

# Quick Operation Manual for Smart Tablet Camera with Temperature Detection + Facial Recognition



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## 1. Product Introduction

### 1.1 Product Description

The 2MP Smart Facial Recognition Tablet with Thermometer product series uses LCD display screen and built in in-depth learning facial recognition algorithm, Integrating high-precision thermal imaging temperature measurement chip, AI intelligent access control products with ISP image processing and other technologies. This product has powerful functions such as face detection, mask detection, face recognition comparison, body temperature detection, living body judgment etc. It accurately captures personal information (such as facial information, identity information, whether wearing a mask, etc.) through the camera's field of view, and body surface temperature. It can effectively help users manage access rights and monitor body temperature status, and help prevent epidemics. Users can manage the access rights offline by loading the face database to the device. It can also be used with attendance software to achieve employee attendance management. It can be widely used in residential access control, barrier gate passage, office buildings and other scenarios.

### 1.2 Product Appearance



### 1.3 Device interface definition

Number	Interface name	Interface Description
1	Power interface	12VDC
2	Network interface	RJ45 interface
3	Relay interface	+ : NO Normally open port - : COM common port
4	Wiegand interface	1: Null

		2: Wigeand protocol data port D1 3: Wiegand protocol data port D0 4: Gnd
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## 2.Device installation

### 2.1 Correct Installation Position

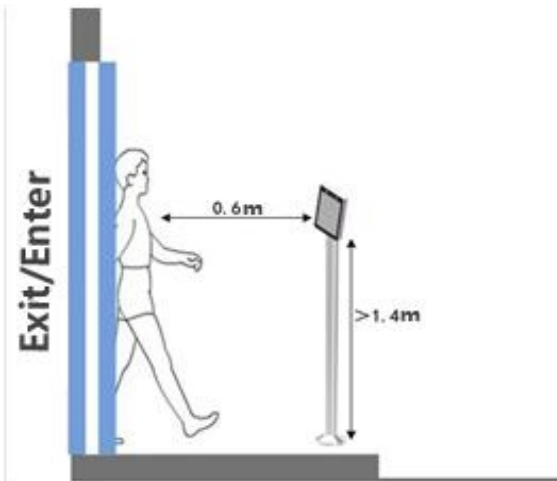
- 1.Setting the camera directly in front of the aisle, ensuring frontal face capture
- 2.The recommended height is approximately 1.4 meters to 1.6 meters; the recommended camera angle is 0 to 5 degrees;
- 3.Ensuring accurate temperature detection, the recommended distance between the device and the facial capture point is 0.4 meters (range 0.3 ~ 0.5 meters), and the facial pixel is no less than 1MP.

### 2.2 Installation Environment Requirements

1. Illumination requirements: No backlight, no obvious reflection on the face, uniform light and no shadow.

Please ensure that the scene lighting is sufficient when capturing human faces, it is recommended that if the human face to be captured is not bright enough, additional lighting equipment needs to be used to light up the human face (generally 250 ~ 800 Lux).

- 2.Light and wind requirements: It is recommended that the device be installed indoors to ensure that there is no wind between the device and personnel. It must avoid direct sunlight, and temperature changes caused by air cooling and direct sunlight.

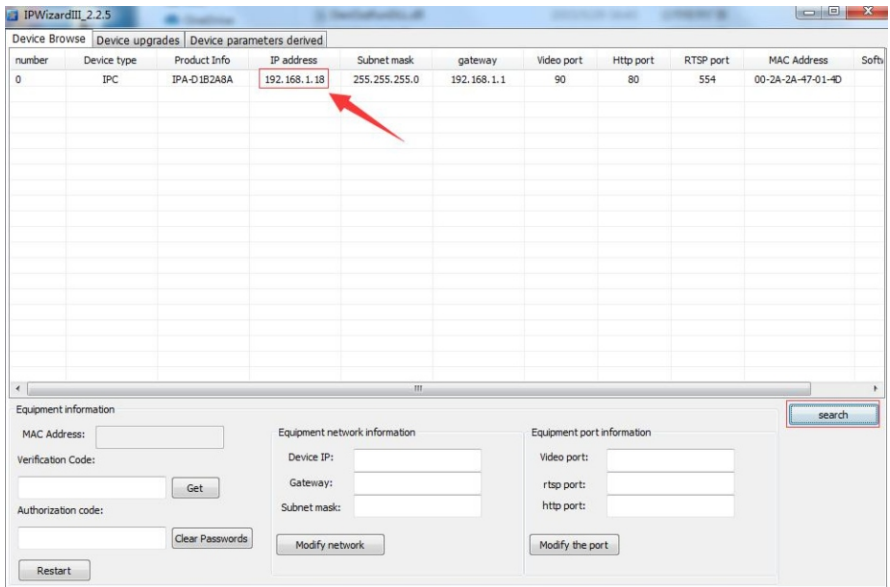


### 3.Quick Start Guide

#### 3.1 Device connection

Connecting the device to the PC through a network cable. After the device is powered on, please open the search tool on the computer and search for the device IP address. At the same time, you can also modify the device IP address through the tool.

**Note:** The default factory IP address is 192.168.1.18

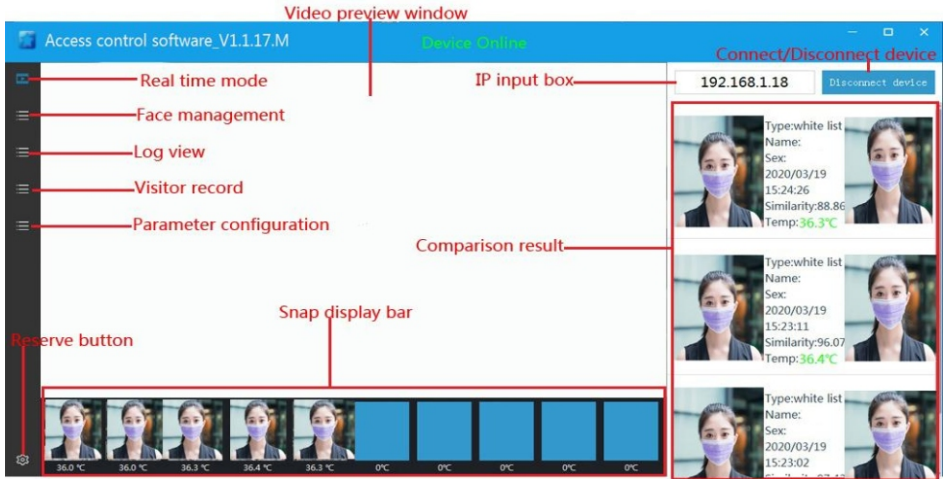


#### 3.2 Smart access control management software operation

After the device is powered on, using the intelligent access control management software to set up the face database, previewing real-time video, displaying real-time comparison results, reading device logs, and configuring device parameters.

##### 3.2.1 Main Interface Introduction

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**【Video preview window】:** After connecting the device, play live video from the camera.

**【IP input box】:** Enter the IP address of the device.

**【Connect / disconnect device button】:** Click [Connect Device] to connect to the device, you can view the preview real-time video, upload real-time snapshot pictures, display recognition results, etc.  
Click [Disconnect Device] to disconnect and close the preview.

**【Comparison result】:** When the captured face matches the face database in the device, it will be displayed here, and basic information, similarity, temperature and other information of the face will be displayed. If the face database is not matched, it will not be displayed.

**【Snap display bar】:** In the video preview mode, the captured face picture of the current screen and the body surface temperature are displayed.

**【Face management】:** Click to enter the face database management interface, you can add subtract, delete, check, change and other operations on the face database.

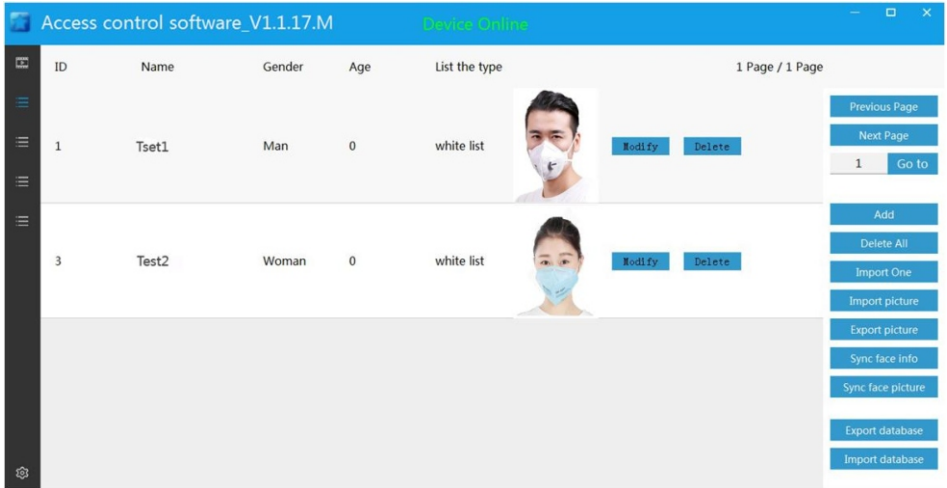
**【Log view】:** View and export the face recognition record information saved by the device, and generate a staff attendance record form.

**【Parameter configuration】:** Device face recognition key parameter configuration interface, you can modify parameters in this interface.

**【Reserve button】:** Functions are not defined yet, software setting functions will be added later.

## 3.2.2 Face database management

Users can perform operations, such as adding, subtracting, deleting, checking, and modifying the face database on this interface.



**【Add to】:** Add face library to the device by snapshot

**【Delete all】:** Click the button to delete all face libraries in the device

**【Single import】:** Import a single picture to the device face library

**【Batch Import】:** Batch import multiple photos to device face library

**【Refresh】:** Click refresh to automatically download the basic information of the device face database

**【Manual synchronization】:** Device uploads face library to PC software

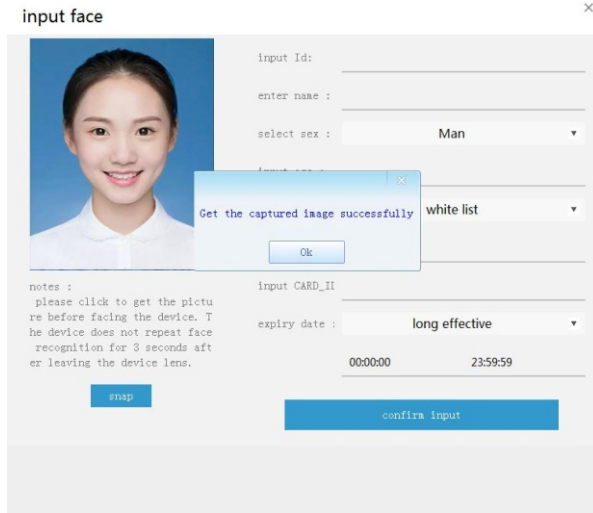
**【Send on simulation platform】:** Reserve

**【modify】:** Modify the personal attribute information of the current face

**【delete】:** Delete the current face database information from the device

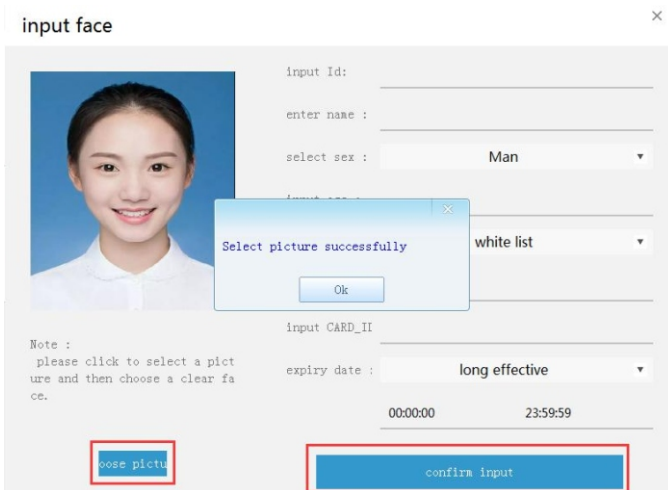
### 3.2.2.1 Add operation

Click the [Add] button to enter the interface. Face is directly facing the camera. Click the [Capture Picture] button to capture the face picture and enter the personnel information. Click the [OK] button to prompt the formal entry of the face successfully.



### 3.2.2.2 Single import face database operation

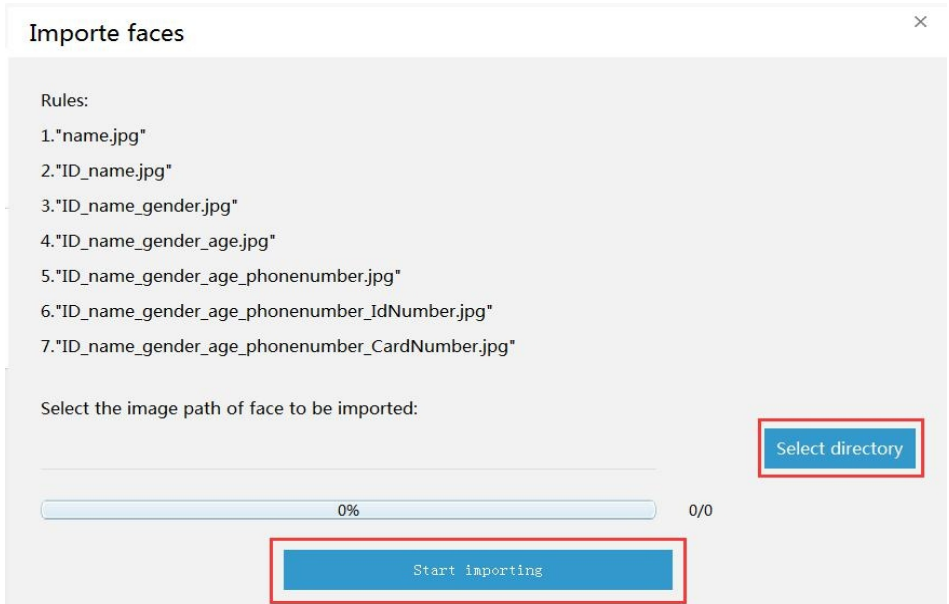
Click [Single Import] to pop up the input face interface, click [Select Picture], select the face picture file, enter the personnel information, and click [Enter] to complete the single face import.



### 3.2.2.3 Batch import face database operation

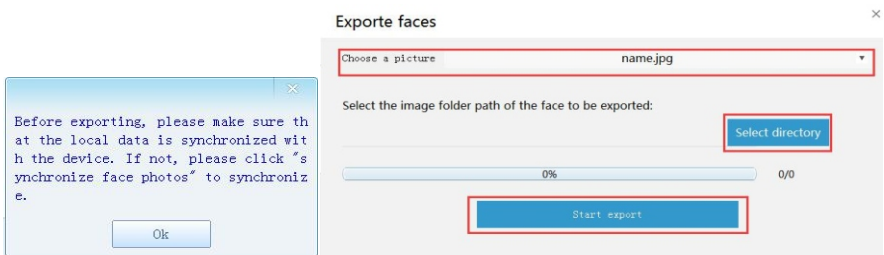
Click [Batch Import], pop-up interface, click [Choose Directory], select the face picture folder, and click [Start Import]. The import progress bar will complete the batch import of faces.





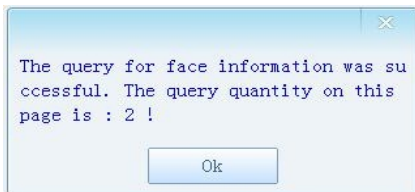
### 3.2.2.4 Refresh operation

Click the [Refresh] button to synchronize the basic information of the face database, and you can view the statistics of the number of entered faces.



### 3.2.2.5 Manual synchronization operation

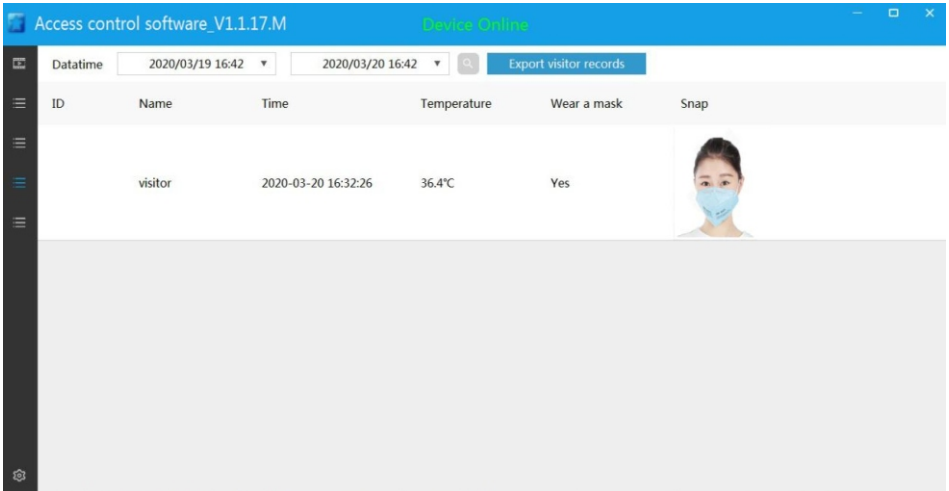
Upload the face database from the device to the management software. After replacing the new device, you must first manually sync the face database. Otherwise, the personnel information on the management software and the device's face database may be inconsistent, resulting in incorrect display of the identification comparison information.



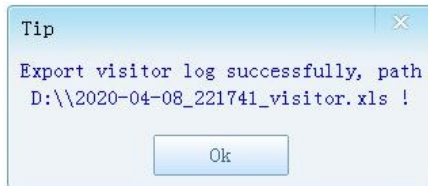
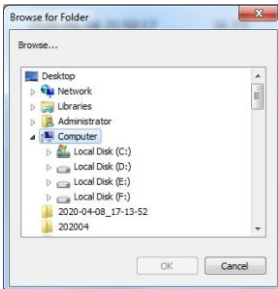




## 3.2.4 Visitors Log

Click **【The visitors log view】** → Select the start time and end time → click **【🔍】** button to search the log.



Click **【Export visitor records】** button → Select save address → automatically export attendance record to save in EXCEL.



id	name	date	time	temperature	wear a mask	image
	visitor	2020-04-13	09:35:58	36.5	yes	
	visitor	2020-04-13	09:36:15	36.3	yes	

## 3.2.5 Parameter configuration

You can set the key parameters of face capture as shown below.



**Capturing interval(s):** Set the face capture interval to avoid repeated snapping of pictures in a short time.

**Snap picture quality parameters(0-1):** Set the quality of the captured picture. 0 is the worst and 1 is the best.

**Blur parameter(0-1):** Set the sharpness of the captured picture. The range is 0-1. The smaller the value, it will be clearer.

**Living-body threshold(0-1):** Set the face recognition biometric threshold, larger the value, the stricter and more secure the biometric detection

**Face recognition(0-100):** Set the threshold for face recognition matching, compare the captured face picture with the face database, and the similarity exceeds this threshold, that is, the same person is identified. The threshold is recommended to be set above 70. The greater the matching, the higher the similarity requirement will be safer.

**Identified Times(1-10):** Set the number of times that the face is repeatedly recognized within the camera recognition range. After this number of times, the face is no longer recognized. You need to exit the camera's field of view and re-enter the screen to continue recognition.

**Recognition distance threshold:** Optional configuration 0.5m, 1m, 1.5m, 2m, 2.5m, the default is 1 meter, because the distance of the temperature measurement module is limited to less than 1 meter, so this option is limited and cannot be set.

**Face exposure threshold(0-100):** Set the brightness of the picture captured by the face. The default is 50.

**Software version:** Factory setting version number can not modify.

**TEMP compensation coefficient:** In the case of harsh environment, increase the compensation temperature to improve the accuracy of temperature measurement.

**Switch delay time:** The pulse time of the digital output (unit: 100ms), the default configuration 2 is 200ms.

**Black and white list comparison switch:** Turn on and off the face recognition comparison function, and off will not perform the face comparison action.

**Face recognition association relay:** The face recognition result of the switch is associated with the relay action. After opening, according to the successful face comparison, after switching to the white list, the relay is closed.

**Face recognition voice broadcast:** Configure the voice broadcast mode of the recognition result. There are three modes: co-broadcast, non-broadcast, and only broadcast abnormal.

**TEMP detection switch:** Turn on and off the temperature detection function.

**TEMP related relay:** Configure whether to associate the relay. Configured to be related, if the body temperature is normal, the control relay is opened and closed, and the default control relay mode is closed.

**Temperature detection voice broadcast:** Configure the temperature test result voice broadcast mode to only broadcast abnormal, no broadcast, broadcast temperature mode

**Mask detection switch:** Open and close the mask detection function.

**Mask detection mode:** Can be configured as epidemic mode and non-epidemic mode, two modes.

Epidemic mode: In this mode, a voice prompt "please wear a mask" is detected when a mask is not worn

Non-epidemic mode: In this mode, it is detected that a person is wearing a mask, and a voice reminder "please remove the mask" will improve the

recognition accuracy rate.

**Mask associated relay:** Open and close the mask detection results associated with the relay. In epidemic mode, when the mask is worn correctly, the relay is controlled to operate, otherwise the relay is not controlled.

**Mask detection voice broadcast:** Configure the mask reminder broadcast mode to broadcast only abnormal, not broadcast. Only broadcast abnormalities: in epidemic mode, "please wear a mask" will be broadcast without wearing a mask, otherwise no reminder will be broadcast; in non-epidemic mode, wearing a mask will remind "please remove the mask", otherwise it will not broadcast.

**Overlay time:** When it is on, the device's current time is displayed on the screen, and when it is off, the device time is not displayed.

**Temperature mode:** Configure the temperature unit. Can be configured as two temperature units of Celsius and Fahrenheit.

**【Refresh】:** Click the button to get the configuration on the device.

**【Save】:** Click the button to send the configuration information to the device to save and take effect.

## 4.Device program upgrade

Users can use the browser or PC tools to upgrade the program;

**Note:** Browser upgrade package suffix is .ifu, PC tool upgrade package suffix is .bin

### 4.1 Web upgrade program:

**Note :** The browser can only use IE browser, QQ browser and 360 secure browser. IE Edge browser and 360 fast browser cannot be used.

Step 1: Open the browser, enter the device IP address, and enter the username admin and password admin.

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Step 2: Click Settings-> System-> Maintenance in order to enter the upgrade interface.

Step 3: Click Browse to select the app.ifu upgrade package.

Step 4: Click the [Upload] button to start the upgrade. Wait for the upgrade to complete and the web page will refresh automatically.

