freecam™

C310 Solar Intelligent WiFi Camera
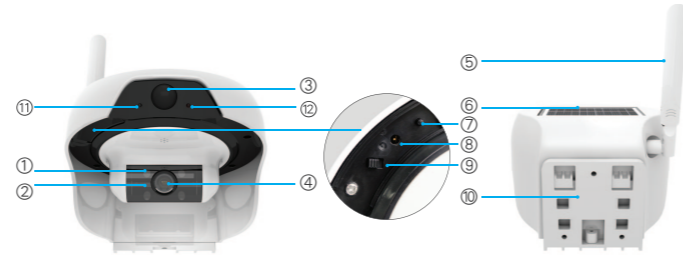## User Manual V2.4

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C310 is a smart WiFi camera that can operate for a long time with only solar power supply.
· **C310 only works under PIR alarm triggered or APP remote to wake up, usually it keeps online in deep sleep mode with low power consumption;**
· **When an object enters the warning area of C310, it can automatically wake up the camera, and push pictures to notify users;**
· **C310 can wake up quickly anywhere by mobile phone and view live video；**
· **Automatic recording after wake up;**
· **Infrared LED can supply light at night;**
· **In most area of the world, C310 can operate long time under normal sunlight.**

1 Appearance Illustration

Prior to installation of this equipment, please carefully read all operation and installation instructions, and operate according to these instructions.

① Infrared light	② Photosensitive device	③ PIR sensor
④ Lens	⑤ Antenna	⑥ Solar charge panel
⑦ WiFi reset button	⑧ Charging socket	⑨ Power supply switch
⑩ Mounting base bracket	⑪ Power indicator	⑫ WiFi status indicator

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2 Indicator Light Status

Indicator light status	Status	Solution
Yellow Power indicator on	Charging	
Yellonw Power indicator on and go out	Charge complete	
WiFi indicator blinks blue	Waiting for connecting	
WiFi indicator blinks red	Connecting to WiFi	If it blinks over 1 minute and still can't connect success, please reset device and check the router's WiFi
WiFi indicator off	Normal working or power off	

3 Installation Instructions

1 Install mobile client software
1.1 Equipment power-on
Before use, please connect the charging cable to the matching DC5V / 1A mobile phone charger to charge the equipment. For first time to charge the device, it should be charged at least six hours. The equipment can be powered off once it finishes charging.

1.2 Install mobile client software
APP name: Doby
Scan the following QR code, then download and install it.
If you need PC client software, please download at Download center from LSVT official website.
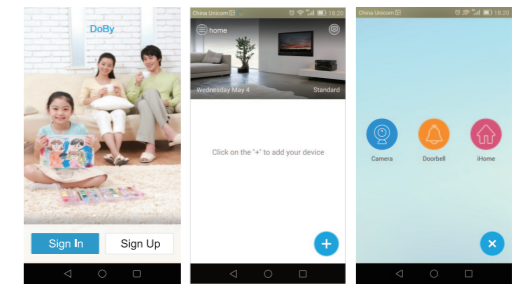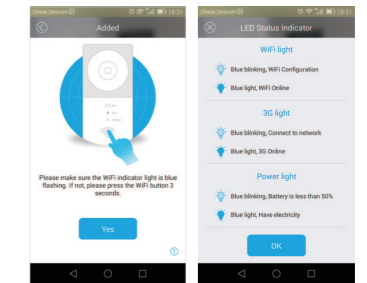
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1.3 Register and log in
Open the client software, click on [Sign Up], and register a new account number, and operate according to the prompted steps: if you already have an account, click on [Sign In] directly.
1.4 Add equipment
1.4.1 After registering and logging in successfully, enter [Home], click on
" ⊕ " in the lower right corner, and select "Camera":

1.4.2 Please place the camera where there is strong WiFi signal, then turn on the camera's power switch (see the Page1) to check if the device WiFi light is blinking blue. If blue light flashes, then click on "Yes" to enter the WiFi configuration interface; if not, please keep press the WiFi button for 3-5 seconds, and wait until the WiFi indicator flashes blue, then click on the "Yes" to enter WiFi configuration page;

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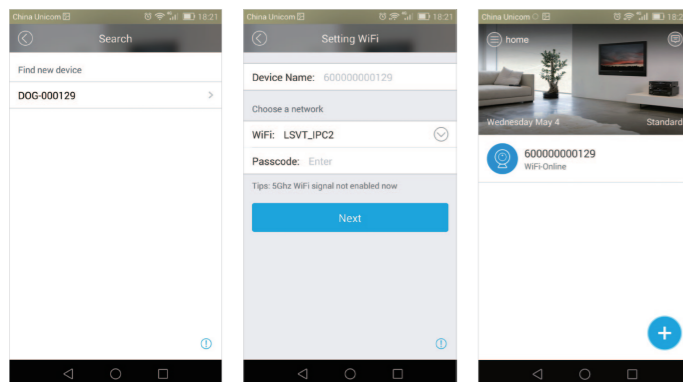1.4.3 Android system – add equipment
1.4.3.1 For Android mobile phone, on [Nearby Equipment] page, Select the adding device ID. (e.g. DOGXXX)
1.4.3.2 Enter [Setting WiFi] interface, select the wireless network to be connected to, enter router's password, and then click on "Next".
1.4.3.3 Added successfully.
1.4.3.4 The WiFi status indicator blinks red over 1 minute, means it may be a wrong password to enter a router, or bad WiFi notwork condition.

⚠ Notice
WiFi Reconfigure
When the password is wrong, or your network changes, you can refigure WiFi as shown below:
Please turn on the camera and wait the WiFi status indicator light on, then press the WiFi reset button for 3-5 seconds till the WiFi status indicator has blinks blue, and add camera by APP again (see Fig.1.4.2).
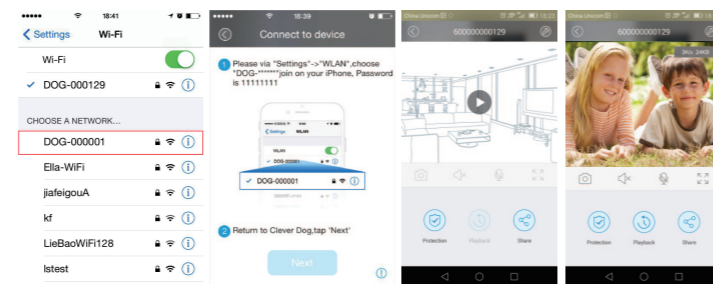

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1.4.4 IOS system – add equipment:
IPhone: open the system's "Setting" -> "WLAN", select "DOG-******" to connect it, and the password is eight 1. Then go back to the client, and click on "Next".
1.5 Video view
1.5.1 Click on the equipment number in the list on the [Home] page, enter "Camera Video View" page, and click on " ▶ " to enter the [Living Broadcasting Page].

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1.5.2 Menu bar:
· ⎙ Camera: Capture the current live broadcasting screen and save it to the equipment album.
· ◁× Voice: Click on the horn button to hear the voice from camera;
· 🎤 This model doesn't support such function;
· ⤢ Full screen: Click on it to display in landscape mode;
· ◎ Protection: After enabling the "Motion Detection" function, when the screen of the environment on the camera end changes, the changed picture will be captured, and such information will be sent to mobile phone client(see Fig. 1.5.2).
It includes motion detection (ON/OFF), sensitivity (namely, PIR detection sensitivity, which can be adjusted to be low, medium and high according to the requirements, this not supported in current version), and alarm time period(set the alarm time period) and so on.
· ⟳ Historical video: View the historical video saved in SD card;
· ⇗ Intimate share: Share the video with your relatives and friends who have registered account, and then your relatives and friends can view your video images. (Such equipment doesn't support viewing by multiple persons at the same time. Only one user can view at any moment).

1.5.3 ⚙ Setting（see Fig.1.5.3）:
• Equipment name: You can give the equipment a nice name.
• WiFi configuration: It's not currently supported.
• Equipment information: View the information status of the equipment.
• Video recording: Select "When error is detected" or "Never".
• SD card: View the status of SD card of the equipment.
• Video direction: There are two options of "Default (forward direction)" and "Invert (Rotate for 180°)".
• Time zone of equipment: When the equipment is initially activated, it uses local time zone,If needs to be changed, click to setup.
• Equipment indicator light: This model is not supported.

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1.5.4 PIR detection
If moving objects are detected within 5 meters by device, motion detection will be triggered and alarm notification pushed to mobile phone APP (refer to Figure 1.5.4a). A screenshot will be sent with recorded video about 30 seconds once alerts occur (Whether WiFi is connected or not, video will be recorded).

Notice: Please check if the phone's lock screen notification for the APP has been turned on. There have some different ways for different phones to set up (refer to Figure 1.5.4b).
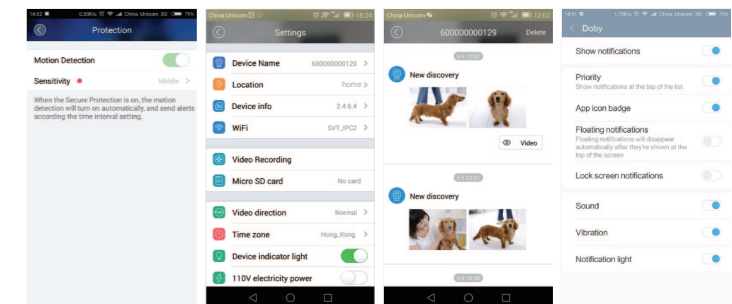

| Fig. 1.5.2 | Fig. 1.5.3 | Fig. 1.5.4a | Fig. 1.5.4b |

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2 Device Installation Instructions

This equipment usually can be installed on the wall or pole (ensure there is sunlight as much as possible). The mounting wall should have certain thickness and can afford at least three times of the weight of the equipment. Please select the mounting position as required.

2.1 Prior to installation of the product, first confirm steady WiFi signals (at least two grids of signals) in installation position with mobile phone. When the installation place cannot be covered by WiFi signals, it's allowed to add WiFi repeater to realize extension. Please install the repeater in the place between route and camera where there are at least two grids of signals (Please refer to router and repeater installation and instructions).

2.2 Method of installation on the wall (see Fig. 2.2): tear down the installation sticker, paste it in the selected position, dig a hole, knock the expansion bolt into the blank space (please select a sunny place for installation) .
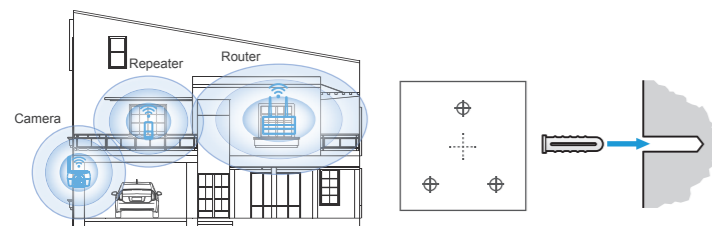

Fig. 2.1   Fig. 2.2

2.3 Align the mounting bracket with the installation sticker, and fix the installation bracket in the position of hole with screw. If you install the equipment into the wooden wall, the equipment can be fixed by directly pushing in the screw. Then install the equipment on the bracket, and fix it with screw (see Fig. 2.3).

2.4 Ribbon type installation method: Such method applies to installation of the equipment on the pole. First bind the installation bracket onto the pole with ribbon, and tighten the ribbon as much as possible. Then install the equipment onto the bracket, and fix it with screw (see Fig. 2.4).

2.5 In selecting installation place, please note:

2.5.1 Please try to select a place with plentiful sunshine for installation.

2.5.2 Avoid installing the equipment in the place where the equipment is disturbed by the object which moves frequently as much as possible.
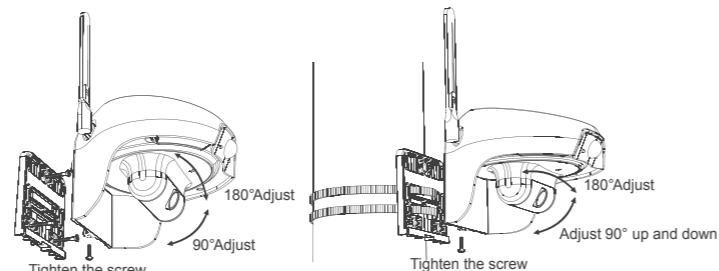

Fig. 2.3   Fig. 2.4

2.6 Sunlight distribution of the world (see Fig. 2.6). Please confirm whether the installation is appropriate according to the sunlight distribution of the country or region where you are located (you might need to charge the camera with charger regularly for the country or region where the average peak sunshine duration is within 1.0-2.9).

Note: Peak sunshine means the maximum solar irradiance which can be obtained in most places of the earth surface on sunny days – 1000 w/m2.

2.7 The operating time of this camera is related to charging time of sunlight and the number of times of triggering and waking up. Fig. 2.7 describes and expresses the relation among these three factors. Please refer to it when using this product.
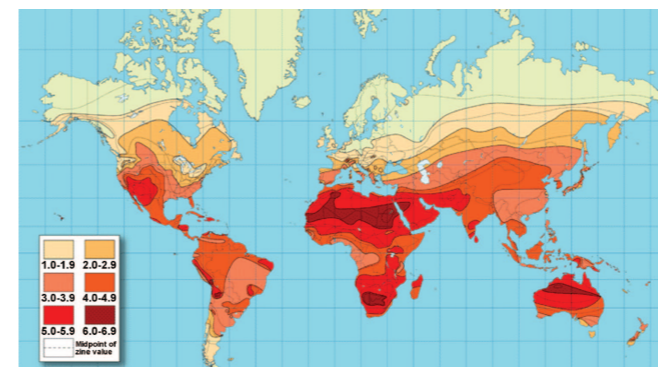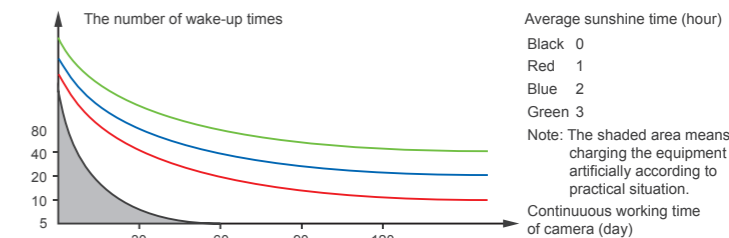

Fig. 2.6

Fig. 2.7

2.8 Notes:

PIR detection is a high-sensitivity detector which is used for infrared detection of object motion. Therefore, motion detection can be triggered by the change of sunshine when cloud layer moves fast outdoors, the movement of automobile, and the floating of leaves caused by wind.

> **Notice**
>
> **If user discovers false alarm frequently , please find reasons and use "PIR shield sheet" to cover this interference area. If the shield sheet still not work, you can select "security" option in APP and turn off the "motion detection" function in "Protection" option until environment return to normal, you can open and use this function again.**

PIR shield sheet Installation:

2.8.1 Paste the PIR shield sheet in the position of camera PIR device according to Fig. 2.8.1.

2.8.2 Bend the shield sheet of five areas according to Fig. 2.8.2 so as to shield the areas.

2.8.3 After an area is shielded, the moving objects in such area cannot trigger and wake up the camera.
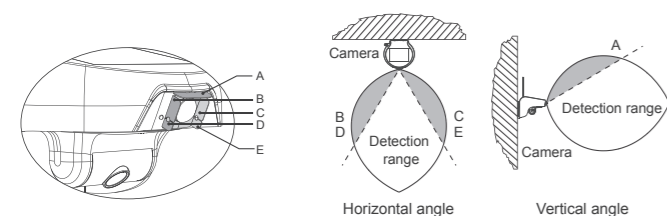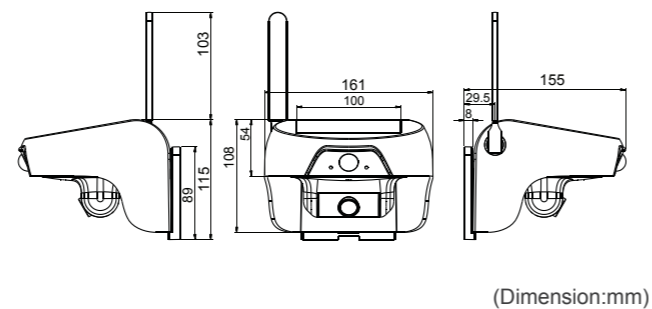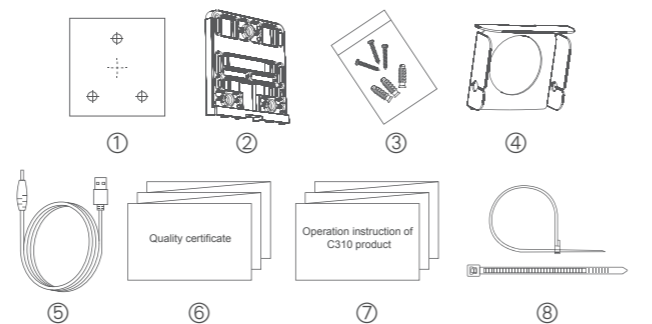

Fig. 2.8.1   Fig. 2.8.2

Horizontal angle   Vertical angle

Note: The shaded area can change with an appropriate amount according to the bending angle of the shield sheet.

4 Product Dimension

(Dimension:mm)

5 Accessories

①	Installation sticker × 1	②	Mounting base bracket × 1
③	Screw set × 1	④	PIR shield sheet × 1
⑤	Charging cable × 1	⑥	Quality certificate×1
⑦	Operation instruction of C310 product× 1	⑧	Ribbon×2

6 Technical Parameters

Item	Specification
Product model	C310 Solar Intelligent WiFi camera
Lens	3.6mm / M12/90 degrees
Video	H.264 encoding
Audio	Support
WiFi	Support IEE802.11b / g / n protocols(4GHz)
Infrared fill light	Support
PIR body induction	Induction distance ≈ 5 meters
Cycle time	If there is no operation within 30 seconds after trigger is started, enter the sleep state
Network P2P traversal	Support
Battery power indicator	APP support
Standard solar panel	Maximum output current is 150mA@5.5V, which will change according to solar intensity and incident angle
Extensible storage space	Extensible storage space: Built-in 16GB Micro SD card
Battery and standby	6800mAh, charged with solar energy 20 hours per month. Wake up or trigger startup for 10 to 20 times per day, and can be used for a long time
Dimension	161 × 155 × 108 mm
Net weight	800 g
Waterproof level	IP55

7 FreeCam's common problems and solutions

1 Equipment adding failure.

Several causes leading to equipment adding failure:

① Pending time-out error at App equipment adding

Solution: If the WiFi status indicator blinks red over one minute, please press the reset button for 3-5 seconds till the WiFi status indicator blinks blue, then confirm if the router signal is favorable and input correct router password to re-add the equipment.

② A prompt message "Please input the default password, 11111111" on some Android mobile phone;

Solution: The failure is caused by connection abnormity between mobile phone and camera hot point; first of all, please access to WiFi setup interface of mobile phone to connect to the camera (hot point name is DOG-***) manually, and then return to app; if the failure still exists, please turn off the mobile phone WiFi and turn it on again. Repeat the above-mentioned connection method manually to add the equipment smoothly.

2 Whether C310 solar intelligent WiFi camera can work all the time? How to deal with power outage while using the equipment?

The equipment can be used for long-term in case of 4-5 days of sun irradiation charging every month and 10-20 times of triggering actions. If it displays as low battery:

① Reduce awakening arising from false alarm as far as possible; use PIR shilding case or turn off motion detecting function to save electric quantity.

② Charge for the camera with a common USB charger indoor or with a charger.

3 Whether the contents stored at the TF card of the camera can be reviewed on a PC?

The videos stored in the camera can be reviewed with a mobile phone with WiFi available or remove TF card to insert to a PC card reader. Use FreeCam PC client-side to review the record.