DNV SERIES

Network Cameras

Installation and Operations Manual

Model Number: DNV Series IR Domes

DNV Series IR Bullet

IP Camera User Manual

(WEB interface)

Preface

Welcome

This user manual is designed to be a reference tool for the connection and operation of IP camera.

Here User may find information about the camera's features and functions, as well as troubleshooting information.

Overview

Main content of this manual include:

Title	Content
Internet connection	Introduction to IP camera connecting guide and web login guide
Preview	Introduction to IP camera Preview's main functions and usage
Backup	Introduction to record playback's main functions and usage
Settings	Introduction to the web setting's main functions and usage

Symbol Definition

There are some Symbols in this manual; their meanings are explained by the following:

Title	Content
Warning	There is a potential danger; alert users there may be potential harm
Caution	There is a potential risk that could lead to camera damage or loss of data
Description	Additional information, as an additional remark for main content.

Important Safeguards and Warnings

1. **Electrical Safety**

All installation and operation should conform to local electrical safety codes.

The product must be grounded to reduce the risk of electric shock.

We assume no liability or responsibility for any fires or electrical shock caused by improper handling or installation.

2. **Transportation Security**

Heavy stress, violent vibrations, and excess moisture should not occur during transportation, storage, and installation of the device.

3. **Installation**

Handle the device with care. Keep the device right side up.

Do not apply power to the camera before completing installation.

Do not place objects on top of the camera.

4. **Repair Professionals**

All the examination and repair work should be done by qualified service engineers.

We are not liable for any problems caused by unauthorized modifications or user-attempted repair.

5. **Environment**

The camera should be kept in a cool, dry place away from direct sunlight, flammable materials, explosive substances, etc.

This product should be transported, stored, and used only in the specified environments as stated above.

Do not aim the camera at a strong light source, as it may cause overexposure of the picture, and may affect the longevity of the camera's sensors.

Ensure that the camera is in a well ventilated area to prevent overheating.

6. Operation and Maintenance

Do not touch the camera sensor or lens directly.

To clean dust or dirt off of the lens, use an air blower or a microfiber cloth.

Directory

1 Connection Guide

1.1 Connection Guide

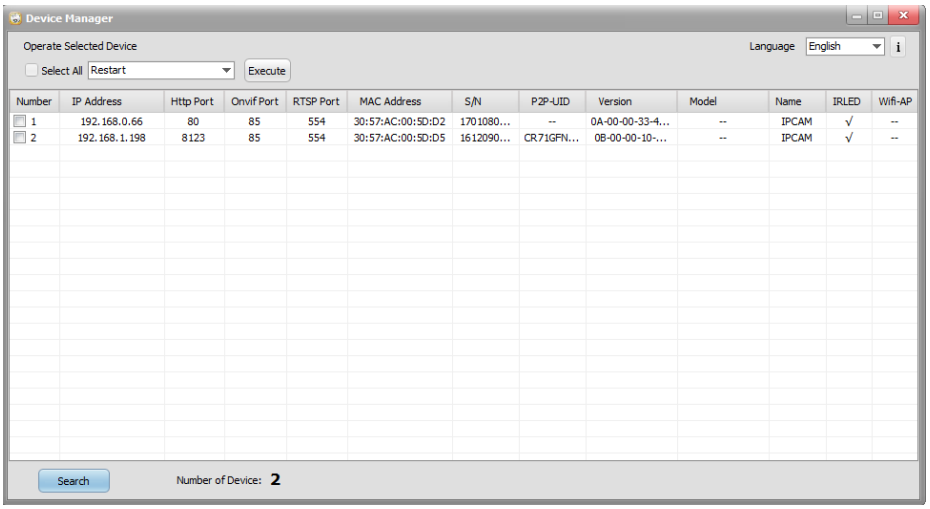
There are two main methods to connect the camera:

Pic 1-1 Network cable connection diagram

Pic 1-2 POE switch or router connection diagram

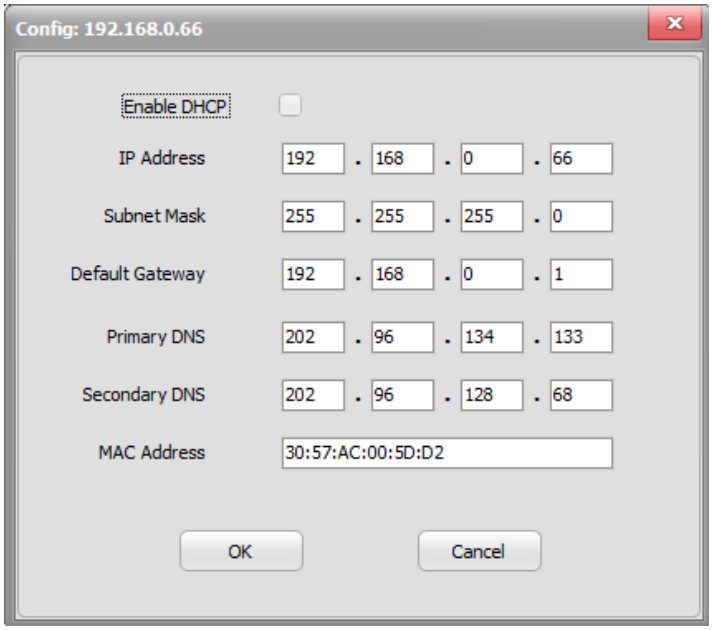
Before accessing the IP camera, user needs to acquire the IP camera’ s IP address. User may find the IP address by using the “Device Manager” software included in the CD.

From the Device Manager software, left click on “search” to find all the available IP cameras in current LAN network. The software will display the IP camera’s IP address, port number, MAC address, Serial Number, UID, version info, and model number. Please use the picture below as reference.



If the IP address found does not match user computer’ s IP subnet, please use Device Manager to modify the IP camera’ s network info.

From the Device Manager, select the IP camera to be modified and right click, then choose Network Configuration. Please use the below picture as reference.



Note

The IP camera's IP address will default to 192.168.0.66.

Default Username and Password: admin/admin.

1.2 Logging into the Web Interface

When user accesses the web interface for the first time, "VLC media player" is needed in order for the video to show correctly.

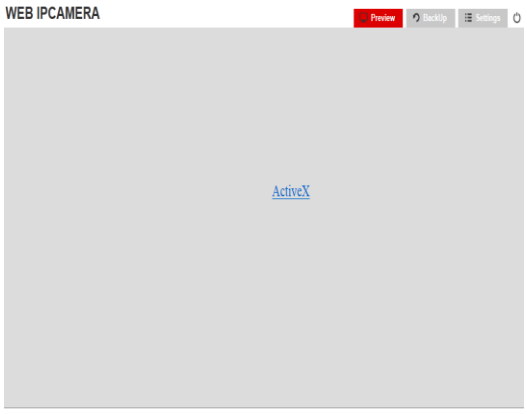
To access the web interface, please follow the steps below.

Step 1: Open Internet Explorer and input the IP camera's IP address into the URL address bar.

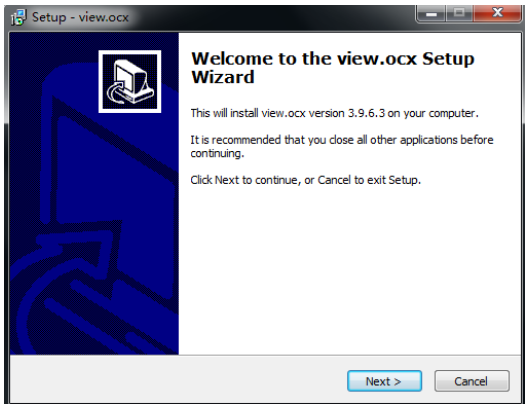
Step 2: When the user interface is shown, enter the default username: admin and password: admin to log into the web interface. An example of the login screen is shown below.

Step 3. Install the plug-in when prompted:

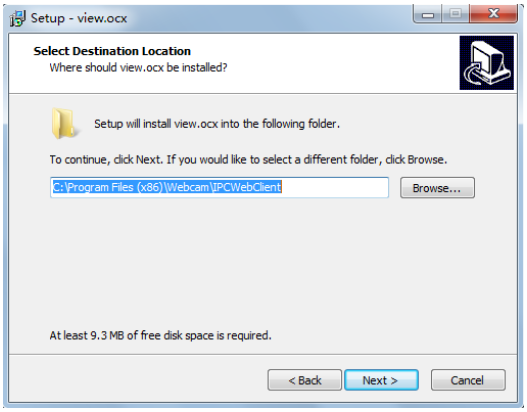
①



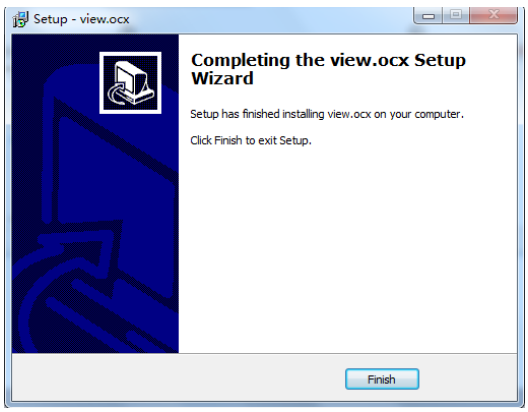
②



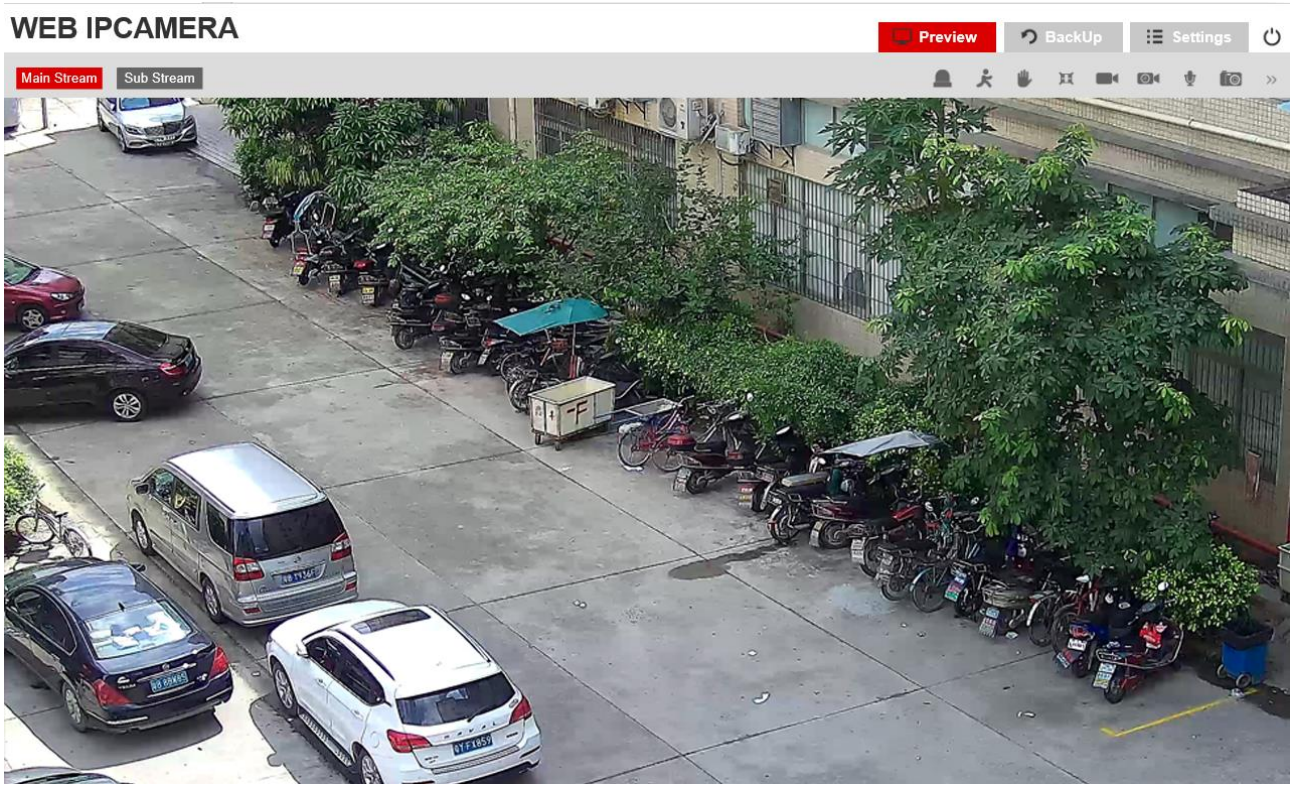
③



④



Step 4. Refresh the web page after the plug-in installed successfully. Repeat step 2 to log into the web interface again. The web interface is shown below:



Available from the Web Interface:

- Live Preview
- Record Playback
- Save a recording onto the local computer.
- Modify IP camera parameters, change settings, change video quality and system time.

Minimum Requirement:

- 2.0 GHz and up CPU
- 2GB and up RAM
- 10/100Mbps network
- 1024 x 768 or up Monitor Resolution

Supported OS:

- Microsoft Windows 7, Microsoft Windows 8, Microsoft Windows 10
- Mac OS

Note:

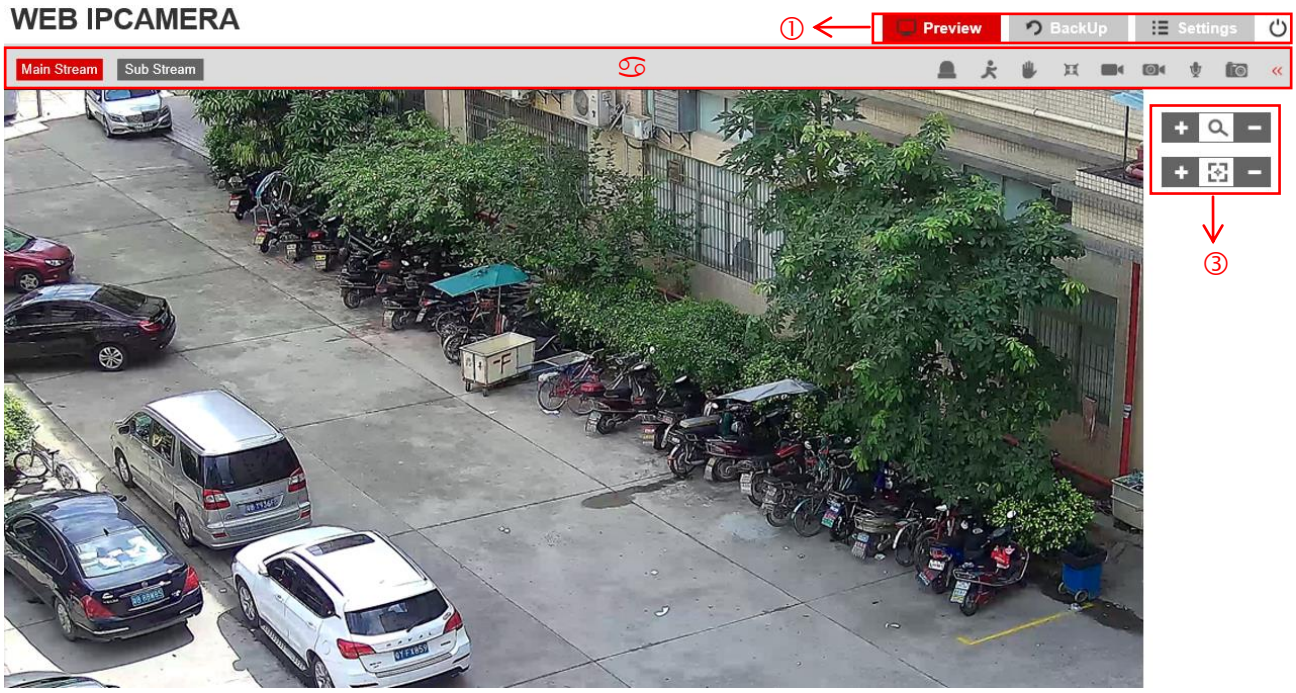
The Internet browser mentioned in the manual is Internet Explorer. Please use IE version 9 and up to access the web interface.

2 Preview

Web client preview has included the 3 function bar:

Parameter	Description
①	Menu Bar
②	Tool Bar
③	Sidebar

Web client preview picture reference below

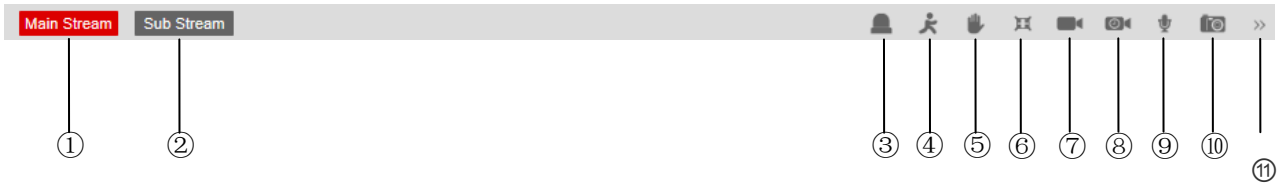


2.1 Main Menu

For detail information of each sections, please see (section 2 Preview, section 3 Backup, section 4 Settings)

Click here to log out

2.2 Tool Bar



Parameter	icon	Description
① Main Stream	Main Stream	Switch to main stream; Main stream is the recorded bit rate with high resolution
② Sub Stream	Sub Stream	Switch to sub stream; Sub stream is the lower resolution and bit rate used when bandwidth is a restriction.
Sensor alarm		**Display the Sensor Alarm Status:** ◆ White: Sensor alarm has not been set up ◆ Blue: Sensor Alarm has been set up and activated ◆ Sensor Alarm is been triggered Note: Only the status is shown here. For detail setting, please refer to section 4.4.2
④Motion Alarm		**Display the Motion Alarm Status:** ◆ White: Motion Alarm has not been set up ◆ Blue: Motion Alarm has been set up and activated ◆ Red: Motion Alarm is been triggered. Note: Only the status is shown here. For detail setting, please refer to section 4.4.1
⑤ Video Cover Alarm		**Display the Video Cover Alarm status:** ◆ White: Video Cover Alarm has not been set up ◆ Blue: Video Cover Alarm has been set up and activated ◆ Red: Video Cover Alarm is been triggered. Note: Only the status is shown here. For detail setting, please refer to section 4.2.2
⑥ Full screen		Single left click this icon will bring the video to full screen. Double click on the video or hit "ESC" to exit full screen
⑦ Manual Record		Single left click will turn on manual record mode
⑧ Schedule Record		**Show the status of Schedule Record:** ◆ White: Schedule Record has not been set up. ◆ Blue: Schedule Record has been set up and is currently recording
⑨ Audio		Turn on/off the Audio
⑩ Screen Capture		Single left click will capture a screenshot. For the screenshot save path, please refer to section 4.1
⑪ Display/Hide Sidebar		Display/hide sidebar

Note

Sensor alarm, Audio, Video cover alarm may not be available for some models.

2.3 Side bar

Zoom and Focus

Parameter	icon	Description
Zoom		Adjust the camera’ s Zoom level; single left click or left click and hold on the + and – sign for adjustment.
Focus		Adjust the focus; single left click or left click and hold on the + and – sign for adjustment.

Note

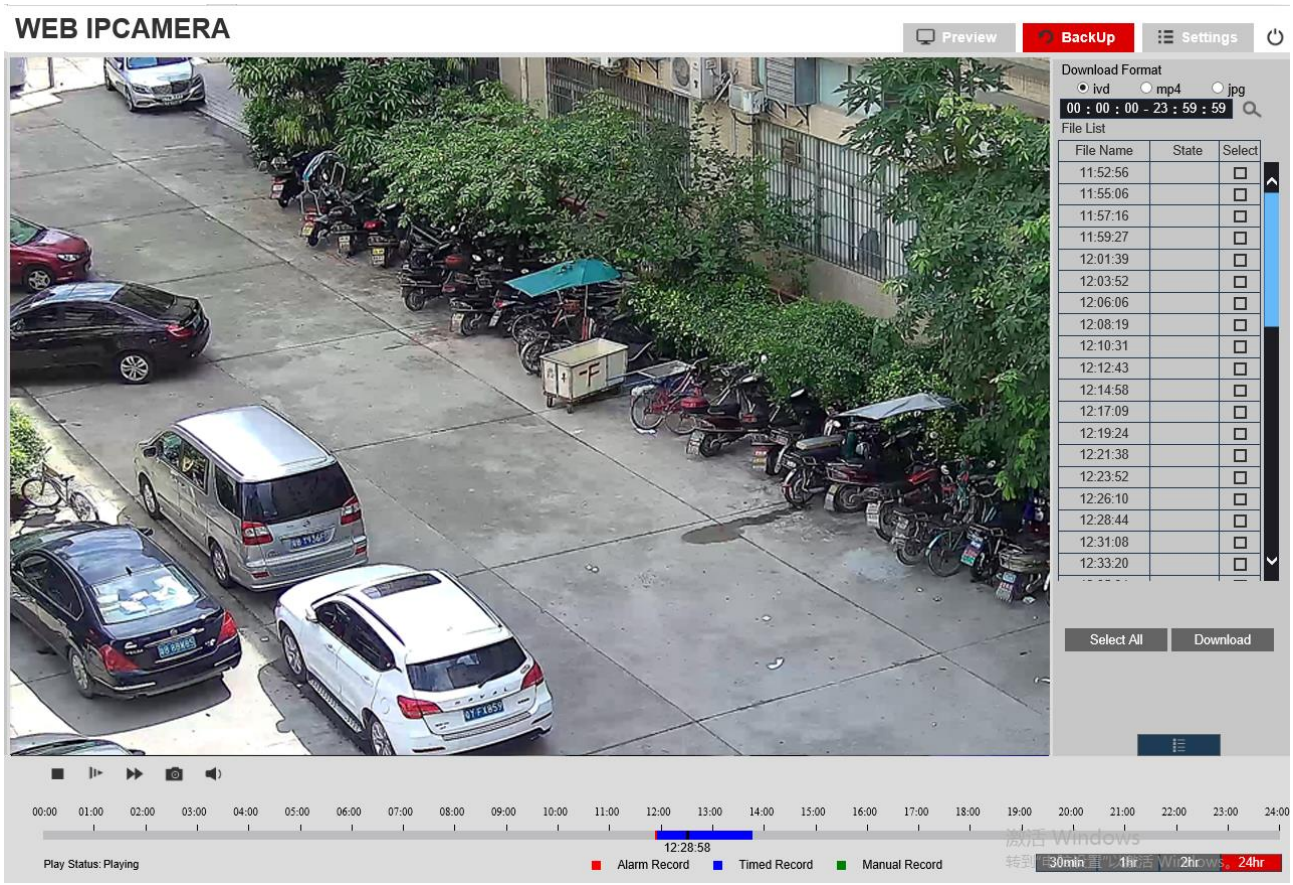
Only model with motorized zoom support this feature.

3 Playback

Step 1: Choose “BackUP” . Reference Picture below:

Step 2 Select date and time.

Step 3 Click , Pop-up video and picture list, Reference Picture below:



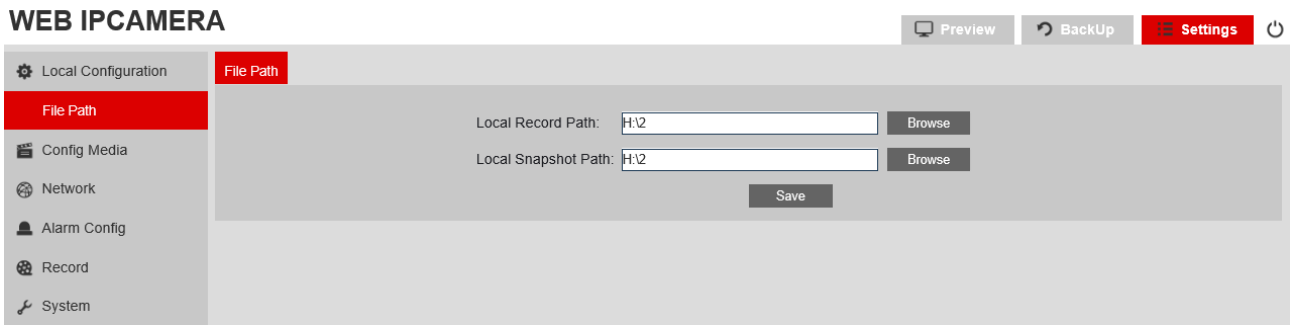
Parameter	icon	Description
① play/pause	▶ / ■	Click this button to play or pause
② Slow play		Click this button for slow play back
③ Fast Forward		Click this button to speed up playback
④ Capture		Click this button to capture picture
⑤ Audio		Click this button to turn on/off audio

4 Settings

Web Client’ s Settings have 6 options: Local Configuration, Config Media, Network, Alarm Config, Record, and System.

4.1 Local Configuration

Step 1: Choose “Settings -> Local Configuration -> File Path”. Reference Picture below:



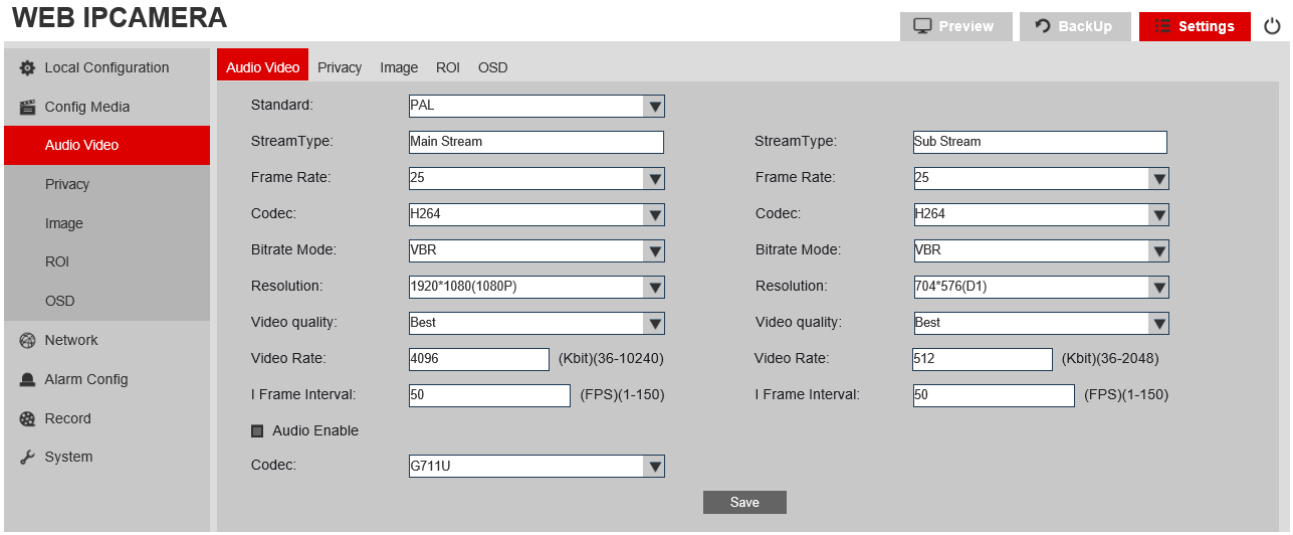
Step 2: Select the storage path for Record and Snapshot and click “Save” to finish setting.

4.2 Config Media

Config Media has the sections: Audio Video, Privacy, Image, ROI and OSD.

4.2.1 Audio Video

Step 1: Choose “Settings -> Config Media -> Audio Video”. Reference Picture below:



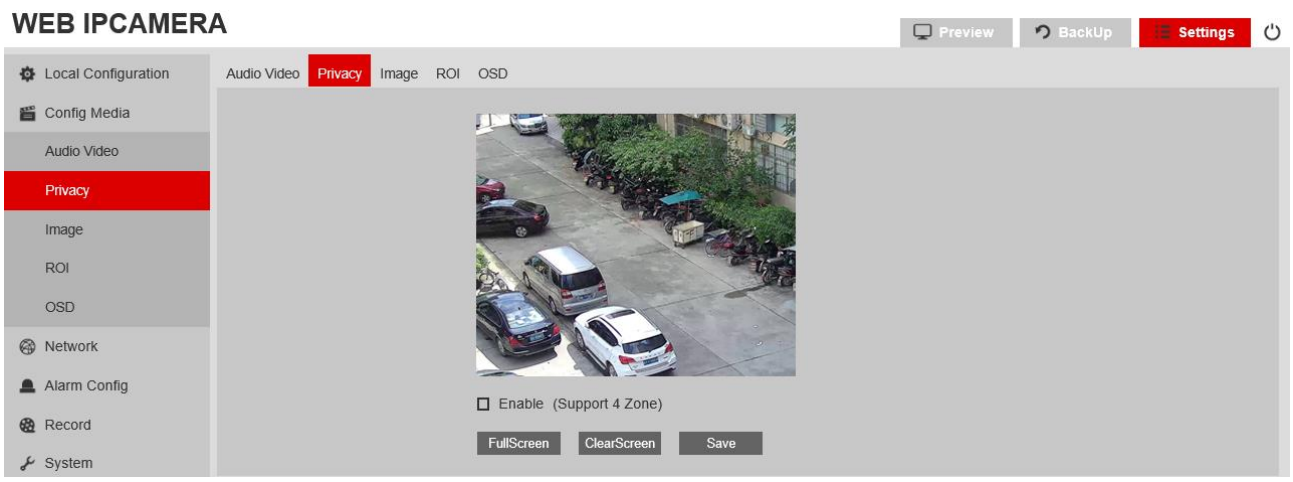
Step 2: Audio Video Parameters:

Parameter	Description
Standard	**Set the video standard** ◆ PAL: 25FPS ◆ NTSC: 30FPS
Stream type	**Set the video parameter for each stream type:** ◆ Main Stream is the recorded bit rate ◆ Sub Stream is the secondary stream used for mobile access
Frame Rate	Set the Frame Rate Per second (FPS). Reducing the frame rate will increase the average bit rate for each frame, but does not necessary saves disk space. The maximum FPS will depend on the resolution set
Codec	Set the camera to use H.264 or H.265 codec
Bitrate Mode	**Bitrate mode** ◆ CBR: The bitrate will stay constant ◆ VBR: When video contains high amount of activity, the bitrate will Increases; the bit rate decreases in the case of inanimate environment, saving storage space
Resolution	Select IP camera’ s resolution
Video Quality	provides “Best/Excellent/good/normal/worst five option
Video Rate	The actual amount of data the camera is using for recording. The higher the bitrate, the larger the video footprint, results in better image.
I Frame Interval	Indicates the number of P frames before two I frames. The larger the number, the fewer key frames and the more critical frames. Increasing critical frame Numbers improves quality, but adds network load. The maximum is 100, and the recommended setting is twice the
Audio Enable	Click to turn on/off audio input/output
Codec	Select audio encoding format G.711U/G.77A, suggest to select G.711A

Step 3: click “Save” to complete video configuration.

4.2.2 Privacy

Step.1 Select “Settings > Config Media > Privacy” . See picture below for reference:



Step2 Check "Enable".

Step3 Click "Full Screen" to select the entire area, click "Clear Screen" to clear the previous settings, click "Save" to complete privacy area configuration.

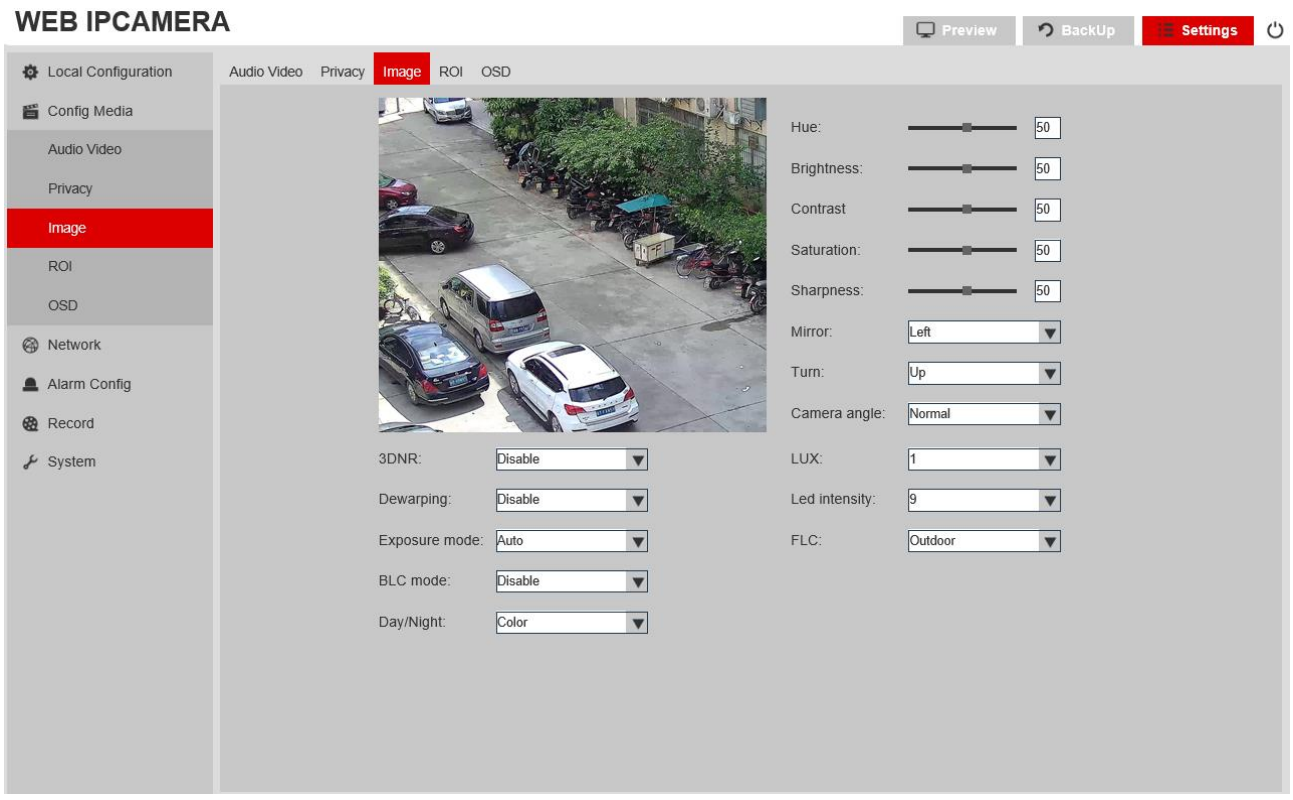
Note

Privacy block supports up to four areas.

4.2.3 Image

Step1 Select "Settings > Config Media > Image". See picture below for reference:

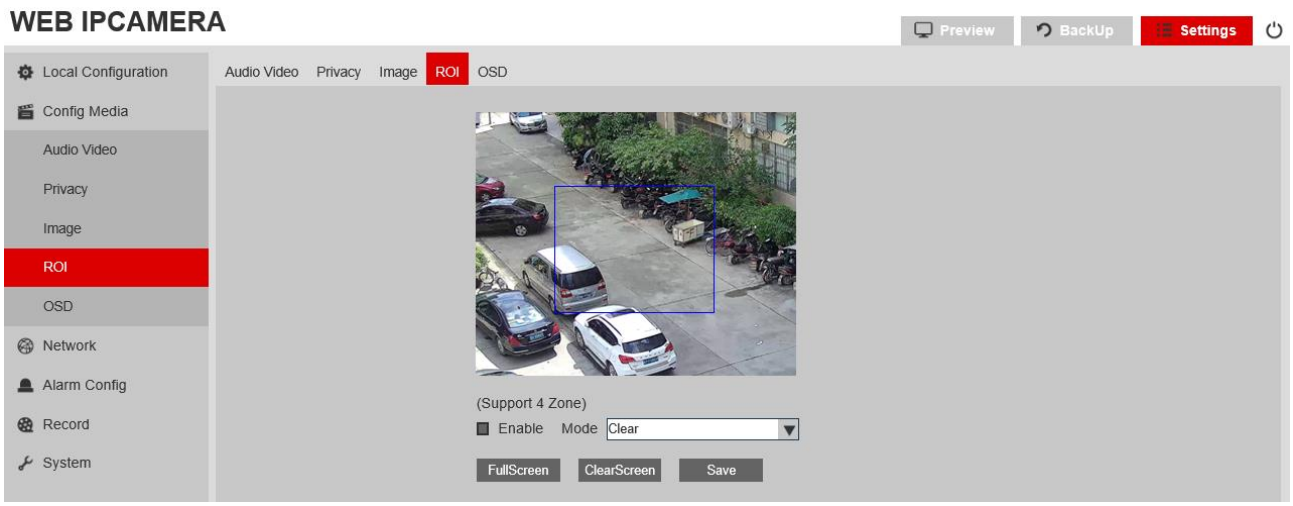
Step2 Image setting detail description.



Parameter	Description
Hue	Changes the color mix of the image (this may have very dramatic results)
Brightness	Changes how bright the image appears to be. The bigger number the brighter.
Contrast	The separation between the darkest and brightest areas of the image.
Saturation	Alters how much color is displayed in the image. The higher the saturation, the brighter and vivid colors will appear to be.
Sharpness	Sharpen image to increase the Signal Noise ratio.
Mirror	Change the orientation of the image to be horizontally reversed.
Turn	Change the orientation of the image to be vertically reversed.
Camera Angle	Change the orientation of the image to 90°, 180°, 270° or normal.
3D DNR	3D-Noise Ratio: if Enabled, may decrease the noise of the image.
De-warping	Refers to the process of perspective correction of an image, to reverse the effects of geometric distortions caused by the camera lens. Most commonly known as a "Fisheye" and/or "360°" device.
Exposure Mode	◆ Auto: Select the exposure level of the camera based on pre-defined conditions. ◆ Manual: Adjust shutter speed and gain value of the camera manually.
shutter	Known as "exposure time", stands for the length of time a camera shutter is open to expose light into the camera sensor. If the shutter speed is fast, it may help to freeze action completely. If the shutter speed is slow, it may create an effect called "motion blur", where moving objects appear blurred along the direction of the motion. This effect is used quite a bit in advertisements of cars and motorbikes, where a sense of speed and motion is communicated to the viewer by intentionally blurring the moving wheels.
BLC Mode	◆ Turning on the Wide Dynamic Range (WDR) feature for photos improves the overall exposure throughout the entire image. It enables the camera to pick up greater detail in dark shadows, while making sure that the highlights don't get blown-out. ◆ Digital wide dynamic range (D-WDR) is a software-based technique that optimizes image quality by adjusting the gamma (γ) value to enhance dark areas. ◆ Back-light Compensation (BLC) optimizes exposure in the foreground and background of security video. It splits the video scene into different regions and uses a different exposure for each of these regions. It corrects regions with extremely high or low levels of light to maintain a normal and usable level of light for the object in focus. ◆ Highlight Compensation (HLC) senses strong sources of light in video and compensates for exposure on these spots to enhance the overall quality.
FLC	◆ 50Hz：In the case of 50Hz, according to the brightness of the scene, the exposure is automatically adjusted to ensure that the image does not appear horizontal stripes ◆ 60Hz: In the case of 50Hz, according to the brightness of the scene, the exposure is automatically adjusted to ensure that the image does not appear horizontal stripes ◆ Outdoor： In this mode, the mode of exposure mode may be changed to achieve the effect of the corresponding exposure mode FLC： Outdoor/50Hz/60Hz optional， default mode is Outdoor
Day/Night	◆ Color： Only display color image ◆ B/W： Only display black/white image ◆ Auto： Display color or B/W image according to CDS(lux value) ◆ Time： Display color or B/W image according to setting time Day/Night：Color/B&W/auto/time optional. For non-IR IP camera, default mode is color, for IP camera with IR, default mode is auto.

4.2.4 ROI-Region of Interest

Step1 Select "Settings > Config Media > ROI". See picture below for reference:



Step2 Check "Enable".

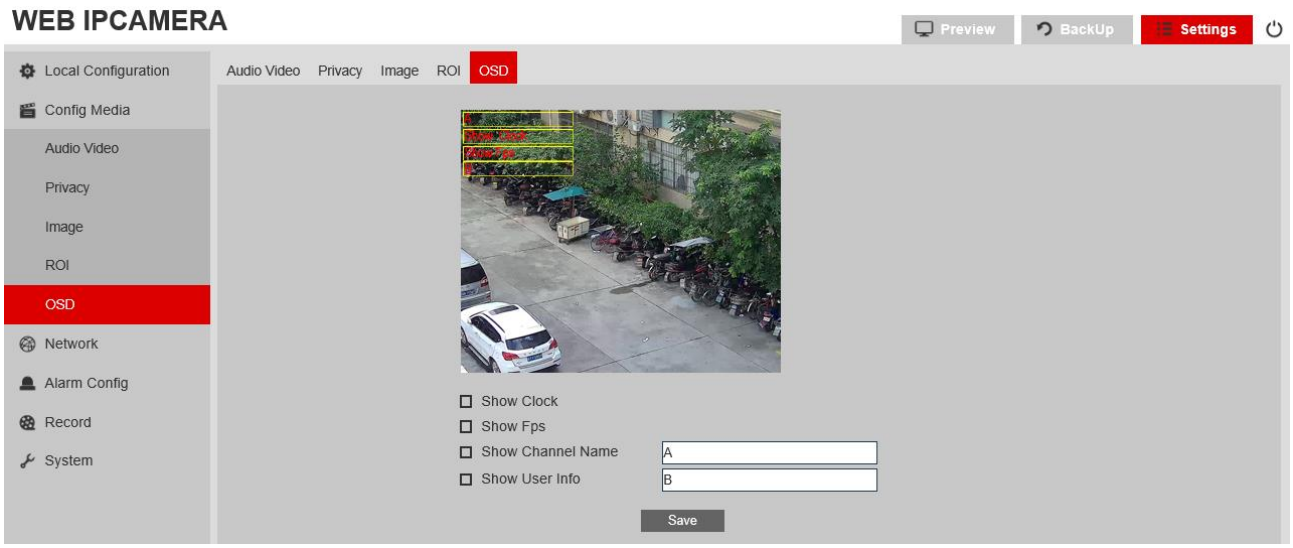
Step3 Click "Full Screen" to select the whole area, click "Clear Screen" to clear the previous settings, Click "Save" to complete ROI area configuration.

Note

ROI function supports up to four areas.

4.2.5 OSD

Step1 Select "Settings > Config Media > OSD". See picture below for reference:



Parameter	Description
Show clock	Display or Hide current time
Show Fps	Display or Hide FPS info

Show Channel Name	Display or Hide Channel name. (up to 16 characters)
Show User Info	Display or Hide User info. (up to 16 characters)

Step2 OSD Parameters

Step3 Click “Save” to complete OSD configuration.

Note

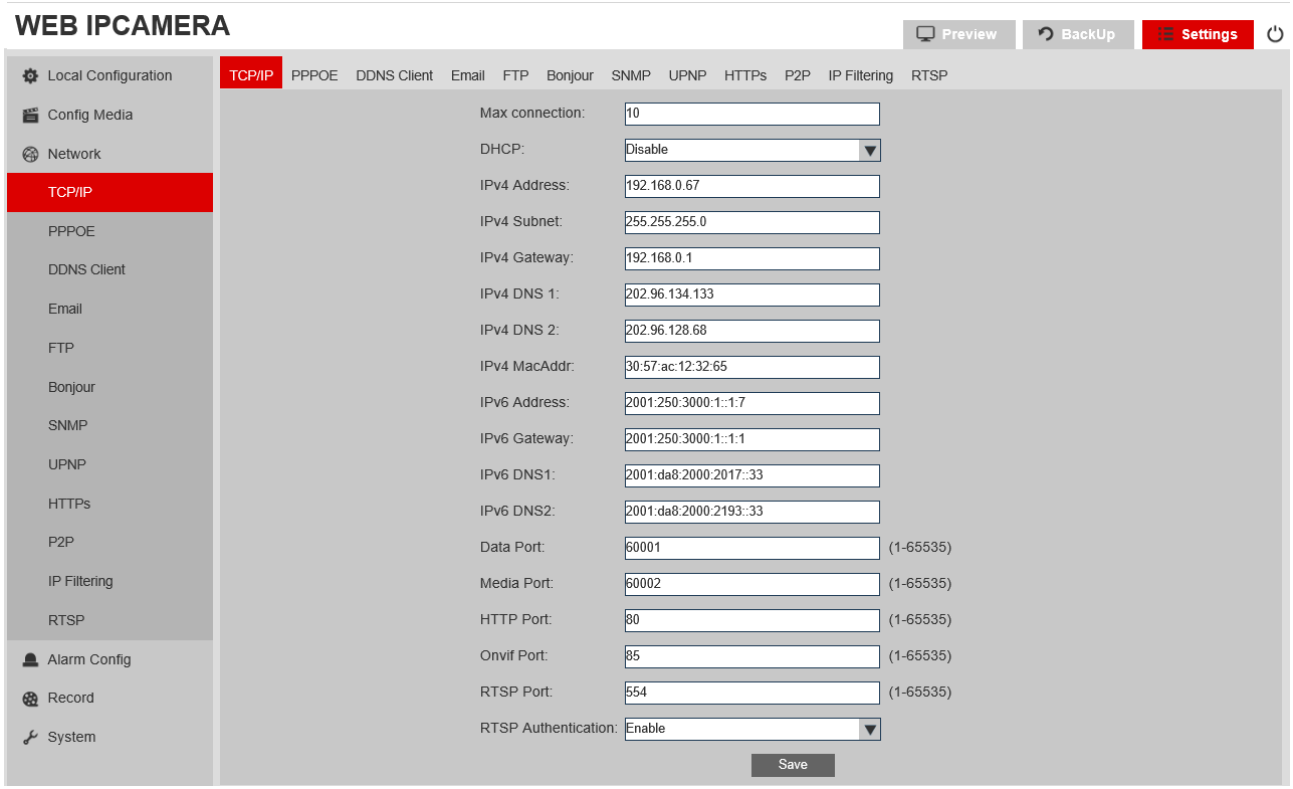
User may use mouse to change the OSD content position.

4.3 Network

Network Configuration: “TCP/IP, PPPOE, DDNS Client, Email, FTP, Bonjour, SNMP, UPNP, HTTPS, P2P, IP Filtering, RTSP “

4.3.1 TCP/IP

Step1 Select “Settings > Network > TCP/IP” . See picture below for reference:



Step2 TCP/IP Parameters

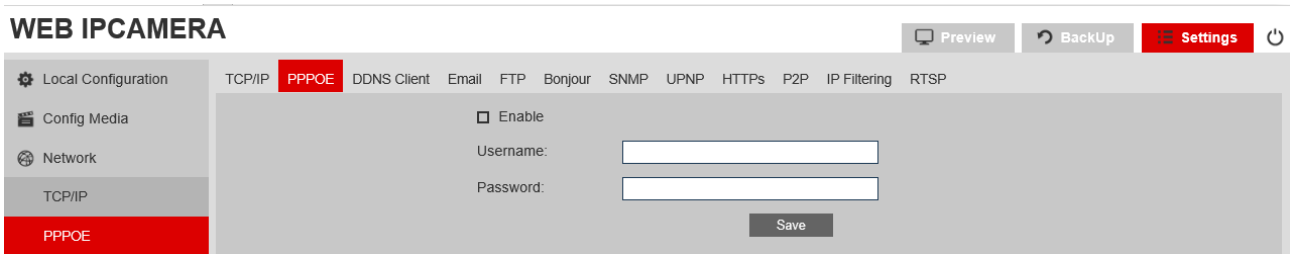
Parameter	Description
Max connection	Allows up to 10 concurrent device logins.

DHCP	Enable or Disable DHCP ◆ Enable DHCP: DHCP is a system where one device on your network (usually a router) will automatically assign IP address to device connected to the network. ◆ Disable DHCP (Static): Static networks require all devices to have their IP addresses manually defined, as there is no device dedicated to automatically assign IP address.
IPv4/IPv6 Address	◆ Just as Home and Office needs to have an address which identifies their location on the road network. The camera uses IPv4 addressing, which consists of four groups of numbers between 0 and 255, separated by periods. For example, a typical IP address might be “192.168.1.37”or similar. ◆ The length of the IPv6 address is 128 bits, which is four times the length of the IPv4 address, expressed in hexadecimal and separated by colons. For example, a typical IP address may be "2001: 250: 3000: 1 : 1: 7 "or similar.
IPv4 Subnet	◆ If the IP address is like a street address, then a sub-network is like user specific area. ◆ This will be formatted in a similar way to the IP address (ie., four numbers up to 255 separated by periods) but contain very different numbers. ◆ In the above example, the Subnet might be something like: “255.255.255.0”.
Gateway	◆ This is the address of the “way to the Internet.” To continue the road analogy, this is like your local access point to the highway. This is an IP address in the same format as the others, and is typically very similar to the IP address of the Camera. ◆ To continue the above example, it might be something such as: “192.168.1.1”.
DNS	Set DNS server address
MAC Address	The Media Access Control address. This is a unique code which nothing else should share. User can’t change this one - it’s pre-set when the Camera is manufactured.
Data / Media Port	The default port is 60001/60002. Do not modify it.
Http Port	◆ This is the port through which User will be able to log in to the Camera. It will need to be forwarded properly in order to ensure smooth, latency-free communication. ◆ The default value is “80”, if another device on user network is using this port, please change to other value. ◆ This is the port number user will need to remember when logging in remotely from a remote PC via the HTTP interface. i.e., http://ip:port (http://56.236.333.237:80)
Onvif Port	◆ ONVIF protocol communication port. ◆ The default value is “85”
RTSP Port	◆ “Real Time Streaming Protocol”, User may use this port to send the streaming file ◆ The default RTSP port is 554 Main Stream path example rtsp://192.168.0.65:554/H264?channel=0&subtype=0&unicast=true&proto=Onvif Sub Stream path example rtsp://192.168.0.65:554/H264?channel=0&subtype=1&unicast=true&proto=Onvif
RTSP Authentication	Enable: The RTSP connection requires a username and password. Disabled: The RTSP connection does not require a username and password.

Step 3. Click “Save” to complete TCP/IP configuration.

4.3.2 PPPOE

Step.1 Select”Settings > Network > PPPOE”. Picture is for reference only:

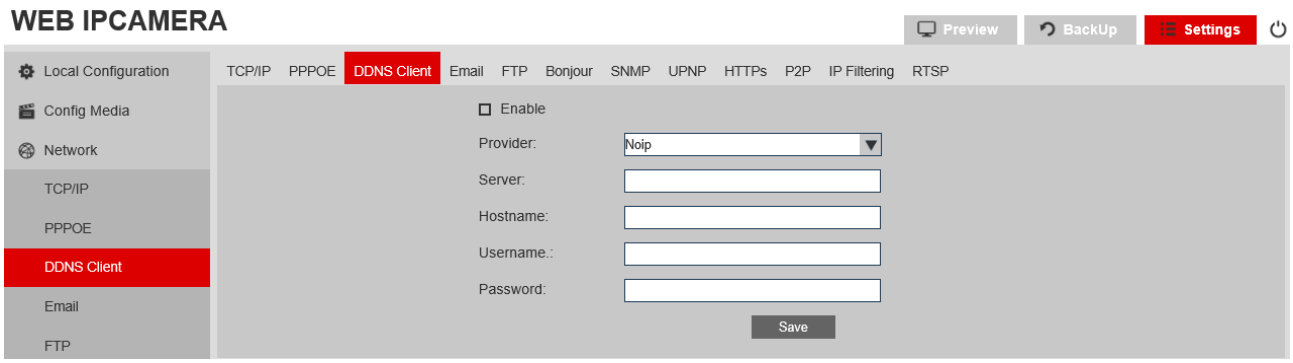


Step2 Check“PPPOE”Enable”.
Step3 Input username & password from ISP（Internet Service Provider）.
Step4 Click“Save” Camera will reboot to complete PPPOE configuration.

Note
PPPOE: An advanced protocol that allows the Camera to be more directly connected via a DSL modem. This is an option for advanced users only.

4.3.3 DDNS Client

Step1 Select“Settings > Network > DDNS Client”, picture for reference only:



Step2 DDNS Client Parameters

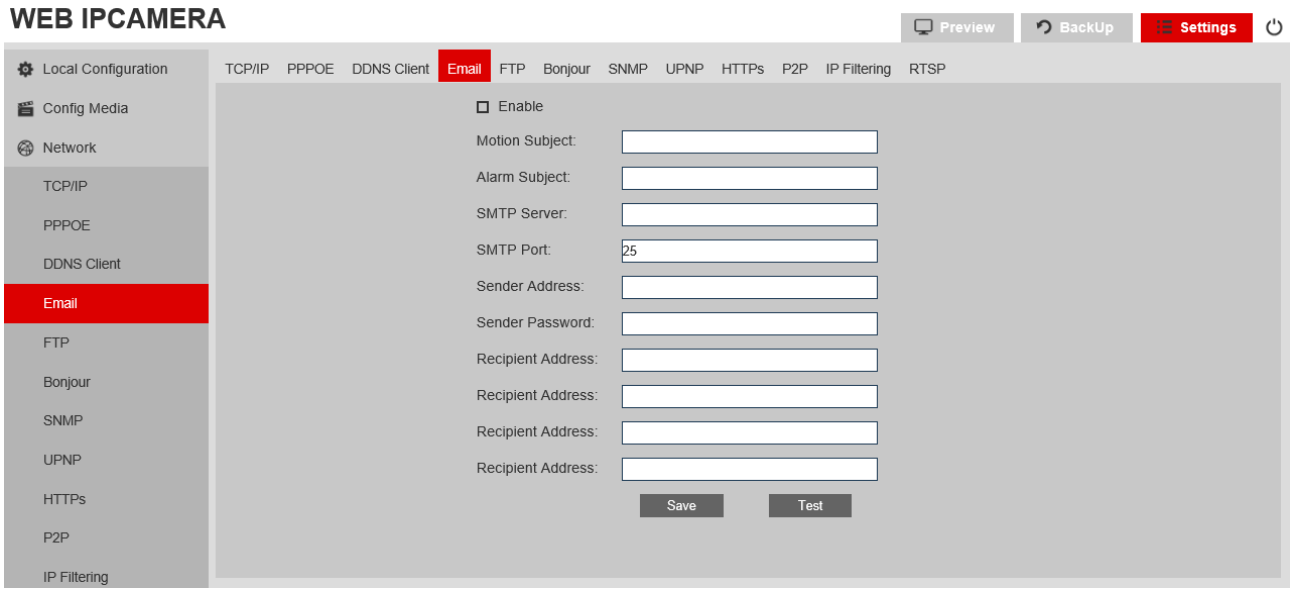
Parameter	Description
Provider	Choose a server that you’re using from 3322.org, DynDDNS, Noip.
Server	Enter the server address from your DDNS service provider.
Hostname	Enter the Hostname that user sets up in DDNS service. This is the address user employs to access user network.
Username	Enter the username user setup with your DDNS server.
Password	Enter the password user setup with your DDNS server. These do not have to match your username/password combination in either your Camera or router. (For the sake of security, we suggest making them different).

Step3 Click ”Save” Camera will reboot to complete DDNS Client configuration.

Note
DDNS – This stands for Dynamic Domain Name System. DDNS is a method of automatically updating a name server in the Domain Name System (DNS), often in real time, with the active DNS configuration of its configured hostnames, addresses or other information.

4.3.4 Email

Step1 Select “Settings > Network >Email”. See picture below for reference:



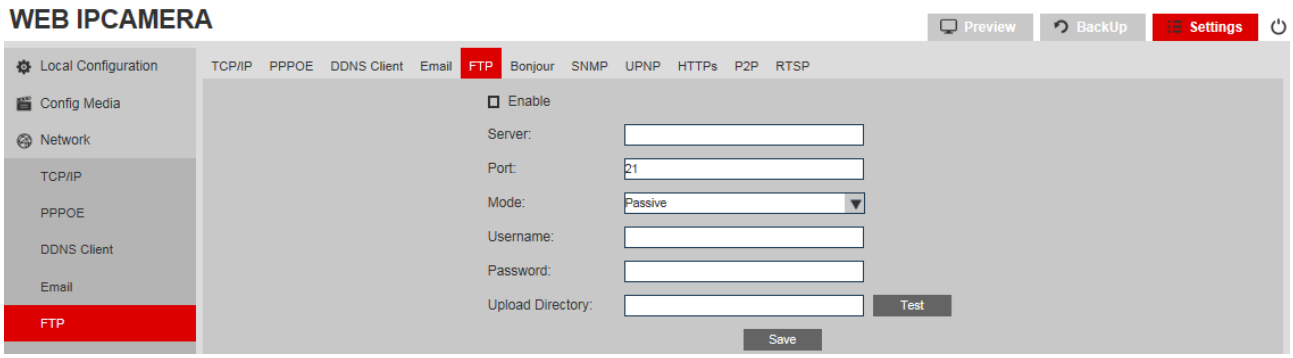
Step2 Email Setting Parameters

Parameter	Description
Enable Email	Enable or Disable Email Function
Motion Subject	This field allows the user to define the Motion Subject line of the email that is sent to the receivers.
Alarm Subject	This field allows the user to define the Alarm Subject line of the email that is sent to the receivers.
SMTP Server	SMTP stands for Simple Mail Transfer Protocol. This field allows the user to enter the SMTP server used by the email service. For example: “smtp.gmail.com”
SMTP Port	The SMTP Port used by the email provider of your choice. The default value is “25”
Sender Address	The address user sends the emails from. For example: “youraddress@gmail.com” or similar.
Sender Password	The password for the outgoing email account.
Recipient Address	The email address user wants the Camera to send emails to. Note that the Camera might send a large number of automatic emails under certain conditions. Maximum 4 recipients.

Step3 Click ”Save” to complete Email configuration.

4.3.5 FTP

Step1 Select “Settings > Network >FTP”. See picture below for reference.



Step2 FTP Parameters

Parameter	Description
Server	Enter your FTP server address, may be IP address or the FTP link address.
Port	Enter the FTP port number. The default value is “21”
Mode	Setting up FTP mode: active or passive (active presentation of the data transfer by the server, passively representing the client's data transfer)
Username	Enter the username used to login to the FTP server.
Password	Enter the password used to login to the FTP server.
Upload Path	Enter the upload folder name here to receive the recorded files.
Test	After finished setting, User may click Testing to verify FTP settings, it will show FTP Test, Succeed or FTP Test Failed on the bottom of the window. If setting is failed, please check your configuration again.

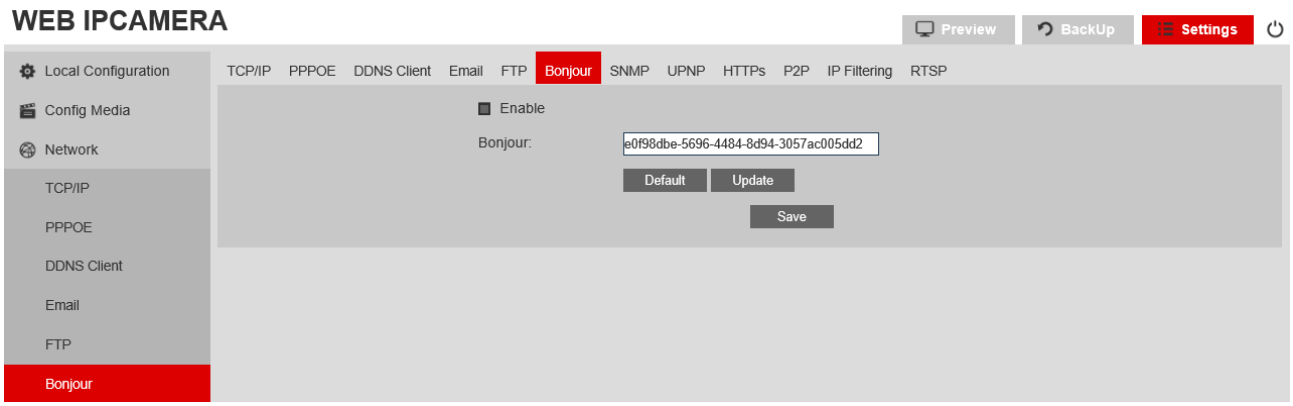
Step 3 Click “Save” to complete FTP configuration.

Note

FTP: A file transfer protocol. The two-way transmission of control files on the network. In the use of FTP, there are two concepts: "download" and "upload". The "download" file is a copy of the file from the remote host to its own computer. "Uploading" files is copying files from their computers to remote hosts. This feature is the camera "uploading" or video to FTP Server

4.3.6 Bonjour

Step1 Select “Settings > Network > Bonjour”, See picture below for reference:



Step2 Check “Enable”, Click ”Save” to complete Bonjour configuration.

Note

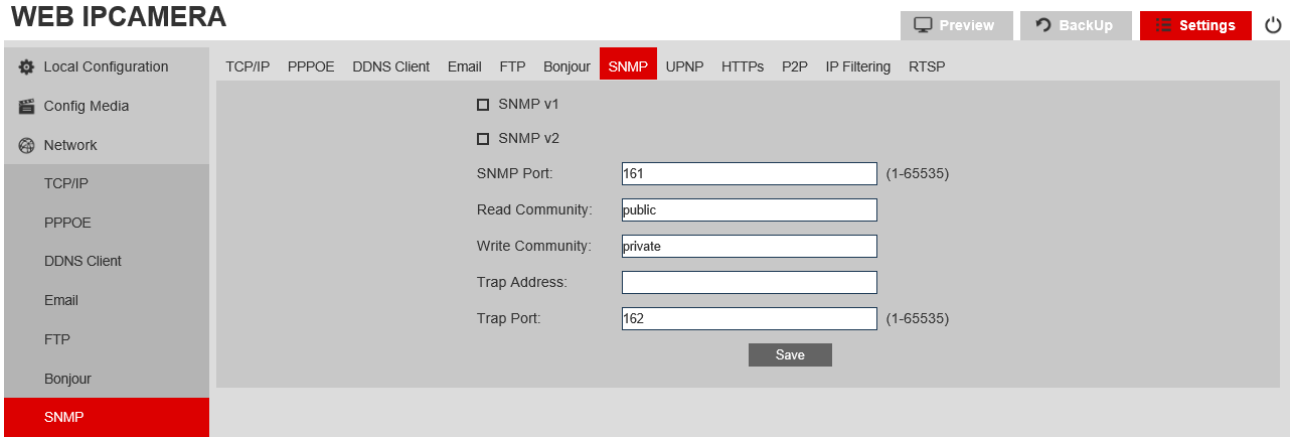
Bonjour is Apple's implementation of Zero-configuration networking (Zeroconf), a group of technologies that includes service discovery, address assignment, and hostname resolution.

Click the check-box next to Enable to the Bonjour functionality. The Server Name field allows the user specify what name to use in order to connect devices via the Bonjour protocol.

To reset to default settings, click the Default button. To update the Bonjour Server Name, click the Update button. Click the “Save” button to save the settings,

4.3.7 SNMP

Step1 Select “Settings > Network > SNMP”. See picture below for reference:



Step 2 SNMP Parameters.

Parameter	Description
SNMP Version	These check-boxes allow the user to select the SNMP version to use.
SNMP Port	This field allows the user to write in a port for SNMP to use. The default value is “161”
Read Community	This field shows which SNMP community has read access. The default setting is： public
Write Community	This field shows which SNMP community has write access. The default setting is: Private
Trap Address	This field allows the user to write in a trap address.

Trap Port	This field allows the user to write in a trap port number. The trap port number should not be the same as the SNMP port. The default value is “162”

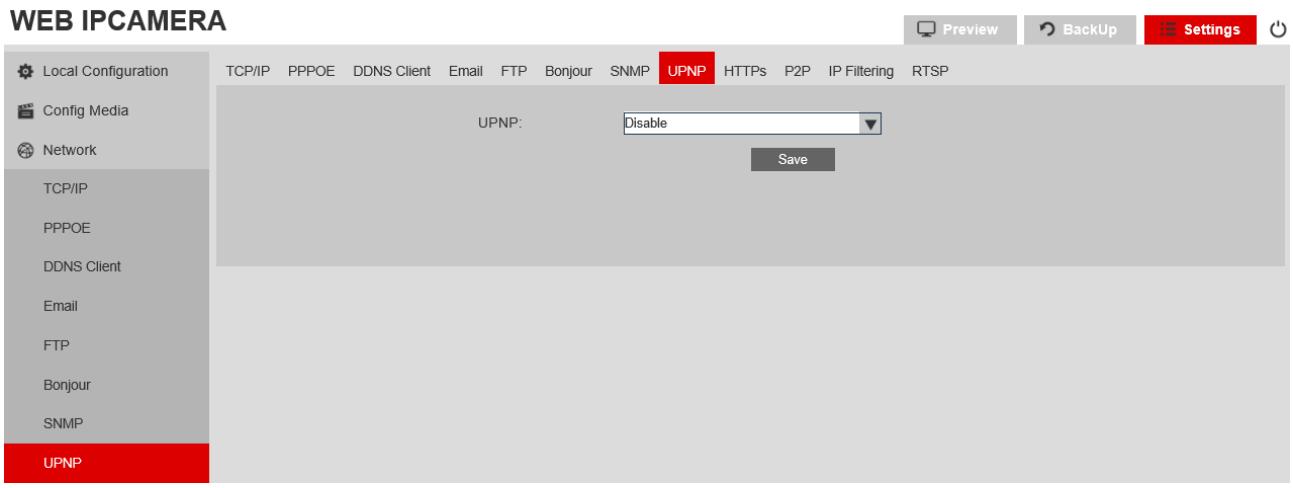
Step3 Click “Save” to complete SNMP configuration.

Note

SNMP stands for Simple Network Management Protocol. This protocol is used to provide a basic framework in order to allow connection between various network devices.

4.3.8 UPNP

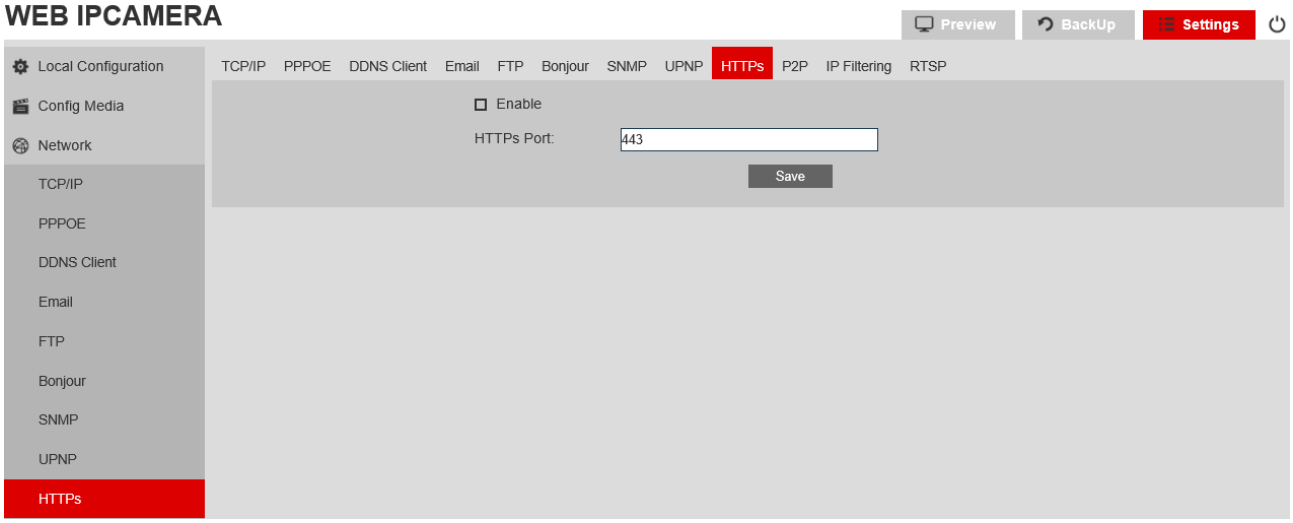
Step1 Select “Settings > Network > UPNP” . See picture below for reference:



Step2 Check “Enable” ; Click “Save” to complete UPNP configuration.

4.3.9 HTTPS

Step1 Select “Settings > Network > HTTPS” , See picture below for reference:



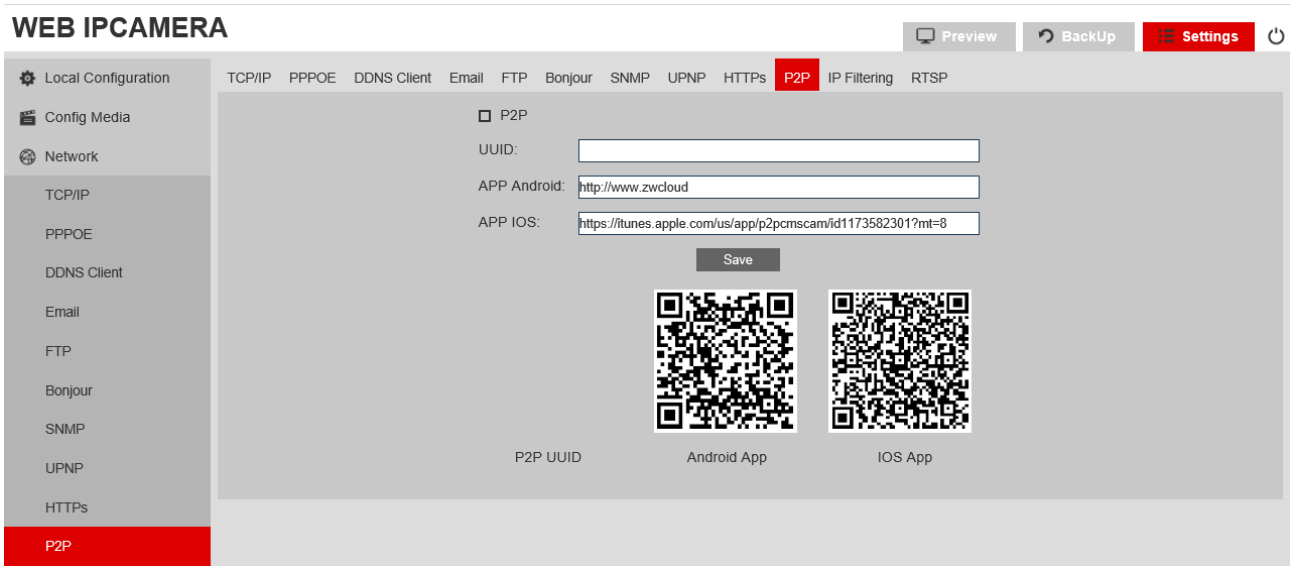
Step2 Check “Enable” ; Click ”Save” to complete HTTPs configuration.

Note

This check-box enables the use of the HTTPS protocol for accessing the camera. This field designates the Hypertext Transfer Protocol Secure (HTTPS) port number. The default value is “443”.

4.3.10 P2P

Step 1 Select “Settings > Network >P2P”. See picture below for reference:



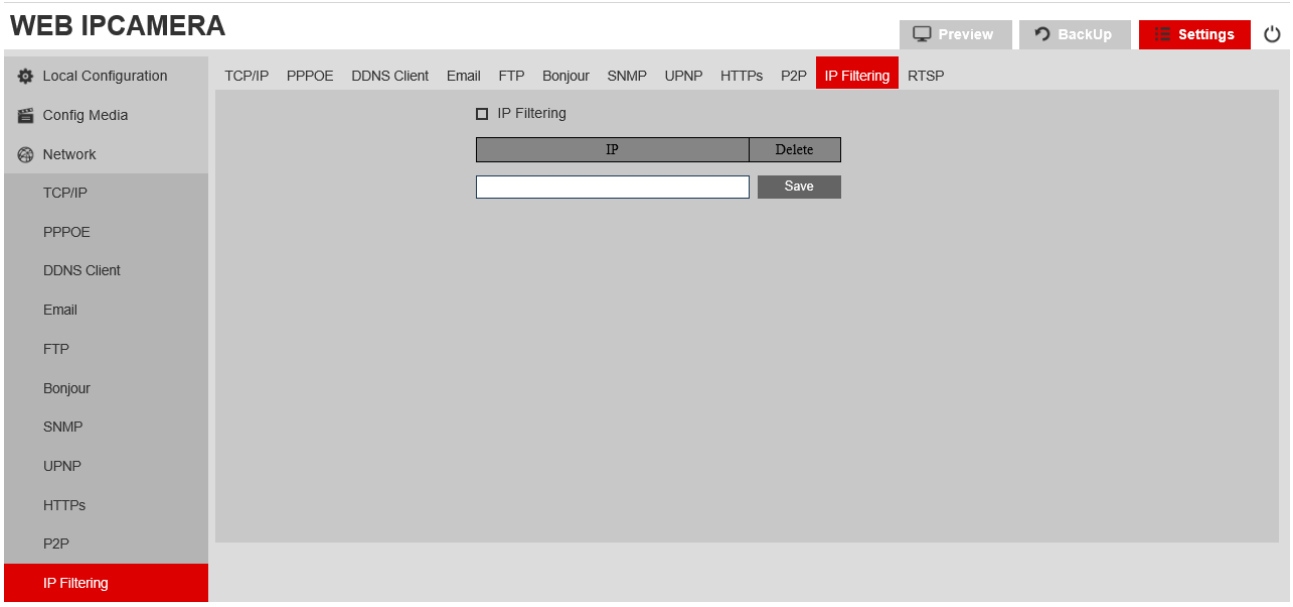
Step 2 Check “P2P” to enable the P2P feature for the camera. This feature must be enabled for the camera to connect to a smartphone or tablet via the App. It is enabled by default.
Step 3 Scan QR Code to download the Mobile App.
Step4 Use the APP to scan the UUID QR Code to add the camera. The S/N may be used to manually enter the camera’s information on a mobile or tablet device in case the QR code scanning feature cannot be used.
Click “Save”, to complete P2P configuration.

Note

By using mobile APP, user is able to remote check camera real time video. Remote recording and snapshot, change IP camera parameter setting, alarm setting etc.

4.3.11 IP Filtering

Step 1 Select “Settings > Network >IP Filtering”. See picture below for reference:



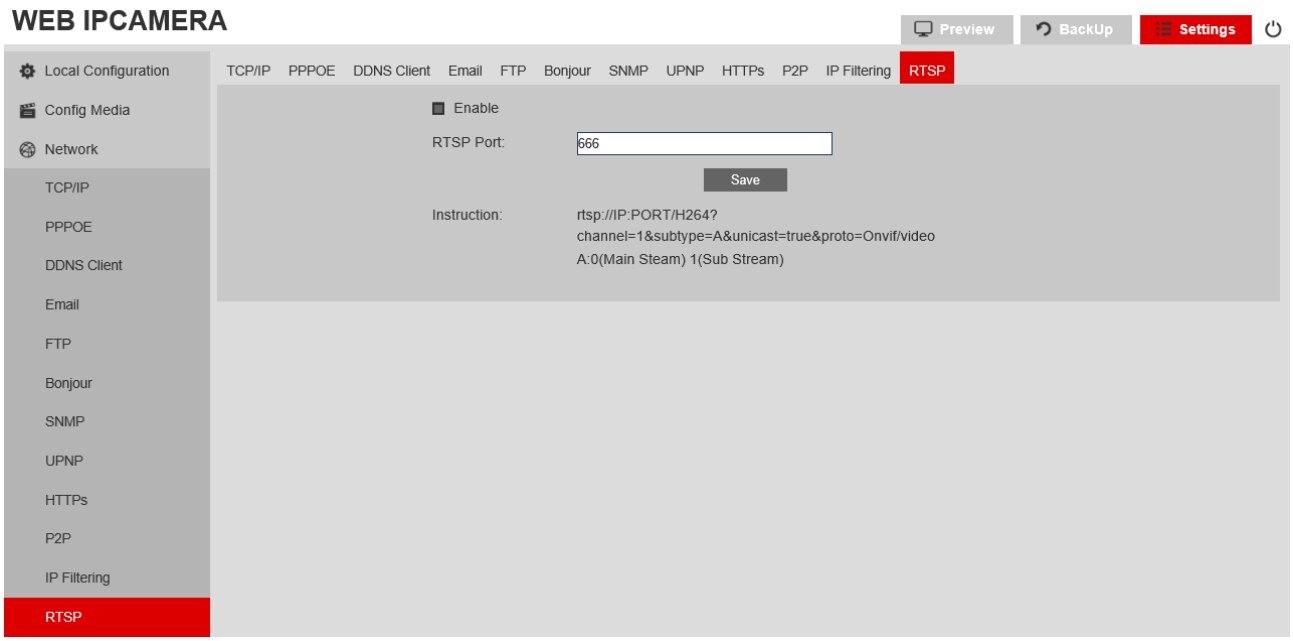
Step2 Check “IP Filtering” Enter the IP address, Click ”Save” to complete IP Filtering configuration.

Note

Added IP address, cannot access IPC

4.3.12 RTSP

Step 1 Select “Settings > Network >RTSP”. See picture below for reference:



Step2 Check “RTSP” to enable the RTSP feature. Click ”Save” to complete RTSP configuration.

4.4 Alarm Config

Alarm is divided into “Motion Detection, Video Blind, and Alarm”

4.4.1 Motion Detection

How Motion Detection Works:

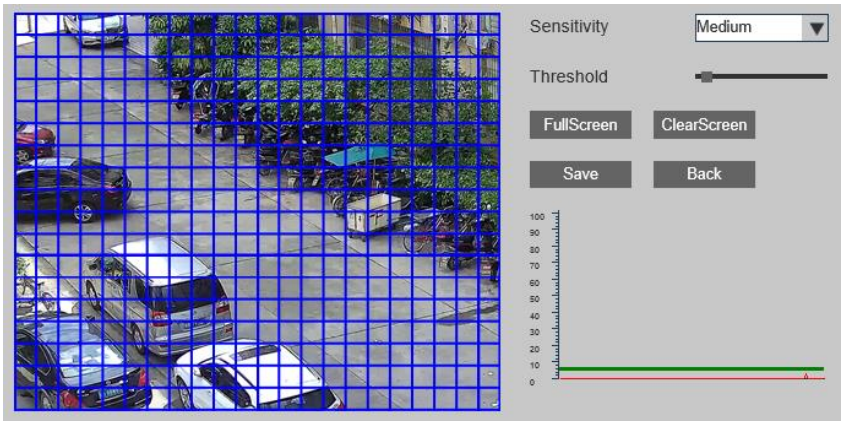
The way that the Camera detects motion is quite straight forward - it's a process where it compares one frame with the next. A certain amount of "difference" between these two "frames" is interpreted as motion.
As a result, the Camera is able to detect when there is a change in the picture. However, this does not necessarily need to be something moving in the frame.
For example, a light being turned on or off, a lightning flash or even the sun coming out momentarily on a cloudy day might be enough to trigger the motion detection on the Camera. However, as these events last only a moment (and are relatively rare) they will only create a few redundant clips, which will not take up too much space or pose a problem with scanning through footage.

Step 1 Select "Settings > Alarm Config > Motion Detection", picture is for reference only:

Step **2** Check "Enable" to turn on the Motion Detection function, then check "Alarm Output" and "Record Video", depending on different circumstances.

- Alarm Output: check this function to generate an alarm output signal to trigger the related alarm output devices.
- Record Video: check this function to record video when a motion detection alarm is triggered.

Step 3 Click "Regional Edit" opens a pop up screen that may be used to set detection areas.



Use the mouse to select detection areas. Areas with blue squares are selected.

- Sensitivity: the higher the sensitivity, the less movement is required to trigger a motion event. The lower the sensitivity, the more movement is required to trigger a motion event.
- Threshold: the level that the motion detection needs to reach in order to trigger detection. The lower the threshold, the more likely that motion will trigger detection.
- Full Screen: one-click to select all areas for motion detection.
- Clear Screen: one-click to remove all areas for motion detection.

Step 4 Click "Save", then click to complete the configuration.

Step 5 Setup "Alarm Duration", "Pre-record Time", "Record Time" for different circumstances.

- Alarm Duration: when alarm triggered, the alarm duration will last for a certain period. (range from 5 to 300 seconds) The alarm will not be triggered again till this period is ended.
- Pre-record Time: this field specifies in seconds how long the surveillance footage is recorded before motion detection is triggered.
- Record Time: this field specifies in seconds how long the surveillance footage will be recorded after motion detection is triggered. The record time will not be triggered again till this period ended.

⚠ Note

Set up the "Alarm Duration" time shorter than "Record Time" is recommended. Otherwise might not record all the events.

Step 6 Set up "Time Periods" for motion alarm, only scheduled periods will trigger alarm event.
User may set up 4 periods per day maximum.

Step 7 User may duplicate the same settings to different days as user selects, or all days by checking "Select All".

Step 8 Click "Save" to complete motion detection configuration.

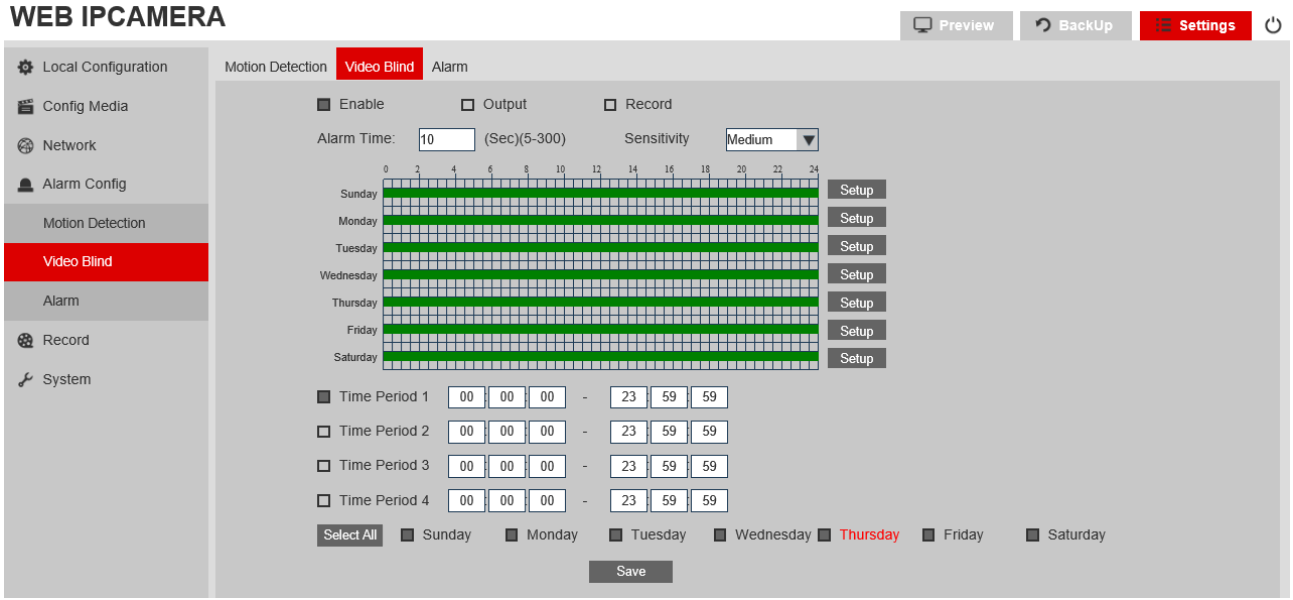
Note

Only certain models support Alarm Output function.

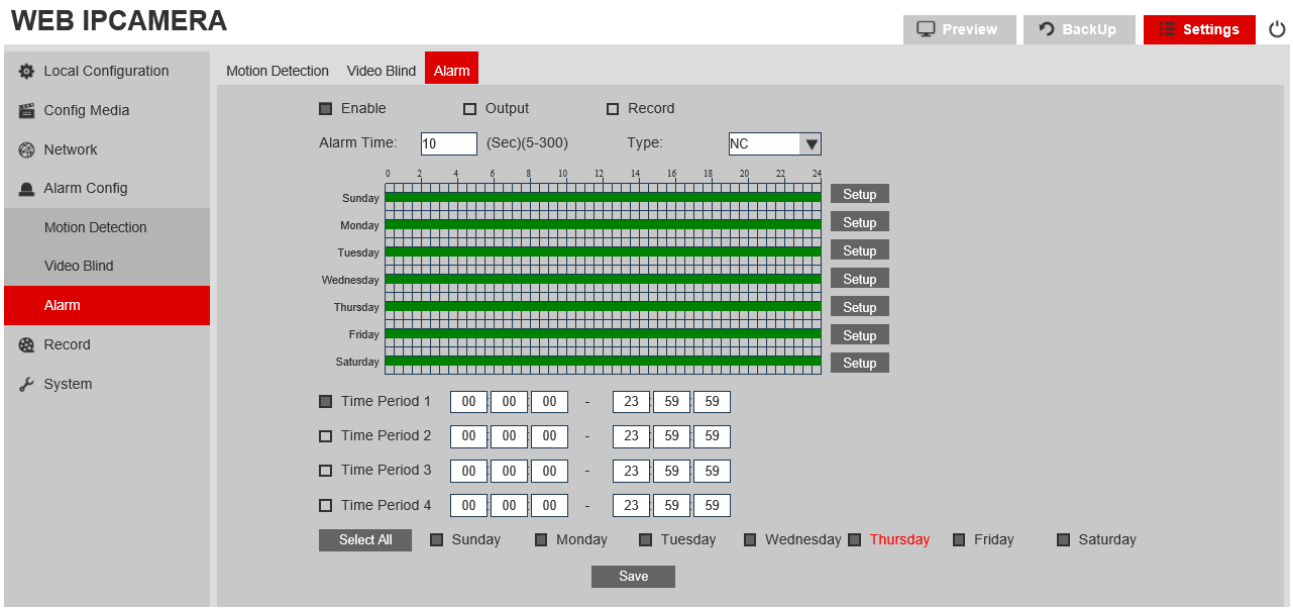
4.4.2 Video Bind & Alarm

Step1 "Settings > Alarm Config > Video Bind & Alarm"

Video Blind Picture reference



Alarm picture reference



Step 2 Check "Enable" to turn on the Video & Alarm, " then check "Alarm Output" and "Record Video" depending on different circumstances.

- Alarm Output: check this function to generate an alarm output signal to trigger the related alarm output devices.
- Record Video: check this function to record video when a motion detection alarm is triggered.

Step 3 Set up the alarm interval according to requirements, 5-300 seconds option, and Detection sensitivity provides: High/middle/low optional.

- Alarm Duration: when alarm triggered, the alarm duration will last for a certain period. (range from 5 to 300 seconds) The alarm will not be triggered again till this period ends.

Step 4 Set up "Time Periods" for alarm, only scheduled periods will trigger alarm event.

- User may set up 4 periods per day maximum.

Step 5 User may duplicate the same settings to different days as user selects, or all days by checking "Select All".
Step6 Click "Save" to complete Video & Alarm.

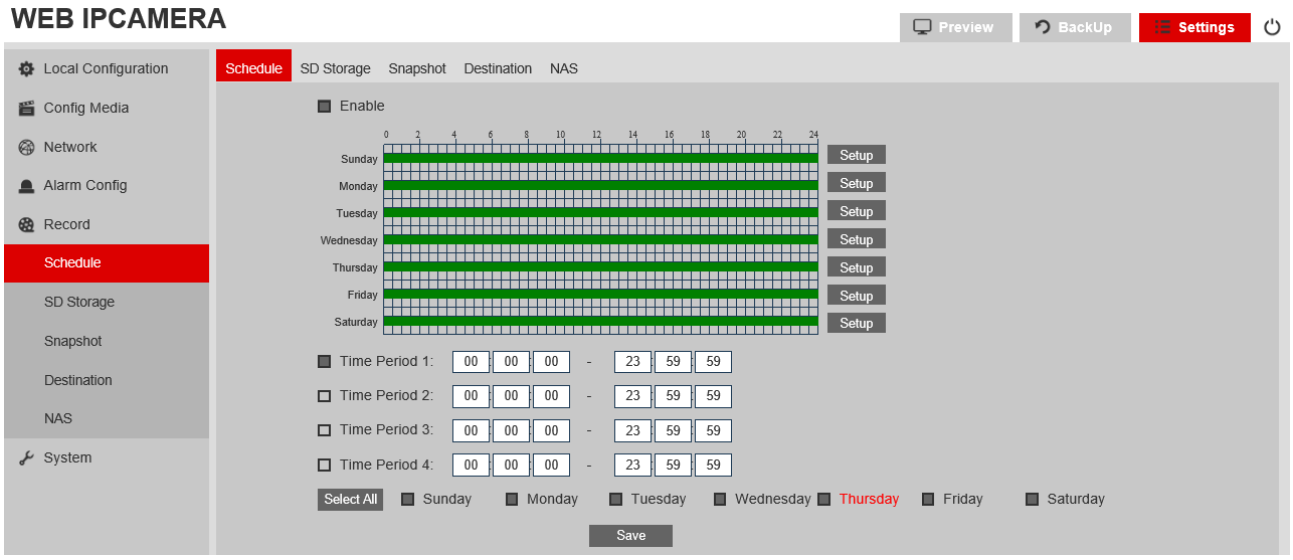
Note
Only certain models support Alarm Output function.

4.5 Storage

Storage divided into "Schedule, SD Storage, Snapshot, Destination, NAS "

4.5.1 Schedule

Step 1 Select "Settings > Storage > Schedule". See picture below for reference:



Step 2 Check “Enable” to set up scheduled recording.

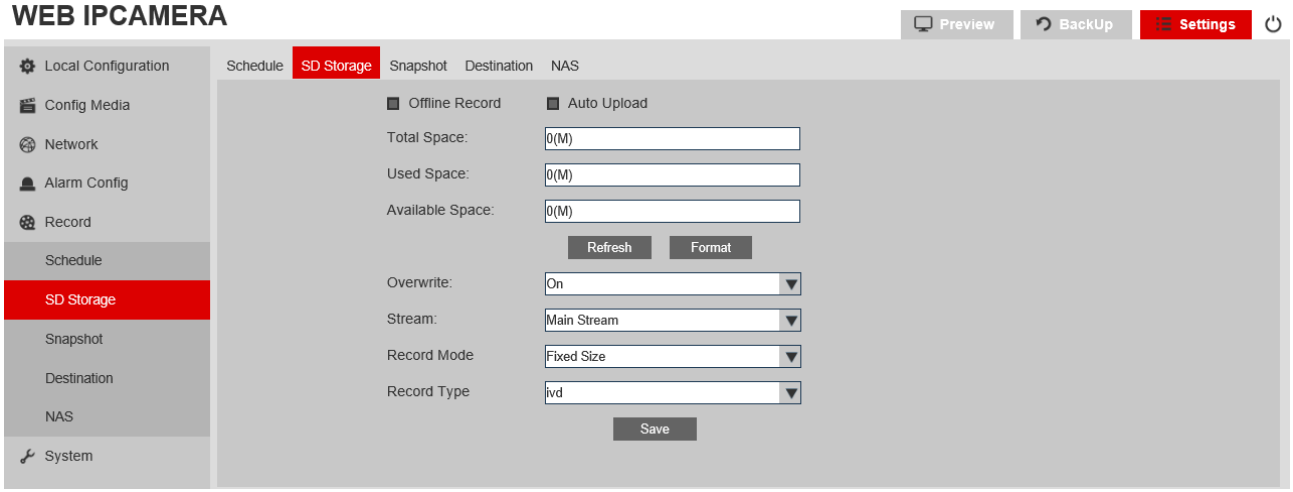
Step 3 Set up “Time Periods” for scheduled recording, only scheduled periods will start recording. User may set up 4 periods per day maximum.

Step 4 User may duplicate the same settings to different days as user selects, or all days by checking “Select All”.

Step 5 Click “Save” to complete scheduled recording configuration.

4.5.2 SD Storage

Step 1 Select “Settings > Storage > SD Storage”， picture for reference only:



Step 2 After put in the SD card, click “Refresh”， to check the “Total Space”, ”Used Space” and “Available Space”

Step 3 Click “Format” to format the SD card before use. All existing data from the SD card will be erased.

Step 4 Enable or Disable auto overwrite for different circumstance.

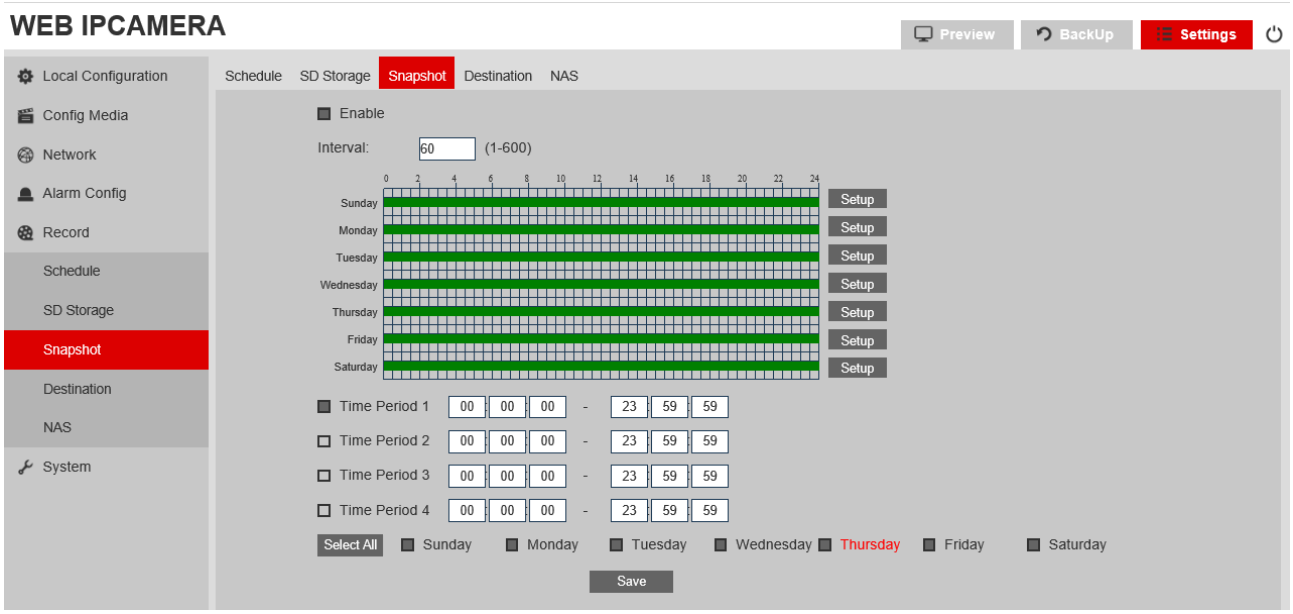
“On”: The recording will overwrite the data to the first day of records that's saved on the SD card automatically when there’s no available space.

“Off”: The recording will stop when the SD card has no available space.

Click “Save” to complete SD Storage configuration.

4.5.3 Snapshot

Step 1 Select “Settings > Storage > Snapshot”， picture for reference only:



Step 2 Check “Enable” to turn on the snapshot function.

Step 3 Set up the capture time interval from 1 to 600 seconds for different circumstances.

Step 4 Set up “Time Periods” for snapshot, only scheduled periods will capture snapshots.

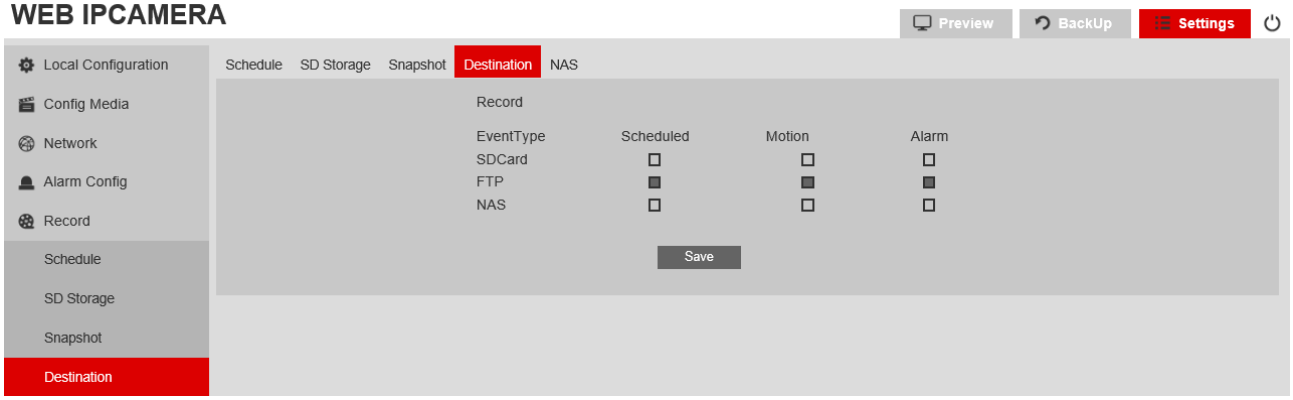
User may set up 4 periods per day maximum.

Step 5 User may duplicate the same settings to different days as user selects, or all days by checking “Select All”.

Step 6 Click “Save” to complete Snapshot configuration.

4.5.4 Destination

Step1 Select “Settings > Storage > Destination”， See picture below for reference:



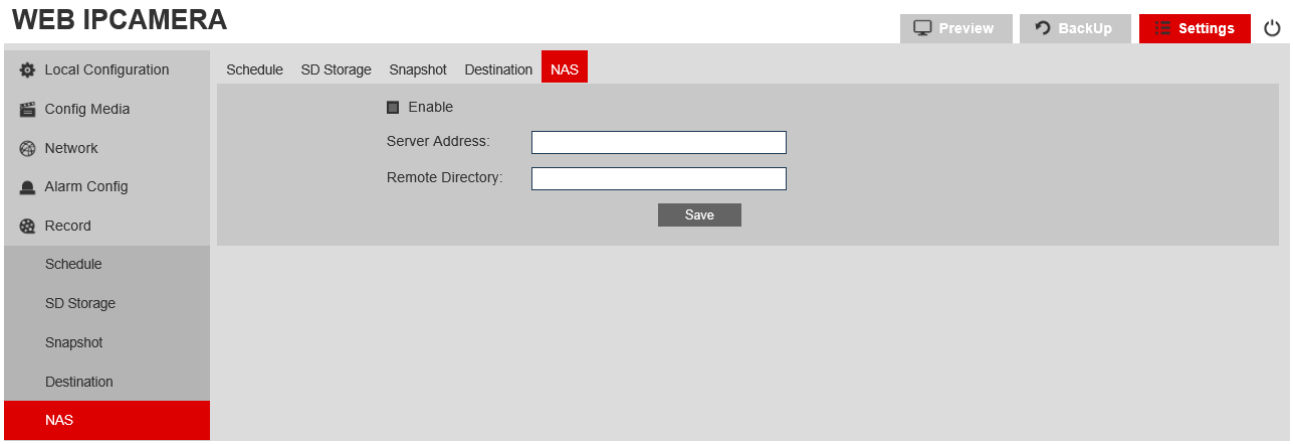
Step 2 Destination Parameters.

Parameter	Description
SD Card	When select this option, Video, alarm and snapshot will save in SD card
FTP	when Select this option, Video, alarm and snapshot will save in FTP server
NAS	when Select this option, Video, alarm and snapshot will save in NAS

Step3 Click “Save” to complete Destination configuration.

4.5.5 NAS

Step1 Select “Settings > Storage > NAS”. Picture is for reference only:



Step2 NAS Parameters

Parameter	Description
Server Address	Input NAS IP address
Remote Directory	Input NAS directory

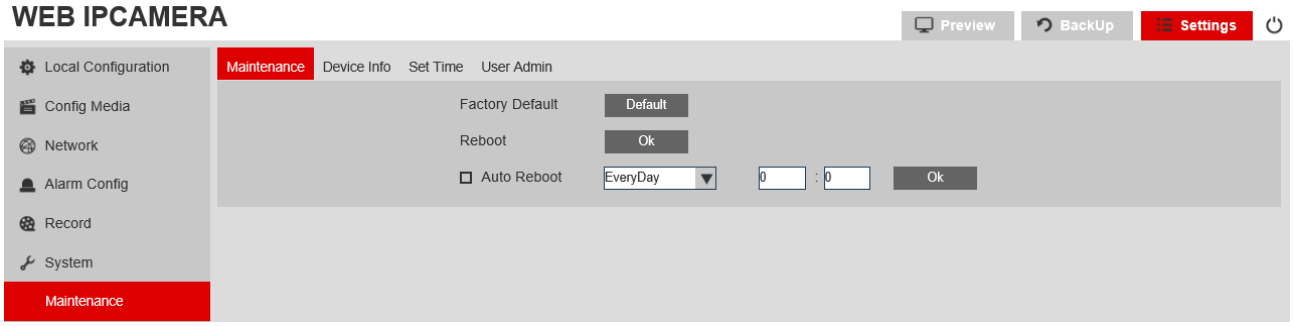
Step 3 Click “Save” to complete NAS configuration.

4.6 System

System is divided into ” Maintenance, Device info, Set Time, User Admin “

4.6.1 Maintenance

Step 1 Select “Settings > System > Maintenance”. See picture below for reference:



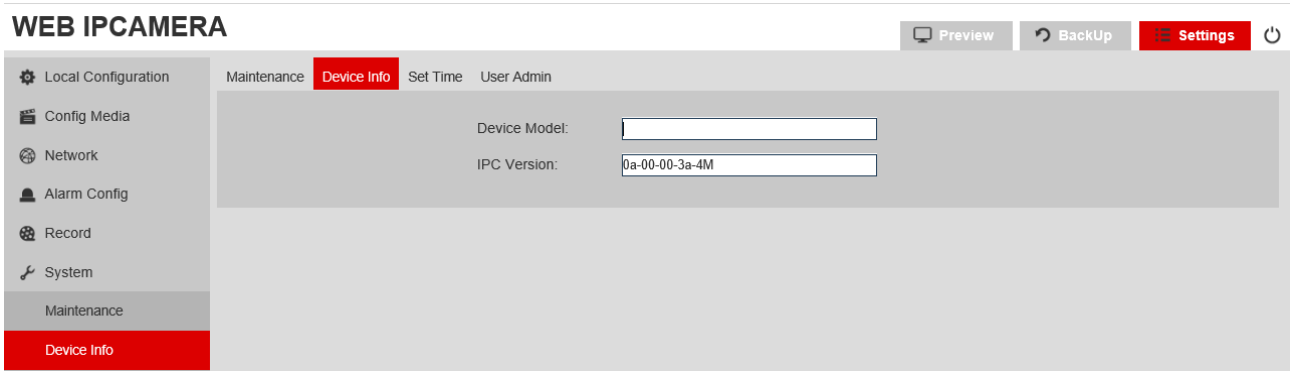
Step 2 Maintenance Parameters.

Parameter	Description
Factory Default	Reset the system to factory default settings.
Reboot	Simply reboot the IP Camera.
Auto Reboot	Schedule an auto reboot for the IP Camera.

Step 3 Click “Save” to complete Maintenance configuration.

4.6.2 Device Info

Step 1 Select “Setting > System > Device Info”. See picture below for reference:



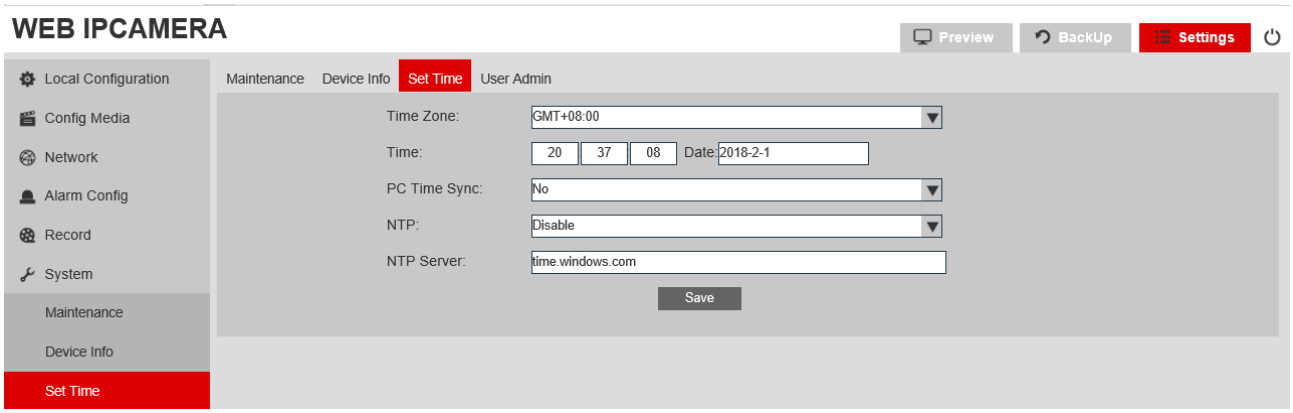
Step 2 Device info Parameters.

Parameter	Description
Device Model	model number for the IP Camera
UPnP	The required port is automatically enabled through the UPNP protocol to the router that has this capability
IPC Version	IP Camera firmware version

Step 3 Click “Save” to complete Device Info configuration.

4.6.3 Set Time

Step 1 Select “Settings > System > Set Time”. See picture below for reference:



Step 2 Set Time Parameters.

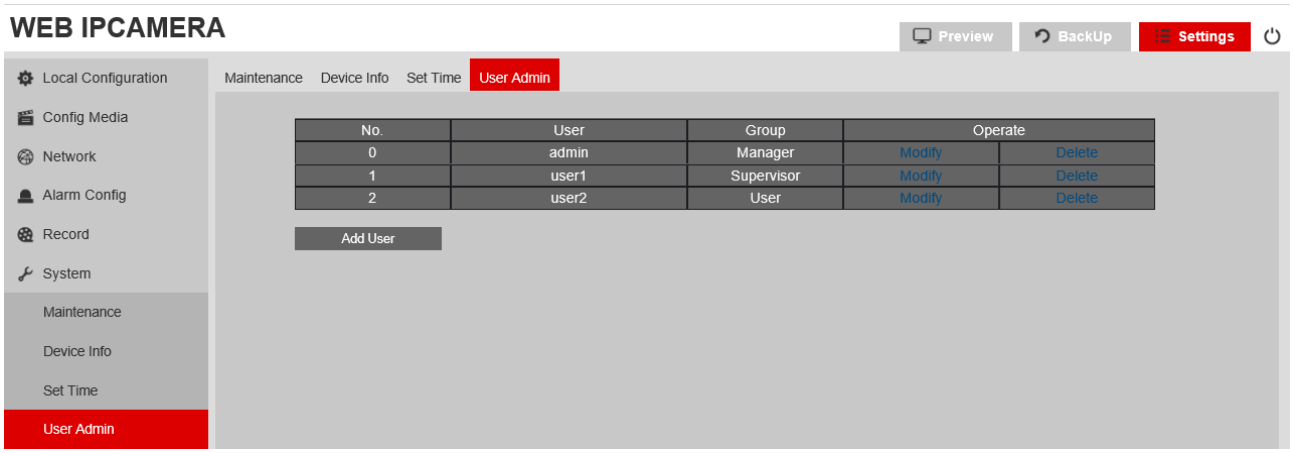
Parameter	Description
Time zone	Set IPC time zone
Time	Manually set time when necessary

PC Time Sync	Set SYNC time with PC
NTP	Set if enable SYNC network time function, default is “enable”.
NTP Server	Set NTP server address, default is “time.windows.com”.

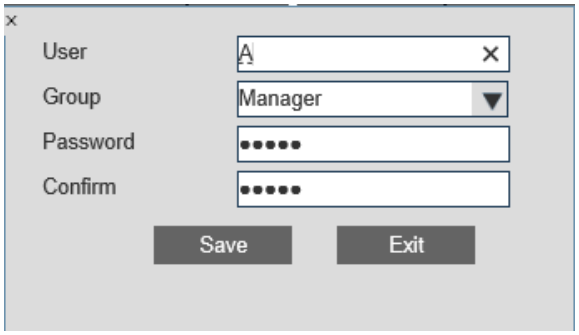
Step 3 Click “Save” to complete Set Time configuration.

4.6.4 User Admin

Step 1 Select “Settings > System > User Admin” See picture below for reference:



Step 2 Click “Add User” to add a user for IPC.



- User: Create an user for IPC .
- Group: Provide Manager, maintainer, user 3 level option.
- Password: Change user password.
- Confirm: Confirm password.

Note

User 1, User2 cannot be deleted, only allow modifying password. New added user may be deleted.

Glossary of Terms

1 WDR

WDR (Wide Dynamic Range) is the technique aim to reproduce a similar range of luminance through adapting to the different exposure level presented in the environment, by collecting two different level of exposure of the same picture twice and combining them. The WDR feature will allow the dark area to be brighter and darken over-expose area, allowing detail other-wise dampened by over-exposure (glare) and under-exposure.

2 DWDR

With the same aim as WDR, DWDR (Digital Wide Dynamic Range) adjust the exposure by digitally adjusting the contrast and gamma value of the picture, reducing the effect of glare. Unlike WDR is done by the hardware, DWDR may cause the picture to appear washed-out.

3 BLC

BLC (Backlight Compensation) increase the overall exposure of the entire picture to reduce the contrast between the background and the main interest area. The overall viewable area will improve but area with brightly-lit area will be overexposed.

4 HLC

HLC (Highlight Compensation) reduce the overall exposure in the main interest area to reduce the effect of strong light. It is the reverse of BLC because HLC target the lighting generated in the main interest area.

5 3DNR

3DNR (3D Noise Reduction) is the technique used to reduce video noise by analyzing and compare the difference between each successive frames in order to adjust video pixel. With 3DNR, there will be a trade-off between video crisp and motion blur.

6 IPv6

IPv6 is the next version of IP (Internet Protocol), the communication protocol that provides an identification and location system for traffic-routing across the networks. It is designed by IETF (Internet Engineering Task Force) to replace IPv4 in the anticipation of IPv4 address exhaustion.

7 FTP

FTP (File transfer Protocol) is a protocol used to transfer files between two end-points (computers) on a network. FTP is an application that exists in different operation system which follows the same set of standard for file transportation, allowing file transfer across different platforms.

8 DHCP

DHCP (Dynamic Host Configuration Protocol) is a network protocol that allows a server (in most cases, a router/modem) to automatically assign an IP address to a connected device from a defined range of IP numbers. DHCP allows a uniformly assigned network environment across different devices.

9 DDNS

DDNS (Dynamic Domain Name System) is a system to automatically update the client’s dynamic IP address to a static domain name, thus allow a consistent connection without the need to check dynamic IP address. The update client will send the IP address in real time, based on a predefined interval, to a server hosting the static domain name, which in term allows other domain name server to acknowledge the new IP address, without the need to manually changing the record.

10 PPPOE

PPPoE (Point-to-Point Protocol over Ethernet) is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with DSL services where individual users connect to a DSL modem over Ethernet.

11 RTSP

RTSP (Real Time Streaming Protocol) is a network protocol designed to allow system to control streaming media servers and is used to establish and control media session between two end-points over TCP/IP.

12 ONVIF

ONVIF is the global and open industry standard for interfacing between video surveillance product and other physical security areas. The standard defines device discoveries, live video and audio standard, bit rate, and controls, ensuring compatibility between different manufacturers.

13 H265

H.265 is the successor to the H.264 video encoding standard. The aim for H.265 is to improve bit rate, video quality, and overall video performance. Compare to H.264, H.265 only needs half of the require data to achieve the same video quality as H.264.

14 HTTPS

HTTPS (Hyper Text Transfer Protocol Secure) is the secure version of HTTP, the protocol which data is sent between browser and the website connected to. The 'S' at the end of HTTPS stands for 'Secure'. It means all communications between browser and the website are encrypted using SSL.