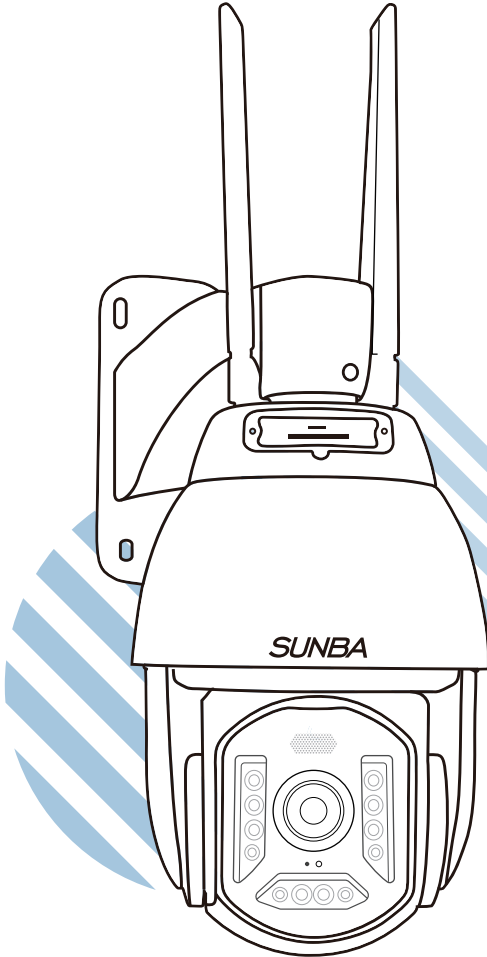


# 4G/LTE Wireless PTZ Camera



/// 2021/06  
User Manual



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

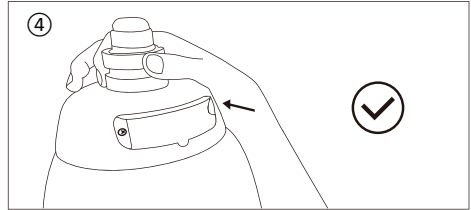
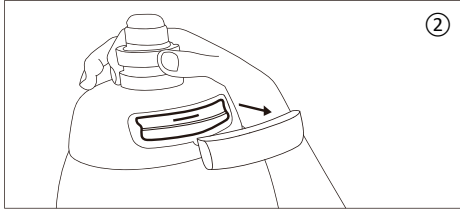
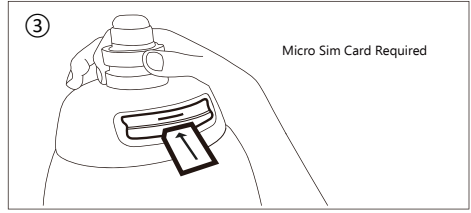
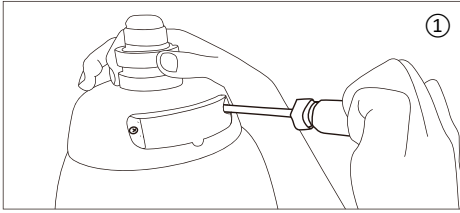
# 1. Product Overview

Model	603-D25X 4G
Image Sensor	1/2.8" Progressive Scan CMOS
Resolution	50HZ:25fps(1920x1080) 60HZ:30fps(1920x1080) 50HZ:25fps(1280x720) 60HZ:30fps(1280x720)
Focal Length	4.8-120mm
Viewing Angle	59.5°-2.6°
Aperture Range	F1.6-F3.5
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 (5G is currently NOT supported)
4G Frequency Range	North America: LTE FDD: B2/B4/B5/B12/13/B14/B66/B71; WCDMA: B2/B4/B5 Europe: LTE FDD: B1/B3/B7/B8/B20/B28A; LTE TDD: B38/B40/B41; WCDMA: B1/B8 Japan: LTE FDD: B1/B3/B8/B18/B19/B26; LTE TDD: B41; WCDMA: B1/B6/B8/B19
3G Frequency Range	B2 - 1900 MHz(aka. PCS) B4 - 1700/2100 MHz(aka. AWS) B5 - 850 MHz
ONVIF	Supported (only when connected through WiFi)
Power Gauge	DC12V 4A

A table of 4G LTE bands for global cellular carriers is attached at the end of manual for reference. For up-to-date bands, please consult your regional cellular service providers.

## 2.Sim Card Installation

This camera can work with a qualified 4G/LTE sim card and be able to connect to the internet in places without WiFi network coverages, and have limited ways of running network cables.



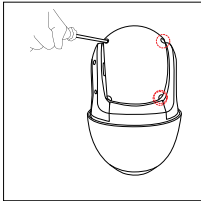
The sim card module would display blue signal light if the card has been installed correctly.

## 3. TF Card Installation

Compatible Size: Micro SD Card

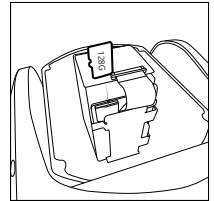
Compatible Standard: At least Class 10 high speed and up to 128GB (64GB recommended)

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

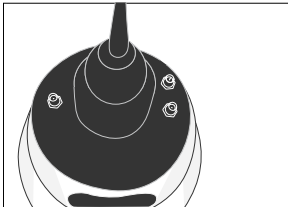


① Remove the 4 screws to take off the camera back cover.

② Insert the TF card as directed by the arrow.



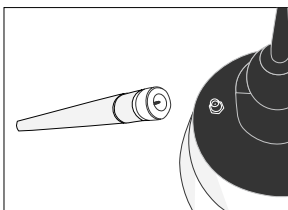
## 4. Antenna Installation



The camera comes with 3 antennas.

One acts as a 4G signal receiver, and the other for wireless signal receiver and transmitter. The 3rd antenna (female head) acts as ancillary antenna for 4G signal boost.

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



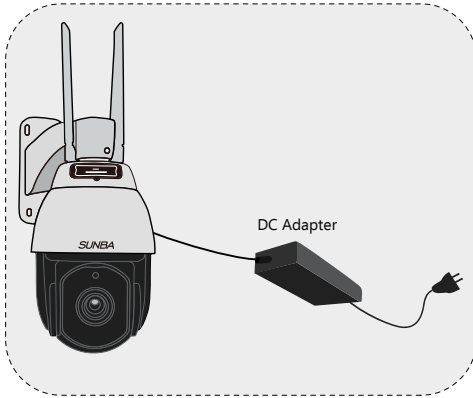
If your antenna is damaged out of box, please contact [support@sunba.net](mailto:support@sunba.net) for replacement.

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

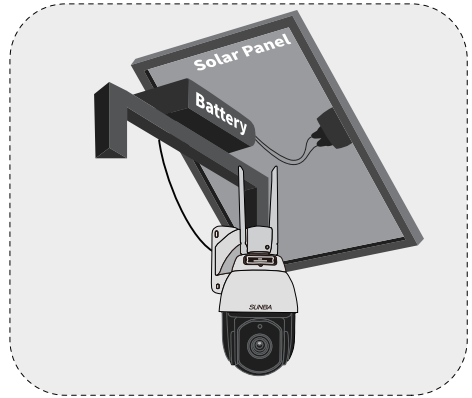
# 5. Power Standard

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

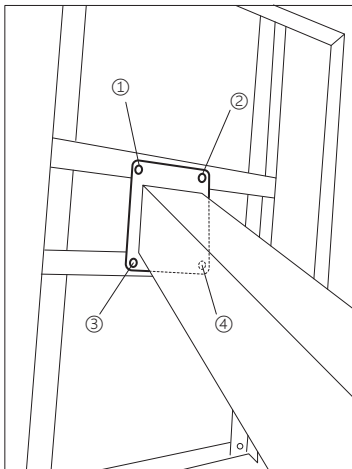


Warning: The load end for MANY battery charge controllers doesn't regulate voltages and is for wide voltage equipments. Sunba cameras require, however, fixed voltage. In this case, you need to get a voltage regulator for the load end if the battery doesn't have built-in regulators.

Solar Panel Requirement: 60W Monocrystalline DC12V and must be waterproof or needs waterproof measures. The power can be over 120W but the voltage must NOT exceed 12V.

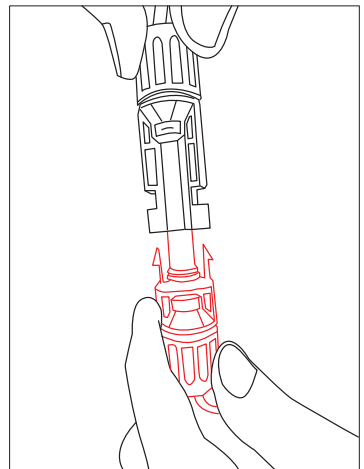
Battery Requirement: 12V 40Ah or larger capacity.

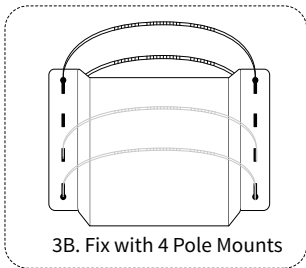
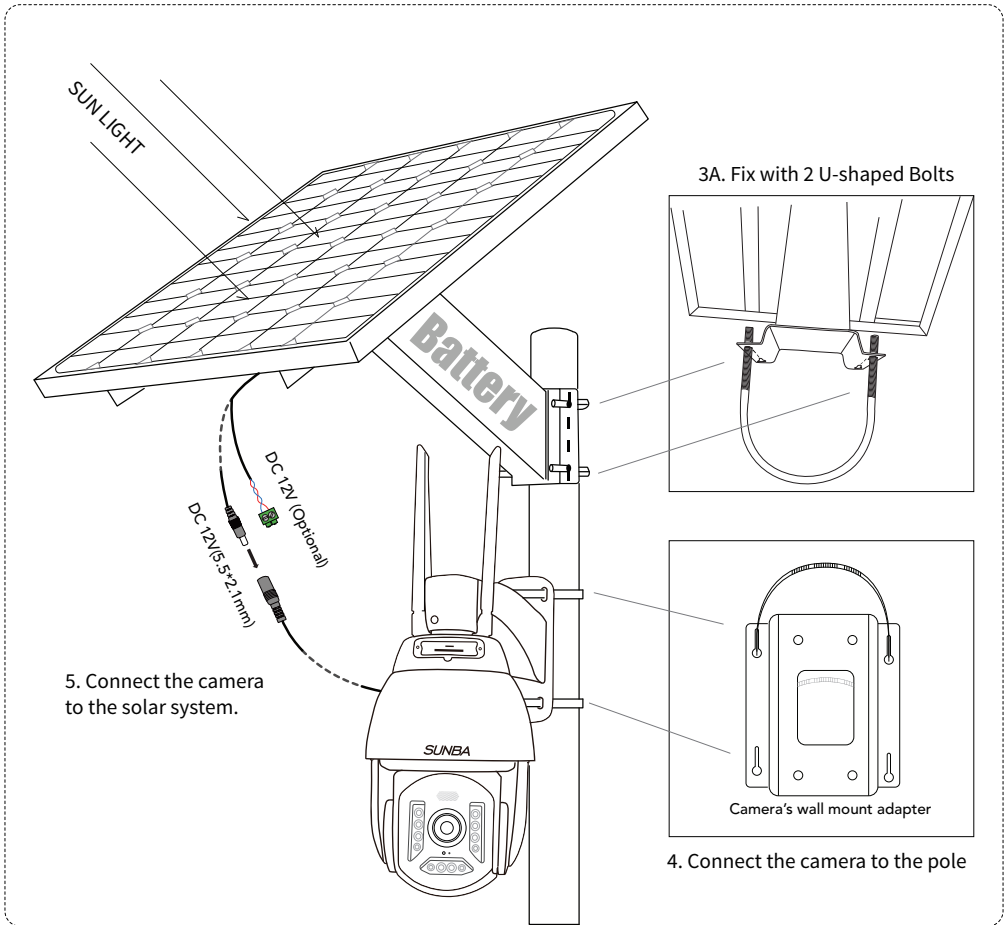
# 6. Sunba Solar Battery Kit Installation Guide



1. Secure the battery to the solar panel by installing 4 screws.

2. Connect the battery to the solar panel so that the positive MC4 connector (+) of the battery connects to the matching positive connector (+) from the panel, and vice versa.





**Packing List:**

- 60W Monocrystalline Solar Panel x 1;
- 40Ah Battery x1, U-Bolt x 4;
- Pole Mount x 6 Screw Kits  
(4 for solar panel; 2 for camera);
- PTZ Mount Adapter x 1

Installation Video Tutorial: <http://solar.sunbatech.com>  
 Support: [support@sunba.net](mailto:support@sunba.net)

**Dual Mounting Options for the Solar Kit**

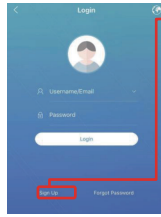
- 3A: 2 x U-Shape Bolts
- 3B: 4 x Pole Mounts

***This chapter is only applicable if you purchase the Sunba solar battery kit together with your 4G LTE PTZ camera.***


# 6. Smartphone Control

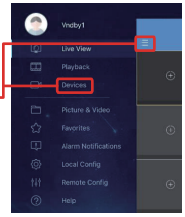
## Method A: Scan the barcode to add the camera (4G Application)

① Download Guard Viewer App



② Sign up a cloud account. Select “international” service zone if asked.

③ Tap  to show the sidebar, and go to the Devices option to add device:

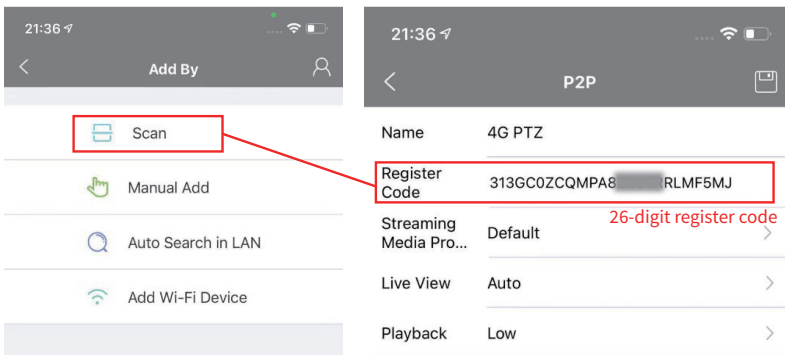


Note: You must create a cloud account to add the device.

Select “Scan” to add the device. Scan the barcode on the camera body or the box.

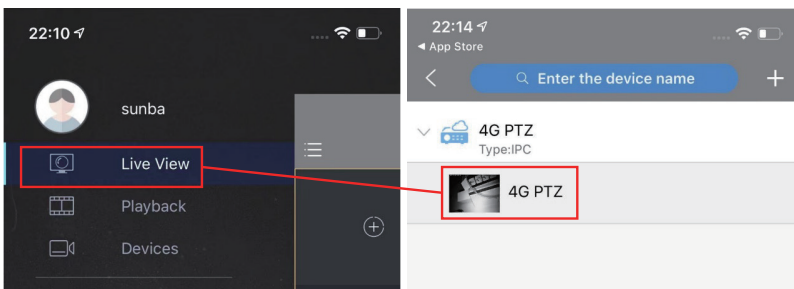
Enter the name of the device and click ‘Start to Live View’.

If you have difficulty scanning the QR code, you can also manually add the 26-digit register code (the registration code is printed on the silver label on the package or camera)

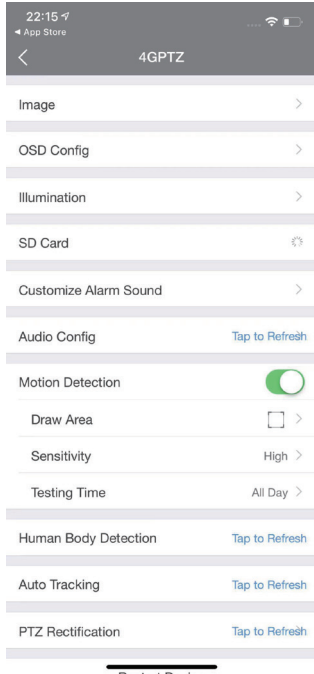
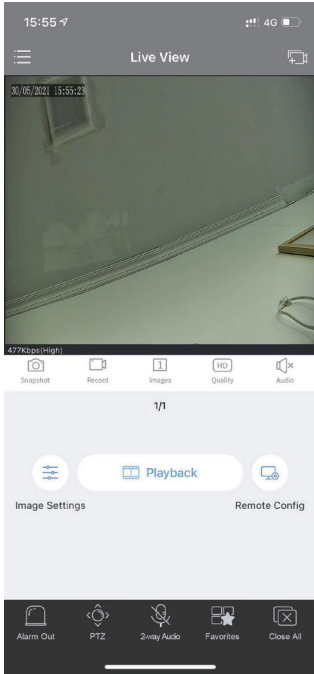


Alternatively, you can go to Live View and click “+” to select the device for live viewing.

After the 4G camera added, the device is online but the live view option does not appear, this situation is normal (due to network factors). You need to wait patiently for 30 seconds or more. After the P2P function is completely normal, you can got the live viewing.



The live view page will load as follows.



Quality = Switch the live view quality. It's recommended to set low in sites with limited cellular coverage.  
 Snapshot = Take snapshots.  
 Record = Record to smartphone.  
 Image = Set live view windows such as 4/9/16.  
 Audio = Turn on audio for live viewing.  
 Image Settings = Set live view brightness/saturation/contrast/sharpness and 2D NR.  
 Remote Config = Configure advanced setting of the camera (see picture below).  
 Playback = Check video playback (recorded footage in SD card).  
 PTZ = Control pan, tilt and zoom action of the camera.  
 Alarm Out = Not supported in the device.  
 2-way Audio = Press to enable communication with the camera's end.  
 Close All = Close all

## Method B: Connect to the same LAN as the camera (4G Hot-spot Application)

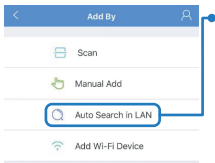
Note: This method is only applicable if you are within the WiFi signal range of the camera for testing purpose.

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 only works when you are physically close to the camera and within its hot-spot transmission range).

After you connect to the wifi hotspot of the 4G camera, the camera's LAN IP is 192.168.8.100 (or 192.168.8.\*\*), and your smartphone is also on the same subnet of 192.168.8.1.



You can add device by Auto Search in LAN if your smartphone is connected to the same network as the camera. Select the device that you want to add.



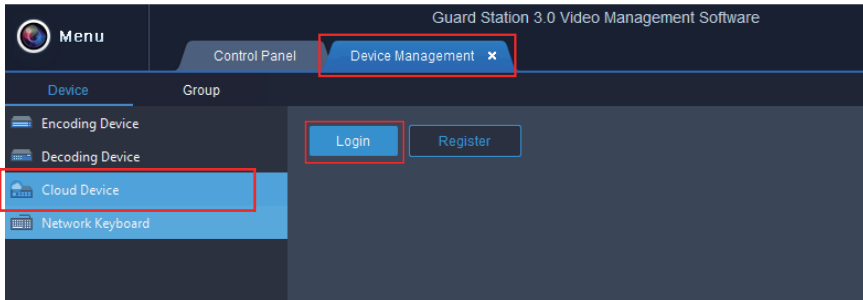
Note: Auto LAN search only works if the http port of the camera remains unchanged (default 80). If the http port has been changed, the camera can only be added manually with its corresponding new port.

# 7.Desktop Setup

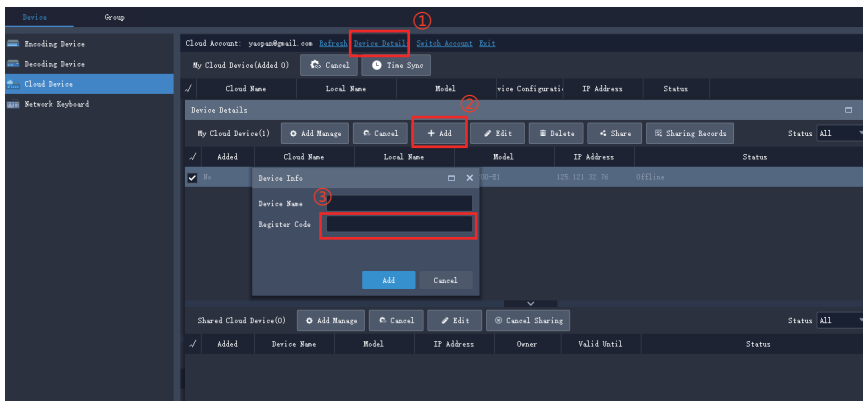
Download the Guard Station Tool from <https://sunbatech.com/download/>

The default username and password is admin/123456.

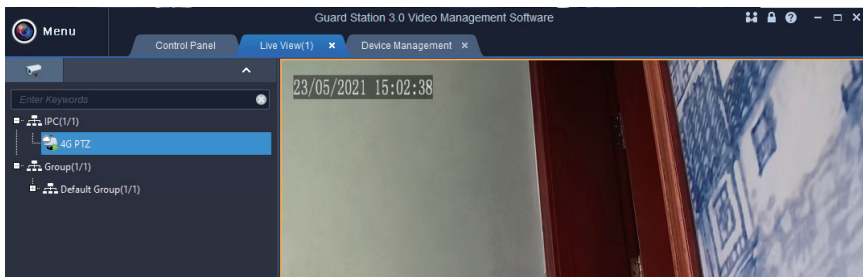
Go to **Device Management - Cloud Device**. Register the account if you haven't or simply login if you've completed registration from other devices or through Guard Viewer.



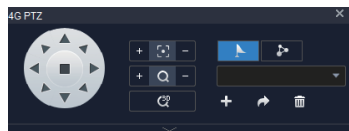
Click **“Device Details”** to add/delete the cloud devices.



After that, please navigate to Live View section and double click the cloud device to enable live view.



Click the PTZ icon to open the PTZ control panel.



# 8. 4G/LTE 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**

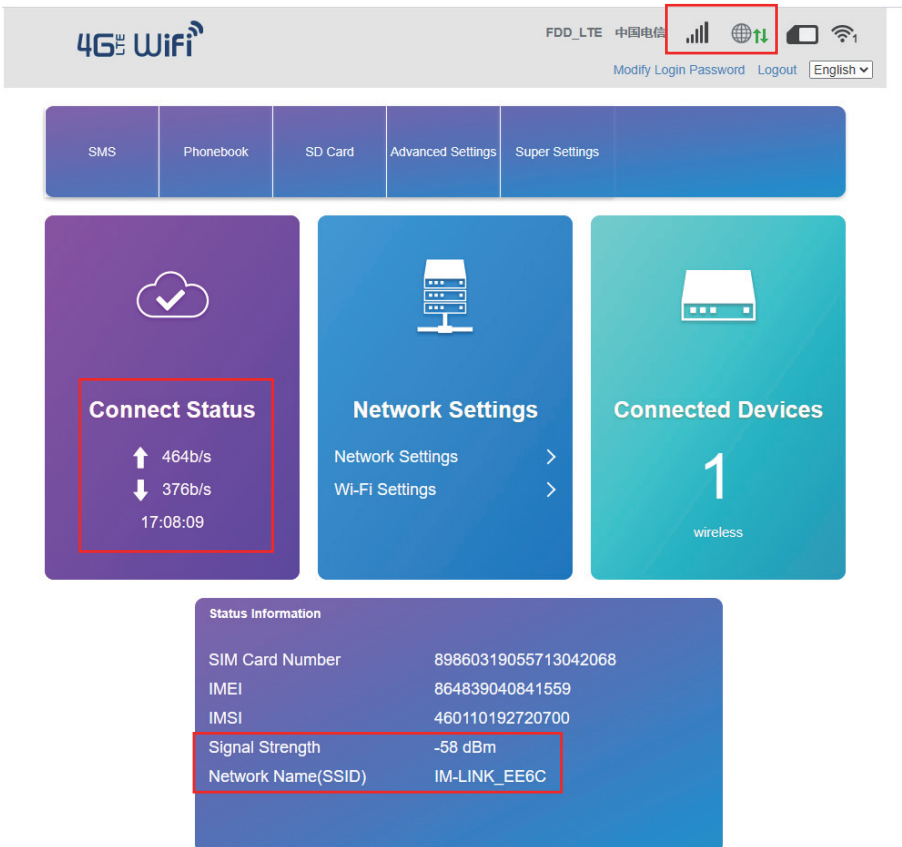
Once connected, please login to the 4G/LTE management panel via its IP address.

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.

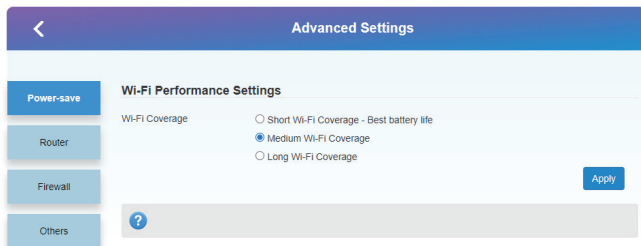
Select "English" as the language and enter "admin" as password.



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.



## 9.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 only be controlled by “Guard Viewer” app or “Guard Station” though P2P, as the base stations (cell towers) for almost all US cellular carriers would not assign a public WAN IP that could be used by 3rd party software.

#### How can I store videos to the camera?

The camera has built-in TF card that can support up to 128GB of TF card and can be set to record 24/7 or simply motion clips.

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

We have a 30aH battery and when fully charged under cloudy weather (with minimal solar charging), it could last 48hrs 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.

#### 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.

# 10. ISP Frequency Band Comparison Table

Asian version (exclude Japan): LTE-FDD: B1/B3/B5/B8; LTE-TDD: B38/39/40/41

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

American version: LTE-FDD: B2/B4/B5/B7/B8/B12/B17; LTE-TDD: B38/B40/B41

European version: LTE-FDD: B1/B3/B5/B7/B8/B20; LTE-TDD: B38/B40/B41

Area	Country	Carrier(ISP)	LTE-FDD	LTE-TDD	Compatible version
North America	USA	Verizon	B13/B4		American version
		Sprint	B25/B26	B41	American version TDD only, signal problems may occur
		T-Mobile	B2/B4/B17		American version
		AT&T	B2/B4/B17		
	Canada	Bell	B2/B4/B7/B17		
		Rogers	B4/B7/B17		
		Telus	B4		
	Guam	GTA	B4		
		iConnect	B2/B12		
		IT&E	B12		
		NTT	B17		
	Mariana Islands	IT&E	B12		
		AT&T	B4/B17		
	Puerto Rico	Claro	B17		Unsupported
		OpenMobile	B13		
		Sprint	B25		American version
T-Mobile		B4			
Virgin Islands	AT&T	B4		Unsupported	
	Sprint	B25			
South America	Brazil	Claro	B7		American or European version
		Nextel	B3		European or Asian version
		Oi	B7		American or European version
		On Telecom		B38	All versions support TDD only, signal problems may occur
		SKY Brasil		B38	
		TIM	B3/B7		All versions are supported (European version recommended)
	Vivo	B7		American or European version	
	Mexico	Movistar	B2		American version
		Iusacell	B4		
		Telcel	B4		
Asia	India	Aircel		B40	All versions are supported
		Idea	B3		European or Asian version
		Vodafone	B3		
	Indonesia	Indosat Ooredoo	B3/B8		All versions are supported
		Smartfren	B5		
		Telkomsel	B3/B8		European or Asian version
		XL Axiata	B3/B8		
	Japan	au	B1/B11/B18/ B26/B28		Japanese version
		NTT	B1/B3/B9/B19/ B5/B21/B26/B28		
		SofoBank	B1/B3/B8/B9	B41	
	Malaysia	Celcom	B3/B7		All versions are supported (European version recommended)
		Digi	B3/B7		
		Maxis	B3/B7		
		Telekom Malaysia	B5		All versions are supported
		U Mobile	B7		American or European version
	South Korea	KT	B3/B8		American or European version
LG U+		B1/B5/B7		All versions are supported (European version recommended)	
SK Telecom		B1/B3/B5			
Thailand	AIS	B3		European or Asian version	
	DTAC	B1/B3		European or Asian version	
	TrueMove	B1/B3/B8		European or Asian version	

Area	Country	Carrier(ISP)	LTE-FDD	LTE-TDD	Compatible version	
Europe	France	Bouygues	B3/B7/B20		European version	
		Free	B7		American or European version	
		Orange	B7/B20		European version	
	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	B38		
		Play / P4	B1/B3			
	Russia	Beeline	B3/B7/B20			
		MegaFon	B3/B7	B38		
		MTS	B3/B7/B20	B38		
		Tele2 Russia	B3/B7/B20	B40		
	Spain	COTA / Murcia4G		B38		All versions support TDD only, signal problems may occur
		Movistar	B3/B7			European version
		NEO-SKY		B42		All versions support TDD only, signal problems may occur
		Orange	B3/B7			European version
		Vodafone	B3/B7/B20			
United Kingdom	EE	B3/B7				
	UK Broadband		B42/B43	All versions support TDD only, signal problems may occur		
	Vodafone	B20		European version		

## 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.

For any questions, don't hesitate to reach [support@sunba.net](mailto:support@sunba.net)  
SUNBA® Technology

