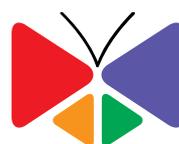




# Face Recognition Reader User's Manual

R71CF-31, R71CF-32, R71CF-33, R71CF-34

2019/09/23



**ACTi**  
Connecting Vision

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## About this Manual

This Manual is subject to domestic and international copyright protection. The manufacturer reserves all rights to this manual. This manual cannot be reproduced, changed, translated, or distributed, partially or wholly, by any means, without the prior written permission from the manufacturer.

## Precautions

### Read these instructions

You should read all the safety and operating instructions before using this product.

### Heed all warnings

You must adhere to all the warnings on the product and in the instruction manual. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.

### Servicing

Do not attempt to service this video device yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

### Trademarks

All names used in this manual are probably registered trademarks of respective companies.

### Liability

Every reasonable care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

### Support

Should you have any questions, please do not hesitate to contact your local dealer.

### Data Protection

During the use of the device, personal data will be collected, stored and processed. To protect data, the development of devices incorporates privacy by design principles. For example, for device with facial recognition features, biometrics data is stored in your device with encryption method; As data controller, you are advised to collect, store, process and transfer data in

accordance with the applicable data protection laws and regulations, including without limitation, conducting security controls to safeguard personal data, such as, implementing reasonable administrative and physical security controls, conduct periodic reviews and assessments of the effectiveness of your security controls.

## Regulatory Information

### FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC compliance:** 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 should be installed and operated with a minimum distance 20cm between the radiator and your body.

### FCC Conditions

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.

### EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the RE Directive 2014/53/EU, the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see:

[www.recyclethis.info](http://www.recyclethis.info)



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

## Safety Instructions

### Warnings

- All the electronic operation should be strictly compliance with the electrical safety regulations, fire prevention regulations and other related regulations in your local region.
- Please use the power adapter, which is provided by normal company. The power consumption cannot be less than the required value.
- Do not connect several devices to one power adapter as adapter overload may cause over-heat or fire hazard.
- Please make sure that the power has been disconnected before you wire, install or dismantle the device.
- When the product is installed on wall or ceiling, the device shall be firmly fixed.
- If smoke, odors or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the device yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

### Cautions

- Do not drop the device or subject it to physical shock, and do not expose it to high electromagnetism radiation. Avoid the equipment installation on vibrations surface or places subject to shock (ignorance can cause equipment damage).
- Do not place the device in extremely hot (refer to the specification of the device for the detailed operating temperature), cold, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- The device cover for indoor use shall be kept from rain and moisture.
- Exposing the equipment to direct sun light, low ventilation or heat source such as heater or radiator is forbidden (ignorance can cause fire danger).
- Do not aim the device at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.
- Please use the provided glove when open up the device cover, avoid direct contact with the device cover, because the acidic sweat of the fingers may erode the surface coating of the device cover.
- Please use a soft and dry cloth when clean inside and outside surfaces of the device cover, do not use alkaline detergents.

- Please keep all wrappers after unpack them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and lead to additional costs.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.
- Biometric recognition products are not 100% applicable to anti-spoofing environments. If you require a higher security level, use multiple authentication modes.
- Indoor and outdoor use. If installing the device indoors, the device should be at least 2 meters away from the light, and at least 3 meters away from the window or the door. If installing the device outdoors, you should apply Silicone sealant among the cable wiring area to keep the raindrop from entering.

Thank you for purchasing ACTi products. The following documentation covers the installation and configuration of your device.

**NOTE:** The accuracy of the analytics algorithm may be affected by different environmental factors or inappropriate installation. Please follow the procedures in this guide. ACTi will not be held liable for inaccuracies resulting from the aforesaid causes.

# 1. Installation and Connections

## Installation Environment

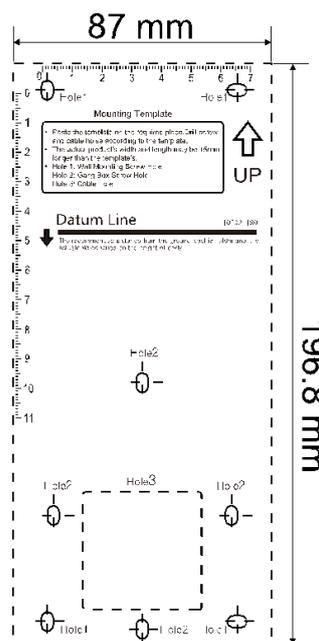
- If installing the device indoors, the device should be at least 2 meters away from the light, and at least 3 meters away from the window or the door.
- If installing the device outdoors, you should apply silicone sealant to protect the cable wiring area to keep raindrop from entering.
- Make sure the environment illumination is more than 100 Lux.

**NOTE:** For more details about the installation environment, see *Tips for Installation Environment* on page 29.

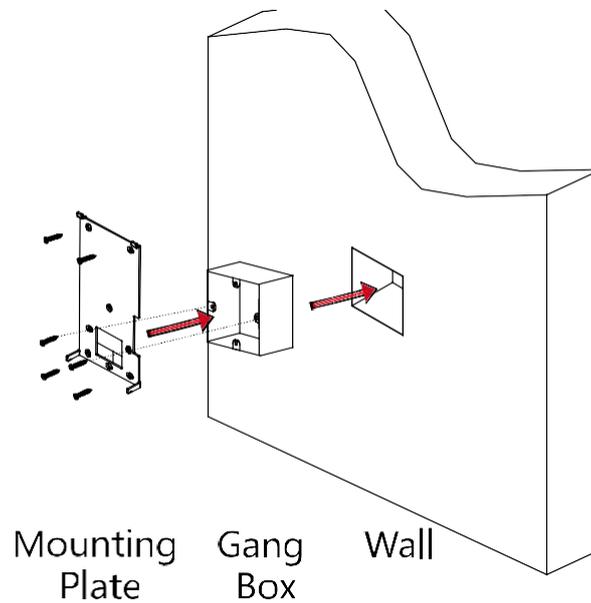
## Installing with Gang Box

The device can be directly installed on a wall with gang box.

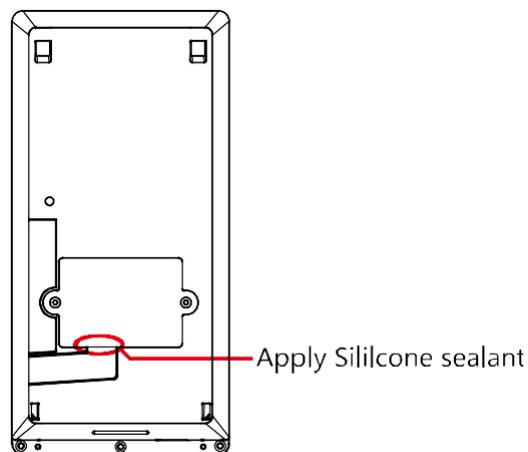
1. According to the Datum line on the drill template, stick the drill template on the surface at 1.4 meters higher than the ground.



2. Drill the holes on the surface according to the drill template and install the gang box.
3. Using the two (2) supplied screws, secure the mounting plate on the gang box. And use another four (4) supplied screws to secure the mounting plate on the wall.

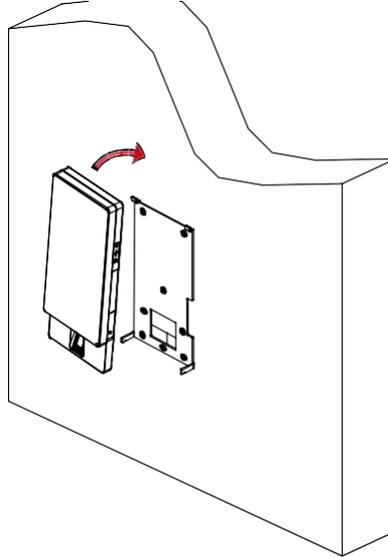


4. Route the cables through the cable hole of the mounting plate, and connect to the corresponding external devices' cables.

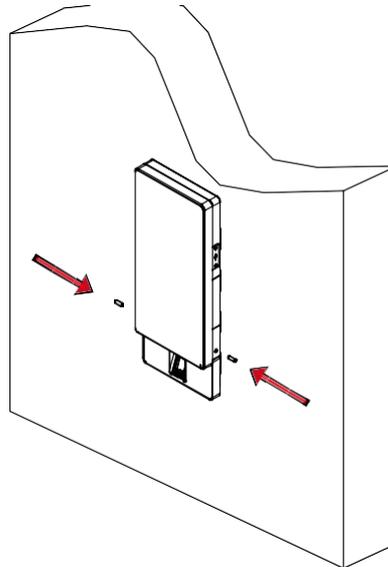


**NOTE:** If installing outdoors, make sure to apply Silicone sealant on the cable wiring area to keep raindrops from entering.

5. Align the device with the mounting plate and hang the terminal on the mounting plate. Make sure the two sheets on each side of the mounting plate are in the holes at the back of the device.



6. Secure the device and the mounting plate.

**NOTE:**

- The recommended installation height 1.4 meters from the ground is a reference point. You can change it according to your actual needs.
- You may also install the device directly on walls without gangbox. Use the drill template to mark the screw holes to use.

## Terminal Connection

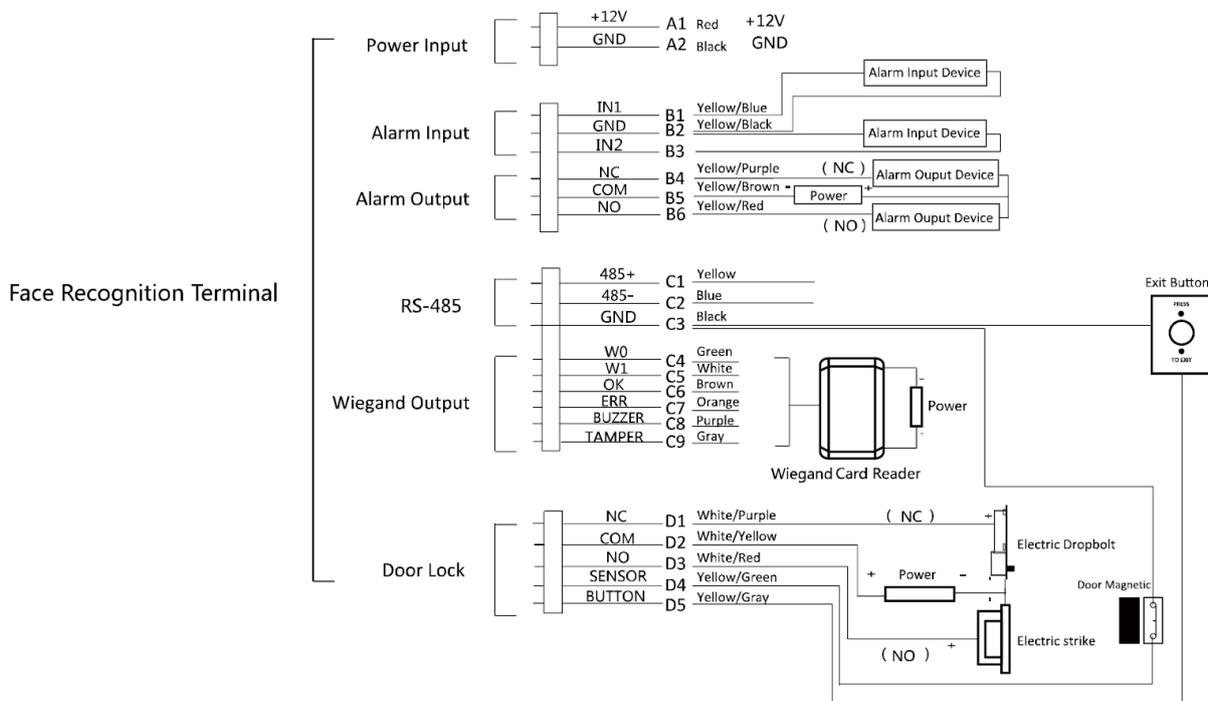
You can connect the RS-485 terminal with the RS-485 card reader, connect the NC and COM terminals with the door lock, connect the SENSOR terminal with the door magnetic sensor, connect the BUTTON/GND terminal with the exit button, connect the alarm output and input terminal with the alarm output/input devices, and connect the Wiegand terminal with the Wiegand card reader or the access controller.

If you connect the WIEGAND terminal with the access controller, the face recognition terminal can transmit the authentication information to the access controller and the access controller can judge whether to open the door or not.

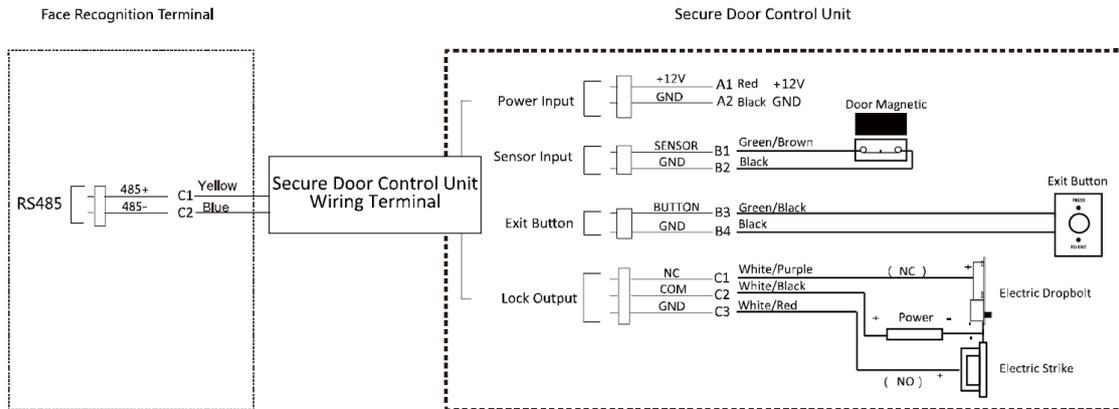
### NOTES:

- If you use 1.0 mm cables, you should use a 12 V switched-mode power supply. And the distance between the power supply and the device should be no more than 20 m.
- If you use 1.5 mm cables, you should use a 12 V switched-mode power supply. And the distance between the power supply and the device should be no more than 30 m.
- If you use 2.0 mm cables, you should use a 12 V switched-mode power supply. And the distance between the power supply and the device should be no more than 40 m.

See wiring diagram below:



You can also connect the device with a secure door control unit. See wiring diagram is below:



**NOTE:** The secure door control unit should connect to an external power supply separately.

## 2. Device Activation

You are required to activate the device first before using it.

**Default IP Address: 192.0.0.64**

**Default Port Number: 8000**

**Default User Name: admin**

After powering on the device, you can activate it. Follow the steps below:

1. Tap the Password field and create a password.
2. Tap the Confirm field and input the password again.
3. Tap **Next** and the device will be activated.

**NOTE: STRONG PASSWORD RECOMMENDED.** It is highly recommended to create strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your device. It is also recommended to re-set the password regularly, especially in the high security system to better protect your device.

## 3. Basic Operation

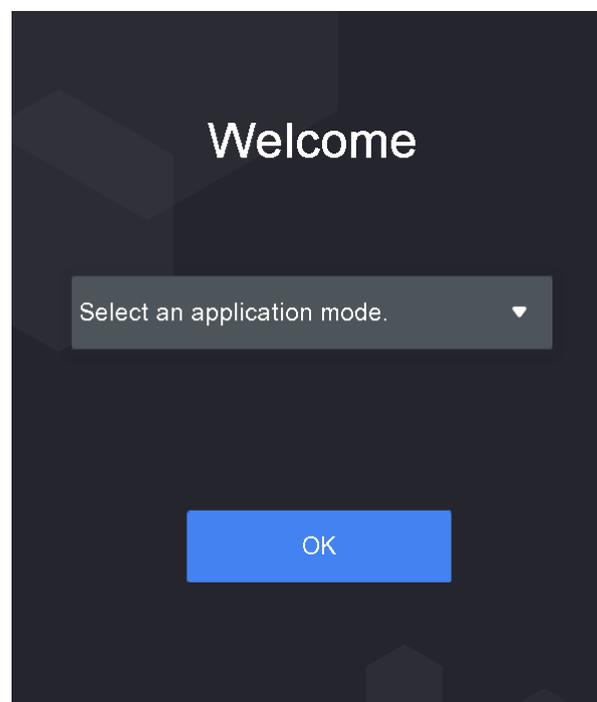
After logging in the device, you can manage users, set communication parameters, set access control parameters, set system parameters, manage data, manage log query, set time, import and output data, maintain data, and view device information.

### Application Mode Settings

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Select the application mode for better device application.

1. In the Welcome page, select **Indoor** or **Others** from the drop-down list.

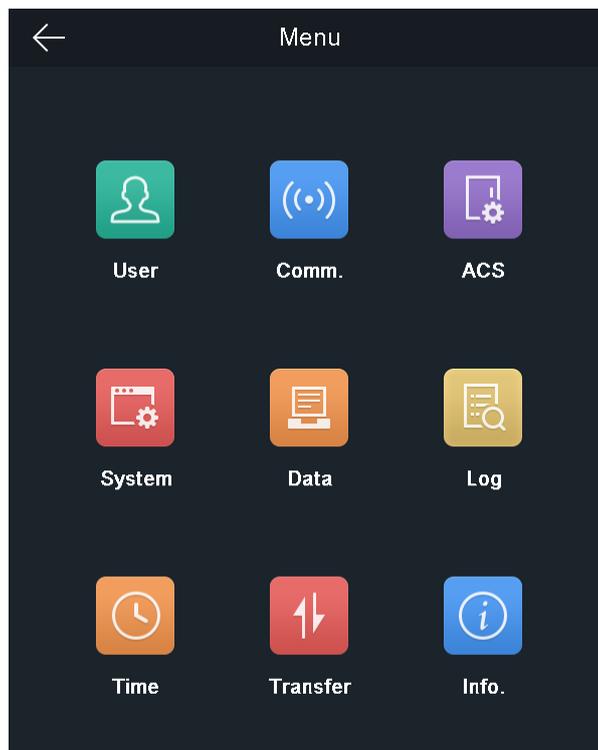


2. Tap **OK** to save the settings.

## Login

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1. Long tap the initial page for 3 seconds to open the Enter Administrative Backend page.
2. Tap the Password field and input the device activation password.  
**NOTE:** The Password here is the activation password.
3. Tap OK to enter the home page.

**NOTES:**

- The device will be locked for 30 minutes after 5 failed password attempts.
- For details about setting the administrator authentication mode, see **Adding User** on page 22.

## General Parameters Settings

### Communication Settings

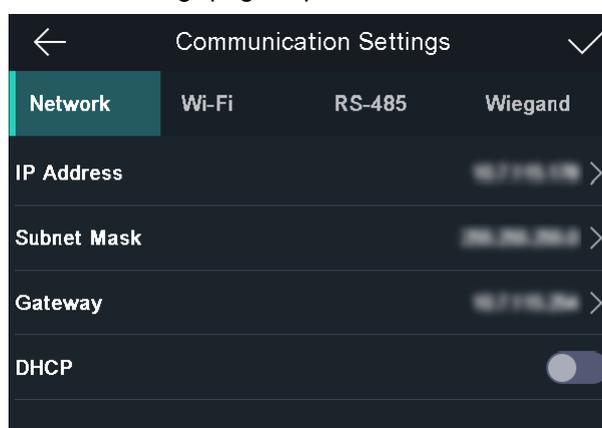
You can set the network parameters, the RS-485 parameters, the Wi-Fi parameters, and the Wiegand parameters on the communication settings page.

Tap **Comm.** (Communication Settings) on the Home page to enter the Communication Settings page.

#### Setting Network Parameters

You can set the device network parameters, including the IP address, the subnet mask, and the gateway.

1. On the Communication Settings page, tap **Network** to enter the Network tab.



2. Configure the network parameters, including IP Address, Subnet Mask, Gateway, and DHCP.

**NOTE: The device's IP address and the computer IP address should be in the same network segment.**

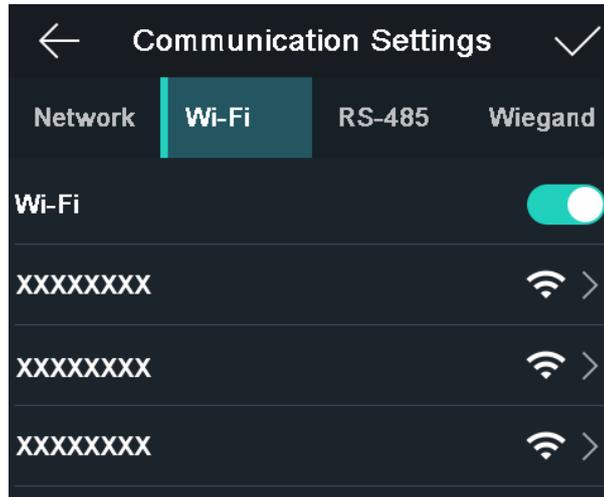
3. Tap ✓ to save the network parameters.

#### Setting Wi-Fi Parameters

You can enable the Wi-Fi function and set the Wi-Fi related parameters.

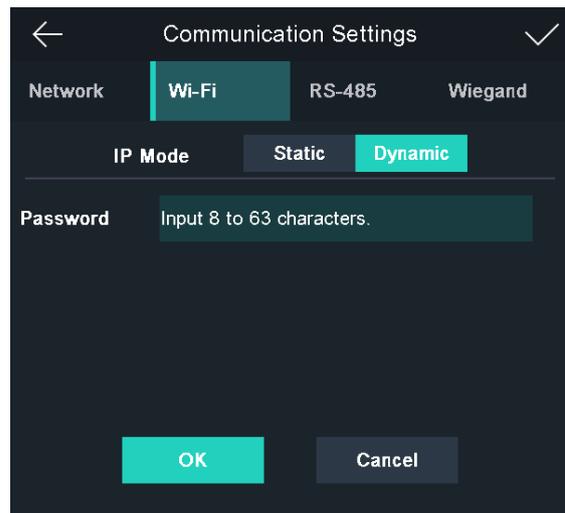
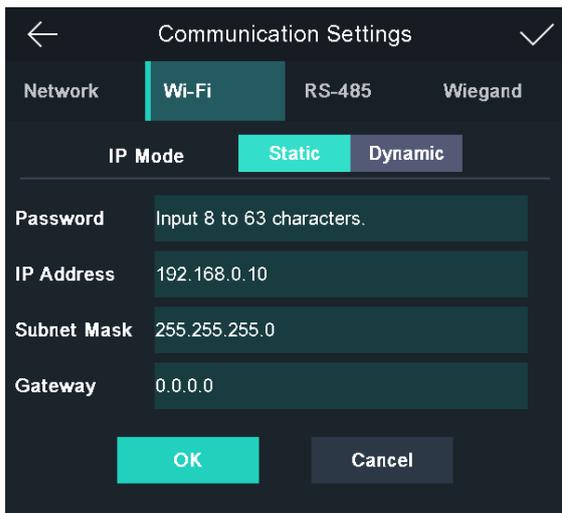
1. On the Communication Settings page, tap **Wi-Fi** to enter the Wi-Fi tab.
2. Tap  to enable the Wi-Fi function.

The icon will turn to  and all searched Wi-Fi will be listed in the Wi-Fi list.



3. Select a Wi-Fi in the list to enter the Wi-Fi parameters settings page.
4. Select an IP mode.

If selecting **Static**, you should input the Wi-Fi password, IP address, subnet mask and gateway. If selecting **Dynamic**, you should input the Wi-Fi password.



**NOTE:** Numbers, upper case letters, lower case letters, and special characters are allowed in the Wi-Fi password.

5. Tap **OK** to save the settings and go back to the Wi-Fi tab.
6. Tap  to save the Wi-Fi parameters and go back to the Home page.

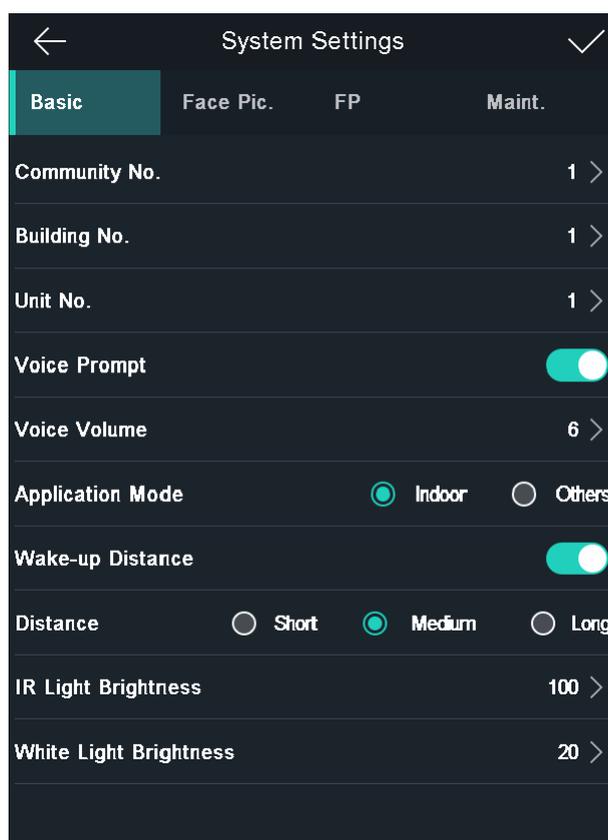
## System Settings

On the System Settings page, you can set the system basic parameters, the face parameters, the fingerprint parameters, and upgrade the firmware.

On the Home page, tap **System** (System Settings) to enter the System Settings page.

### Setting Basic Parameters

You can set the community No., building No., the unit No., voice prompt, voice volume, application mode, wake-up distance, IR light brightness, and white light brightness.



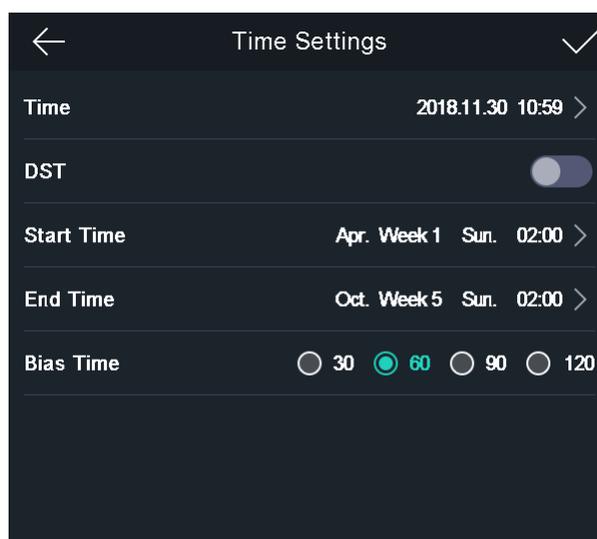
Parameter	Description
Community No.	Set the device installed Community No.
Building No.	Set the device installed Building No.
Unit No.	Set the device installed Unit No.
Voice Prompt	Tap  or  to disable or enable the voice prompt.
Voice Volume	Adjust the voice volume. The larger the value, the louder the volume.

Parameter	Description
Application Mode	You can select either others or indoor according to actual environment.
Wake-up Distance	Wake-up means when person or object is approaching the device, the device will change its status from sleep mode to authentication mode.  The wake-up distance means the maximum distance to wake up the device. <b>Note:</b> Refer to <i>Appendix D Relationship Between Wake-up Distance and Environment</i> to view the relationship between the wake-up distance and the environment
IR Light Brightness	Set the IR light brightness when the IR light is enabled.
White Light Brightness	Set the supplement white light's brightness. The brightness ranges from 0 to 100.  0 refers to turning off the light. 1 refers to the darkest, and 100 refers to the brightest.

### Setting Time

You can set the device time and the DST in this section.

1. Tap **Time** (Time Settings) on the Home page to enter the Time Settings page.



2. Edit the timeparameters.

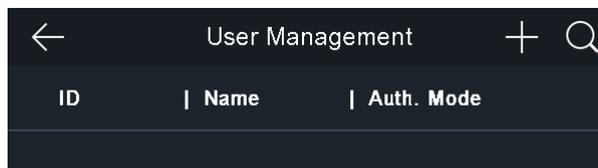
Parameter	Description
<b>Time</b>	Set the time which will be displayed on the device screen.
<b>DST</b>	Enable or disable the DST function. If enabling the DST function, you can set the DST start time, end time, and the bias time. <b>Start Time:</b> Set the DST start time. <b>End Time:</b> Set the DST end time. <b>Bias Time:</b> Set the DST bias time when the DST starts.

3. Tap  to save the settings and go back to Home page.

## User Management

On the user management interface, you can add, edit, delete and search the user.

Tap **User** on the Home page to enter the User Management page.



### Adding User

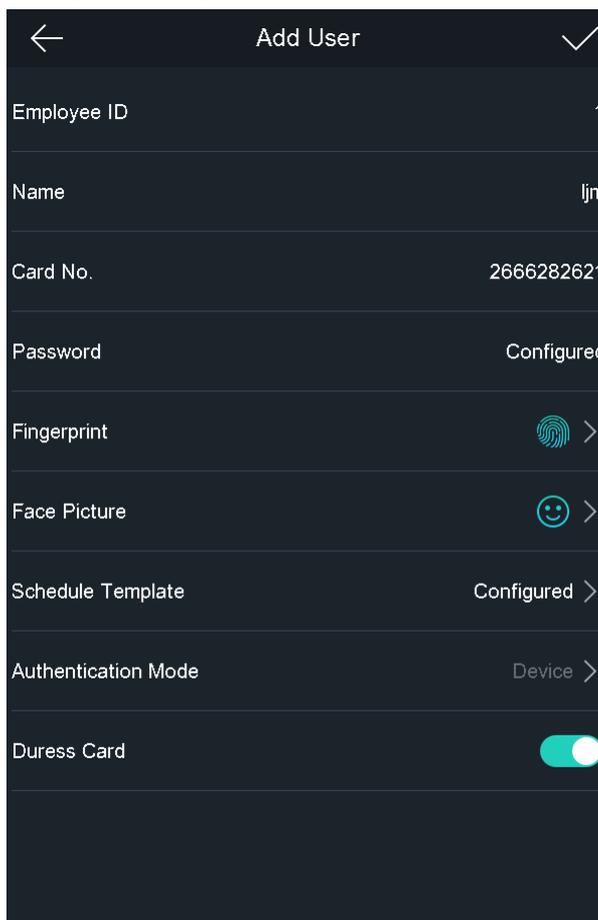
On the **Add User** page, you can add users, including the employee number, name, card number.

You can also link the face picture to the user, or set password, authentication mode, schedule template, administrator permission for the user.

#### NOTES:

- Up to 50000 users can be added.
- Some models do not support the fingerprint related function.

1. On the User Management page, tap **+** to enter the Add User page.



2. Tap the **Employee ID.** field and edit the employee ID.

**NOTE:** The employee ID should be between 1 and 99999999. The employee ID should not start with 0 and should not be duplicated.

3. Tap the **Name** field and input the user name on the soft keyboard.

**NOTES:**

- Numbers, upper case letters, lower case letters, and special characters are allowed in the user name.
- Up to 32 characters are allowed in the user name.

4. Tap the **Card** field and input the card No.

**Option 1:** Input the card No. manually.

**Option2:** Swipe the card over the card swiping area to get the card No.

**NOTES:**

- The card No. cannot be empty.
- Up to 20 characters are allowed in the card No.
- The card No. cannot be duplicated.

5. Tap the **Password** field and create a password and confirm the password.

**NOTES:**

- The Card No. cannot be empty.
- Up to 20 characters are allowed in the Card No.
- The Card No. cannot be duplicated.

6. Tap the **Face Picture** field to enter the face picture adding page. Follow the steps below to add the user's face picture:

- a. Position your face looking at the camera.

**NOTE:** Make sure your face is in the face picture outline when adding the face picture.

After completely adding the face picture, a captured face picture will display on the page.

**NOTE:**

- Make sure the captured face picture is in good quality and is accurate.
- For more details about adding face pictures, see ***Tips When Collecting / Comparing Face Picture*** on page 27.

- b. Tap **Save** to save the face picture. Or tap **Try Again** and adjust your face position to add the face picture again.

**NOTE:** The maximum duration for adding a face picture is 15 seconds. You can check the remaining time for adding a face picture on the left of the page.

7. Tap the **Schedule Template** field to enter the Schedule Template page. Select a schedule template and tap ✓ to save the settings.

**NOTE:** After applying the schedule template from the client software to the device, you can select the corresponding schedule template.

8. Tap **Authentication Mode** to enter the Authentication Mode page. Select **Device** or **Custom** as the authentication mode.

**Device:** If you want to select device mode, you should set the terminal authentication mode in Access Control Settings page first. For details see *6.5 Setting Access Control Parameters*. The user will authenticate his identity according to the configured authentication mode. By default, the authentication mode **Device**. This mode is applicable to edit users' authentication modes in batch.

**Custom:** If an user needs to use a special authentication mode, which is different from the authentication mode configured in *6.5 Setting Access Control Parameters*, he can use other authentication modes. The user will authentication his identity according to the customized authentication mode first. This mode is applicable to edit single user's authentication mode, which has special permissions.

9. Enable or disable the **Duress Card** function.

When the function is enabled, the user's card will be the duress card. When the user authenticates by swiping this duress card, the device will upload a duress card event to the client software.

10. Tap ✓ to save the user parameters and go back to the Home page.

## Managing User

### Searching User

You can search the user in the list according to the employee ID, the Card No., or the user name.

1. On the User Management page, tap  to enter the Search User page.
2. Tap **Card** on the left of the page and select a search type from the drop-down list.
3. Tap the input box and input the employee ID, the Card No., or the user name to search.
4. Tap  to start search. The searching result will be displayed on the list.

### Editing User

You can edit the added user information by following the steps in this section.

1. In the User Management page, tap the user that needs to be edited to enter the Edit User page.
2. Refer to the parameters' instructions in **Adding User** on page 22 to edit the user information.
3. Tap  to save the settings and go back to the User Management page.

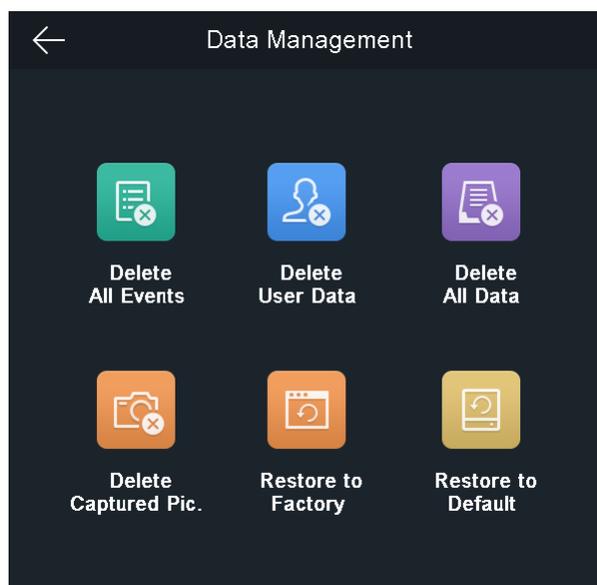
**NOTE:** The Employee ID cannot be edited.

## Other Management

### Managing Data

On the Data Management page, you can delete all events, user data, all data, and captured pictures, and restore device to factory settings or default settings.

1. Tap **Data** (Data Management) to enter the Data Management page.



2. Tap the button on the page to manage data. The available button descriptions are as follows:

Parameter	Description
Delete All Events	Delete all events stored in the device.
Delete User Data	Delete all user data in the device.
Delete AllData	Delete all user data and events stored in the device.
Delete Captured Pic.	Delete the device captured pictured.
Restore to Factory	Restore the system to the factory settings. The device will reboot after the setting.
Restore to Default	Restore the system to the default settings. The system will save the communication settings and the remote user settings. Other parameters will be restored to default.

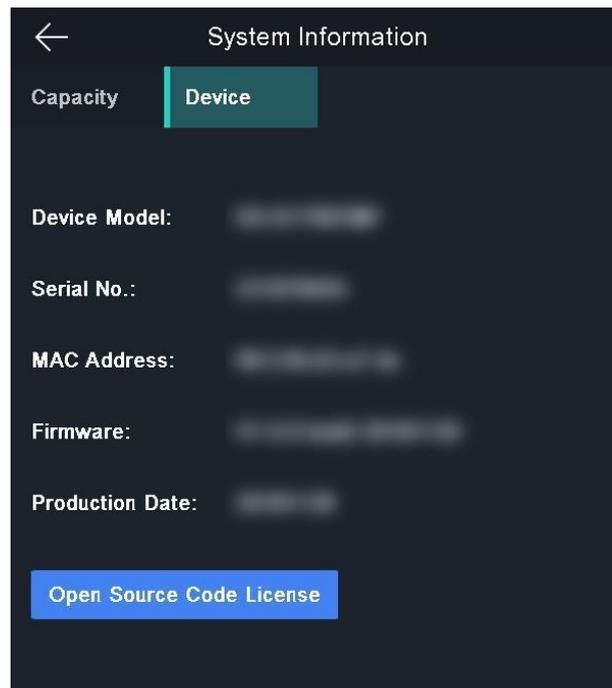
3. Tap **Yes** on the pop-up window to complete the settings.

### Viewing Device Information

You can view the device model, the serial No., the MAC address, the firmware version, the production date, and the open source code License.

Tap **Device** to enter the Device page.

**NOTE:** The device information page may vary according to different device models.

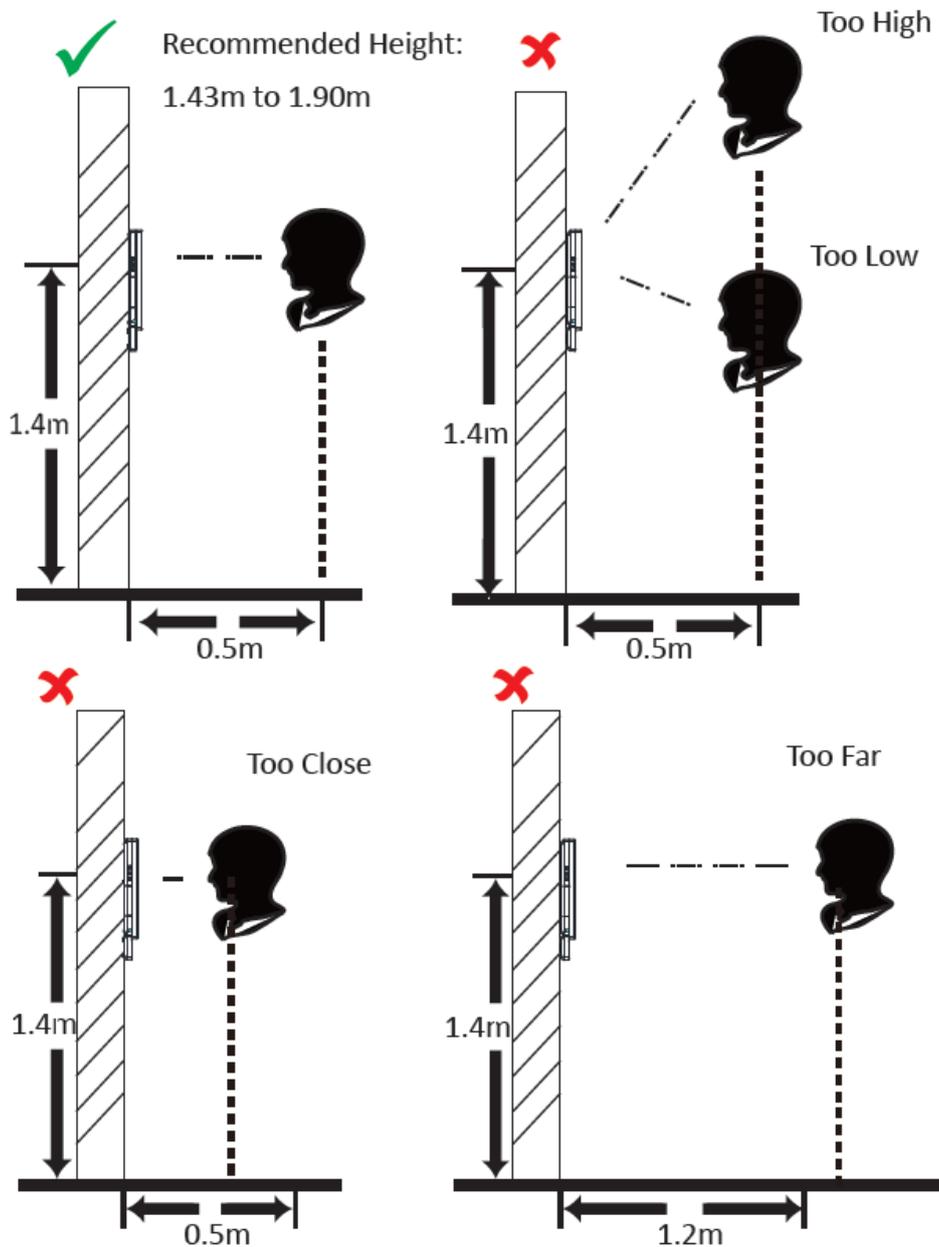


# Appendix

## Tips When Collecting / Comparing Face Picture

### Position (Recommended Distance: 0.5 m)

The position when collecting or comparing face picture is as below:



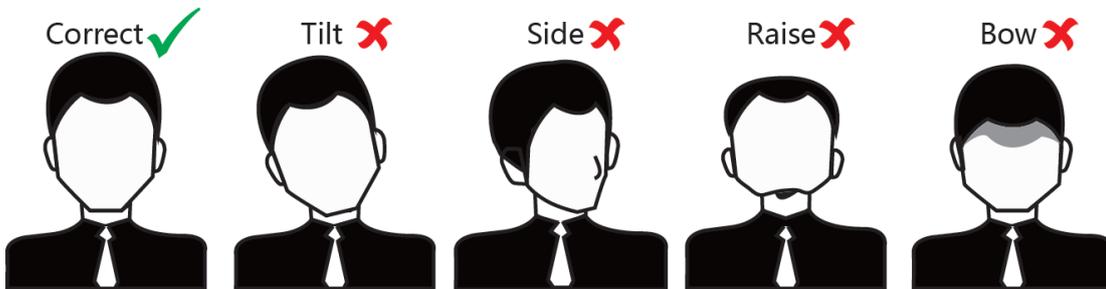
## Expression

- Keep your expression natural when collecting or comparing face pictures. Example on the right:
- Do not wear hat, sunglasses, or other accessories that can affect the facial recognition function.
- Do not make your hair cover your eyes, ears, etc. and heavy makeup is not allowed.



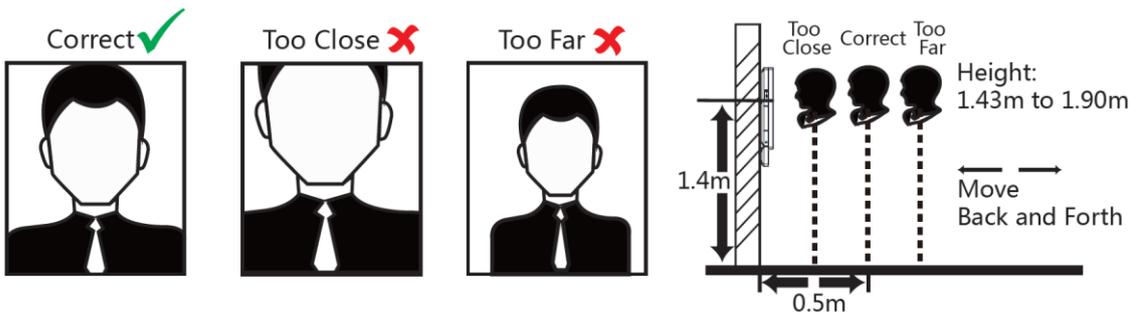
## Posture

In order to get a good quality and accurate face picture, position your face looking at the camera when collecting or comparing face pictures.



## Size

Make sure your face is in the middle of the collecting window.



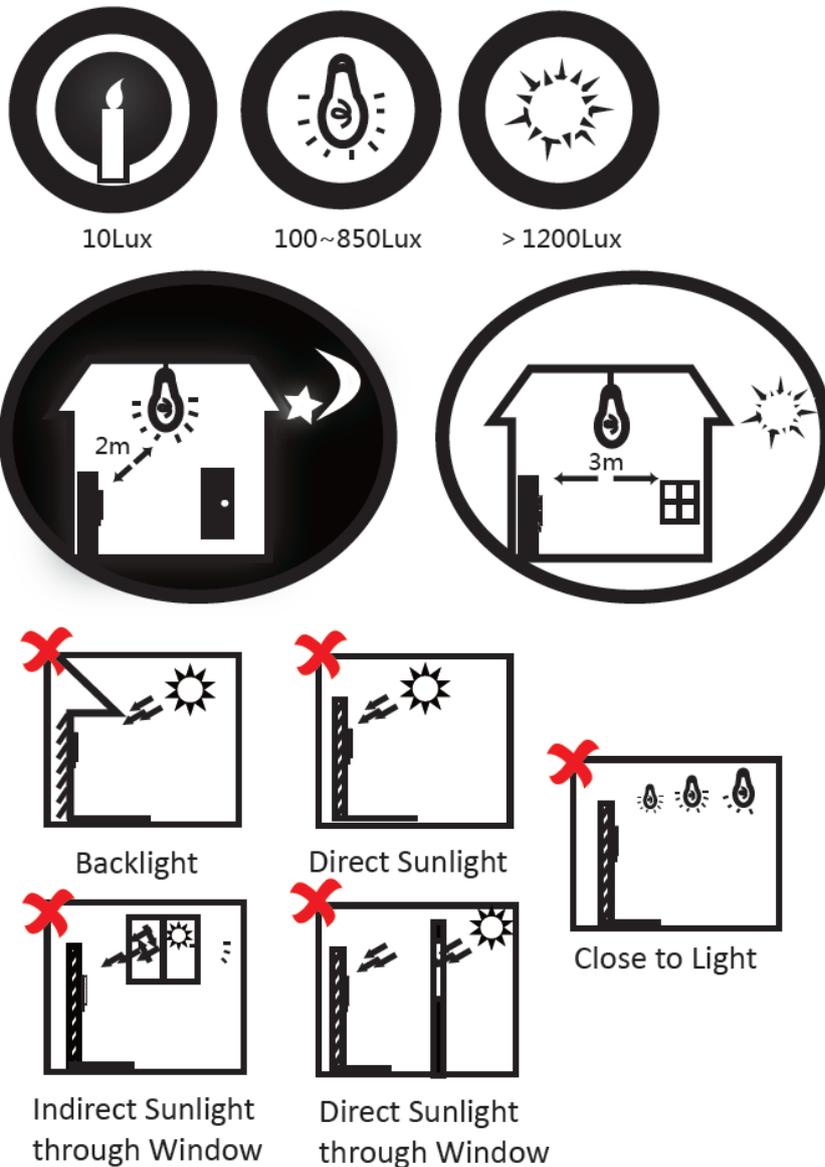
## Tips for Installation Environment

Indoor and outdoor installations are supported.

If installing the device indoors, the device should be at least 2 meters away from the light, and at least 3 meters away from the window or the door.

If installing the device outdoors, you should apply silicone sealant among the cable wiring area to keep raindrops from entering.

Make sure the environment illumination is more than 100 Lux. If the light source is 0.5m away from the device, the illumination should not be less than 100 Lux.



## Relationship Between Wake-Up Distance and Environment

	Environment	Short	Medium	Long
At Dusk (Low Illumination)	Normal White Wall	1.06 m	1.67 m	3.62 m
	Acrylic Wall in Laboratory	0.85/0.73 m	1.30/1.21 m	4.16 m
	Human Body	0.74 m	0.94 m	1.50/1.45 m
	Window Glass	/	/	/
At Night (TurnLight off)	Normal White Wall	0.97 m	1.61 m	3.91 m
	Acrylic Wall in Laboratory	0.79 m	1.32 m	3.67 m
	Human Body	0.47 m	1.03 m	1.65 m
	Window Glass	1.18/1.65 m (Turn on Light at Night)	1.53/2.66 m (Turn on Light at Night)	3.35 m
Daytime (Turn Fluorescent Lamp on)	Normal White Wall	1.1 m	1.8 m	> 4 m
	Acrylic Wall in Laboratory	0.8 m	1.5 m	3.1 m
	Human Body	0.7/0.6 m	1.2/1.14 m	1.5/1.42 m
	Window Glass	1.1 m	1.8 m	> 4 m
Daytime (Turn Camera to Sunlight)	Human Body	0.3/0.26 m	0.56/0.5 m	1.03/1.06 m
Daytime (Turn device's back to unlight)	Human Body	0.36 m	0.6 m	1.25 m
At Night (TurnLight on)	Acrylic Black Wall	0.56 m	0.83 m	1.25 m



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