

# User's Manual

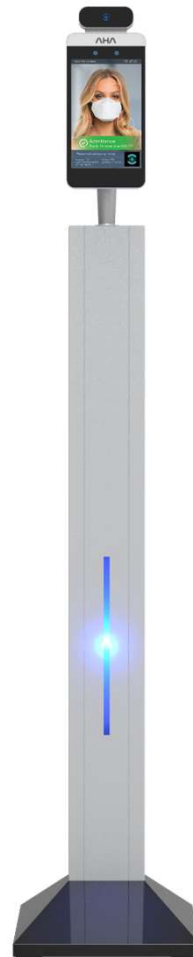
# Smart Pass

(AIoT Face Recognition & Temperature Measurement for Access Control System )

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- Before using the product, please read this manual carefully and keep it for later.
- Image drawings and notations in this document may slightly differ from the actual product.
- The contents of this document are subject to change without notice.

- Model : ASP-2000
- Stand Assembly Manual



English

[www.ahatouch.com](http://www.ahatouch.com)

# 1. Product Approvals

## FCC Rule 15.21

The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## FEDERAL COMMUNICATIONS COMMISSION

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

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.

## IMPORTANT NOTE:

### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operation instruction for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## 2. Smart Pass Overview

### 2.1 Smart Pass Introduction

Smart Pass is an advanced AI (Artificial Intelligence) face recognition and heat Check access control system that accurately identifies a person and measures temperature even if the mask covers part of the face or wears glasses and a mask at the same time with advanced deep learning technology.

## 3. How to use Smart Pass

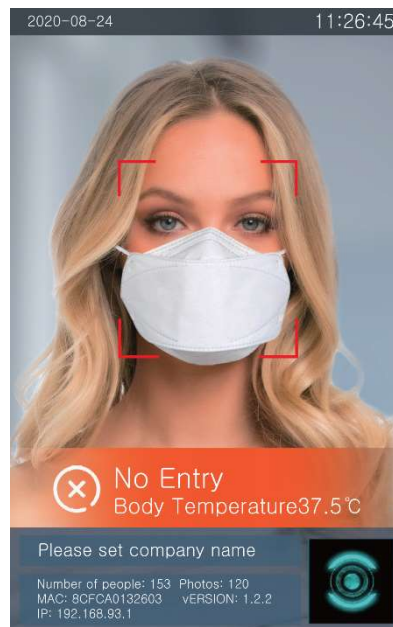
### 3.1 How to run Smart Pass

- 1) When the power is connected, the device turns on. The app is installed on the device, so there is no need for a separate installation process.
- 2) Turn on your device and wait for a while to launch the app and it takes about 30 seconds to use it.
- 3) In order to use a stable device, connect the power to the device and wait about 3 minutes before using it.

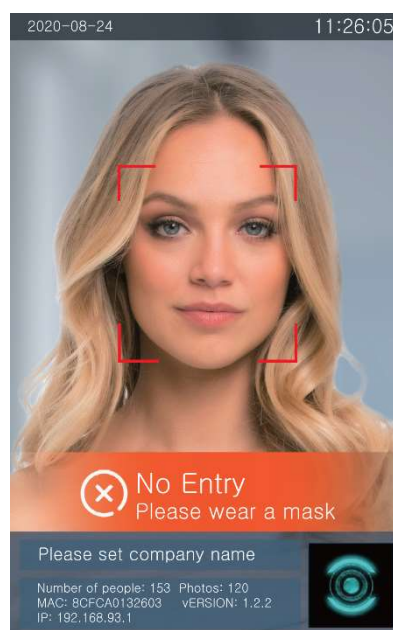


## 3.2 How to use Smart Pass

The camera recognizes a person by standing in front of the camera in line with the line displayed on the screen. As soon as a person is recognized, the temperature is measured and displayed on the screen. If your temperature is normal, you will be informed by voice. If the temperature is high, a Warning tone is displayed and the entry is prohibited.



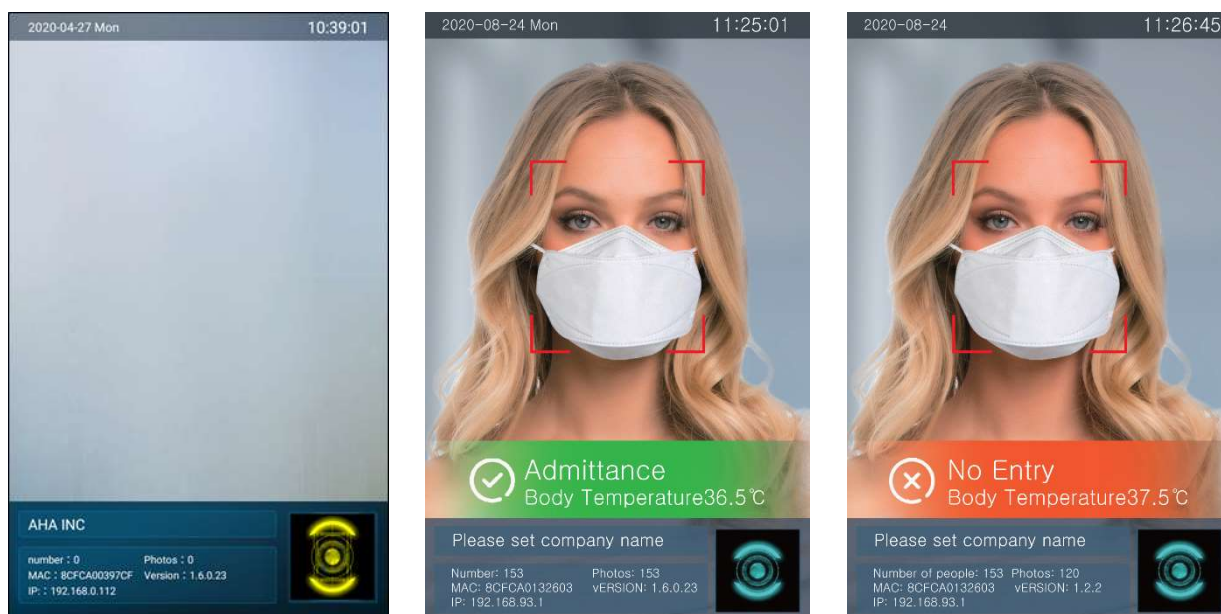
The mask detection function allows you to display the access only when you are wearing a mask. If you are not wearing a mask, you will be asked to wear a mask, and a warning sign will be displayed.



## 4. Smart Pass screen description

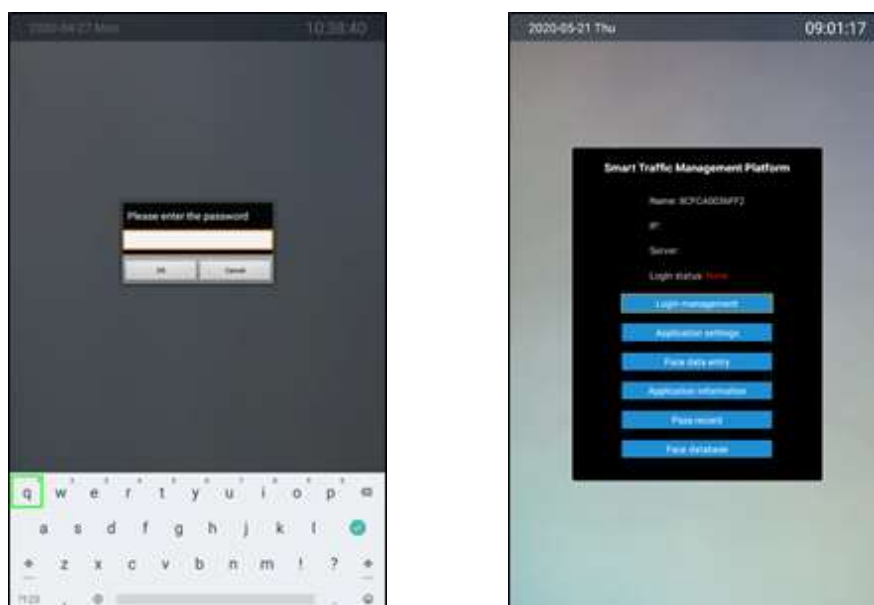
### 4.1 Initial screen

This is a screen for face recognition and temperature measurement. The current date & time are displayed at the top. When a person is detected, contextual phrases or temperature measurement results are displayed. Depending on the setting, information such as IP, company name, and version may be displayed at the bottom of the screen.



### 4.2 Main menu

When the mouse is connected and the wheel button is pressed, the password input window appears, and when the correct password is entered, the main menu is displayed on the screen. ✖ The initial password is '123456'.

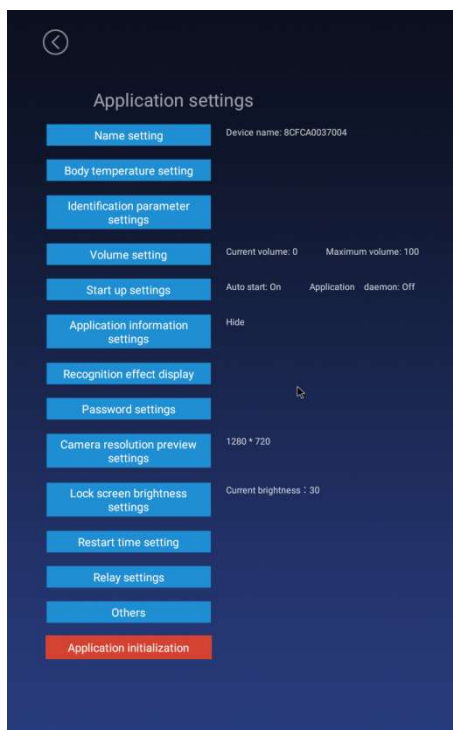




| No. | Name                    | Description   |
|-----|-------------------------|---|
| 1   | Status information      | The set device name, IP, user name, and login status are displayed. |
| 2   | Log In Management       | Used to connect the device to a network (not currently supported)   |
| 3   | Application settings    | Open the Smart Pass detailed settings menu.                         |
| 4   | Face registration       | Capture a person's face and register it in the database.            |
| 5   | Application information | Check various information of the device.                            |
| 6   | Pass record             | Displays a list of people who have measured the temperature.        |
| 7   | Face database           | Shows a list of people registered in the database.                  |

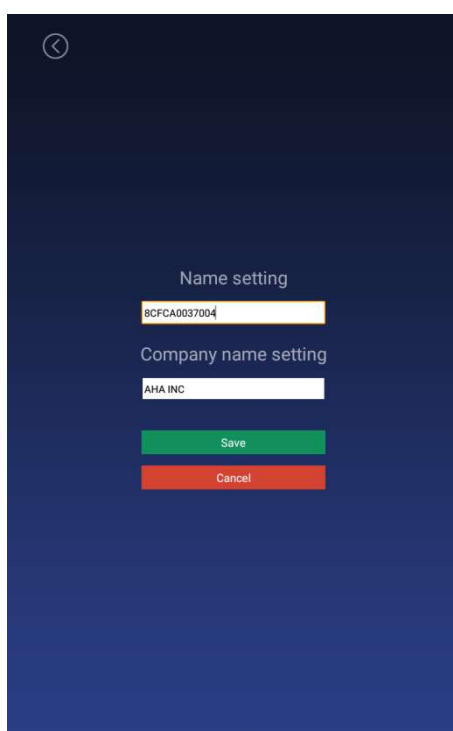
## 4.3 Setting

This is a detailed menu for setting up a Smart Pass.



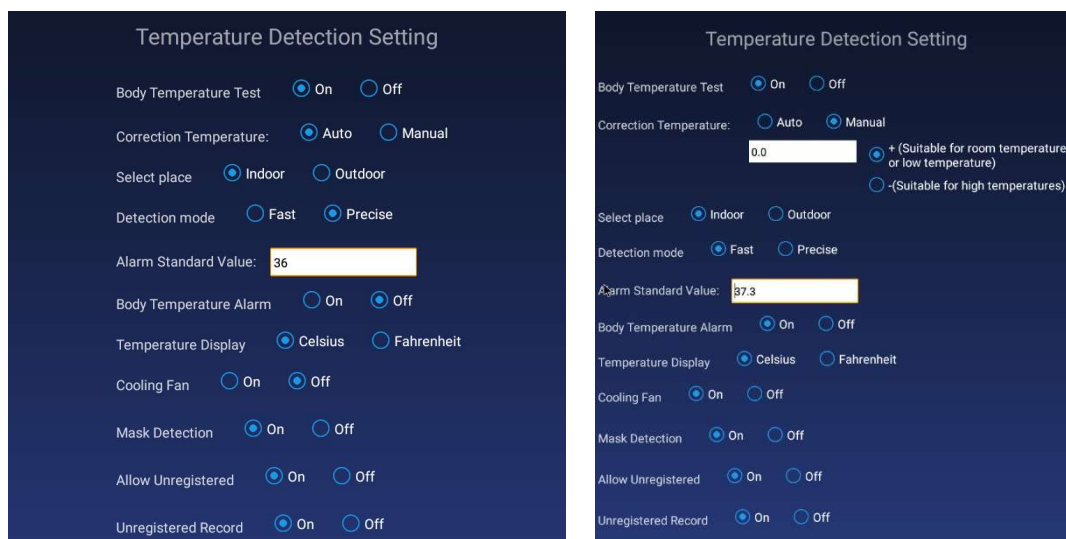
### (1) Name setting

Set the device name and company name.



## (2) Inspection setting

This is a detailed setting menu related to face recognition and temperature measurement.



| No. | Name                     | Description  |
|-----|--------------------------|--|
| 1   | Temperature test         | Turns the temperature test function on or off.   |
| 2   | Temperature compensation | It is used to calibrate the temperature when measured different from the actual temperature by the external temperature. In case of manual setting, detailed input field appears. Input value is between 0 ~ 1 °C. |
| 3   | Scene selection          | Setting whether the device is installed indoors or outdoors.   |
| 4   | Alarm threshold          | If the measured temperature is higher than the entered value, an alarm message is displayed.<br>When the temperature alarm is on, a beep sounds.   |
| 5   | Temperature alarm        | Enable or disable the Alarm.   |
| 6   | Temperature display      | Change the temperature display format to Celsius (°C) or Fahrenheit (°F).  |
| 7   | Fan                      | It set the operation of the fan for heat dissipation.  |
| 8   | Mask detection           | Measure your temperature and check whether wear a mask or not. When a person without a mask is detected, display a no-access sign and you can hear the voice.  |
| 9   | Stranger mode            | When it detects a person who is not registered in the database, it notifies them that it is a stranger.  |
| 10  | Stranger record          | When a stranger is detected, the captured picture is saved separately.   |



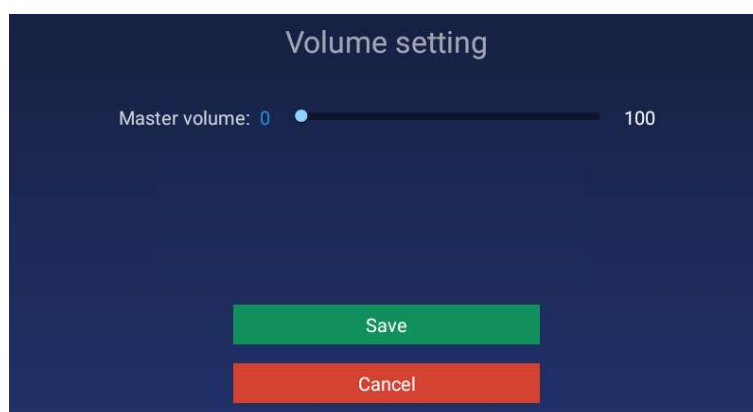
### (3) Detailed recognition setting

When checking whether it is a stranger or registered in the database, the accuracy and the number of identifications are set.

| No. | Name  | Description   |
|-----|---|---|
| 1   | Test threshold  | Determines the precision of comparison with photos in the database. The lower the number, the more precise the comparison. Input value is 10 ~ 20.          |
| 2   | Comparison count  | Compare and check the number of times entered. The bigger the number of comparisons, the more accurately a person can be judged. Up to 0~99 can be entered. |
| 3   | Facial Liveness Detection(Face Biometric Authentication): | This is to detect if a person in front of camera is a real person or manipulated image (photo) and stop spoofing attempts. The default is off.              |

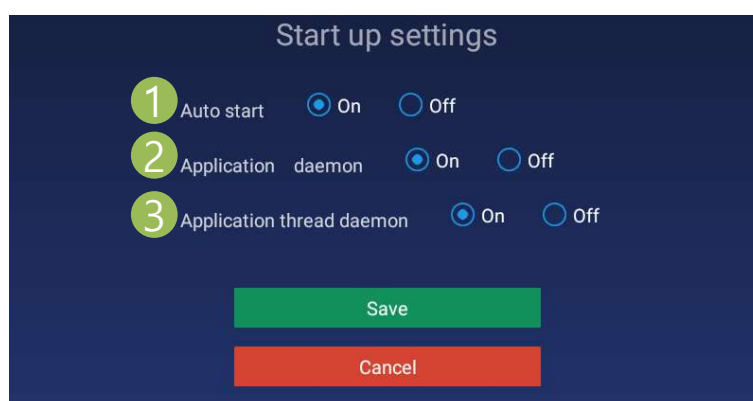
## (4) Volume setting

Adjust the volume level for voice guidance and warning sounds.



## (5) Startup setting

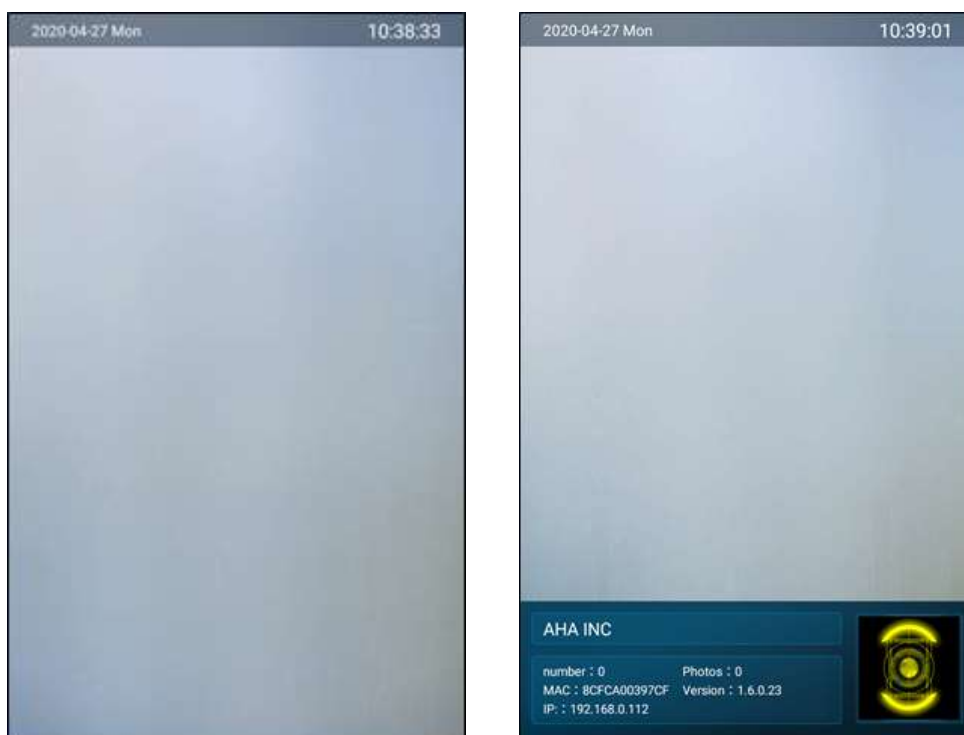
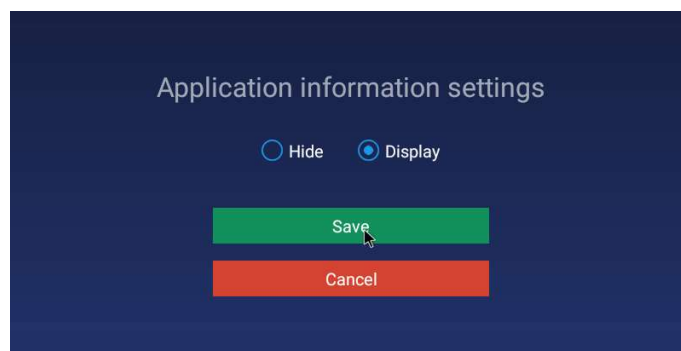
Change the behavior or program settings when the device is turned on.



| No. | Name                      | Description  |
|-----|---------------------------|--|
| 1   | Auto start                | Set whether the app turns on automatically when the device is turned on.   |
| 2   | Application daemon        | When the setting is on, the app will automatically appear on the screen after 30 seconds even if the app is not on the screen. |
| 3   | Application thread daemon | If the setting is on, the camera function will restart if an error occurs while the camera is on.                              |

## (6) Application information settings

Set whether to display information such as MAC address, IP, and company name on the initial screen.



< Hide / Show app info setting >

## (7) Recognition effect display

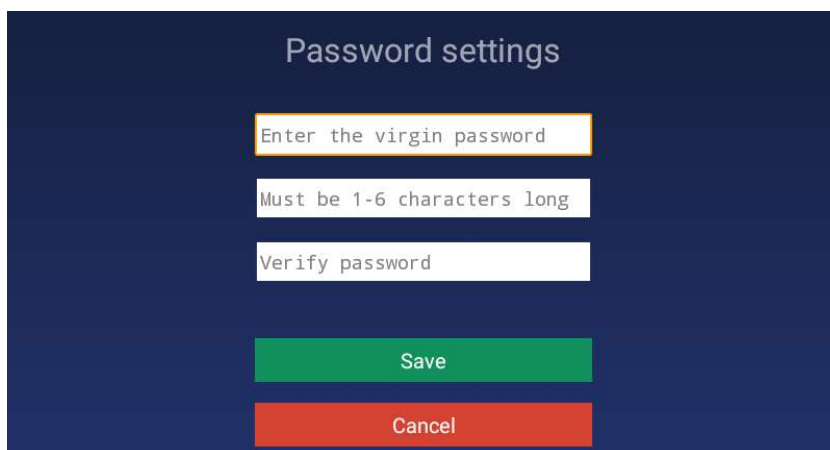
Set the change of screen or light when a person is recognized.

| No. | Name                | Description   |
|-----|---------------------|---|
| 1   | Recognition success | When a person registered in the database is recognized, a picture of the person is displayed, or the name of the person is displayed.   |
| 2   | Recognition failure | Choose whether to turn the light to red when the person not registered in the database is recognized or the mask is not worn. If the dimmer setting is a single light, this setting is not visible. |
| 3   | Photo flood lamp    | Set whether to use all colors such as white / red / green lights or only white light.   |

## (8) Password setting

This menu is for changing the password.

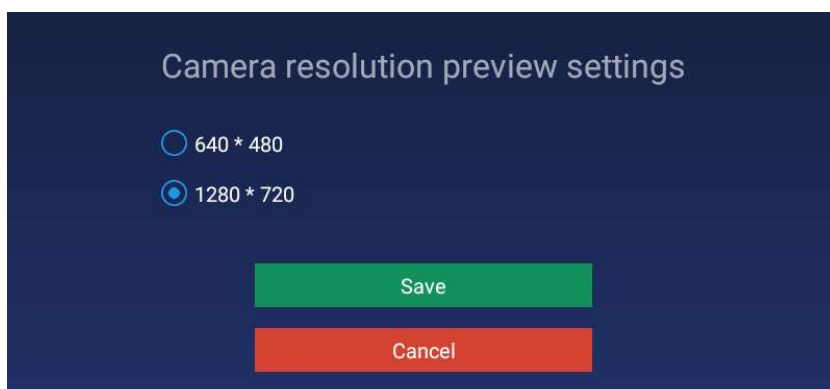
※ The default password value is '123456'.



The screenshot shows a 'Password settings' menu on a dark blue background. It contains three input fields: 'Enter the virgin password' (highlighted with a yellow border), 'Must be 1-6 characters long', and 'Verify password'. Below these fields are two buttons: a green 'Save' button and a red 'Cancel' button.

## (9) Camera resolution setting

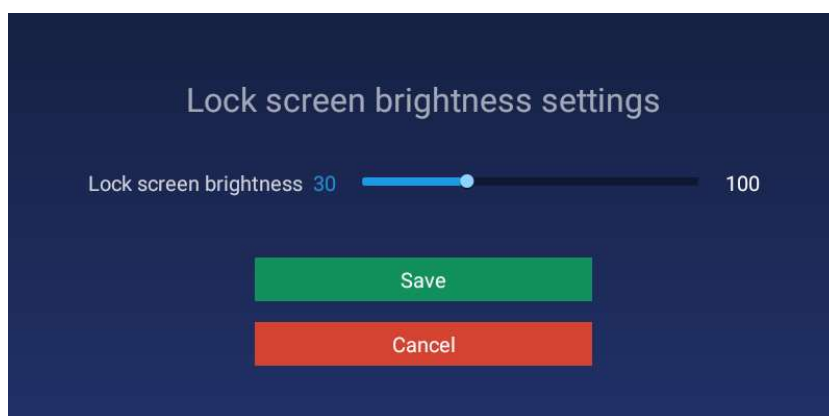
Change the camera captured screen resolution. There are 640 \* 480 resolution and 1280 \* 720 resolution.



The screenshot shows a 'Camera resolution preview settings' menu on a dark blue background. It features two radio button options: '640 \* 480' and '1280 \* 720'. The '1280 \* 720' option is selected, indicated by a blue dot. Below the options are two buttons: a green 'Save' button and a red 'Cancel' button.

## (10) Screen protection brightness setting

Set the screen brightness when the screen is switched to the screen protection state because no person is detected for a certain period of time.



Lock screen brightness settings

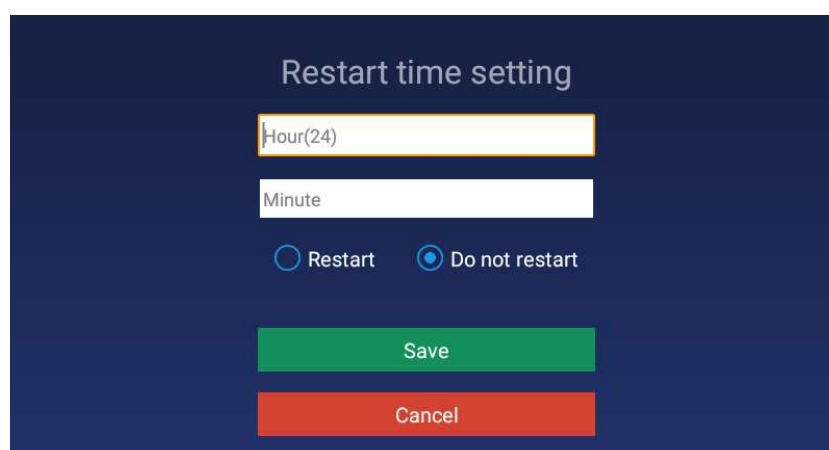
Lock screen brightness 30 100

Save

Cancel

## (11) Restart time setting

Enter the hour in the upper column and the minute in the lower column on a 24-hour basis. Reboot or shut down the device at the specified time.



Restart time setting

Hour(24)

Minute

☐ Restart ☒ Do not restart

Save



Cancel

## (12) Relay setting

Set relay mode and delay time

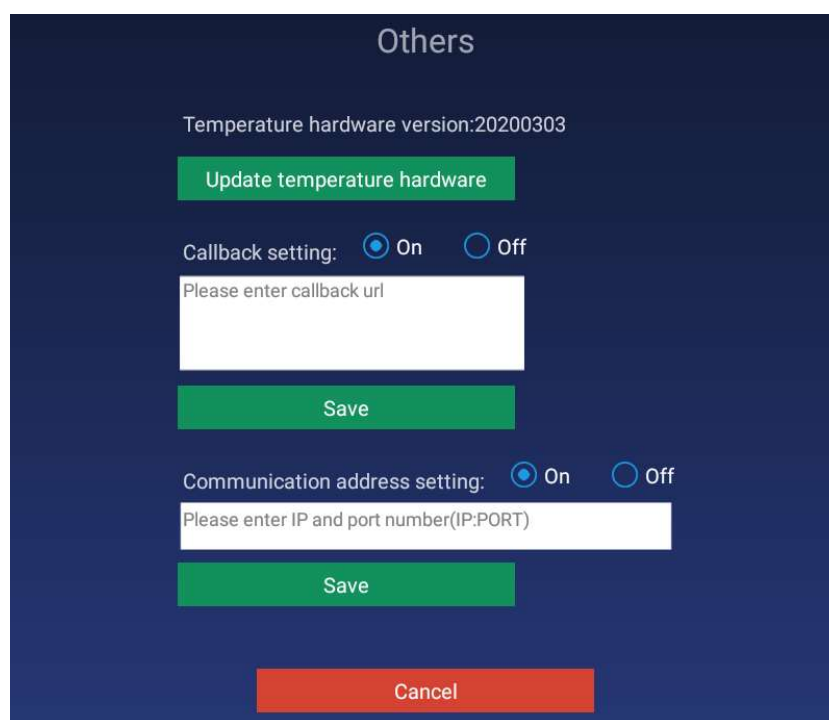
Relay is a kind of switch and operates according to the mode setting as follows. Relay mode is used to operate the external door lock, warning light, alarm buzzer, etc. according to the recognition result.

Maximum driving current and voltage: 2A 30VDC, 0.28A 220VAC Excessive use of the maximum drive current and voltage may cause product defects.

| No. | Name       | Description  |
|-----|------------|--|
| 1   | admittance | Relay output when "admittance" judgment is displayed on the screen(Normal temperature, wearing a mask)   |
| 2   | No entry   | Relay output when "No entry" judgment is displayed on the screen(High temperature or no mask)  |
| 3   | Mode 0     | Disable relay  |
| 4   | Mode 1     | When the relay is open, it is closed for the set 'delay time' and Then opened again.<br> |
| 5   | Mode 2     | The relay is closed and opened for the set 'delay time' and Then closed again<br>        |
| 6   | Delay time | Set the operation time of the relay.   |

## (13) Others

You can configure firmware upgrade or server communication related settings.

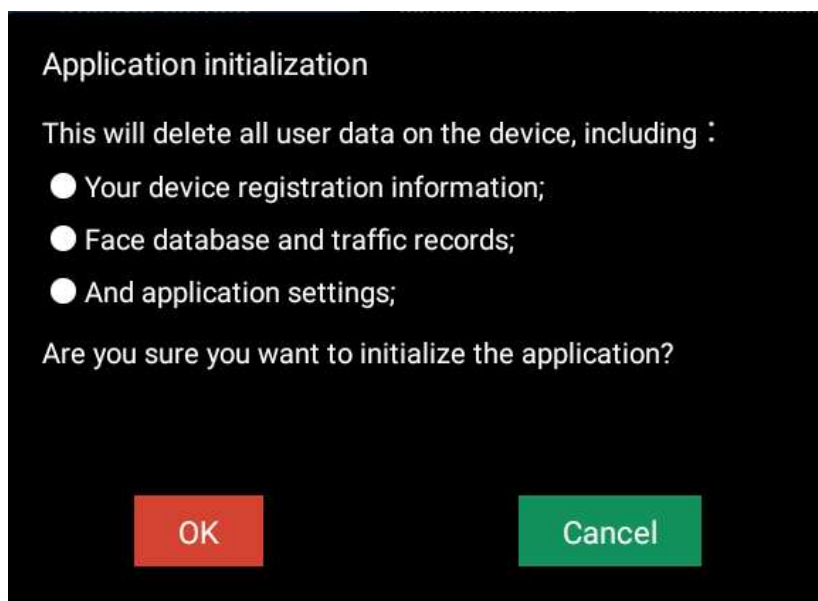


| No. | Name                                | Description   |
|-----|-------------------------------------|---|
| 1   | Temperature module firmware upgrade | You can manually upgrade the firmware by connecting the USB containing the firmware upgrade file. The file name should be "updateTemp.bin" and it should be at the top of the USB path. |
| 2   | Callback setting                    | If you select On, a field for entering content appears. Enter if callback setting is required.  |
| 3   | Communication address setting       | If you select On, a field for entering content appears. Enter the IP and port number of the server to communicate with. The format is IP: PORT  |



## (14) Program initialization

This function returns the program settings to the initial state.

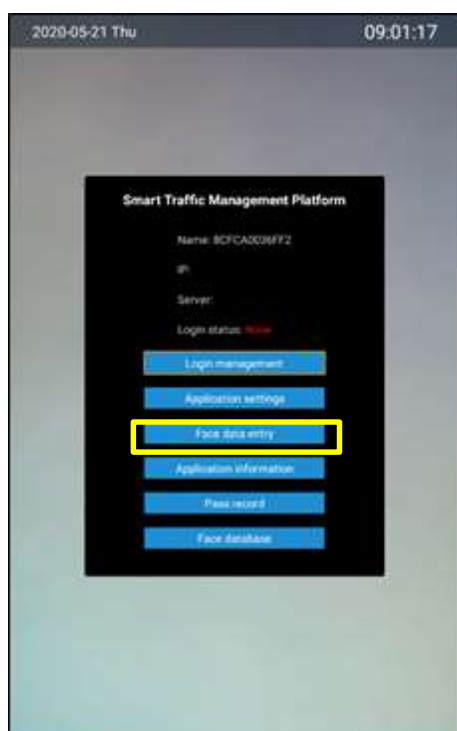


When the button is pressed, the above warning appears, and when the OK button is pressed, various settings are initialized and all information and records registered in the database are lost.

- ※ Once the program initialization function is activated, it cannot be reversed.
- ※ Back up data before initialization.

## 4.4 Registration of access information

This is a function to take a person and register it in the face database.



Make sure your face is facing the camera

collection

ID  
Please enter ID

Name  
Please input your name

Gender  
☒ Male
 ☐ Female

Save Cancel

Press the Gather button at the top to take a picture. The picture which was taken is scaled to fit the person's face. Enter ID and name, select gender and click Save to save it to the Face database.

Make sure your face is facing the camera

collection

Verification successful

ID  
1111

Name  
gildong hong

Gender  
☒ Male
 ☐ Female

Save Cancel

## 4.5 Device information

Displays information about apps and devices. Information such as firmware version, memory, brightness, and volume is displayed.



## 4.6 Access record

You can see who measured your temperature with Smart Pass.  
This record contains name, identity, checking time, temperature and photo at the time of measurement.



The screenshot shows the 'Access Record' screen with a dark blue background. At the top, there is a back arrow icon, the title 'Access Record', and two buttons: 'Filter' and 'Save'. Below the title, there are two date/time input fields: '2020-08-27 00:00' and '2020-08-27 09:32', followed by 'Search' and 'Reset' buttons. A table with the following headers is displayed: 'Name', 'Assigned', 'Entry Time', and 'Photo Shoot'. The first row of data shows 'AHA' as the name, 'Staff' as the assigned role, '2020-08-27 09:06:31' as the entry time, and a photo of a woman. Below the entry time, the text 'Body Temperature 36.3°C' is visible.

| Name | Assigned | Entry Time                                     | Photo Shoot  |
|------|----------|--|--|
| AHA  | Staff    | 2020-08-27 09:06:31<br>Body Temperature 36.3°C |  |

If the detected person is not in the face database, it is displayed as 'Stranger'.  
Enter the time zone you want to see and press the 'query' button to retrieve only the records for that time.

If you connect a USB storage device and press the 'Export' button, you can save the records currently in the list separately.



This screenshot is similar to the previous one, showing the 'Access Record' screen. The date/time filters remain the same. The table now shows a record for 'Stranger' with 'None' as the assigned role and '2020-08-27 08:47:06' as the entry time. The body temperature is '36.7°C'. The photo of the same woman is displayed.

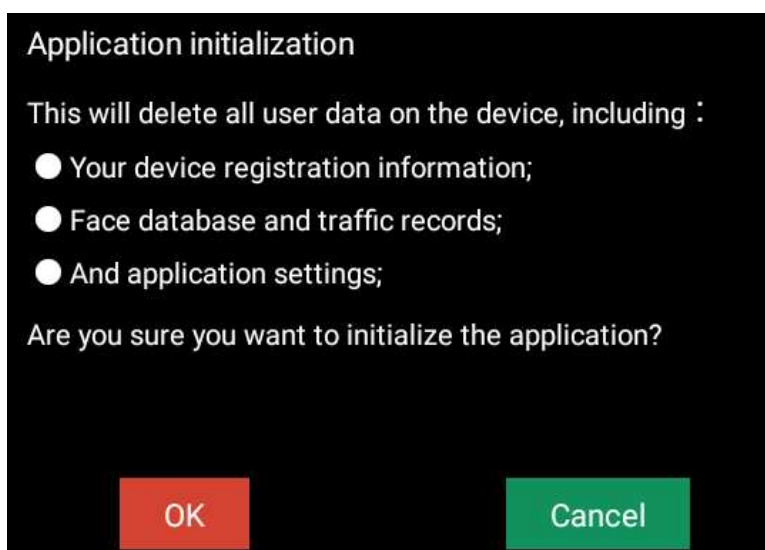
| Name     | Assigned | Entry Time                                     | Photo Shoot   |
|----------|----------|--|---|
| Stranger | None     | 2020-08-27 08:47:06<br>Body Temperature 36.7°C |  |

If the storage capacity of the device is full, use "Settings"-> "Program Reset" to delete the old records.

At the time of initialization, the record of the registrant list is also erased, and the settings are initialized, so please back up and record the contents.

If the storage capacity is full due to the access record and remains below 1GB, Records of 10 days are deleted automatically in sequential order.

### Application initialization

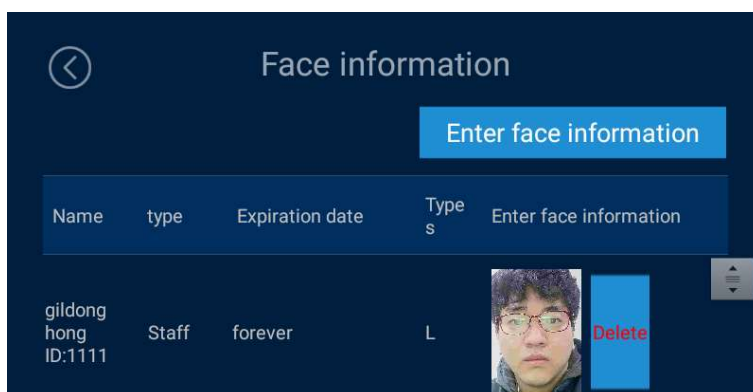


## 4.7 List of registrants

You can check the list of people registered in the database.

The list shows the name and ID, identity, expiration date, registered type, and photo.

If you click 'Registration of visitor information' button, you will be taken to the 'Registration of visitor information' menu. Click the 'Delete' button on the right to delete the person's information from the database.

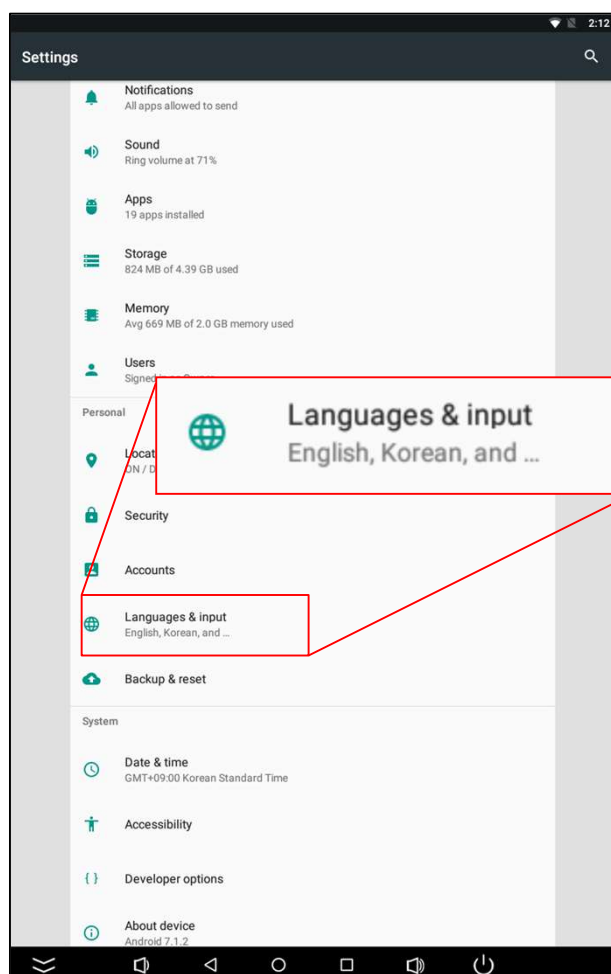


## 5. Countermeasure

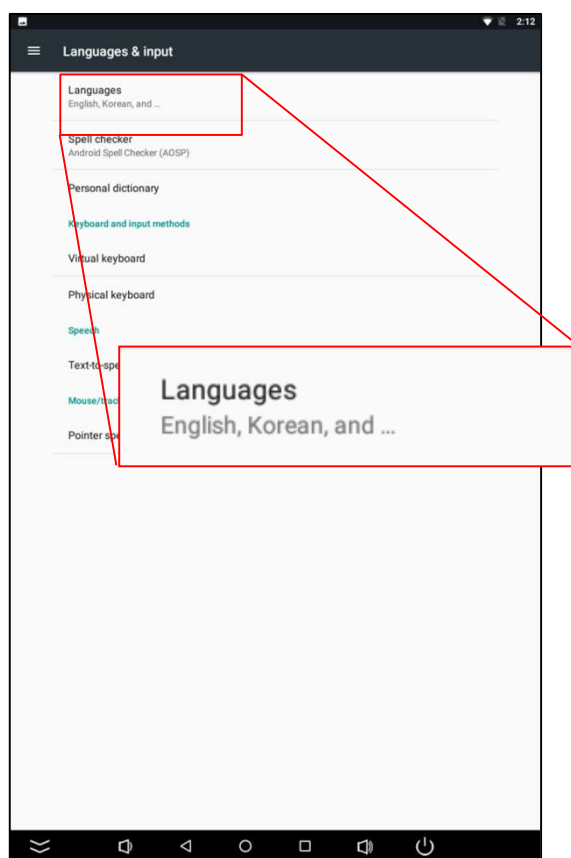
1) If the device discontinued and slows down, reboot the device. To reboot, drag the left mouse button at the bottom of the screen and drag it up to bring up the bottom menu. Press the power button on the right side of the bottom menu and select Restart to reboot.



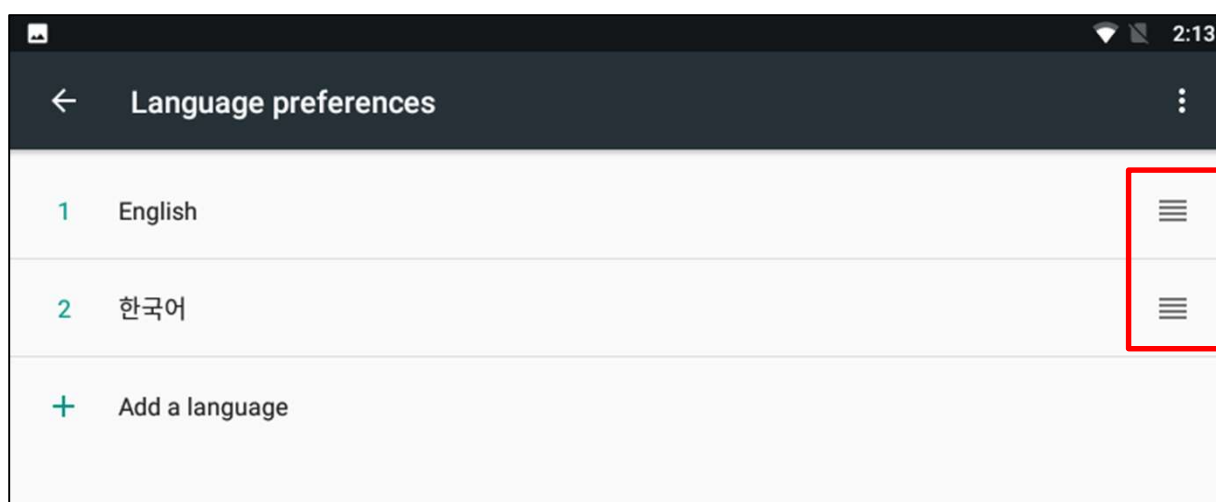
2) If you want to change the language Left-click and drag up from the bottom of the screen with the mouse to bring up the bottom menu. Tap the circled button in the middle to go to the Android home screen and open Settings. In the settings window, go to the language and input settings menu as shown in the following figure.



Go to Language preferences by selecting 'Language' from the Language & input menu.



Drag the icon on the right in Language preferences to change the order to change the device's system language. Changing the system language also changes the language of the Smart Pass.



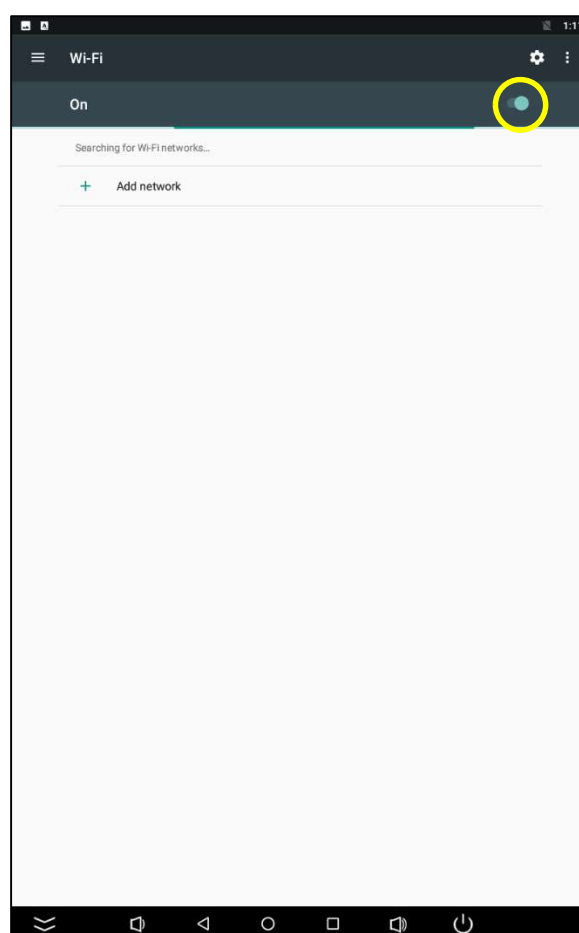
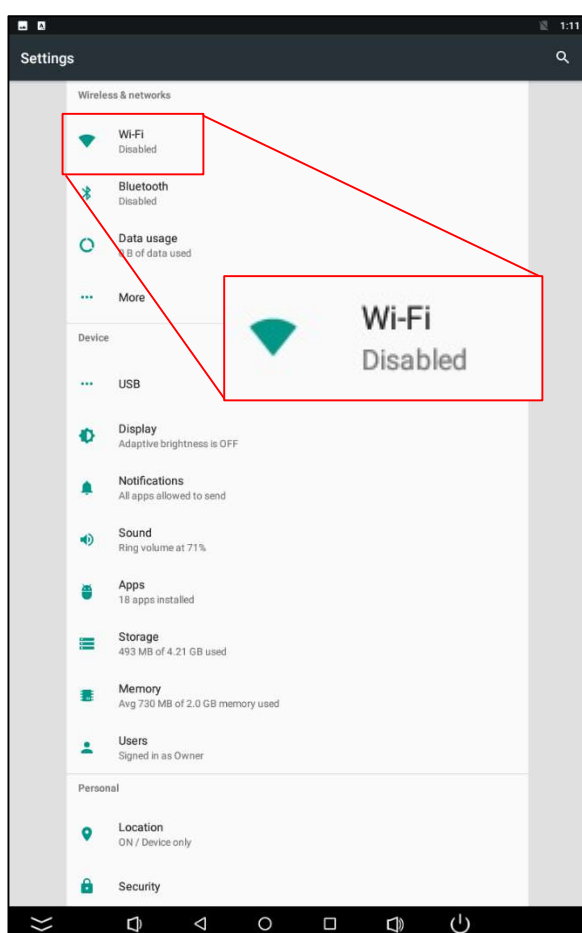
When changing the system language, it is recommended to reboot the device for better usage.

### 3) How to use Wi-Fi mode

Left-click on the bottom of the screen and drag upwards with the mouse to display the bottom menu. Tap the circled button in the middle to go to the Android home screen and open Setting menu. In the setting menu, go to Wi-Fi settings.



After that, activate Wi-Fi and select the network you want to use.

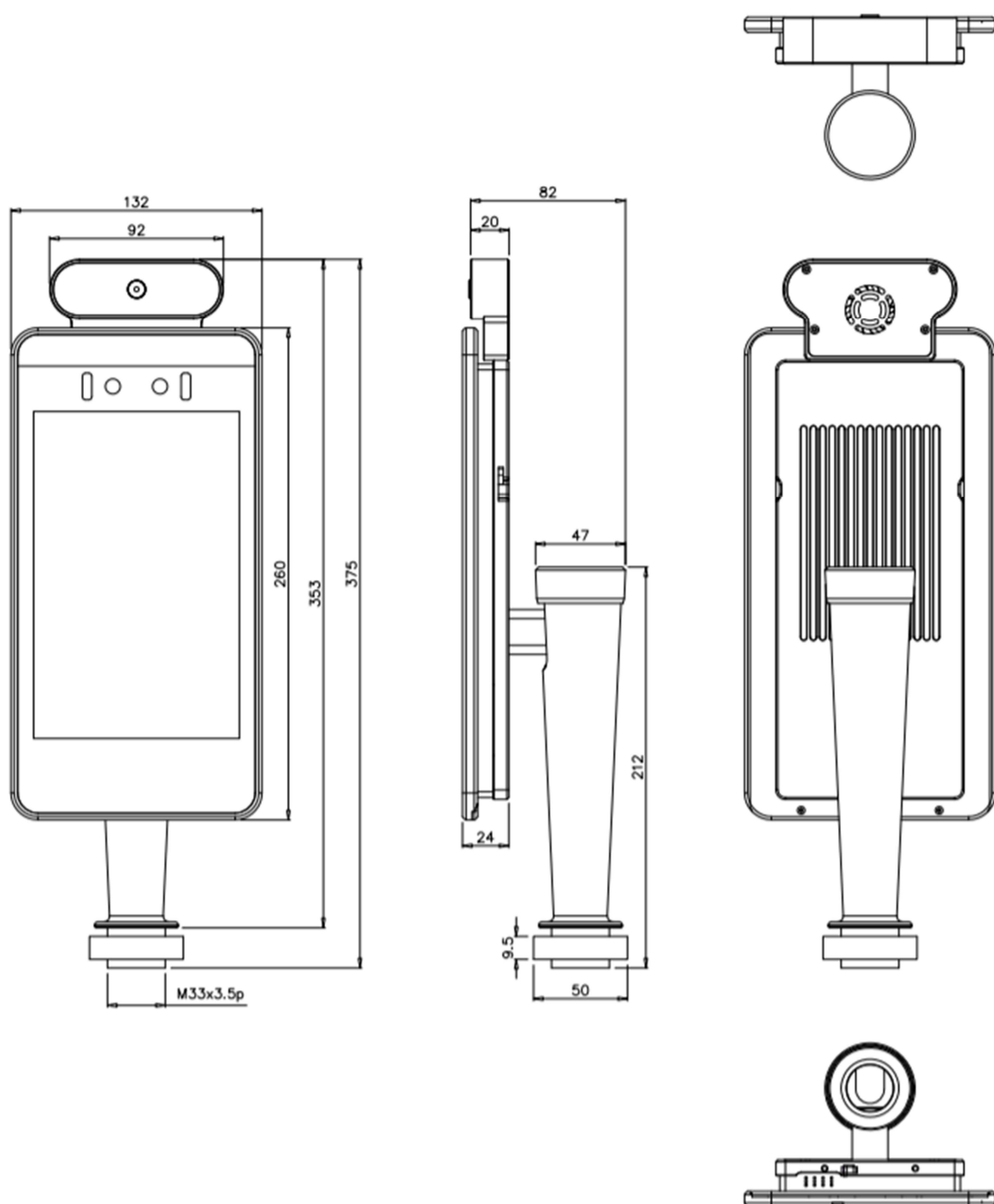




## 6. Product specification

|                                 |   |  |
|---------------------------------|---|--|
| Camera                          | Resolution  | 2 million pixels   |
|                                 | Type  | Dual wide dynamic camera   |
|                                 | Aperture  | F2.4   |
|                                 | Focusing distance                                     | 50-150cm   |
|                                 | White balance   | Auto   |
|                                 | Photo flood light                                     | LED and IR dual photo flood light  |
| Screen                          | Size  | 8 inch IPS LCD screen  |
|                                 | Resolution  | 800×1280   |
| Processor                       | CPU   | RK3288 quad-core<br>(optional RK3399 6-core, MSM8953 8-core)                             |
|                                 | Storage   | EMMC 8G  |
| Interface                       | Audio   | 2.5W / 4R speakers   |
|                                 | USB   | USB OTG, 1 USB HOST standard A Type x 1  |
|                                 | Serial communication                                  | RS232 serial port x 1  |
|                                 | Relay   | 1 point contact (2A 30VDC, 0.28A 220VAC)   |
|                                 | Wiegand   | Wiegand 26/34 output x 1, Wiegand 26/34 input x 1  |
|                                 | Upgrade button  | Support Uboot upgrade button   |
|                                 | Wired network   | RJ45 Ethernet socket x 1   |
| Function                        | Face Detection  | Support  |
|                                 | Face library  | Up to 30,000   |
|                                 | 1: 1 face comparison                                  | Support  |
|                                 | Stranger detection                                    | Support  |
|                                 | WiFi  | 2.4GHz Support   |
|                                 | Identify distance configuration                       | Support  |
|                                 | Interface   | Device management interface, HR/photo management,<br>Record inquiry                      |
|                                 | Deployment method                                     | LAN, Stand-alone, Support for use in conjunction with<br>Existing access control systems |
| Infrared thermal imaging module | Temperature detection                                 | Support  |
|                                 | Temperature detection distance                        | 1 meter (optimal distance 0.5 meter)   |
|                                 | Temperature measurement accuracy                      | ≤ ±0.5°C   |
|                                 | Temperature measurement range                         | 36°C ↑   |
|                                 | Pixels  | 1024 (32x32)   |
|                                 | Visitors' temperature is normal and released directly | Support  |
|                                 | Abnormal temperature alarm                            | Support (temperature alarm value can be set)   |
| General parameters              | Power   | DC12V ( ±10% )   |
|                                 | Operating temperature                                 | 10°C~40°C(15°C ~ 30°C optimal)   |
|                                 | Storage temperature                                   | -20°C~60°C   |
|                                 | Power consumption                                     | 13.5W ( Max )  |
|                                 | Installation method                                   | Gate bracket, on the wall, floor stand,<br>desk stand installation                       |
|                                 | Size  | 296.18*132.88*25 ( mm )  |
| Packing list                    | Machine * 1, power adapter * 1, manual * 1            |  |

## 7. Product diagram



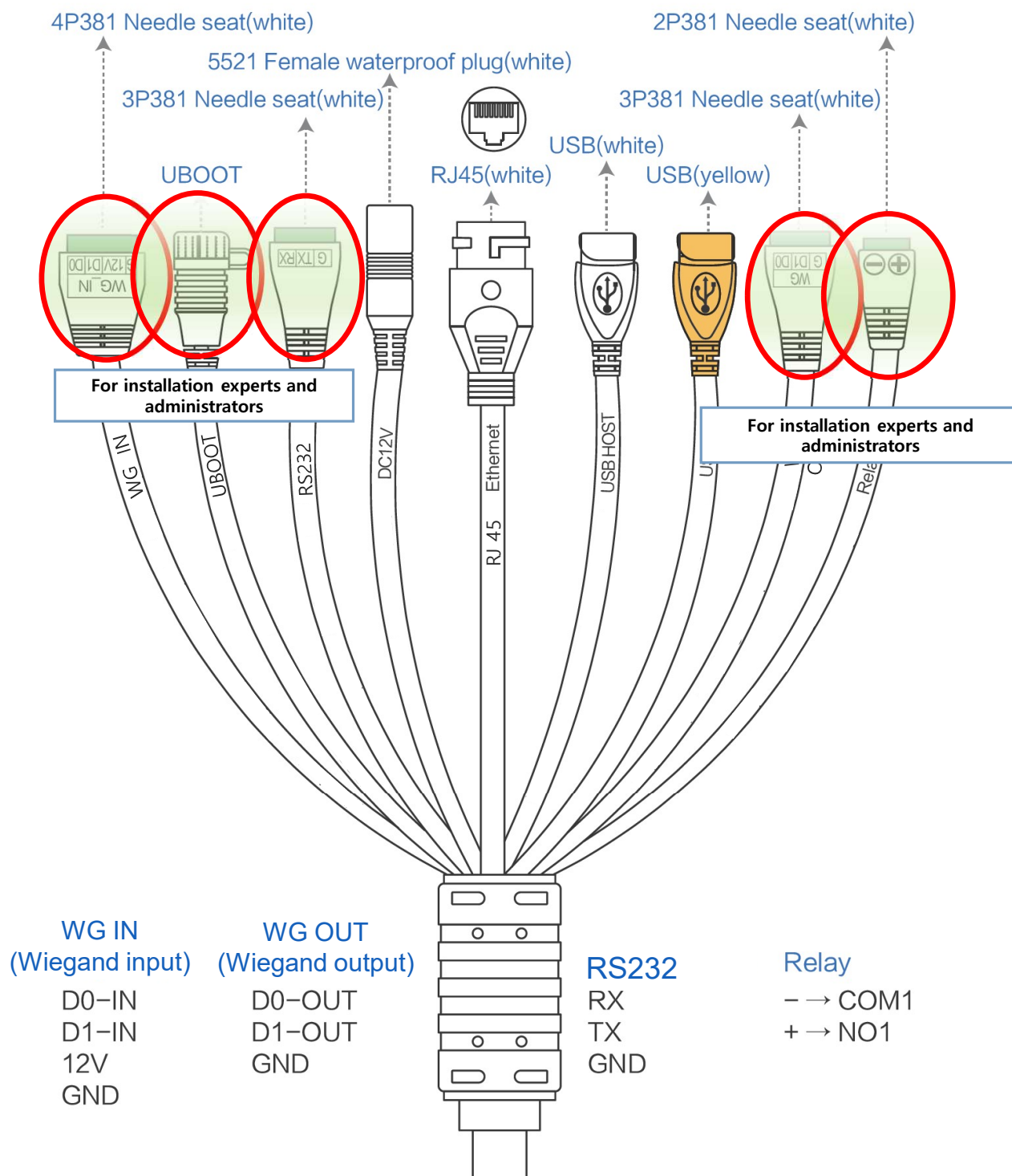
## 8. Product description(display)



## 9. Product description



## 10. Product port description



## 11. Maintenance & Precautions

### <Installation caution>

1. Please use this product indoors.
2. Avoid areas around devices that generate heat or humidity, such as air conditioners, heaters, and humidifiers. Please refrain from installing in a place where direct sunlight enters.
3. Do not install the screen of this product in a location facing a window, air conditioner, or heater. (Since this product measures infrared rays and heat, it may affect accuracy.)
4. Please use this product after operating it from 3 to 5 minutes after installation for proper operation.
5. Install this product in a safe place so that it will not fall over.
6. Please place your face according to the shape of the face displayed on the screen for accurate temperature measurement.
7. Please make sure that you read the instruction manual before using the product.

### <Safety caution>

1. If abnormal video, audio, odor, or smoke is generated from this product, immediately disconnect the power cable. Please contact customer service otherwise it may cause a fire or electric shock.
2. When installing this product, please disconnect the power cable before installation.
3. Do not wipe the product with a wet towel or cloth. If water gets inside the product, it may cause a fire, electric shock, or malfunction. Wipe dry with a soft cloth.
4. Do not block the ventilation port of this product. It may cause fire or malfunction.
5. Do not modify or disassemble this product. It may cause fire or malfunction.
6. Do not damage the appearance of the product, do not use chemicals such as thinner or acetone, chemical substances, or insecticides.

# Installation manual

(Main Unit + Stand)

Face recognition, fever check for access control system

- The image and notation of this document may be different from this product.
- The content of this article is subject to change without notice.

Model name : ASP-2000  
 Desk stand  
 Floor stand  
 Wall bracket

ENGLISH

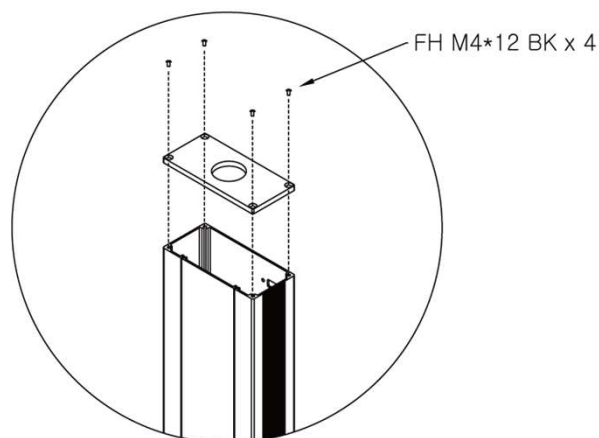
Copyright ©2020 AHA INC CO.,LTD.

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## How to assemble the main unit and floor stand

### 1 Disassemble the table cover

Put the stand upright and remove the fixed screws (4ea) to disassemble the cover of the top of the stand.

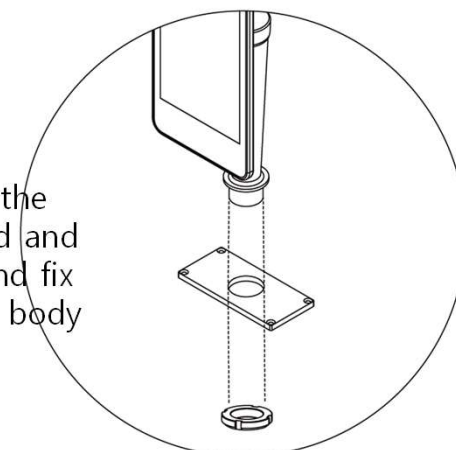


### 2 The main unit and stand assembly

Put the cables in the hole of the stand and insert the main unit into the stand and

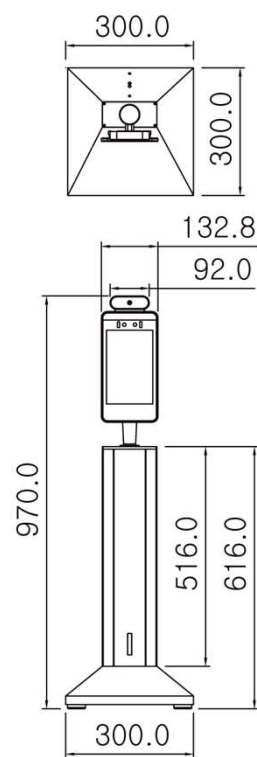
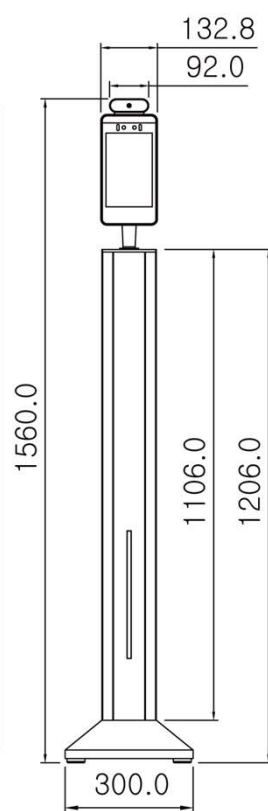
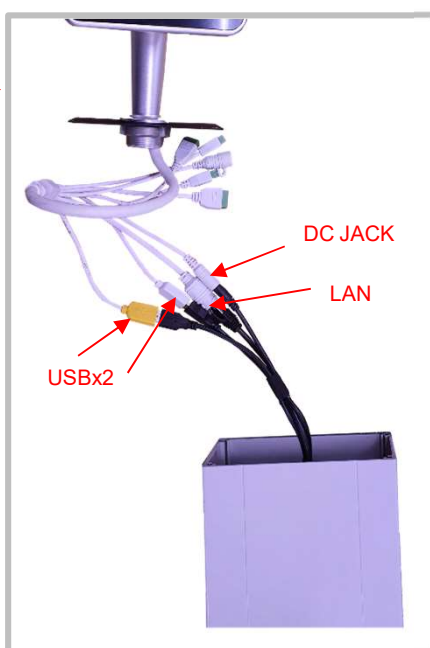
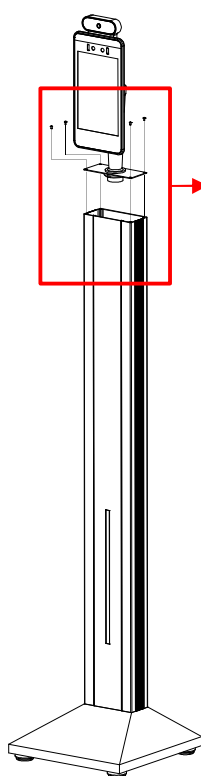
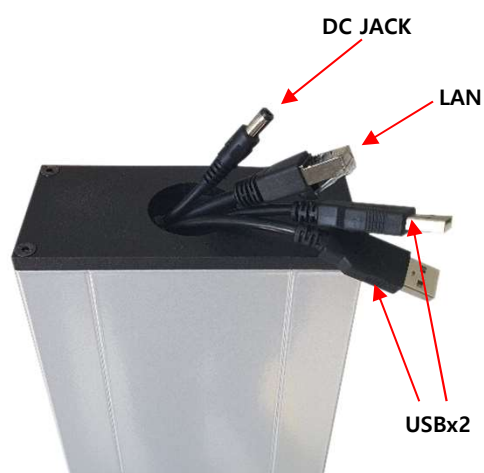
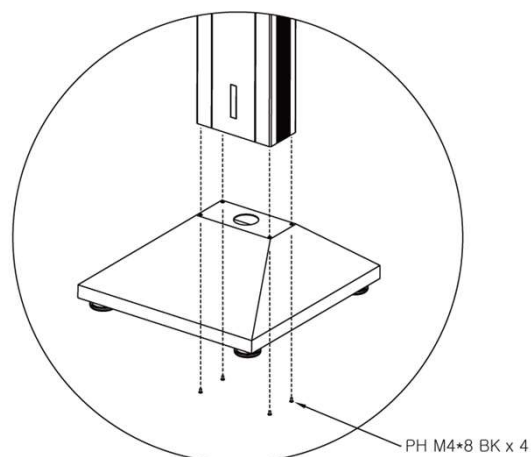
### 3 Cable connection

Connect USB(x2) and LAN, DC cables of the main unit to the each cables of the stand and put the connected cables in the stand and fix the table cover with the main unit to the body of the stand.



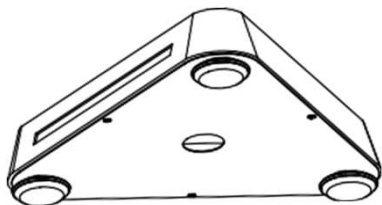
#### 4 Assembly of stand body and pedestal

Enables USB (X2) and LAN , DC Jack to be connected to the body and the support



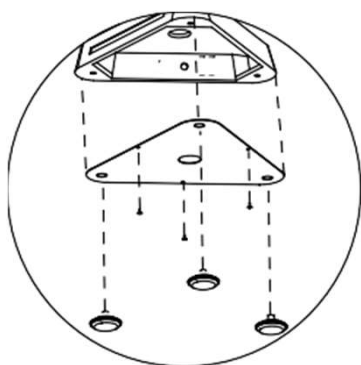


## How to assemble the main unit and the table stand



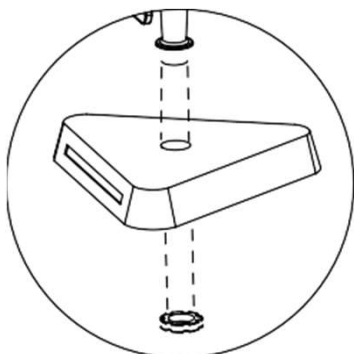
### 1 Table stand

The table stand has a cover, non-slip foots (Foot x 3ea), and screws (M3 x 3ea) on the bottom surface.



### 2 Disassemble the table stand

Separate the foots and screws from the bottom of the table stand to disassemble the cover and table stand.

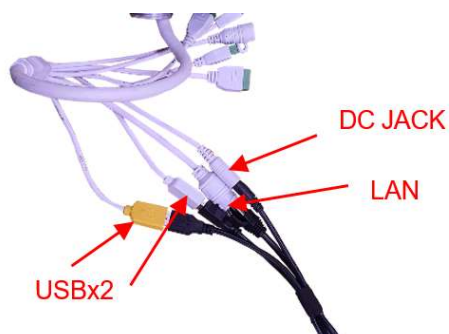
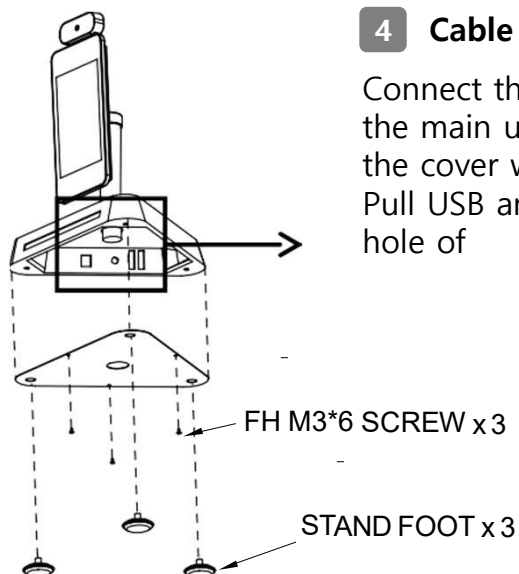


### 3 The main unit and stand assembly

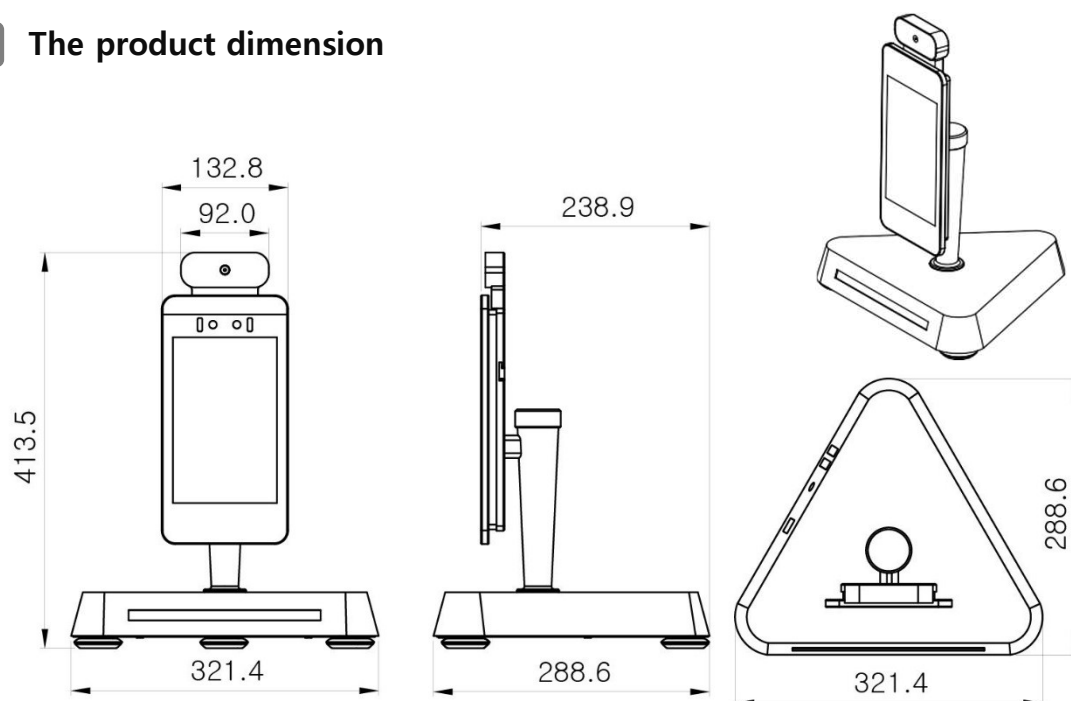
Put the cables in the hole of the stand and insert the main unit into the hold of the stand and fix the

### 4 Cable connection

Connect the LAN and DC Jack of the stand to the main unit and close the stand cover and fix the cover with the screws and the stand foots. Pull USB and other terminals out of the center hole of



## 5 The product dimension



### Gate Installation



### Wall Installation



### Product weight/ dimension

|              | Weight (kg) | Dimension (mm)              |
|--------------|-------------|-----------------------------|
| ASP-2000     | 1.4         | 132.9(W) x 296.2(H) x 25(D) |
| Desk stand   | 3.5         | 321(W) x 413(H) x 288(D)    |
| Floor stand  | 8           | 300(W) x 1552.2(H) x 300(D) |
| Wall bracket | 1.4         | 132.9(W) x 296.2(H) x 25(D) |

Model

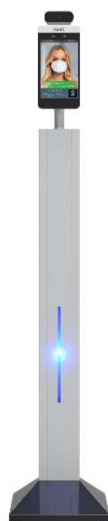
ASP-2000



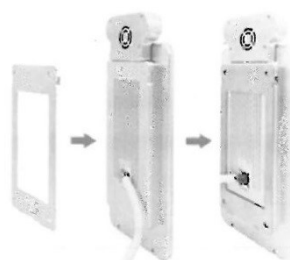
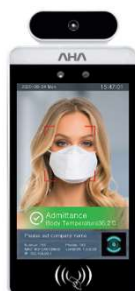
Desk stand



Floor stand



Wall bracket





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All specifications are subject to change without prior notice to improve the product.