DefendCam

DefendX
- Your 24h Safe Guarder

User Manual

V 1.0

Welcome

Thank you for purchasing our wire-free WiFi camera Defend X!

This user manual is designed to be a reference tool for the installation and operation of your Defend X camera.

Here you can find information about the camera's features and functions, as well as information to aid in troubleshooting.

Support

Many of the setup and installation sections have corresponding introductions on Defend X official website, please go to: www.defendcamera.com

For access to details of the cloud service and your subscription plans, go to:

Your DefendCam App
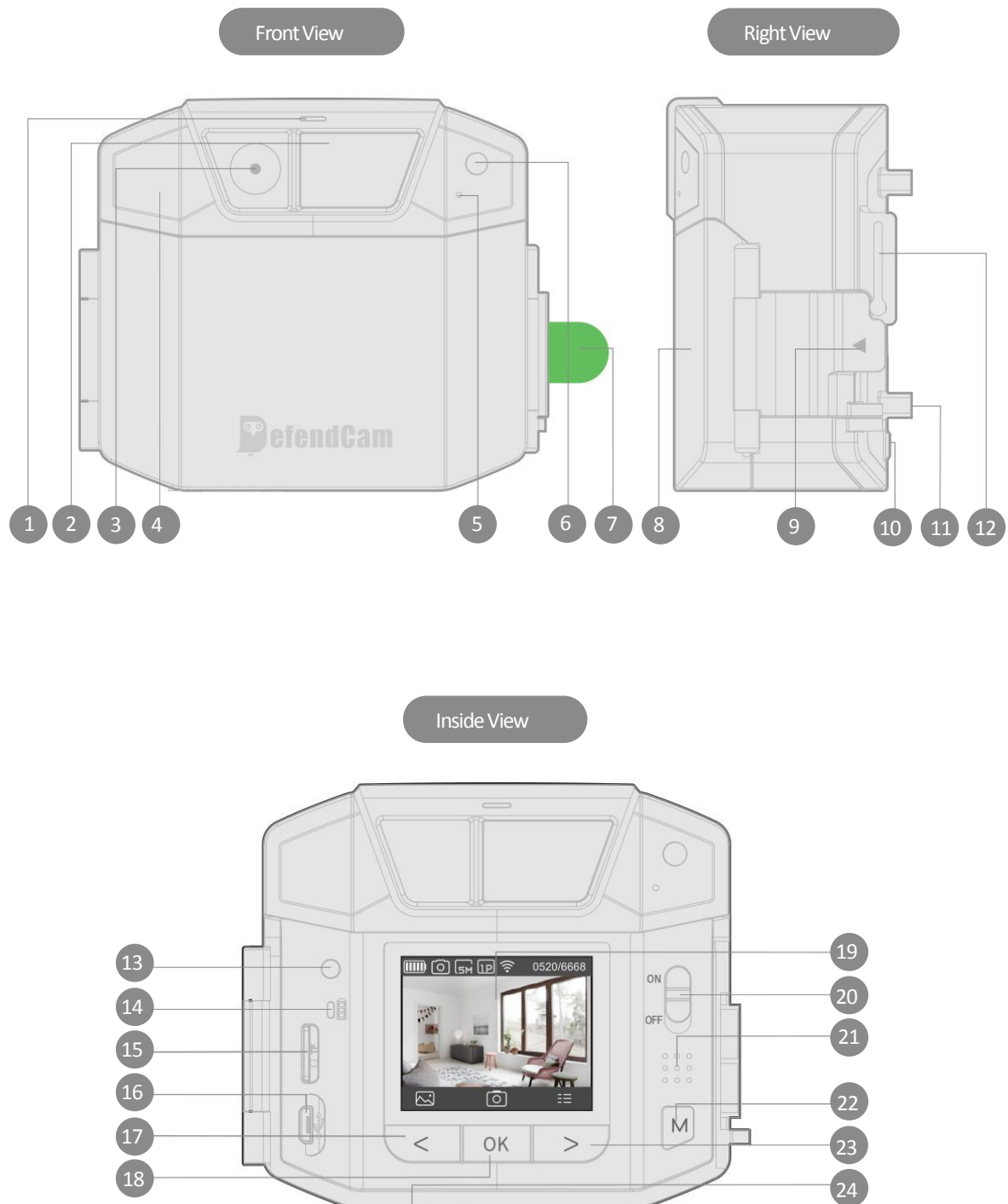
www.defendcamera.com

www.wuyuantech.com

To contact Defend X for timely support, please send your emails to:

support@defendcamera.com

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1. Introduction to the Camera

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Right View

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⑦ Insulation Paper	⑲ Display Screen
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⑨ Latch	㉑ Speaker
⑩ Screws	㉒ Menu/Exit
⑪ Lock Hole	㉓ Network Status/Navigation Button/Reset
⑫ Strap Hole	㉔ Power Port

Please refer to the following chart for information about the camera's indicator lights.

No.	Indicator Light	Meaning
①	Working Status Indicator Light	The light turns red-the camera cover is open and the power is switched on;
		The light blinks-the camera is at preview/setting mode and detects a motion;
		The light turns off after 5 flashes-the camera enters auto photo/video taking mode when its cover is closed.
⑭	Power Charging Indicator Light	The light turns red-the camera is on process of power charging when connected with external power source;
		The light turns green-the camera is charged full.

Please refer to below chart for information about the camera's buttons.

NO.	Buttons	Function
⑳	Power Switch	To power on/off the camera
㉒	Menu/Exit	To enter menu or exit from current step
⑱	OK Button	To take a photo/video manually; to confirm setting changes; to play videos when previewing.
⑰	Preview/Navigation	To preview photos/videos; to navigate to previous options.

|	Button	
㉓	Network Status/ Navigation Button/Reset	To check network status; to navigate to next options; to reset the camera when pressing up to 15 seconds.
⑬	Working Status Shift Button	When it is pressed down by close of the camera cover, the camera enters into auto photo/video taking mode;
		When it is released by opening of camera cover, and the camera screen lights up for previewing / programming/ manual test. Note: The camera will auto turn off when there is no operation at the main interface more than 3 minutes.

2.Setup Your Camera

2.1 Get the Camera Ready

1) Power Charge

The camera is provided with 2 built-in rechargeable batteries. For full performance of the camera, please charge the batteries full by DC with the provided power adaptor in the box before you use the camera.

Note: There is an insulation paper inserted in the battery compartment, please pull it out at your first time of use. If it is too tight to pull out, please unscrew the battery compartment cover, and remember to screw it back for the best waterproof effect.
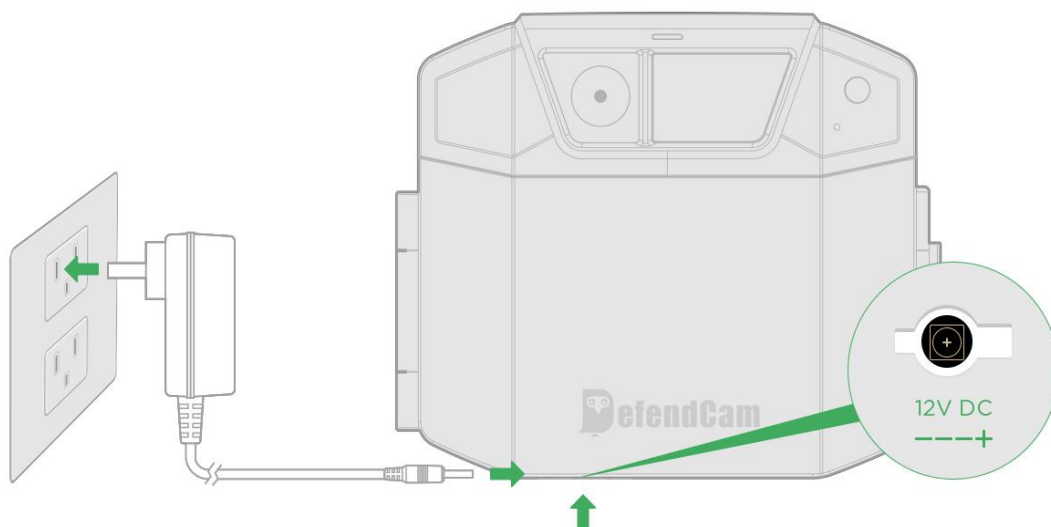
The power charging indicator light will turn green when the camera battery is fully charged.

Note: Except for powered by DC power (12V/1A output), the internal batteries of the camera can be also charged by solar power and other external power supply kits (sold separately) that with 9V/1A output. For uninterrupted camera use, you can consider adopting these spare power sources on hand for long term outdoor use.

Caution: Use the Batteries with Re/Discharge Protection Circuit

| 18650 Li-ion +

+ 18650 Li-ion |

⚠ Battery Warning

• Please keep the batteries away from children;

• Please place the batteries in the right direction of polarity;

• Please do not mix-use old and new or different types of batteries together;

• Please remove the batteries in avoidance of erosion resulting from battery leakage if you do not use the camera for long periods, and store them in a cool, dry, ventilated area.

2) Storage Space

Defend X supports SD card local storage and online cloud storage.

When the camera detects a movement, it will record and save the photo/ video to the SD card, then send to your encrypted DefendCam cloud account.

In this part, we will mainly introduce the SD card storage. For more details about the cloud storage, please refer to following chapter 2.2 and 6.

This camera supports 4-32GB Micro SD card, Class 10, UHS-1 or higher level, FAT32. When the SD card is not compatible or not properly inserted, the camera will display a prompt " No Card ".

Please refer to below photo for correct insertion (golden part face to left):

When inserting or removing the SD card, please make sure that the camera is turned off.

Steps to format the SD card: Left Navigation button -> OK button -> Right Navigation Button -> OK Button -> Yes ->OK Button -> M Button to back to main interface.

Note: There is no SD card included in the camera package, please purchase one and insert it in the camera.

2.2 Get the DefendCam App

Download the DefendCam app for your smartphone by scanning QR codes below or those on the camera packing box or searching for DefendCam in the app store.

Note: If you already use the DefendCam app, make sure that you are using the latest version. To find out if an update is available, go to the app store and search.

2.3 Add Your Camera to Your App

After successfully installed the app, please tap the DefendCam app icon on your mobile device to launch the app, and follow below steps to add your camera to the app.
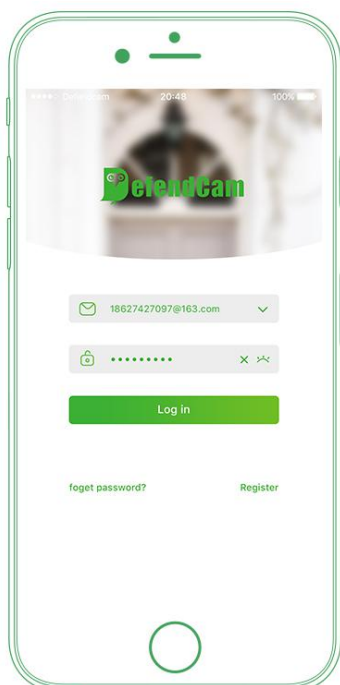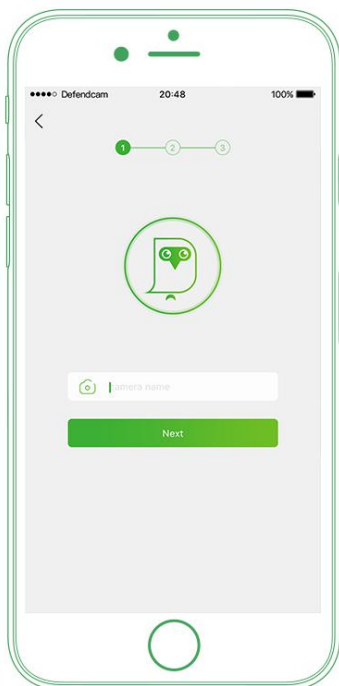

1.Please use a valid email address to register, then active the account by clicking the email you received, and log in.
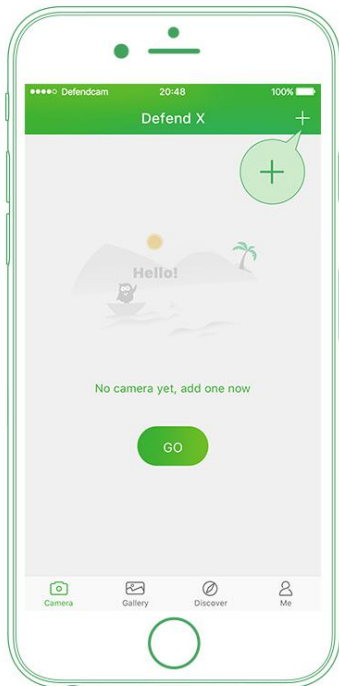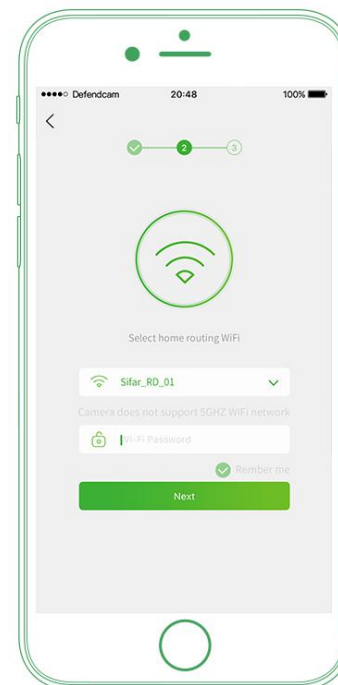
2.Click "Camera" icon, then click "+" to add your DefendX cameras.

3.Switch ON camera, please press menu button to enter main interface. Scan QR code on the camera.

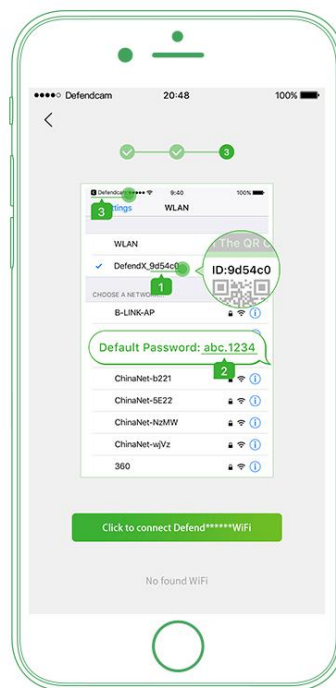4.Please name your camera for device management.

5.Please select your home router and enter the password (camera doesn't support 5GHZ Wi-Fi).

■ **Android APP**

■ **iOS APP**

6.For Android users, please connect your camera Wi-Fi according to the ID on the QR code. Then it will prompt the boot operation after success or failure.

7.For iOS users, please click the green button to enter into the setting interface. And then connect your camera Wi-Fi according to the ID on the QR code, the default password abc.1234. At last, click back to DefendCam app at the top left corner.

2.4 Configure Your Camera

1) Camera Operation Menu

Press "Menu" button to enter camera setting menu; to navigate setting interface by pressing navigation buttons "←", "→", press "OK" to confirm the configurations, "Menu" to exit the configuration page.
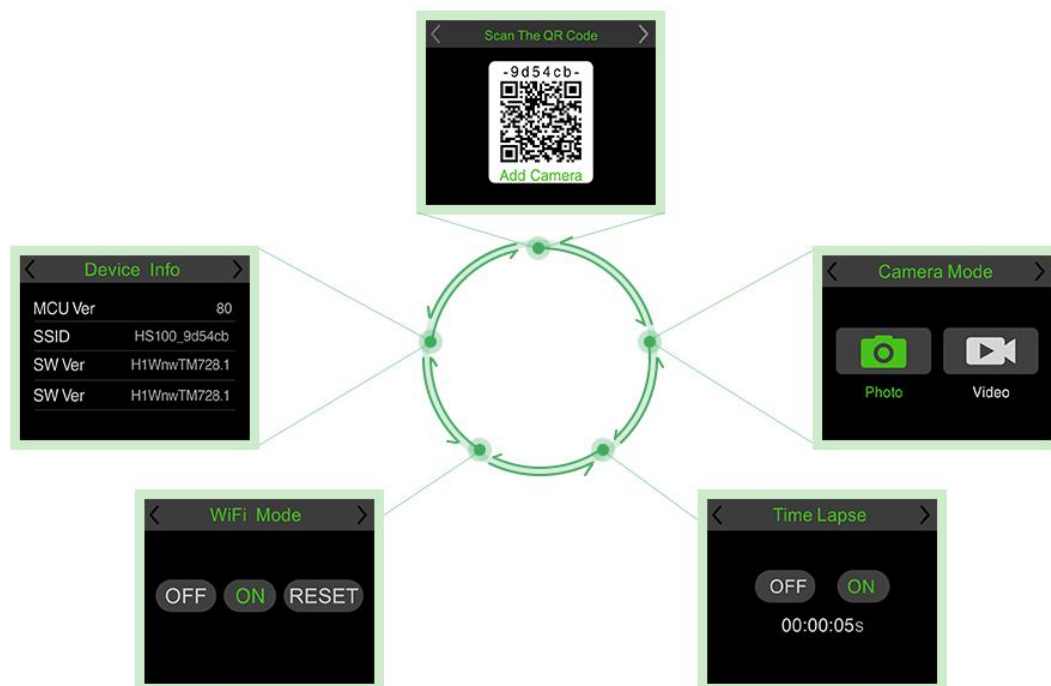
Menu Options	Functions (Default Settings Marked in Red)
Camera QR Code	The identification for you to recognize, add & manage the camera
Camera Mode	**Photo/Video** **Photo:** camera shoots photos based on configured Multi-shot & Image Size; **Video:** camera shoots videos based on configured Video Length/Size.
Time Lapse	**OFF/ON(HH:MM:SS)** Select "ON", press "OK", to set the interval; PIR sensor of camera will be turned off; camera will shoot pics or video clips automatically upon the interval user set. Configurable interval: 00:00:05~23:59:59.
WiFi Mode	**OFF/ON(HH:MM:SS)** OFF: the camera cuts off the network connection at this mode; **ON:** the WiFi connection capability of the camera is on at this mode; **RESET:** to clear the WiFi network already configured.
Device Info	**MCU Ver/SW Ver/SSID/MAC** **MCU Ver:** the MCU version of the camera chipset; **SW Ver:** the software version of the camera; **SSID:** the username of the WiFi network of the camera; **MAC:** the physical device address of camera.

2) App Function List
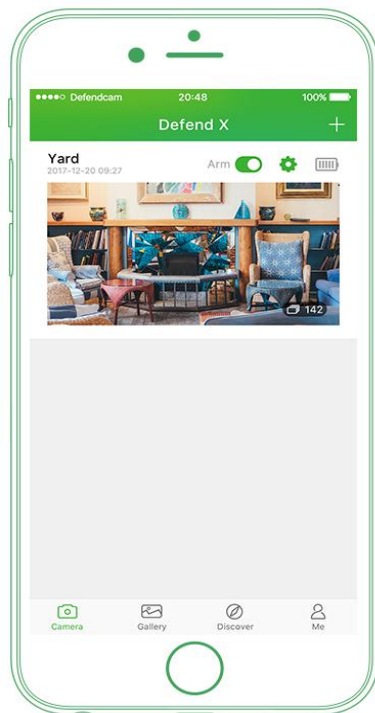
+ : Add New Cameras, tap this icon to add new camera.

◯ : Arm/Disarm, tap this icon to turn off/on PIR/Time Lapse working mode.

⚙ : Settings, tap this icon to enter settings page of the App.

▥ : Battery Status, this icon shows you left power volume of the camera.

142 : New recordings, this icon shows volume of camera feeds.

◯ : Added camera list, tap this icon to view all cameras added on the App.

▨ : Gallery, tap this icon to view & manage downloaded photos/videos.

⌀ : Tap this icon to discover the access for more services & cameras.

☺ : Tap this icon to know more details of your account.

3) Remote Camera Settings

Tap " ⚙ " icon on top right of each camera on the app, you will go to the interface for camera setting. Below is a list of settings you can change remotely on the phone App.
(Default Settings Marked in Red)

Camera Name	Programmable up to 12 characters in length
Camera Mode	Photo/Video
Image Size	5MP(2560x1920), 8MP(3264x2448), 12MP(4032x3024)
Multi Shot	1P-5P
Video Size	FHD 1080P@30FPS; HD 720P@30FPS; WVGA
Video Length	5s-10s
PIR Sensitivity	High/Middle/Low
Timer 1	OFF/ON(HH:MM-HH:MM), 00:00-23:59
Timer 2	OFF/ON(HH:MM-HH:MM), 00:00-23:59
Time lapse	OFF/ON (HH:MM: SS), 00:00:05-23:59:59
Delay	OFF/ON (HH:MM: SS), 00:00:03-23:59:59
Change Camera WiFi	Shortcut to connect the camera to another WiFi network. Note: Please follow the steps indicated on the App.
Delete Camera	No/Yes, the shortcut to delete the camera from the list
Other Settings	**Manually Upgrade:** Shortcut to upgrade camera software when there are updates available.
	SD Cycle: OFF/ON
	Sync Server Time

3.Manage Your Camera

This part will introduce how to add new camera, modify the camera information and modify camera login password etc.

3.1 Add New Camera

You can add the new camera by scanning the QR code on the camera menu. Tap " ➕ " to start.

Scan the QR code in camera menu to continue.

Note : In the dark environment, please turn on the flashlight on your phone.
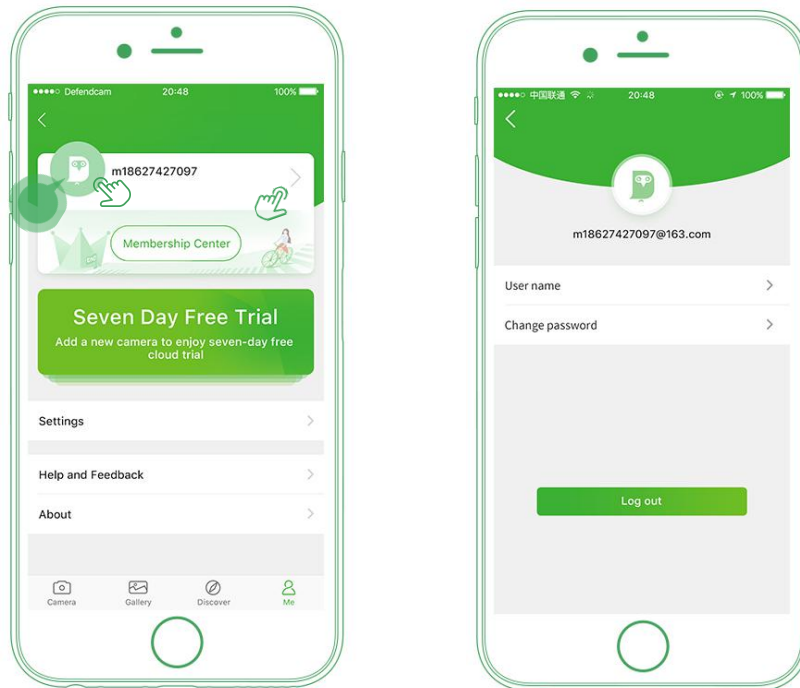
Follow the steps indicated on the App and camera to finish the adding process.

For detailed instruction, please refer to the steps explained in chapter 2.3 to add new cameras.

3.2 Edit the Camera

To modify the login information of your camera, follow the steps below:

1）Tap " 👤 " to enter your account info page

2）Tap the account icon to enter camera account editing page

3) Tap " User Name " and " Change Password ", then enter new login username and password (English letters & numbers only), and tap " Save " and " Done " on top right to save settings and tap " < " on top left to return to the previous page.
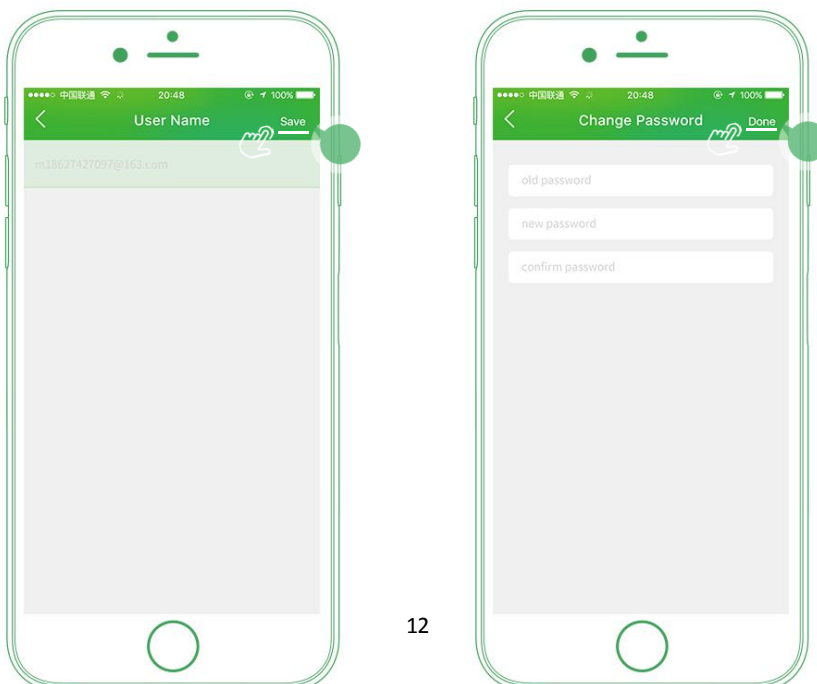
3.3 Reset the Camera

To reset the camera to factory original settings, please stay at main interface and press the right " Navigation " button up to 15 seconds, then release and a prompt " Complete " means the camera has been reset successfully.

Note: A reset of the camera will remove all personal settings you made on the camera, include the WiFi network info you configured on successfully.

3.4 Delete the Camera

On the " Camera " page, choose the camera you want to delete from the list, and tap "   " on top right to enter Camera Settings page, and tap " Delete Camera " to delete the camera.
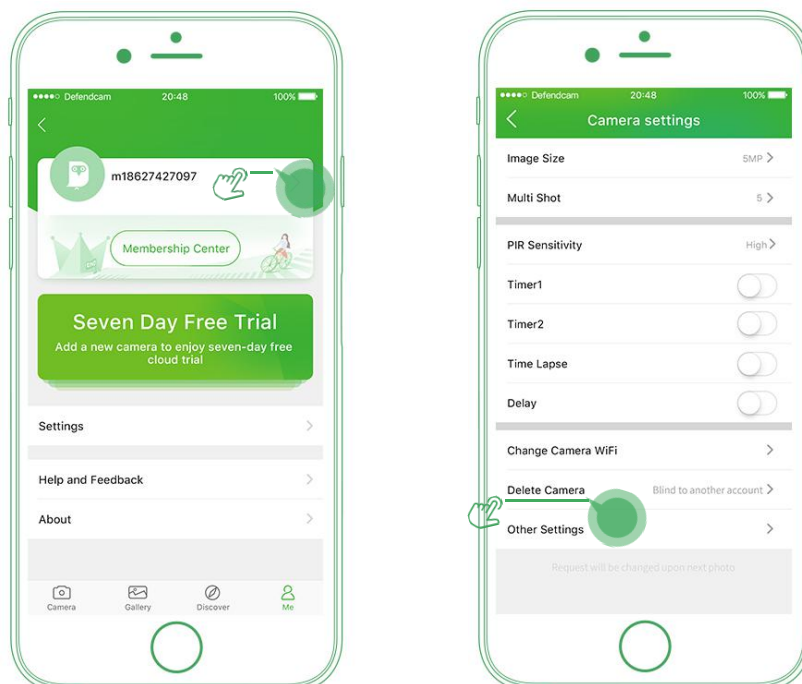
Note：A camera will be able to be added from another DefendCam account only after it is deleted from the previous account it has been added before.
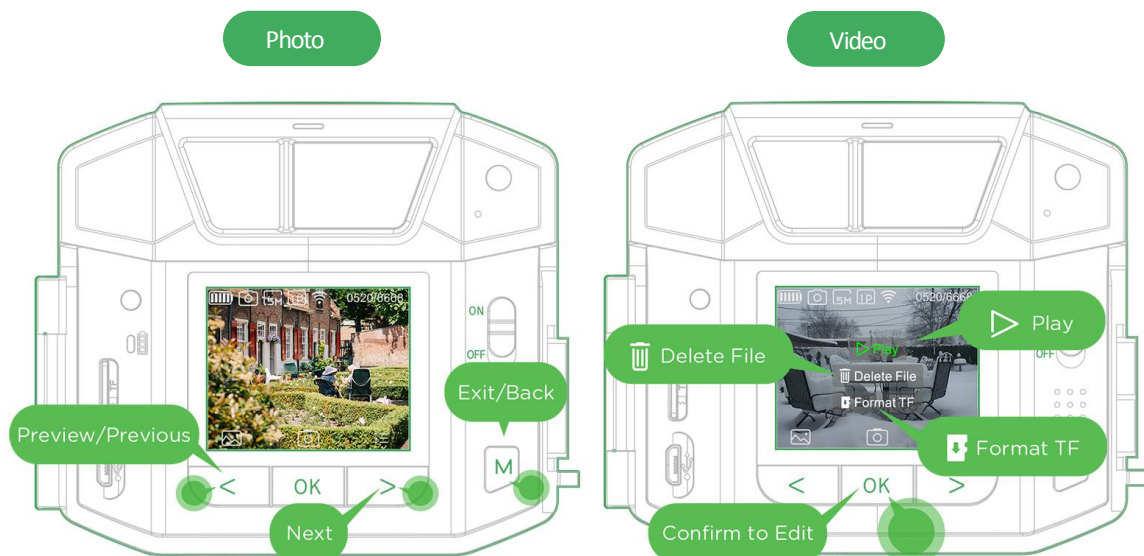
4.View & Manage Your Contents

The photos and videos taken are firstly stored on camera SD card, then sent to your encrypted DefendCam cloud storage space, and for permanent record of the contents in need, you will need to download them timely to your local Gallery.

4.1 View & Manage Your Contents on Camera

When the camera is on hand, you can check and manage the contents directly on camera or use the provided USB cable or your own prepared SD card reader to view and manage the contents on computer.

1) Directly on Camera

Steps: Switch ON Camera -> Press Left Navigation Button to enter contents previewing -> Left/Right Navigation Button to move forward/backward -> OK Button to edit/confirm -> M Button to exit/back.

2) Via USB/Card reader
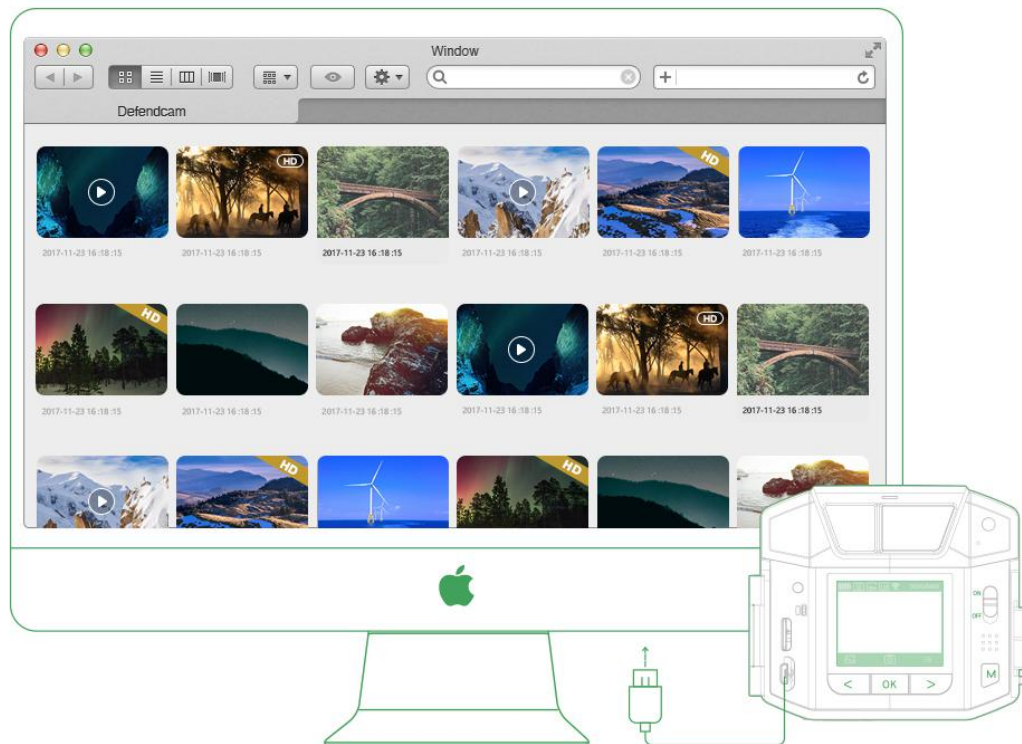

4.2 View & Manage You Contents on Cloud

Even without fetching your camera, you can also view and manage your camera contents at any time via your phone App DefendCam.

For photos and videos sent from camera, we offer free cloud storage for rolling contents of latest period and selectable value-added services for larger & longer rolling storage. For long term storage, you can download these contents you interest from the cloud to your Gallery.

Note: All cloud contents are encrypted with the user name and password you that create. No one else can access your recordings.

1) View your contents on cloud

Tap icon "Camera" -> Select the target camera -> Tap cover image of the camera -> View contents under the camera. You can tap the top/left date bar or the calendar icon " " to filter and view the photos/videos by date.
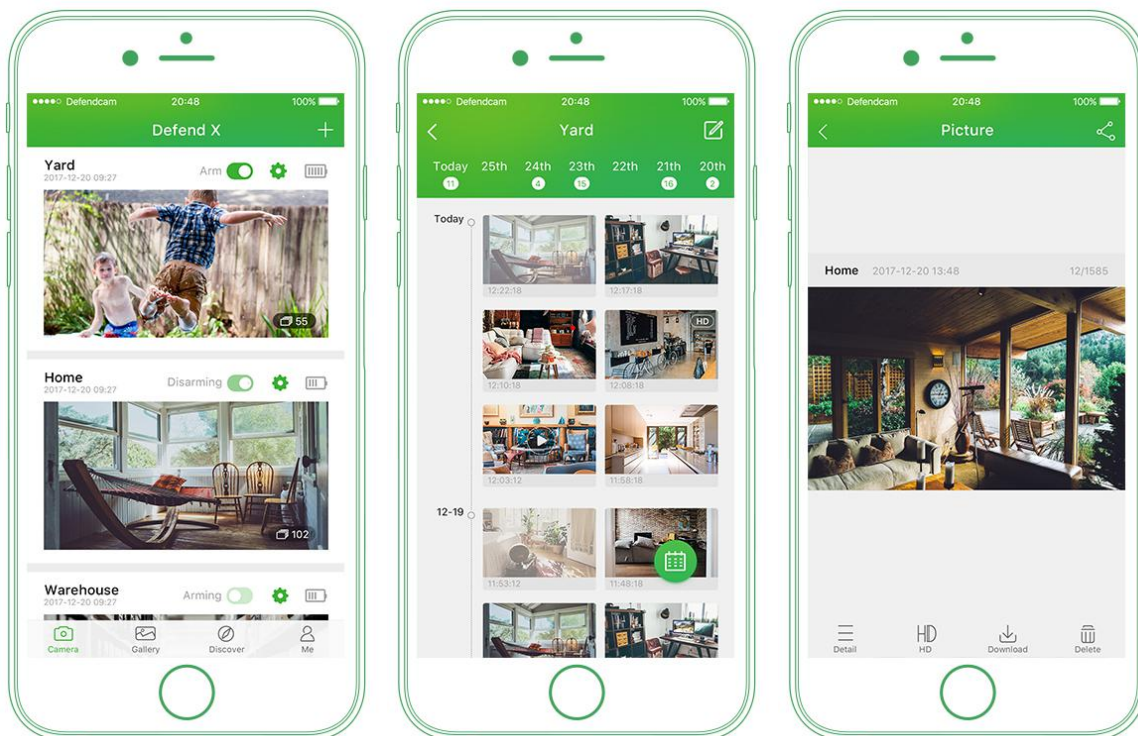
2) Download/delete your contents on cloud

You can download/delete the contents under a camera either in batch by tapping icon
" [icon] " and then confirm to download/delete at bottom of the page, or tap into a single photo or video to download/delete one by one.

3) Share your contents on cloud

When you tap into a single photo or video, there is a " [icon] " icon on top right corner, and you can tap to choose the method that you want to use to share the content.

4.3 View & Manage Your Contents in Gallery

For photos and videos downloaded from cloud, they will be stored local in Gallery, and via the app, you can view and manage the contents.

1) View your contents in Gallery

Tap icon "Gallery" -> Tap "Select" on top left (it appears a camera list) -> Choose your target camera on the list -> View downloaded contents under the camera.

The photos/videos downloaded from the cloud are sorted by cameras. You can tap the left date bar or the calendar icon " [icon] " to filter and view the photos/videos by date.

2) Delete your contents in Gallery

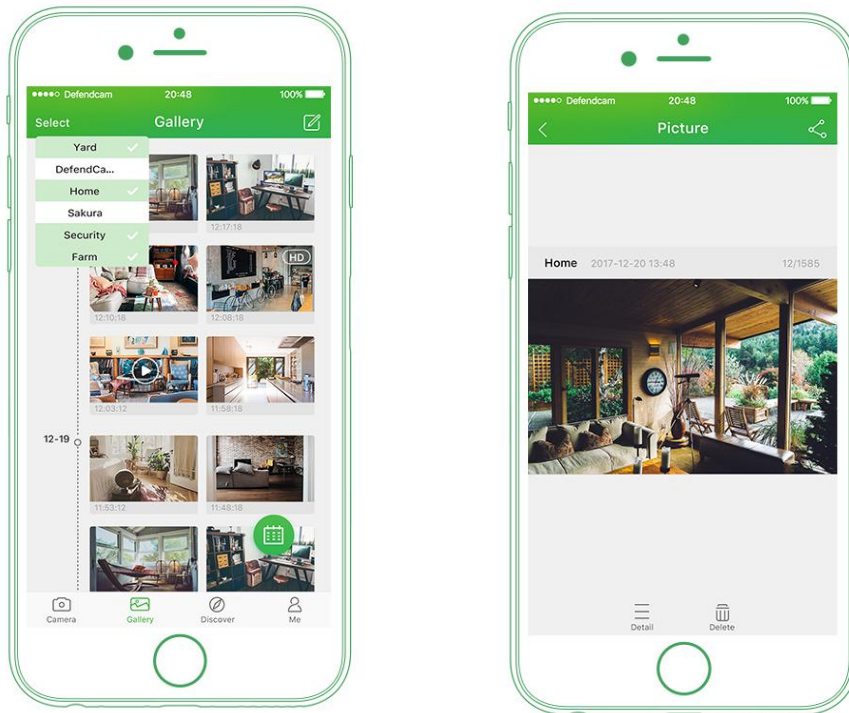You can delete the downloaded contents under a camera at Gallery either in batch by tapping icon " [icon] " and then confirm to delete at bottom of the page, or tap into a single photo or video to delete one by one.

3) Share your contents in Gallery

When you tap into a single photo or video under your Gallery, there is a " [icon] " icon on top right corner, and you can tap to choose the method that you want to use to share the content.

5.Place & Mount Your Camera

5.1 Place Your Camera

Defend X's App view function allows you to see what your camera sees when placing the camera. By viewing the photos/videos sent to App on site, you can adjust the camera to monitor the precise area that you want. Below are several tips to keep in mind:

Place your Defend X at proper distance to the base station for best signal receiving. Meanwhile please don't put cameras too close to each other to prevent WiFi signals interfering,

The Defend X provides 85-degree field of view. Please take this into consideration when aiming the area that you want to monitor is within the camera's field of view.

Place your Defend X at proper height to capture the whole scene. The camera's sensitivity to side to sided movement is much higher than that of vertical direction to the camera.

Please don't place the camera facing mirrors, or any other objects with/reflect bright lights like sunshine, strong lamp light, etc.

Keep the camera away from frequent moving vehicles, and air conditioner vents, humidifier outlets, the heat transfer vent of projectors, etc.

① Detection: vertical: hard to detect by camera; horizontal: easy;

② Don't aim camera lens to mirror;

③ Don't aim camera lens to lightening spot;
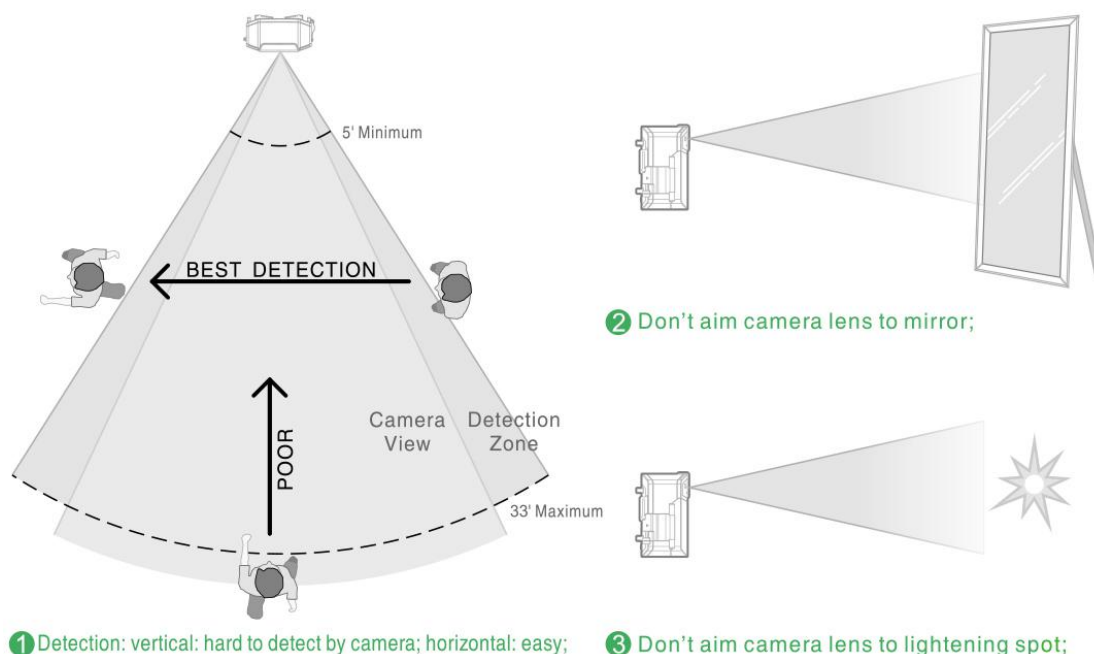
5.2 Mount Your Camera

You can place your camera on a shelf or other flat surface, or you can mount it to the wall, trees or any other poles.

1) To place the camera on Surface

When you place the camera on surface, you can place it directly or use the provided bracket to place it on the surfaces. For the best effect, please note to avoid surfaces that reflects light or those with obstacles nearby.
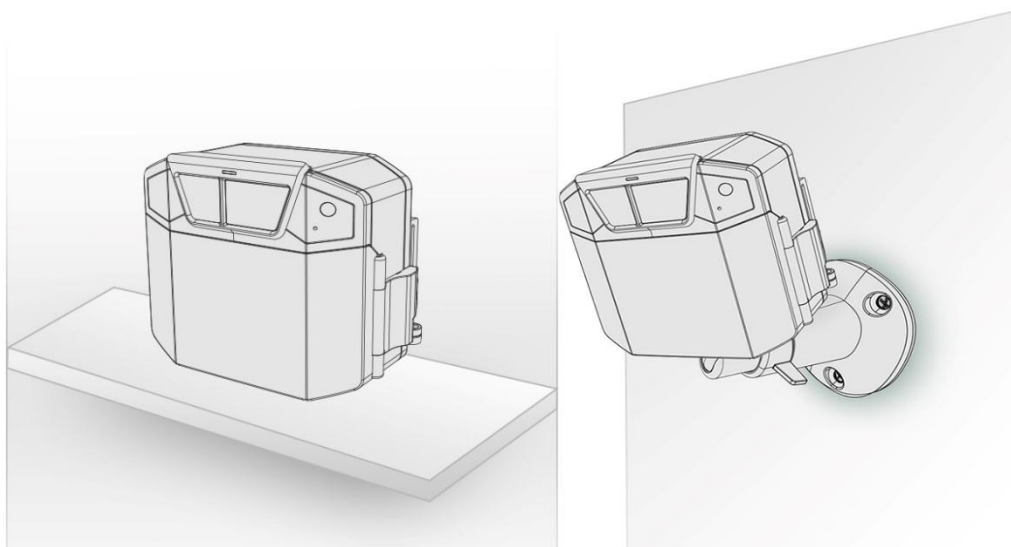
2) To mount the camera on wall

Place the wall plate and secure it with three screws. Attach the camera to the wall plate. If you're mounting the camera to drywall, be sure to use the included plastic drywall anchors.
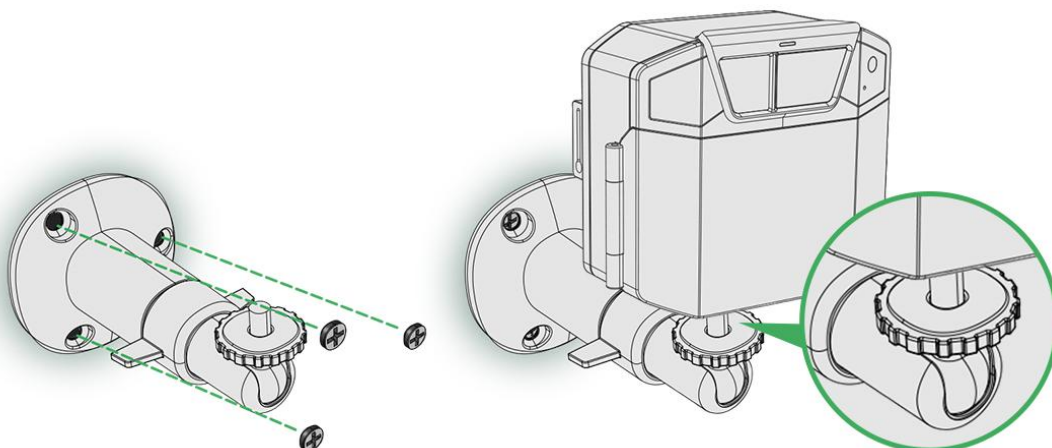
2) To mount the camera on trees/poles
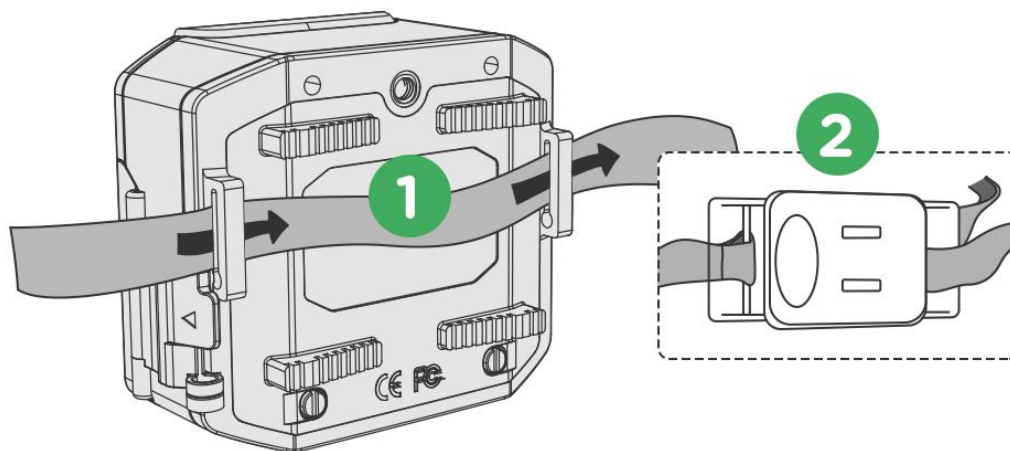
6.Manage Your Subscription Plans

DefendCam includes several days of unlimited free trial of all value-added services for every new account user. The free trial counts from the date when the 1st camera is added to the account. After the trial period, you can choose between free Basic service and Elite service plan.

The free basic service plan offers basic features and functionality. The paid Elite service plan gives you the ability to increase the uses of your camera to suit your specific needs. For information about service plans, visit your DefendCam account on page of "Discover", or website: http://www.wuyuantech.com/WuYuan/

7.Specification

LCD Screen	Built-in 2" TFT color screen
Image Sensor	5 Mega Pixels Color CMOS
Lens	FOV: 85 Degree; Auto IR-Cut-Remove (at Night)
PIR	Angle: 65 Degree
	Distance: 10-12m
	Sensitivity: 3 sensitive level - High/Normal/Low
Image Pixel	5MP(2560x1920), 8MP(3264x2448), 12MP(4032x3024)

Video	Coding: H.264
	FHD 1080P@30FPS; HD 720P@30FPS; WVGA
	File Format: MOV
Storage Medium	Micro SD Card (4-32GB)
Trigger Time	0.4s
Audio	Microphone and Speaker
IR LED	850nm
IR Flash Rang	8-10m
Wireless Transmission	2.4 GHz Wi-Fi, IEEE 802.11b/g/n, WEP / WPA-PSK / WPA2-PSK
Power Supply	2 built-in 3.7V 18650 rechargeable Li-on batteries
USB Interface	Micro USB interface
Mounting	Strap; Tripod; Bracket, 1/4 inch interface
Operating Temperature	-25°C ~ 55°C
Waterproof Spec	IP66
Dimension	106*88*55mm
Weight	337g (built-in batteries included)
Certification	CE FC RoHS

8.Q&A and Troubleshooting

1) The camera does not boot up properly.

Possible reasons	Solutions
a. Power volume of built-in batteries are too low.	Please charge the batteries with the provided power adapter in camera box.
b. The built-in batteries are too aged or damaged	Replace the batteries with new compatible batteries. 3.7V 18650 Li-on protected rechargeable batteries.
c. Damage or drop of codes on camera software.	Update the camera software with the USB provided. Please consult customer service for instruction.

Possible reasons	Solutions
d. Damage of hardware or burnout of circuit	Please contact customer service for instruction.

2) When I scan the QR code to add a camera, why can't I add it?

Possible reasons	Solutions
a. The camera is not on the server cloud, and it shows "The device does not exist" in this situation.	Very rare situation. Please provide the MAC address of your camera to customer service to add it to the server.
b. The camera has been added by other DefendX account.	Please delete the camera from the previously added account first before adding it to another account.
c. The WiFi of the camera is connected by a cellphone or other mobile devices.	Please stop and ignore the WiFi network on your cellphone or other mobile devices.
d. Incorrect network configuration details, like wrong account name or password	Double check the network details and router setting and configure again.

3) Why can't I connect the camera to the WiFi network?

Possible reasons	Solutions
a. WiFi account or password error	Double check the account & password details, and pay attention to capitalization of the letters, etc.
b. The mobile phone doesn't have internet access	Make sure that your mobile phone is connected with data service or WiFi network.
c. The WiFi router doesn't have network connection	Make sure the WiFi router can access the network normally.
d. The WiFi router has network restrictions (like MAC address restriction; network blacklist; bandwidth limit; DHCP server shutdown, etc.)	Check the router settings to make sure there are no network access restrictions

4) What are the factors to consider before you connect the camera to another WiFi?

a. Reset the existing WiFi on camera first;

b. Make sure the camera WiFi (DefendX_******) is not connected by other mobile devices; If yes, please ignore it on your mobile device;

c. Details of the WiFi router to configure with are accurate;

d. The mobile phone to configure has normal access to network.

5) How to confirm the camera is well connected with WiFi network?

a. When camera screen is on, press the Right Navigation button. If the IP shows 192.168.1.xxx and the WiFi is the one you configured it to, then it's well connected.

b. After the camera is added and configured to network, manually press OK button to take a photo and send, then check on mobile App to see if it is well received.

6) When the camera screen is on, does it take and send photos/videos as preset working mode (PIR Motion Detection/Time Lapse)?

No. When the camera screen turns on, it enters previewing/ programming/manual test mode, and under this mode, the camera responds to button operations but not PIR motion triggers and time lapse settings.

7) What are the effective ways to light up the screen when it turns off automatically?

a. Close the camera cover and unlock it again, the screen will light up;

b. Directly press the soft Working Status Shift Button to wake up the screen;

c. Turn off the Power Switch button and turn on again.

8) How about if I want to add the cameras with another DefendCam account?

a. Please make sure the camera is not added by other account. If it is already added, please delete it in previous account (Take this step cautious since delete of the camera means delete of its photos stored on the cloud)

b. Reset the existing WiFi on camera

c. Make sure the camera WiFi (DefendX_******) is not connected by other mobile devices; If yes, please ignore it on your mobile device.

d. Add the camera as a new on the new account.

9) How about if I log in my DefendCam account on another mobile device?

Yes. You can do that, but for safety purpose of your account, the account can be only logged in on one mobile device at the same time, which means when you log in your account on another device, your account on the previous device will be logged out.

10) When will the setting changes I make on App synchronize to camera?

a. When the camera is at Arm Mode, the camera will be able to take and send photos/videos upon motion trigger/time lapse setting, and among the process of sending, the setting changes will be synchronized to camera also.
b. When the camera is at Disarm Mode, the camera doesn't respond to motion triggers/time lapse setting, thus no photo/video taking and sending process, and the camera will auto-connect to server to synchronize the info per hour.

Note: No matter in what situation, to make sure the server info will be synchronized to camera at least once a day, the camera is designed to wake up automatically to synchronize the info 23 hours later after the setting change.

11) What is working capacity of the built-in batteries?

Official statistics for reference:
a. Without network connection and the camera is set to take 1 photo every 5 minutes, the batteries can support camera to take more than 12,000 photos.
b. With stable network connection, the camera is set to take and send 1 photo every 5 minutes, the batteries can support camera to take more than 3,000 photos.

12) How long does it take to charge the built-in batteries full?

Official statistics for reference:
It takes 3 to 4 hours to charge the low power batteries full by DC (9-12V input).

13) Why do the batteries drain out so fast?

a. Motion triggers are too frequent in the area;

b. The configured WiFi router is out of range to connect;

c. The configured WiFi router doesn't have reliable internet access, and the transmission only ends when it waits to timeout;

d. The configured WiFi network is not stable, and the network traffic results in low successful transmission rate and longer transmission time.

14) How about if I forget the DefendCam account name and password?

a. Forget account name: If a camera is added under this account, then you can track back your account by providing your camera Mac address to customer service; If you didn't add a camera to the account, then there is no way to track back.

b. Forget password: Fill in your account on App, and click "Forget Password" to reset your password.

9.Warranty

With great pride and full confidence in our products, we always keep our words which are given to our customers as specified warranty terms and services below. Based on a strict QC system, we initially offer all our customers one year long time limited warranty, come along with selectable chargeable renewal policy of warranty as one, two, three, or four years.

Our products are warranted against defects in materials and workmanship for a period of one year from the date of original purchase. If a defect exists, we will, at our option and to extent permitted by law will (1) repair the product at no charge using new or refurbished parts; (2) exchange the product with a functionally equivalent product that is new or refurbished. Provided the product is returned freight charge paid.

This warranty excludes damage resulting from abuse, accident, modifications or other causes that are not defects in materials and workmanship, or by someone other than our authorized technicians. This warranty only covers failures due to defects in materials or workmanship under normal usage.

To obtain warranty service, please contact us to determine the nature of problem before return the product under this warranty (with a written description of the problem and print samples) for repairing or exchanging.

DefendCam