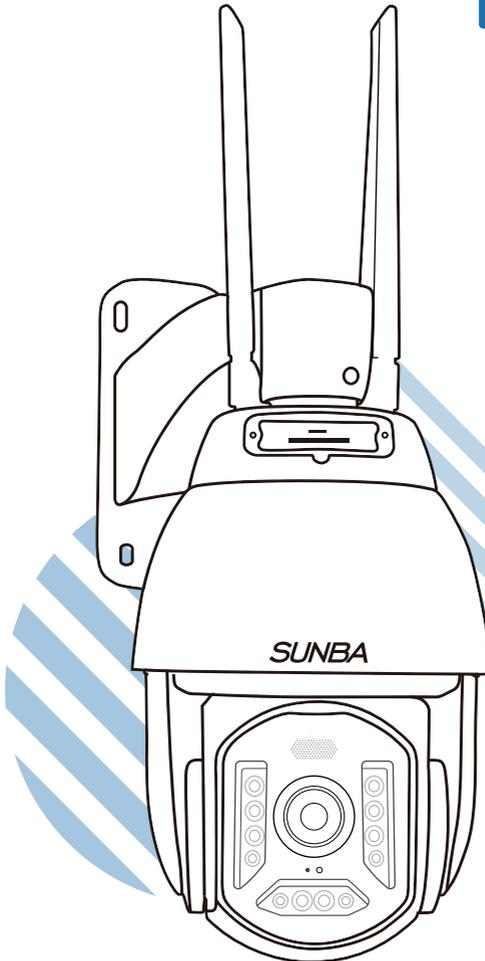


4G/LTE Wireless PTZ Camera

601-D25X 4G/WiFi V2

Built-in 4G Wifi Router
Dual LAN port



/// 2023/08
User Manual
V2.0



Visit <http://4gV2.sunba.net> to access the step by step
YouTube video tutorials for setting up Sunba IP PTZ camera.

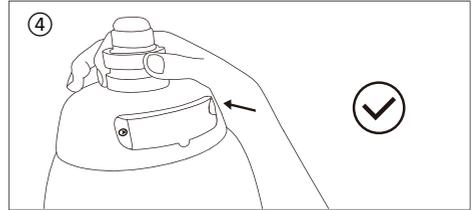
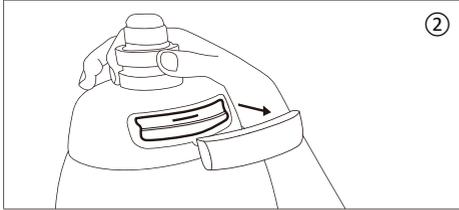
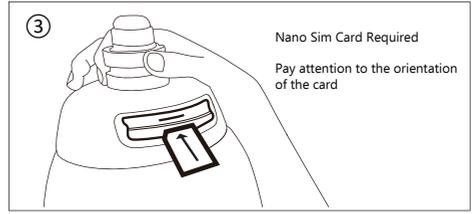
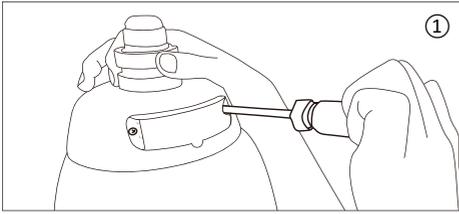
1. Product Overview

Model	603-D25X 4G V2 (Built-in 4G Wifi Router/Dual LAN port)
Image Sensor	1/2.8" Progressive Scan CMOS
Resolution	5MP@15fps/1080P@25fps
Memory Card Slot	Support Micro SD storage, up to 256GB (Class 10 or above)
Focal Length	25x Optical Zoom, 5.2mm-130mm
Viewing Angle	59.5°-2.6°
Aperture Range	F1.5-F3.8
Min. Illumination	Color: 0.05Lux @ (F1.6, AGC ON) B/W: 0.01Lux @ (F1.6, AGC ON)
Focus	Automatic/Semi-Automatic/Manual
Pan & Tilt	Pan: 0-360° Tilt: -10-90°
Zoom	Optical: 25x
PTZ Speed	0~80°/s
Day/Night Mode	BW/Color/Auto
Night Vision	Up to 1000ft
Network Mode	WiFi/4G LTE
WiFi Standard	2.4 Ghz (5Ghz is currently NOT supported)
4G Frequency Range	North America: LTE-FDD: B2/B4/B5/B12/B13/B14/B66/B71; WCDMA: B2/B4/B5 Europe: LTE-FDD: B1/B3/B7/B8/B20/B28; LTE-TDD: B38/B40/B41 WCDMA: B1/B8; GSM: B3/B8 Japan: LTE-FDD: B1/B3/B8/B18/B19/B26; LTE-TDD: B41; WCDMA: B1/B6/B8/B19
ONVIF	Supported
Power Gauge	DC12V 4A

Regarding the issue of operator frequency bands, there is an index of recommended tables at the end of the manual for inquiries and references.

2. Sim Card Installation

The camera does not come with a SIM card. You need to purchase the SIM card yourself. We recommend that you choose the SIM card from the largest local carrier and clearly inform the seller that the device is not an IoT device. The SIM card needs to meet the requirement of a 4G camera SIM card with no speed limit. The USA market recommends using T-mobile SIM card, while Verizon SIM card require IMEI registration before use. Alternatively, simply purchase Security Camera SIM Card on Amazon. e.g: <https://www.eiotclub.com/>



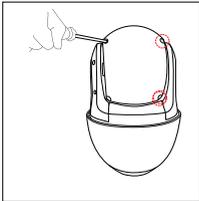
The sim card module would display blue signal light if the card has been installed correctly.

3.TF Card Installation

Compatible Size: Micro SD Card

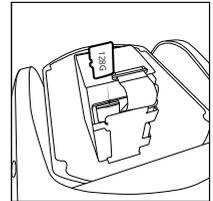
Compatible Standard: At least Class 10 high speed and up to 256GB (128GB recommended)

TF card is an option for storing recorded videos from the camera.

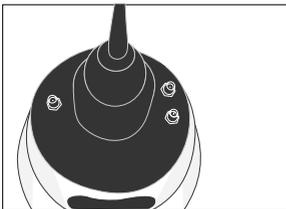


① Remove the 4 screws to take off the camera back cover.

② Insert the TF card as directed by the arrow.



4.Antenna Installation

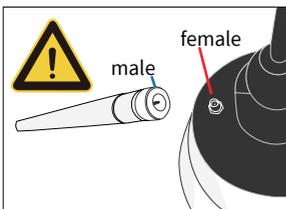


The camera comes with 3 antennas.

Two of the antennas (male) are 4G antennas, one main and one auxiliary. The other antenna (female) is used as a wifi antenna.

It is important to examine the male/female end between the antenna and the receptive port on the camera before installation.

If your antenna is damaged out of box, please contact support@sunba.net for replacement.

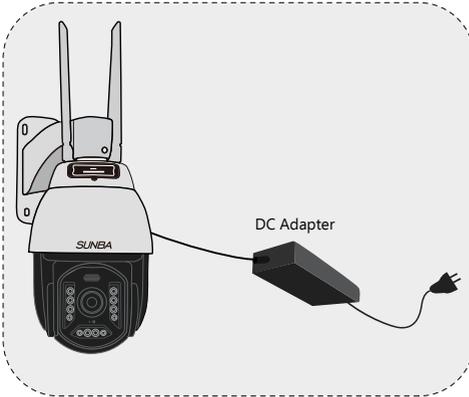


NOTE:Be careful with the female and male ends of the port and the antennas.

5. Power Standard

The camera requires DC12V 4A for operation, and please be aware that using higher voltage would immediately damage the camera and void the warranty.

Power Option A: DC12V adapter



Power Option B: Battery + Solar Panel

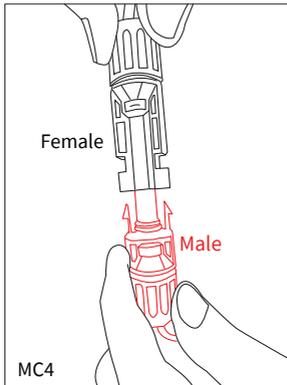
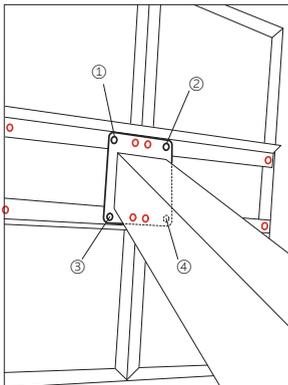


Warning: The load end for MANY battery charge controllers doesn't regulate voltages and is for wide voltage equipments. Sunba cameras require, however, fixed voltage. In this case, you need to get a voltage regulator for the load end if the battery doesn't have built-in regulators.

Solar Panel Requirement: Not less than 60W Monocrystalline, DC12V output.
All connectors must be waterproof or needs waterproof measures.
The power can be over 60W but the voltage must NOT exceed 12V.

Battery Requirement: DC12V/36Ah or larger capacity.

6. Solar Battery Kit Installation



Fixing two solar panels first, then fix the battery.

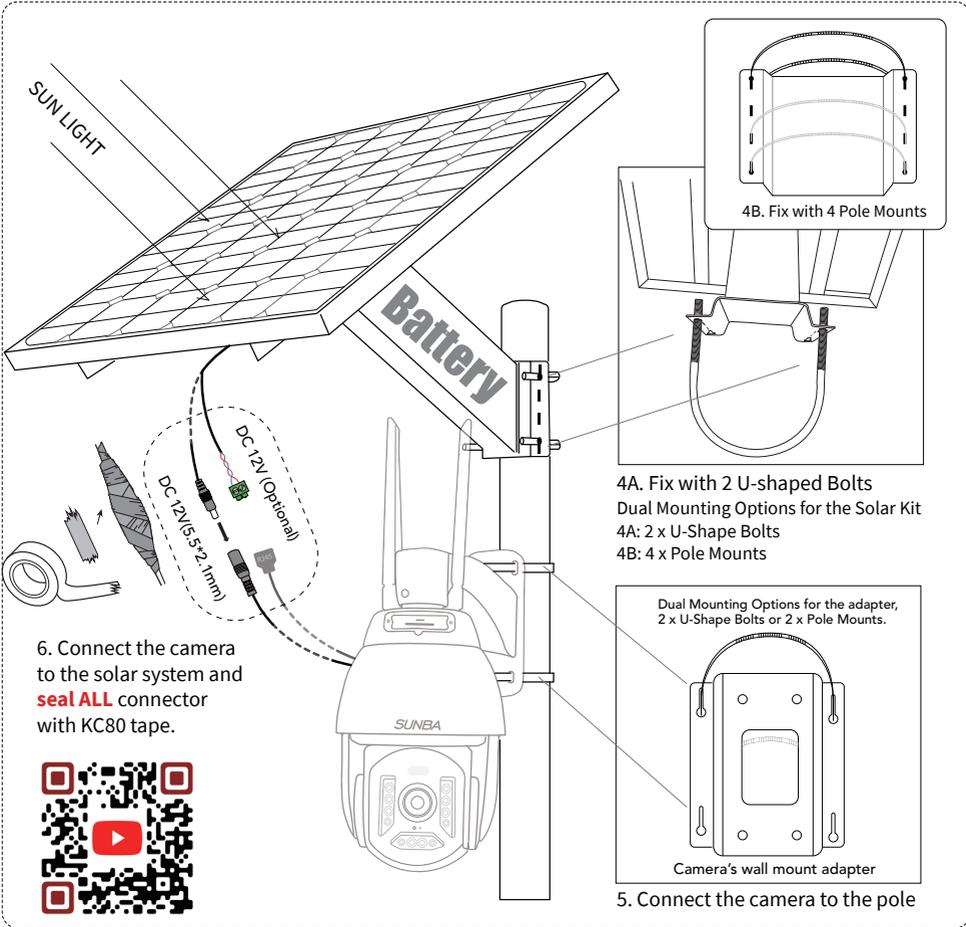
1. Connect the two solar panels facing downwards and secure them using two brackets and 8 screws.

2. Fix the battery to the solar panel with 4 screws.

3. Connect the two pairs of MC4 cable (two male and two female in total)

Pack List:

- Monocrystalline Solar Panel x 2;
- Sunba MBB12V Lithium Battery x1;
- U-Bolt x 4 (2 for solar panel; 2 for camera);
- Pole Mount x 6 (4 for solar panel; 2 for camera);
- PTZ Mount Adapter x 1;
- KC80 Waterseal Rubber Mastic Tape x 1;
- Screws kits x 1set.



Scan to get Installation Video Tutorial:
Support: support@sunba.net

NOTE: RJ45 network cable from the camera can provide Internet to another device, and you can connect to other network cameras or other network devices.

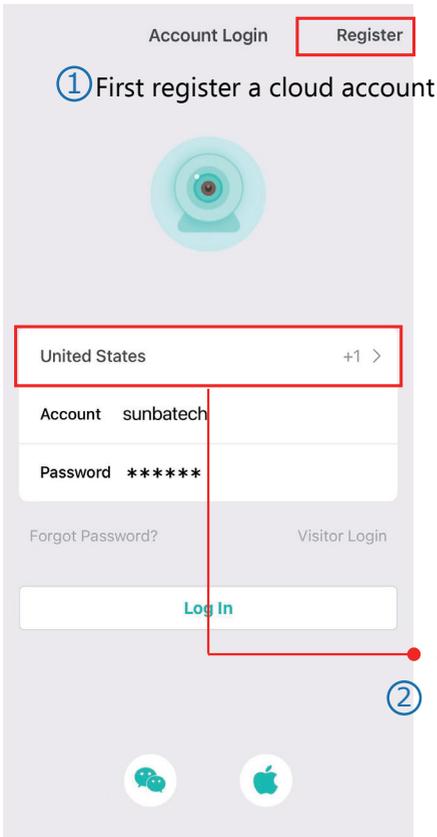
7.Smartphone Control

Method A: Scan the barcode to add the camera (4G Application)



iCSee

video tutorial smartphone.sunba.net



① First register a cloud account



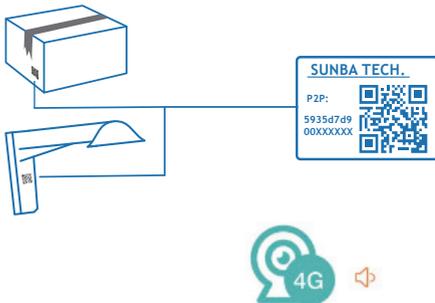
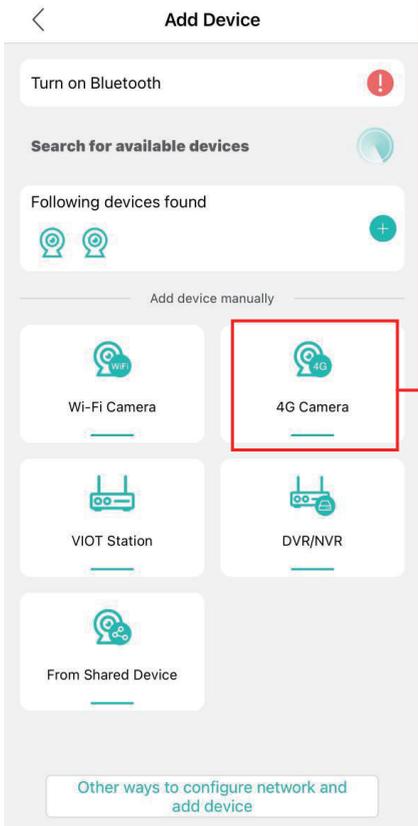
③ Click the "+" icon to add device.

NOTE: If you use XMEye APP
You will not have the cloud
storage option.

② Choosing the correct country/region will help you connect to the fastest cloud server.

④

Select 4G Camera and then manually scan the camera QR code to add device.

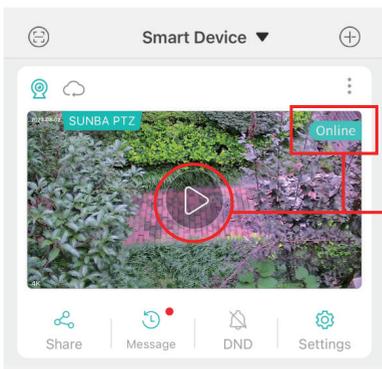
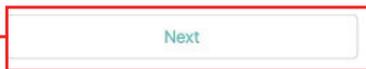


If you don't hear the alert tone, press and hold the SET/RESET button for about 6 seconds and release the button until you hear the "Restoring factory defaults. Please don't power off" alert tone. Reconnect after the device restores the factory defaults.

● To locate the Reset button, see the sign on the device or the User Manual.

⑤

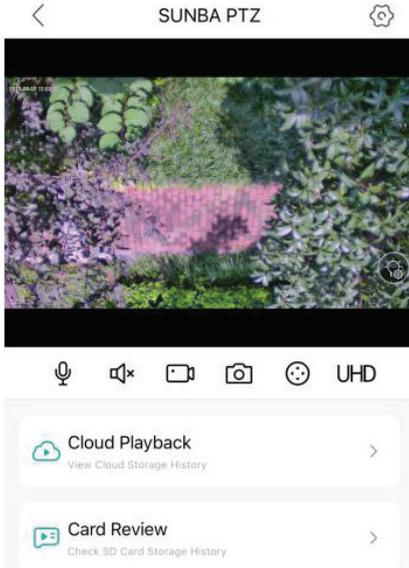
Please ignore the camera's prompt sound and proceed directly to the next step, scanning the QR code on the silver label on the side of the camera



⑥

After scanning the code, the camera will be automatically added to the device list. If the 4G SIM card is successfully connected to the internet, the camera status will change to online

7



Control pan, tilt and zoom, watch live view and set/delete/call presets from this page.

-  Press to speak. (device must support speaker)
-  Turn on/off microphone.
-  Record a video and save the clip to your smartphone.
-  Take a snapshot and save the image to your smartphone.
-  PTZ control.
-  UHD Switch between HD/SD display.

Method B: Connect to the same LAN as the camera (WiFi Application)

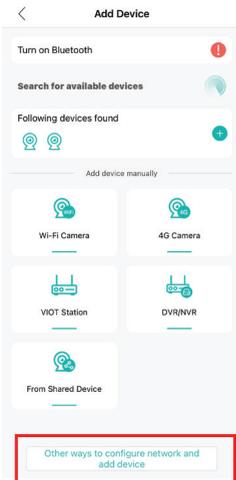
Note: this method is only suitable for the use of close-range (wifi) test camera

Turn on the wifi function of your phone and search for the available wifi and find the one starting with **IM-LINK** And then connect to it with password **1234567890**

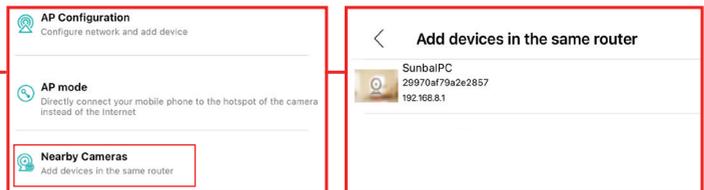
When you successfully connect to the wifi hotspot (IM-LINK****) of the 4G camera, your phone and camera are actually under the same LAN.

At this time, you can add the camera by searching under the LAN (note: this method is only suitable for the situation where the camera is very close, once you lose the connection with the 4G camera's wifi, you will not be able to control the camera).

After connected to the wifi hotspot of the 4G camera, the camera's LAN IP is 192.168.8.100 (or 192.168.8.***), and your mobile phone is also under the same subnet (192.168.8.1).



You can add device by click Nearby Cameras if your smartphone is connected to the same network as the camera. Select the device that you want to add.

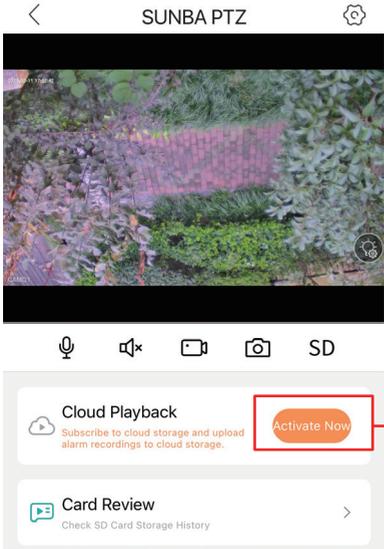


Note: Auto LAN search only works if the http port of the camera remains unchanged (default 80). If the http port has been changed, the camera can only be added manually with its corresponding new port.

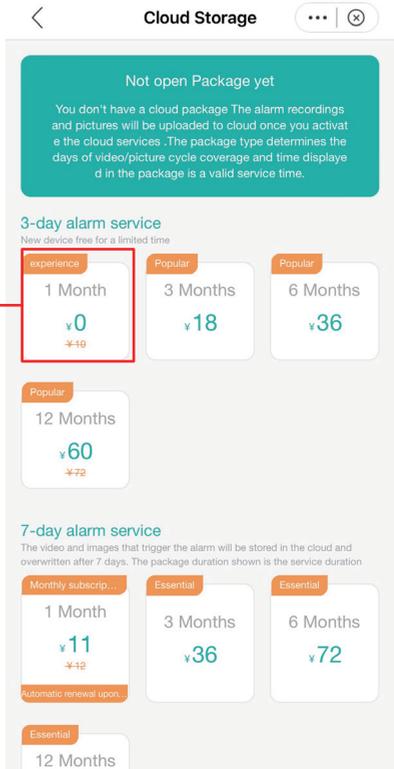
8.Set Cloud Storage

Note: This function only applies to 603-D25X 4G V2 version. It helps to upload the captured alarm recordings to the cloud.

The 603-D25X 4G V1 version belongs to the SUNBA Performance Series, and it needs to be set through the Performance Series APP and client software; the V2 version belongs to the SUNBA Lite Series, this Manual only applies to the V2 version.



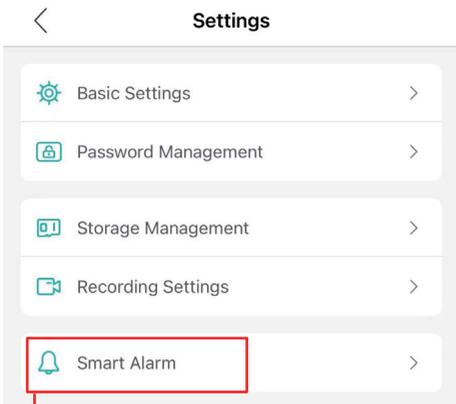
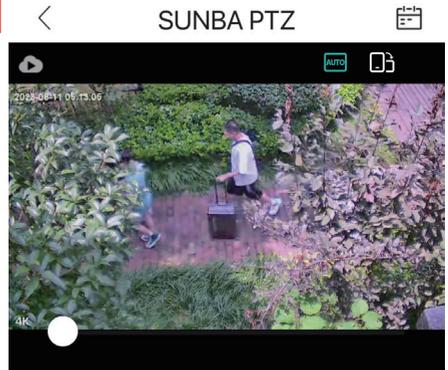
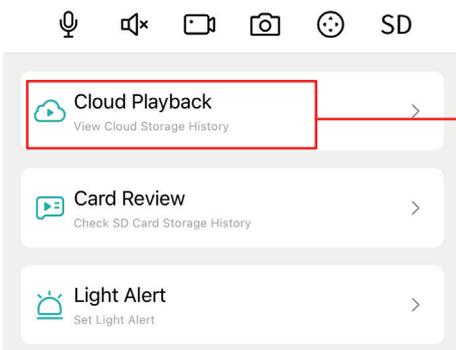
Click to active cloud storage. The alarm recordings and snapshots will be uploaded to cloud once you activate the cloud services .



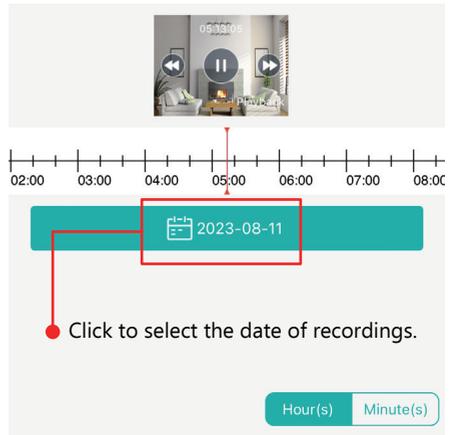
Chose cloud storage service. The package type determines the days of video/ snapshot cycle coverage and time displayed in the package is a valid service time. * Sometimes cloud services have a one month free trial period, and you can activate and try a 30 day free trial.



Click to view cloud playback.
The cloud alarm recording can be used only when the cloud storage function is activated, and the alarm is turned on.



Note: The motion detection alarm is turned on by default. After the alarm is turned off, the cloud platform cannot store recordings.



Click to select the date of recordings.

9. Desktop Setup

Step 1: Install VMS from the CD-ROM or Download form sunbatech.com

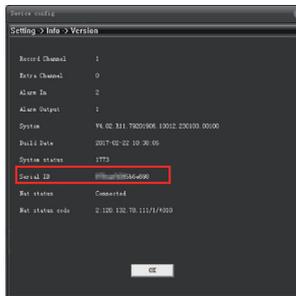
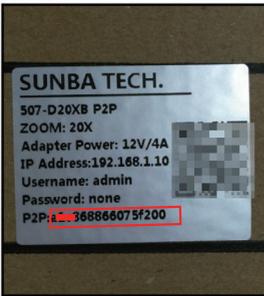
Input the default **software account** below. The account is to ensure no one can have unauthorized access to your surveillance software. This is not the credential for individual IP camera.

VMS for PC: admin/admin

VMS for Mac: admin/(blank)

Step 2: Find Your Sunba Cloud ID

Note: P2P Code = Cloud ID = Serial Number



Tips: Go to Sunba website FAQ page and type keyword "mobile" to gain the setup page for popular smartphone app such as XMEye, TinyCam Pro, IP Cam Viewer.

Step 3: Open the Device Manager page.

Click "**Manual Add**" and enter the cloud ID to connect the device.

Warning: P2P function may not work if you modify the default media port (34567) of the camera or the DNS of your camera is not on the same subnet as your router. Your NAT status by DeviceConfig->Version needs to be "connected" before you are able to access your camera through P2P.

10. 4G/LTE Router Panel Management

Please search for the available wifi hotspot in your network and find the one starting with IM-LINK. And then connect to it with password 1234567890

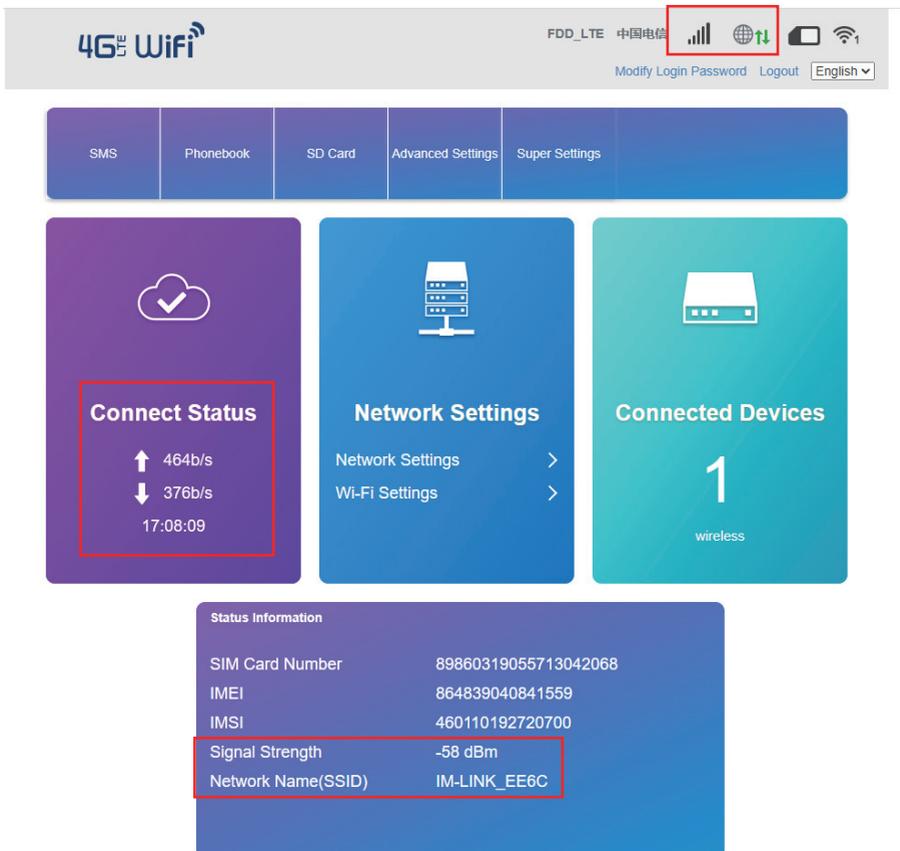
Once connected, please login to the 4G/LTE management panel via its IP address.

The default IP of the 4G module is http://192.168.8.1 but it is always recommended to check via Network and Sharing Center->Change Adapter Setting for verification.

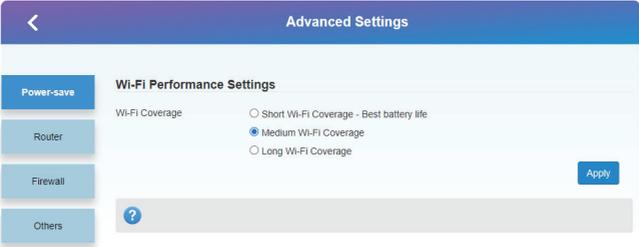
Select "English" as the language and enter "admin" as password.



The LTE/4G management panel will display the current network signal type as well as the carrier, the number of connected device as well as the connect status.



To adjust the WiFi coverage, please go to Advanced Settings-Power-save to set the level. The larger the Wi-Fi coverage, the more battery the camera consumes.



11. Important Troubleshooting Steps

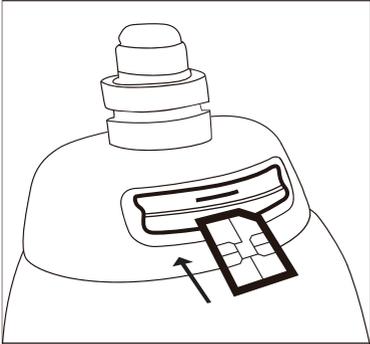
If the camera is not online, please refer to the following 3 steps to troubleshoot.

Step 1. Check SIM card installation

The flashing green LED indicates that the SIM card is exchanging 4G data. But if it doesn't flash, then check if the SIM card is installed in the correct position.

There are three key points to install the SIM card:

1. The **chip** of the SIM card needs to **face the side of the 4G routing board**.
2. The **gap** of the SIM card needs to be **inward**.
3. After the card is pushed in, it will automatically **buckle**, and there is a buckle sound.



Yellow Light	ON = WiFi Working Flashing = WiFi Data Exchange OFF = WiFi Off
Blue Light	ON = 4G Router System ON
Green Light	OFF = 4G Signal Weak or SIM Card Not Recognized Flashing = 4G Signal Good
Red Light	Flashing = LAN1 Port Data Exchange Orange Light Flashing = LAN1 Port Data Exchange

Step2. Check SIM card Carrier Rate Plan

If there is no problem with the SIM card installation, the blue light will always be on, and the green light will start to flash or remain on. Next, check the SIM card rate plan: Are you using a normal SIM card? Or an IoT SIM card? (Our customers usually use the T-mobile unlimited business plan for \$50 per month, and this plan does not have any port or traffic restrictions). Some customers use IoT cards or cards with various limitations. Operators often fail to grant sufficient permissions to cameras that consume a large amount of data transmission, causing the cameras to fail to load videos.

Step3. Check whether the 4G router is connected to the Internet

Generally, if the camera is not online, you need to check whether the 4G router can access the Internet first. If not, you need to call the operator of the SIM card and let their professional technicians help you to check the reason why the device cannot get 4G LTE signal.

Some of our customers have encountered such a situation before, using T-mobile's service, their professional technicians helped him solve the problem.

Usually it is related to your SIM card type, you need to check with your carrier if it is restricted.

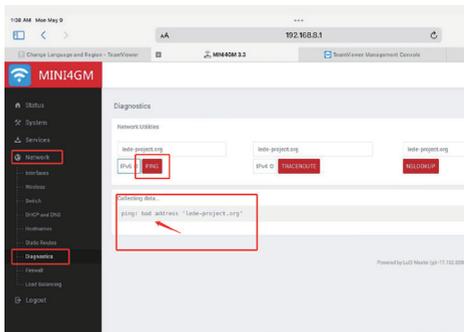
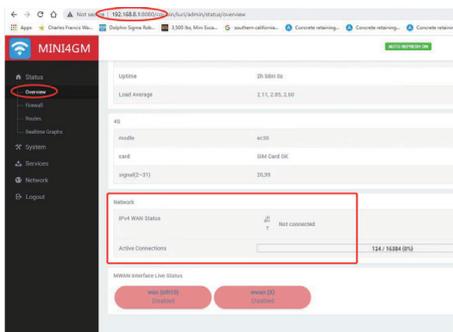
Here are the steps to check whether the 4G router is connected to the Internet:

1. Connect the computer to the wifi of the camera or directly connect the camera via the RJ45 cable, enter **192.168.8.1:8080** in the Web browser.

Username: root

Password: admin

2. Check if an IP address is assigned.



3. Check the ping. If there are no IP and ping results, you will need to call your carrier service.

12.Frequent Asked Questions

Frequently Asked Questions (read me before placing an order) How can I power my Sunba 4G PTZ?

The camera has only a DC12V port and accepts any input power of DC12V 4A. You can use regulated battery with solar panel or with DC12V cable running and plugged to AC outlet.

How can I control the camera remotely?

The camera can be controlled by iCSee APP/XMEye APP or VMS desktop client software though P2P, if your 4G ISP provider can assign a fixed WAN IP, you can also use a browser to remotely control the device (need 4G router portforward). A good 4G signal coverage can bring you high quality and smoother video.

How can I store videos to the camera?

The camera has built-in TF card slot that can support up to 256GB of TF card and can be set to record 24/7 or simply motion clips. (TF card needs to be purchased separately).

Could you please provide a reference for picking the right battery?

We have a 38Ah/456Wh battery and when fully charged under cloudy weather (with minimal solar charging), it could last for 5 days and 4 nights before the battery went out.

Why don't you provide a 2G GSM/EDGE standard?

2G GSM/EDGE signals are unable to carry live stream videos.

How do I know if the camera's frequency range would work for my point of installation?

It is recommended to check map

Why does my camera receive no or minimal 4G signal?

Please first check if your SIM card carrier supports any of the above frequency supported by the camera. Next, each band station supports different frequency range and it is possible that your closet band station doesn't provide a frequency signal that is supported by the camera. Therefore, it is always recommended to test the 4G stability before mounting outside.

13. ISP Frequency Band Comparison Table

American version: LTE-FDD: B2/B4/B5/B12/B13/B14/B66/B71; WCDMA: B2/B4/B5

Japanese version: LTE-FDD: B1/B3/B8/B18/B19/B26; LTE-TDD: B41; WCDMA: B1/B6/B8/B19

European version: LTE-FDD: B1/B3/B7/B8/B20/B28; LTE-TDD: B38/B40/B41; WCDMA: B1/B8; GSM: B3/B8

Area	Country	Carrier(ISP)	LTE FDD	Compatible version
North America	USA	Verizon	B4	American version LTE-FDD: B2/B4/B5/B12/B13/B14/B66/B71 WCDMA: B2/B4/B5
		T-Mobile	B2/B4	
		AT&T	B2/B4	
	Canada	Bell	B2/B4	
		Rogers	B4	
		Telus	B4	
	Guam	GTA	B4	
		iConnect	B2/B12	
	Mariana Islands	IT&E	B12	
		IT&E	B12	
	Puerto Rico	AT&T	B4	
		OpenMoblie	B13	
		T-Mobile	B4	
	Virgin Islands	AT&T	B4	
Movistar		B2		
Mexico	Iusacell	B4		
	Telcel	B4		
Asia		Idea	B3	Japaneseverson LTE FDD: B1/B3/B8/B18/B19/B26; LTE TDD: B41; WCDMA: B1/B6/B8/B19
		Vodafone	B3	
	Indonesia	Indosat Ooredoo	B3/B8	
		Telkomsel	B3/B8	
		XL Axiata	B3/B8	
	Japan	au	B1/B18/B26	
		NTT	B1/B3/B19/B26	
		SofoBank	B1/B3/B8	
	Malaysia	Celcom	B3	
		Digi	B3	
		Maxis	B3	
	South Korea	KT	B3/B8	
		LG U+	B1	
		SK Telecom	B1/B3	
Thailand	AIS	B3		
	DTAC	B1/B3		
	TrueMove	B1/B3/B8		

Europe	France	Bouygues	B3	European version LTE FDD: B1/B3/B7/B8/B20/B28; LTE TDD: B38/B40/B41; WCDMA: B1/B8
		Free	B7	
		Orange	B7/B20	
		SFR	B7/B20	
	Germany	O2	B3/B20	
		Telekom	B3/B7/B20	
		Vodafone	B7/B20	
	Ireland	Meteor	B3/B20	
		Vodafone	B3/B20	
	Italy	TIM	B3/B7/B20	
		Vodafone	B3/B7	
	Netherlands	KPN	B3/B7/B20	
		Tele2	B7/B20	
		T- Mobile	B3/B7/B8	
		Vodafone	B3/B7/B20	
	Poland	Aero2	B3/B20	
		Play / P4	B1/B3	
	Russia	Beeline	B3/B7/B20	
		MegaFon	B3/B7	
		MTS	B3/B7/B20	
Tele2 Russia		B3/B7/B20		
Spain	Movistar	B3/B7		
	Orange	B3/B7		
	Vodafone	B3/B7/B20		
United Kingdom	EE	B3/B7		
	Vodafone	B20		

FCC Warning (U.S.A)

The device has been tested in compliance with limits set by Part 15 of Federal Communication Commission (Class B). The operation of the device is thus limited by the following two conditions: 1) it is not permitted to cause harmful interference to any authorized radio communications, and 2) it must accept any interference it receives.



WARNING: Please test the camera indoor before mounting it outside. Stay at least 24 hours to test both daytime and night vision IR LED.

