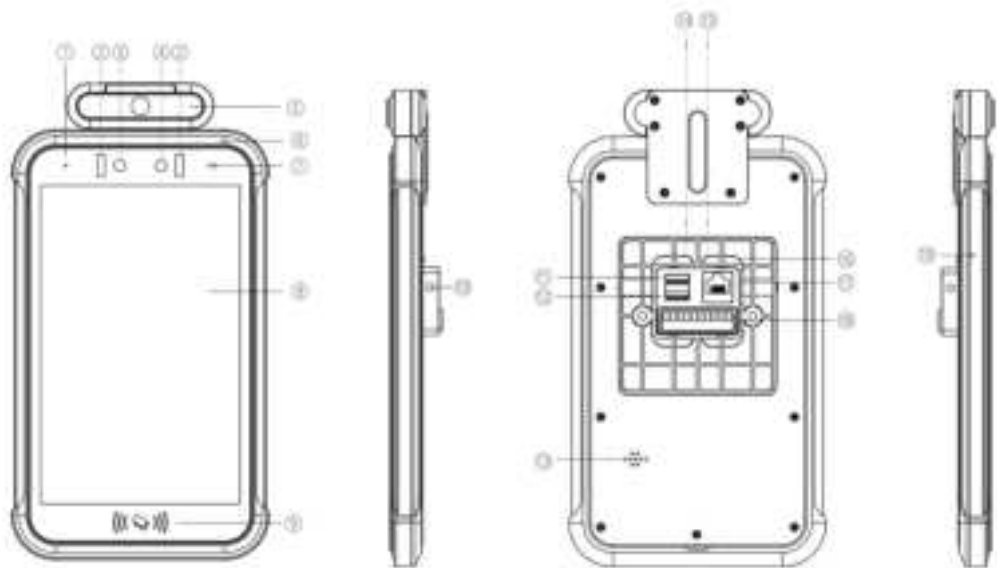
# Specification and performance

| Classification  | Project                 | Parameter   |  |                     |  |
|-----------------|-------------------------|---|--|---------------------|--|
| Device host     | Equipment enclosure     | Plastic cement,aluminium alloy  |  | Operating system    | Android 7.1                            |
|                 | Dimension               | 234mm*140mm*17.8mm  |  |                     |  |
|                 | Processor               | Rk3399 dual Cortex-A72 + four Cortex-A53 size core CPU structurer                                 |  |                     |  |
|                 | RAM                     | 2G  |  | ROM                 | 16GB                                   |
|                 | Display                 | 8" resolution 800*1280  |  | Touch screen        | 8" multi-point capacitive touch screen |
|                 | Interface               | Ethernet  | 100/1000Mbps   |                     |  |
|                 |                         | wifi  | Support  |                     |  |
|                 |                         | Data interface  | USB 3.0*1  | RS485               | RS485*1                                |
|                 |                         | MIC   | *1   | Loudspeak           | 1.5W*1                                 |
|                 |                         | DC-IN   | 12V/1.8A   | Button              | Reset 、 Recovery                       |
|                 |                         | Access control interface  | Support relay, Wiegand, RS485, NFC and face recognition access control |                     |  |
|                 | Working environment     | Operating temperature   | -10℃—+60℃  | Storage temperature | -20℃ ~ +70℃                            |
|                 |                         | Working humidity  | 20%-95% non-condensing   | Machine strength    | Max <18w                               |
|                 |                         | ESD   | ±4kV contact; ±8Kilovolt air   |                     |  |
|                 | Features                | Anti-disassembly  | Support  | Human detection     | Infrared induction                     |
|                 |                         | Fill-in light   | LED fill light strip (white, green, red)                               |                     |  |
|                 |                         | Camera  | RGB camera   | 200W Wide dynamic   |  |
| Infrared camera |                         |   | 200 W  |                     |  |
| Optional        | IC Card                 | NFC (ISO14443A; ISO14443B/15693/18092   |  |                     |  |
|                 | Algorithm               | Living body detection, face recognition   |  |                     |  |
|                 | Temperature measurement | Infrared thermal imaging temperature measurement module   |  |                     |  |
|                 | RF function             | 2412Mhz~2472Mhz maximum output power:0.062W<br>Bluetooth: Frequency Range: 2402Mhz~2480Mhz 0.003W |  |                     |  |

# Product List

| No. | content   | Quantity |
|-----|---|----------|
| 1   | Host  | *1       |
| 2   | Infrared thermal imaging temperature measurement module               | *1       |
| 3   | Mounting bracket  | *1       |
| 4   | Power Adapter   | *1       |
| 5   | 10 pin terminal   | *1       |
| 6   | Install screw package   | *1       |
| 7   | Instruction manual (qualification certificate, product warranty card) | *1       |

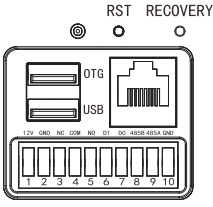
# Structure diagram



(Schematic)

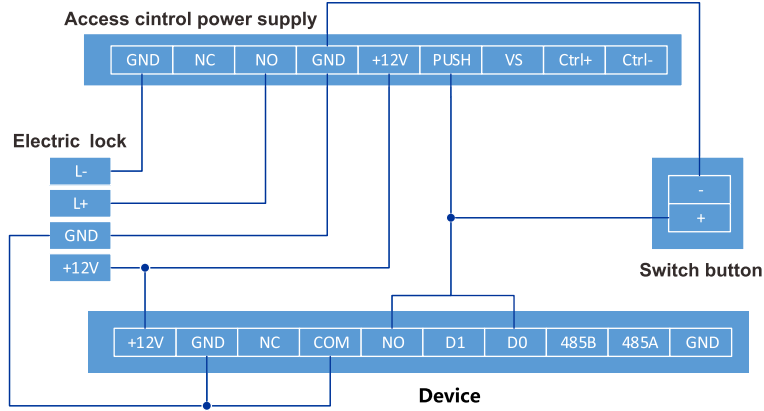
| No. | Explanation  |
|-----|--|
| ①   | Microphone   |
| ②   | Infrared fill light                                    |
| ③   | RGB camera   |
| ④   | Infrared camera  |
| ⑤   | Infrared temperature measurement module                |
| ⑥   | Fill light (white: fill light, green: pass, red: fail) |
| ⑦   | Infrared sensor module                                 |
| ⑧   | 8 Inch Touch Screen                                    |
| ⑨   | Card reading area                                      |
| ⑩   | Fixing screw hole                                      |
| ⑪   | USB OTG  |
| ⑫   | USB 3.0  |
| ⑬   | Loudspeaker  |
| ⑭   | Anti disassembly                                       |
| ⑮   | Reset button   |
| ⑯   | Recovery   |
| ⑰   | RJ 45  |
| ⑱   | 10 Pin function interface                              |
| ⑲   | Reset button   |

# Wiring description

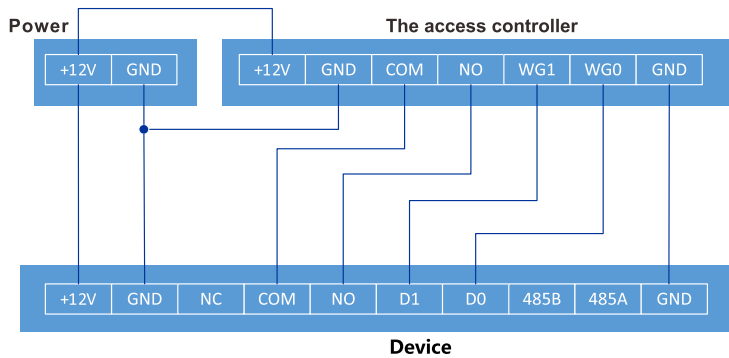
| Connect positive  |  | Interface Description |                     |    |      |
|---|--|-----------------------|---------------------|----|------|
|  |  | DEBUG                 | USB DEBUG interface |    |      |
|   |  | USB3.0                | USB3.0 interface    |    |      |
|   |  | Network port          | 1000M Network port  |    |      |
|   |  | 1                     | 12V                 | 6  | D1   |
|   |  | 2                     | GND                 | 7  | D0   |
|   |  | 3                     | NC                  | 8  | 485B |
|   |  | 4                     | COM                 | 9  | 485A |
|   |  | 5                     | NO                  | 10 | GND  |

Note: The electric control lock needs the access control special power supply to supply separately, the condition may increase the UPS uninterrupted power supply.

## Electric lock wiring



## Access controller connection



**Note:** The combination of NO and COM is normally open, and the combination of NC and COM is normally closed, respectively to the NO, NC and COM terminals of the access controller. The corresponding wiring mark is printed on the 10PIN interface, please refer to the actual product.

# Installation instruction



## Environment requirement

In the installation and use of this product, please strictly follow all local electrical regulations. If the equipment is not working properly, please do not disassemble and repair it by yourself, otherwise it will affect the equipment warranty. During installation and use, extreme or extreme environments such as extreme high temperature (or low temperature), high humidity, high backlight, vibration, radiation, and chemical corrosion must be avoided.



• Lighting conditions: We recommend installation in indoor or semi-outdoor environment, ensuring a well-lit environment, avoiding direct sunlight or low light affect the recognition speed, to avoid facing the glass doors or glass walls.



• Network: It is recommended to install the network open environment, to avoid the bad effect of network identification speed and accuracy.



## Precautions

Before opening the host device, the screen protector should be torn apart to avoid affecting the accuracy of the camera and infrared recognition.

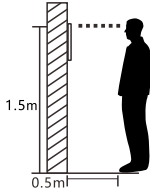


## Location

The recommended installation height of the device is 150cm (camera height).

## Recommended staff positions

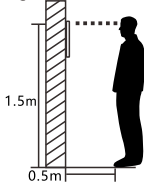
Recognition



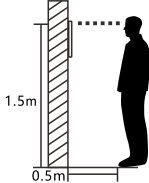
The recommended installation height (height of cameras) is 1.5m which can cover human height of 1.55m - 1.85m when the distance between the person and the panel is 0.5m. The best recognition distance is 50cm to 80cm from the device, as shown in the below image. The best recognition distance is 50cm to 80cm from the device, as shown in the below image. It can be adjusted according to the effect of face image acquired by the device. When the face image is large, it can move backward properly; when the face image is small, it can move forward properly.

## Recommended location

Registration



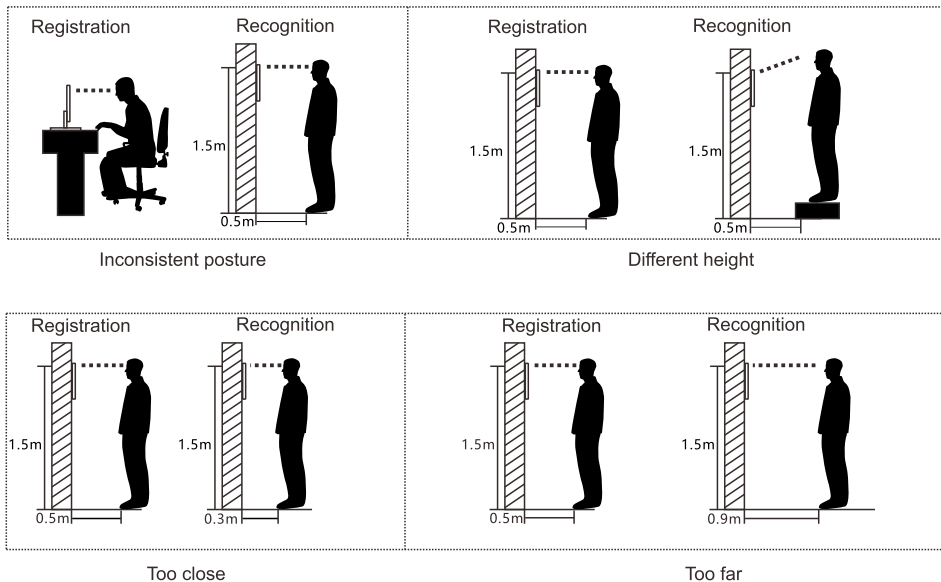
Recognition



When using the device for registration and identification, the installation location of the device must remain unchanged. If you really need to move the device, you must keep the installation height consistent. If it is inconsistent, it may affect the recognition effect. It is recommended that the distance between the face and the machine at the time of registration is 0.5-0.8 meters.

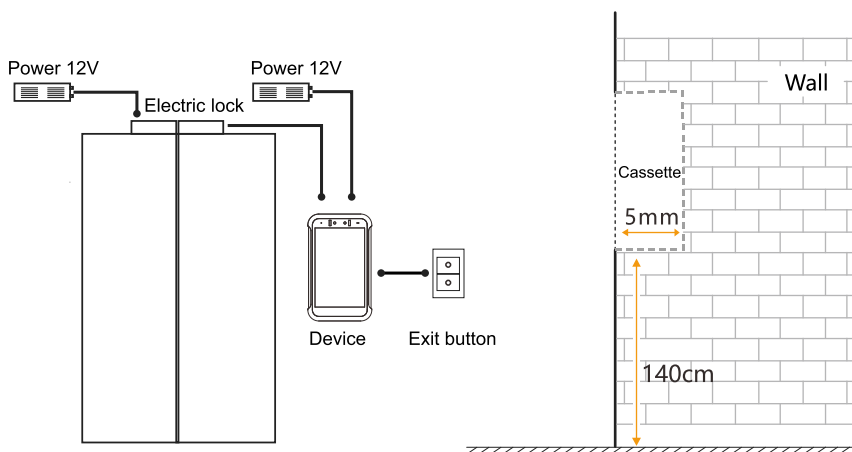


## Wrong usage



## Wall-mounted installation

On the wall surface about 140cm above the ground, open a groove about 9cm in length and 5cm in depth, and select a box with a depth of 5cm to install and fix it.



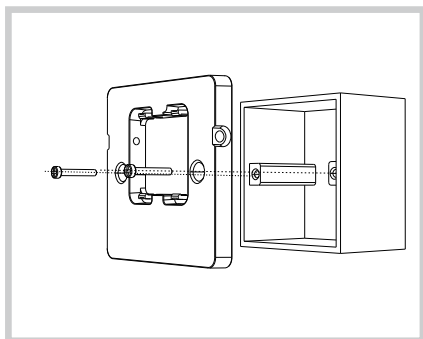
3 sets of wires need to be embedded in advance at the host equipment (reserved wire length is 10cm):

- 12V power cable RVV2 × 1.0 standard and above, one end is at the host device, and the other end is pulled to the original access control dedicated power supply or the 220V power supply 3 hole socket on the top of the sliding door. When installing, connect to the 12V end of the factory supplied 12V1.8A power adapter. The 220V power cable of the adapter is directly plugged into the 220V power supply 3-hole socket.

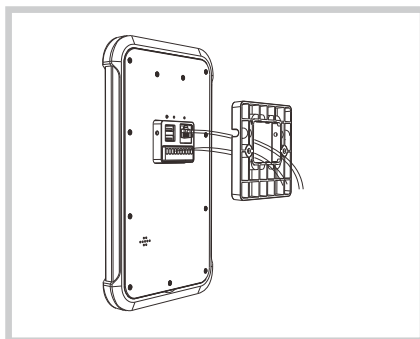
- Door opening control line RVV2 × 0.5 standard and above, one end is at the host device, and the other end is pulled to the original access control dedicated power supply or the top controller of the sliding door, and connected to their door opening signal interface during installation.

- Cat5e network cable 8 × 0.5 oxygen-free copper standard and above, one end is at the host device, and the other end is pulled to the weak motor room switch, and connected to the Internet during installation. If it is difficult to increase the wired network, you can consider using wireless when the wireless network is stable.

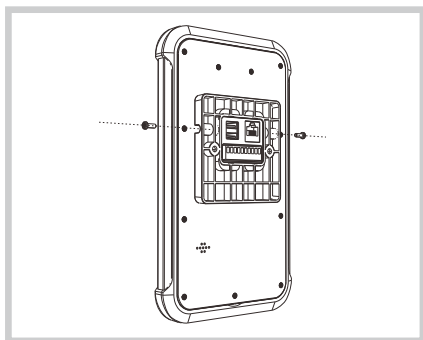
### Installation steps



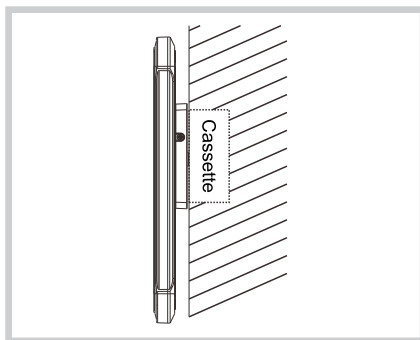
1: Fixed. Fix the wall-mounting accessories to the side wall with screws 86 on the box.



2: Connection. Refer to the "Wiring Instructions" to connect the network cable and power cable to the device.



3: Adjust. Adjust the wiring length until the device can be snapped into the wall-mounting accessory.




4: Lock tightly. Use screws to mount the accessories on the wall to lock the device on both sides. Complete equipment installation

# Declaration of toxic and harmful substances

| Part name     | Harmful substances or elements |      |      |          |       |        |
|---------------|--------------------------------|------|------|----------|-------|--------|
|               | (Pb)                           | (Hg) | (Cd) | (Cr(VI)) | (PBB) | (PBDE) |
| Shell         | ○                              | ○    | ○    | ○        | ○     | ○      |
| Circuit board | ○                              | ○    | ○    | ○        | ○     | ○      |
| Power adapter | ○                              | ○    | ○    | ○        | ○     | ○      |

This table is compiled according SJ/T11364

|  |  |
|--|--|
| ○  | Indicates that the content of the harmful substance in the part is under the limit specified in GB/T26572  |
| X  | Indicates that the content of the hazardous substance in the component exceeds the limit specified in GB/T26572  |
|  | <p>This marking period is 10 years,Under normal use conditions,hazardous substancesin electronic and electrical products will not leak or mutate,and will not cause seriousenvironmental pollution or cause serious damage to personal and property safety.</p> <p>This product meets RoHS environmental requirements.</p> |

# Product warranty card

Thank you for purchasing our products. I guarantee the interests of our customers. If the products of our company fail due to quality problems, they can contact the local dealers with the invoice and warranty card.

Warranty notice:

- 1. Within one year from the date of purchase, in case of failure under normal use, the company will provide free warranty, parts replacement and other services according to the fault conditions.
- 2. The warranty card and purchase invoice are the certificates for our company to provide after-sales service to customers. This card is valid after the following forms are filled in in detail and stamped with the official seal of the dealer.
- 3. Under one of the following circumstances, free warranty service is not implemented, and maintenance is required at a charge;
  - (1) Beyond the validity of the warranty.
  - (2) Damage caused by improper use, maintenance or storage not in accordance with the requirements of the product manual.
  - (3) Failure and damage caused by dismantling, repairing and refitting products without permission of our company.
  - (4) Mechanical failure or damage caused by force majeure.
  - (5) Wearing parts and random accessories.

Purchase date:        M        D        Y

|                       |                 |                     |                     |                         |      |
|-----------------------|-----------------|---------------------|---------------------|-------------------------|------|
| Commodity information | Trade name      |                     | Factory number      |                         |      |
|                       | Product model   |                     | Date of manufacture |                         |      |
| Customer information  | Unit name       |                     | Contacts            |                         |      |
|                       | Address         |                     | Contact number      |                         |      |
| Sales information     | Name of seller  |                     | Contacts            |                         |      |
|                       | Address         |                     | Contact number      |                         |      |
|                       | Date of sale    |                     | Invoice number      |                         |      |
| Maintenance records   | Fault condition | Maintenance results | Customer signature  | Signature of maintainer | Date |
|                       |                 |                     |                     |                         |      |
|                       |                 |                     |                     |                         |      |
|                       |                 |                     |                     |                         |      |

This card is issued with the goods, one card for each machine. In order to ensure that you can fully enjoy the right of free warranty service provided by our company, please keep this card properly and do not make up for it if it is lost.