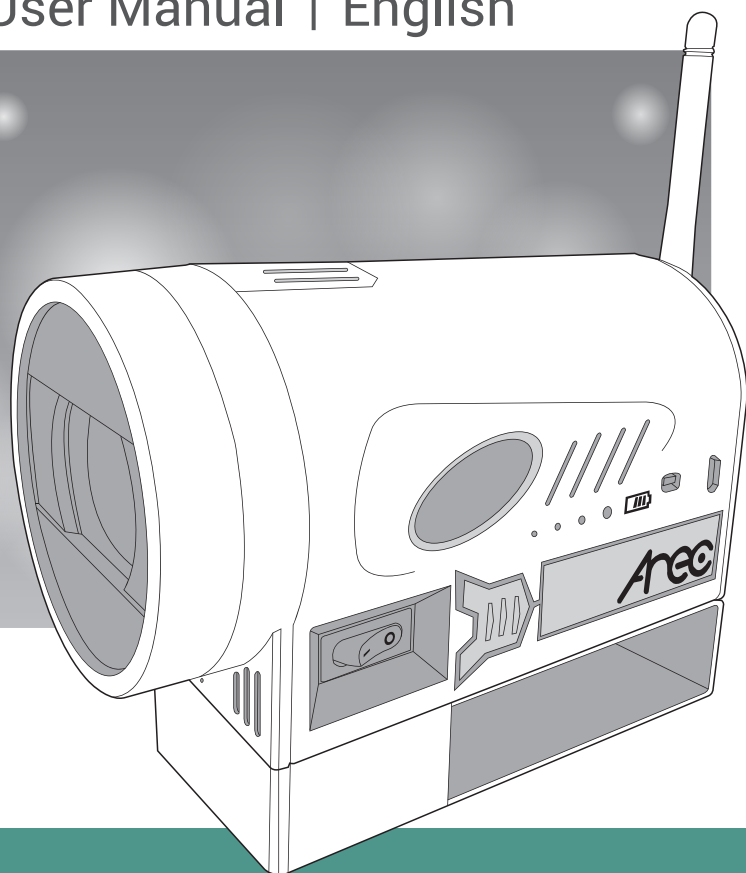




CW-210

Wireless Full HD Network Camera

User Manual | English



Preface

This manual introduces the function installation and operation of the Wireless Full HD Network camera. Prior to installation and usage, please read the manual thoroughly.

1. Warning

- (1) This product can be only used in specified range in order to avoid any damage or danger;
- (2) Don't expose the camera to rain or moisture place
- (3) Don't remove the cover to reduce the risk of electric shock. Refer servicing to qualified personnel.
- (4) Never operate the camera under unqualified temperature , humidity and power supply;
- (5) Please use the soft cloth to clean the camera. Use neuter cleanser if bad smeared .Don't use the strong or cleanser avoiding scuffing.

2. Electric Safety

Installation and operation must accord with electric safety standard.

3. Caution to transport

Avoid stress,vibration and soakage in transport,storage and installation.

4. Polarity of power supply

This product uses DC 5V power supply, power plug Micro USB interface as shown below.



Pic1. Power plug

5. Careful of installation

- (1) This series item must put on the smooth desk or platform,and it can not be installed slant ways.
- (2) Don't apply in corrosive liquid,gas or solid environment to avoid the cover which is made up of organic material.
- (3) This product has a heating device inside, please keep ventilated.
- (4) Never power on before installation is completed.

6. Don't disassemble discretionarily.

We are not responsible for any unauthorized modification or dismantling.

7. Attention

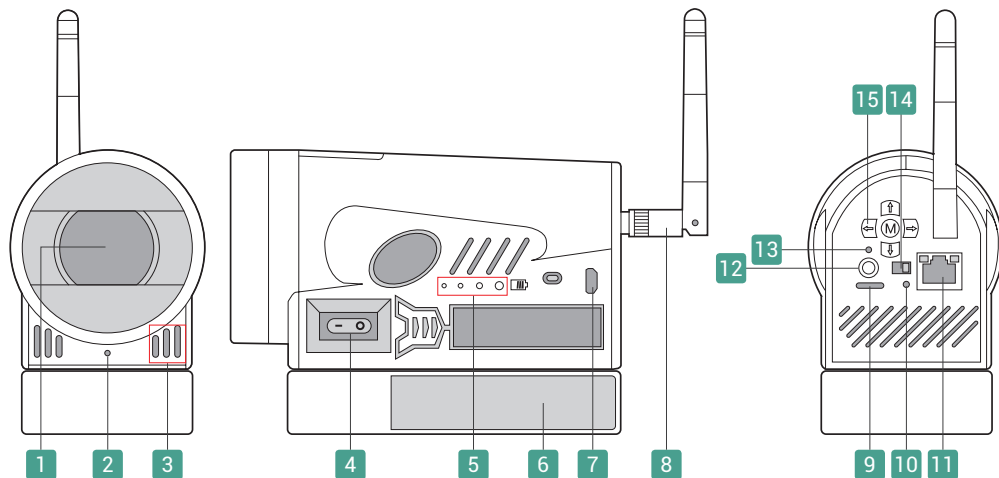
Electromagnetic filed under certain rate may affect camera image!

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Chapter 1. Quick Installation Instructions

1.1 Camera interface and button description



Pic 1.1 Product interface

1	Lens	6	Battery tray	11	LAN interface
2	Power indicator	7	Power interface: DC 5V charging interface.	12	Bluetooth pairing button: built-in bluetooth.
3	Audio interface: built-in microphone	8	WiFi Antenna: embedded WiFi module.	13	Bluetooth pairing indicator
4	Power switch	9	SD card slot:support 64G SD card storage.	14	Bluetooth voice and mic voice switch button
5	Power supply indicator	10	Reset button:press 5 seconds to reset	15	Five control buttons: Zoom / Focus settings.

Five control buttons :

Up: Zoom out (wide angle)	Down: Zoom in (narrow angle)
Left: Focus+ (long shot)	Right: Focus- (close-up)
Middle: Back to the initial state (zoom back out, auto focus)	

1.2 Power on

Step 1 : Connected to DC5V power adapter, and power interface (Micro USB) is shown as pic1.1 No 7. Power supply indicator pic1.1 No 5 (green) is on.

Note: The power indicator light (green) below the lens is off (pic1.1 No 2.).

Step 2 : Turn on the power switch, as pic1.1 No 4 (Power switch), and the indicator belows the lens lights green. Camera module will stretches. When the module finish stretches, the self-testing is finished. The device is in normal working status. Connect the network wire to LAN interface (pic1.1 No11.), and the indicator light of LAN interface flashes yellow, indicating the connection is normal.

1.3 Video output

This product will output video through the network, including wireless and wired networks.

(1) Wired network output: Connect this product and your computer through network cable, then open the browser, enter the camera IP address (factory default 192.168.11.202) in the address bar, then to the login page and input a user name and password (factory default are both "admin"). Finally enter the preview page, and the image comes out. (Note: If you forget your user name, password, IP address, Reset button: Long press Reset button for 5s. You can manually restore the factory default settings.)

a. **Cable connection:** Connect the network cable to the device LAN interface (pic1.1 No 11.).

b. **Sign in to webpages:** Open the browser, enter 192.168.11.202 (factory default) in the address bar, then to the login page. The device facilitates the users control PTZ cameras, record the video, playback, configuration, etc.

(2) Wireless network output:

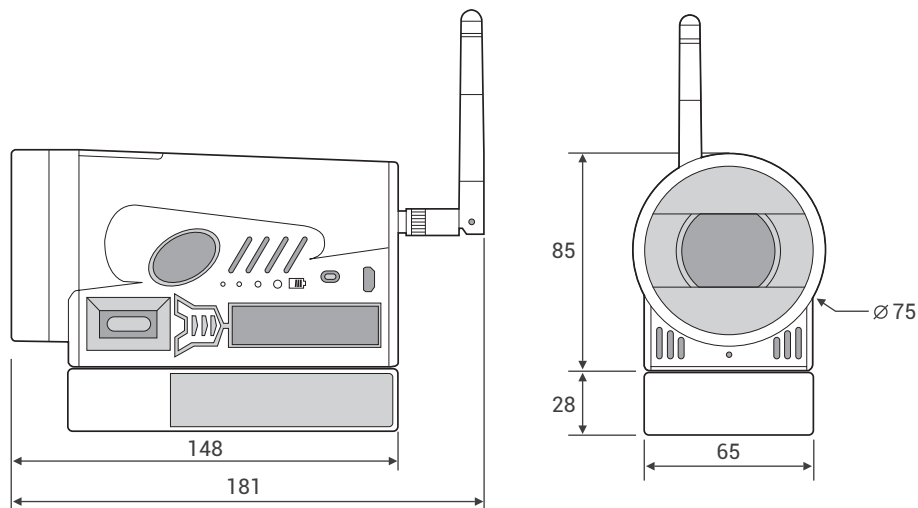
a. **Wireless network configuration:** Wired network login, First, configure the wireless network in the network configuration, check the network port enable, WiFi hotspot search, and connect hotspot.

b. **Sign in to webpages:** Open the browser, enter 192.168.11.202 (factory default) in the address bar, then to the login page. Click "No plug-in is installed, please download and install.", follow the prompts to install successfully. Log in with default username admin and password admin, then entering the preview page.

Chapter 2. Product Overview

2.1 Product introduction

2.1.1 Dimension



Pic2.1 Camera dimension

2.1.2 Accessory

When you unpack, please check the package containing the following items listed below :

	Item
Accessory	Power adapter 1pcs
	Antenna 1pcs
	Quick Installation Guide 1pcs

Table2.1 Accessories

2.2 Main features

2.2.1 Camera performance

The camera offers perfect functions, superior performance and versatile interfaces. The features include advanced ISP processing algorithms to provide vivid images with a strong sense of depth, high resolution and fantastic color rendition. It supports H.264/H.265 encoding which makes motion video fluent and clear even with less than ideal bandwidth conditions. Product works stable and reliable, and it is easy to use, installation and maintenance.

Product advantages:

- **A compact and stand-alone design:** The camera embedded, bluetooth, microphone, SD card, WiFi module and five control button, to achieve the integration of the camera, audio and control functions.
- **Wide-angle lens without distortion:** The camera uses 65° wide-angle, no distortion and auto focus lens. Optical zoom to 10 times, and support 10 times digital zoom.
- **Internal SD card storage:** Provide auto loop recording when power on. Time division packing download.
- **Wireless WiFi:** Embedded WiFi module, support wireless router, bridging, AP, etc.
- **Built-in microphone:** Built-in high-sensitivity digital audio microphone, no external audio equipment required. Omnidirectional and multi-angle orientation can be set. The distance of microphone is greater than 3 meters, with automatic gain and automatic noise reduction function.
- **Built-in bluetooth voice:** Built-in bluetooth module, can be paired to external bluetooth microphone, to achieve bluetooth voice transmission.

Product features:

- **Leading Auto focus technology:** Leading auto focus algorithm makes lens a fast, accurate and stable auto-focusing.
- **Low noise and High SNR:** Low Noise CMOS effectively ensure high SNR of camera video. Advanced 2D/3D noise reduction technology is also used to further reduce the noise, while ensuring image sharpness.
- **Multiple Video compression:** Support H.265 / H.264 video compression; Support compression of resolution up to 1920x1080 with frame up to 60 fps.
- **Multiple network protocol:** Support ONVIF, RTSP, RTMP protocols and RTMP push mode, easy to link streaming media server (Wowza, FMS).
- **Audio:** Support 16000 sampling frequency. Support AAC, MP3 encode type.
- **A variety of applications:** Education, Lecture capture, Webcasting, Videoconferencing, Training, Medicine, Emergency systems, etc.

2.2.2 Technical specification

Camera Parameter	
Sensor	1/2.8 inch high quality HD CMOS sensor
Effective Pixels	2.07 million 16 : 9
Video Format	1080P30/25, 1080I60/50, 720P60/50
Optical Zoom	10x Optical Zoom f=4.7~47mm
View Angle	6.43°(narrow)~65°(wide)
Aperture	F1.6~F3.0
Digital Zoom	X10
Minimum Illumination	0.5Lux(F1.8, AGC ON)
DNR	2D&3D DNR
White Balance	Auto / Manual / One Push / 3000K / 3500K / 4000K / 4500K / 5000K / 5500K / 6000K / 6500K / 7000K
Exposure	Auto / Manual / Shutter priority / Aperture priority / Brightness priority
Focus	Auto / Manual
Iris	Auto / Manual
Electronic Shutter	Auto / Manual
BLC	ON / OFF
WDR	OFF/ Dynamic level adjustment
Video Adjustment	Brightness, Color, Saturation, Contrast, Sharpness, B/W mode, Gamma curve
SNR	>55dB
Input/Output Interface	
Video Interfaces	LAN \ WiFi
Image Code Stream	Dual stream output
Video Compression Format	H.265, H.264
Audio Input	Built-in microphone, with digital, omnidirectional, multi-angle orientation can be set.

Bluetooth Pairing	Built-in bluetooth, can be paired to external bluetooth microphone, to achieve bluetooth voice transmission.
IP Interface	100M IP port(100BASE-TX), WiFi
Network Protocol	RTSP, RTMP, ONVIF, GB / T28181
5 button	Zoom in / out, focus + / - , back to home (zoom back out, auto focus)
Power Interface	Micro USB interface (DC5V)
Other Parameter	
Power Adapter and Battery Specifications (self-buy)	Output DC5V/1A
Battery-powered Time	Standard (cell capacity: 5000mAh; rated capacity: 3300mAh)≥3 hours Larger (cell capacity: 10050mAh; rated capacity: 6400mAh)≥6 hours
Working Voltage	5V
Working Current	1A(Max)
Consumption	5W(Max)
Store Temperature	-10°C~+60°C
Store Humidity	20%~95%
Working Temperature	-10°C~+50°C
Working Humidity	20%~80%
Dimension (width*height*depth)	148mm X 65mm X 113mm(No antenna and tray included)
Weight	760g
Working Environment	Indoor
Remote Operation (IP)	Remote Upgrade, Reboot and Reset
Accessory	Quick installation guide, Antenna

Chapter 3. Product Connection

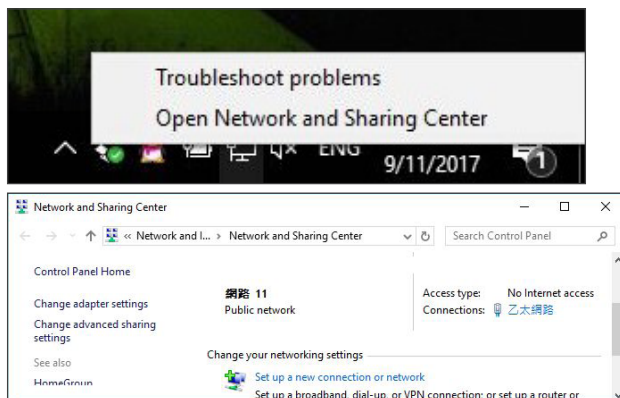
You can connect your camera to a PC or notebook with standard network cable and enter the management site via your Internet browser or connect your camera to a router or any DHCP server. See below for details.



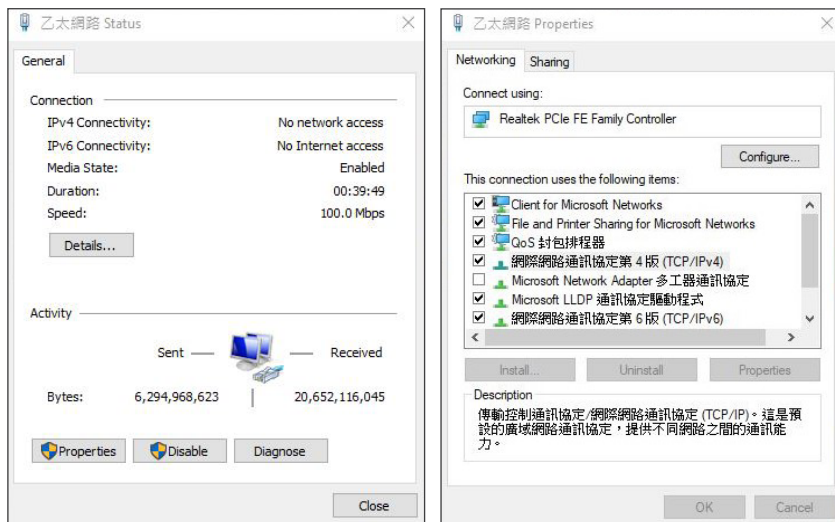
3.1 Direct connection

To access the camera for the first time, connect the camera and computer by network connecting cable. The computer must have the network segment where the camera IP address belong to. The device will not be accessible if without the segment. I.E. The camera default IP address is 192.168.11.202, then segment 11 must be added in the computer. Specific steps are as below:

- (a) Click “Open Network and Sharing Center”.

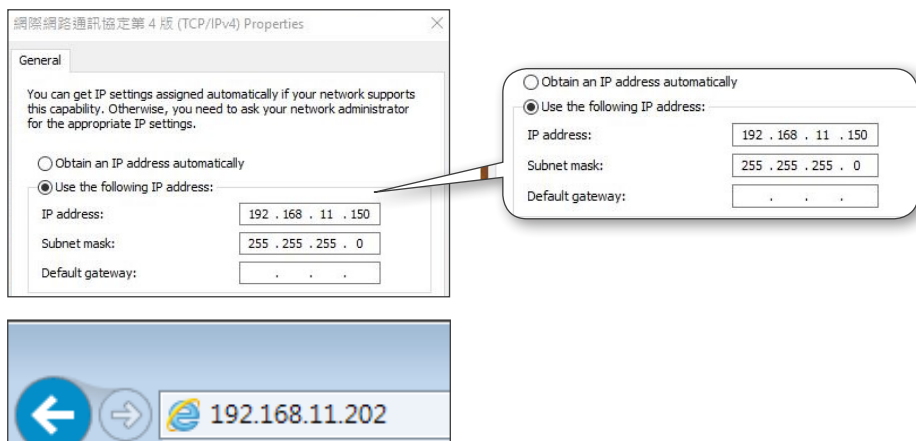


- (b) Click the Properties button in Local Area Connection window and click the Internet Protocol Configuration (TCP/IPv4) option.



- (c) Type IP : 192.168.11.1XX in "Use the following IP address:" field (Figure 1). Enter the static IP address of your CW-210: 192.168.11.202 in your browser's URL bar (Figure 2). The management login page displays.

(Enter account ID and password admin/admin for the first time.)



3.2 Internet connection mode

IP is assigned by a router or any DHCP server. To log in to the administration web, please connect the CW-21 and your PC / Notebook to a router or a DHCP server. Follow below steps:

- Run the "Device Search Tool" utility, and click [] button.
- The tool should find the CW-210 and show detailed information. Double click on the founded camera.
- An access window will pop-up and ask for user name and password.(Enter account ID and password admin/admin for the first time.)

Device Search Tool

Language : English

22 device(s) found!

Model	Manufacture	Name	IP	MAC
KS-2	AREC Inc.	AREC KS-2	10.2.50.157	BC:BA:E1:02:00:7C
KS-710EN	AREC Inc.	AREC KS-710	10.2.50.163	BC:BA:E1:02:10:48
KS-710EN	AREC Inc.	AREC KS-710	10.2.50.135	BC:BA:E1:02:10:40
KS-710EN	AREC Inc.	AREC KS-710	10.2.50.113	84:7E:40:F0:61:04
DS-203	53776467	AREC	10.2.50.155	84:7E:40:ED:80:44
KL-3W	AREC Inc.	KL-3W	10.2.50.129	84:7E:40:F0:8E:60
LS-300	AREC Inc.	LS-300	10.2.50.120	84:7E:40:ED:AD:DE
KS-710EN	AREC Inc.	AREC KS-710	10.2.50.146	BC:BA:E1:02:00:40
LS-300	AREC Inc.	LS-300	10.2.50.151	84:7E:40:F0:34:96
ConfIPCamera	CW-210	ConfIPCamera	10.2.50.148	E4:77:D4:01:43:F4
KS-710EN	AREC Inc.	AREC KS-710	10.2.50.127	BC:BA:E1:08:55:66
KL-3W	AREC Inc.	KL-3W	10.2.50.133	BC:BA:E1:02:10:46

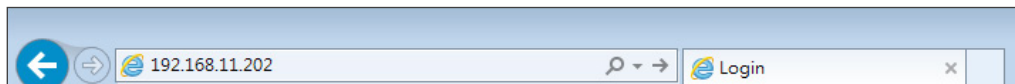
Note: To log in to the administration web by DHCP, please follow the Direct Connection mode to log in first and make the relevant settings. See "4.3.4 Network configure" for more details.

Note: Please do not put the power and network cable in places where can be easily touched to prevent video quality lowered by unstable signal transmission due to poor contact of cables.

Chapter 4. Overview of the Web Interface

Web client: Input the IP address 192.168.11.202 of the device in the address field of browser and click Enter button to enter into Web Client login page.

Note: Web access supported browsers: IE, 360 browser and other regular browser.



Download / Install Plug in : When first using IE browser to access the web conferencing camera, the login page will appear "Playback plug-in is not installed, please download and install!". Click on this message, download and install "MRWebXinstall.exe", according to information prompts.

Language selection : In login interface, the upper right corner shows "Chinese | English", click to select the web interface language.



Input the username and password after plug in installed. You can choose to log in as administrator or login in as normal user:

(1) Login in as administrator:

The default user name and password are both "admin".

After log in successfully, enter Administrator webpages. Users can enter preview, playback, configuration and logout pages.

(2) Login in as normal user:

The default user name and password are both "user1" or "user2".

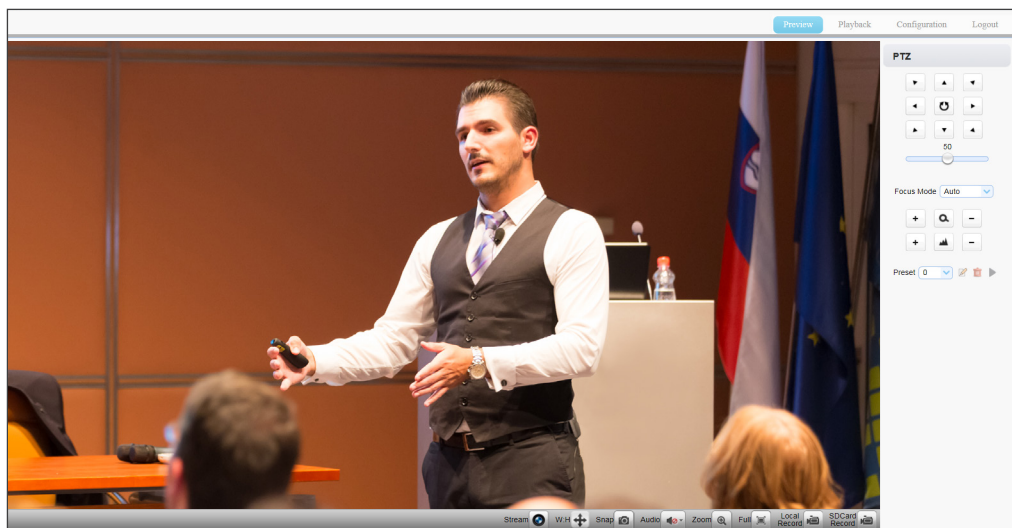
After log in successfully, enter Administrator webpages. Users can enter preview, playback and logout pages.

Note: Normal user does not have permission to configuration page.

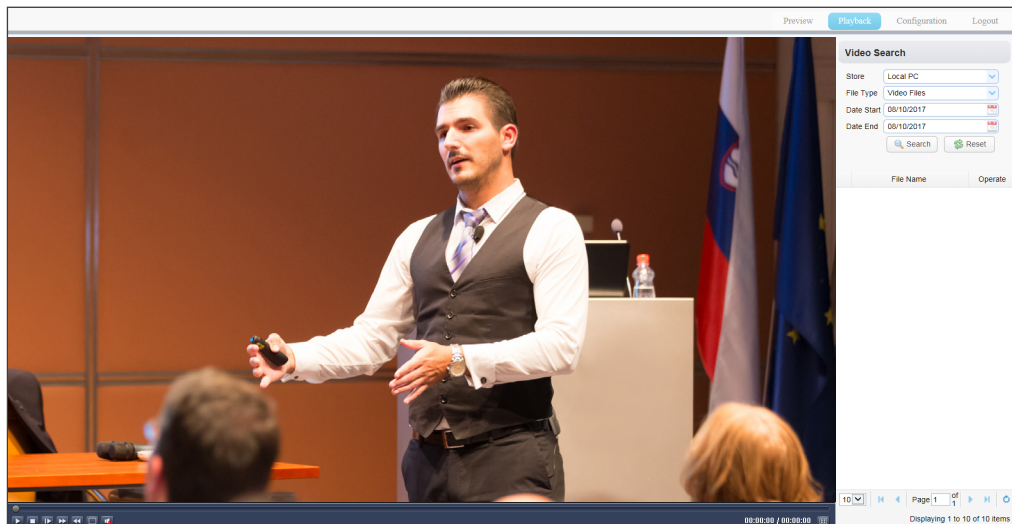
Menu	Description
Preview	Can control PTZ cameras, zoom, focus, snapshot, audio, fullscreen, local recording, SD card recording, preset settings, etc.
Playback	Can playback the video and picture files that are stored in local PC or SD card.
Configuration	Including Local configuration, audio configuration, video configuration, network configuration, system configuration, and so on. Note: The normal user login does not have configuration rights.
Logout	Log out of the management interface.

4.1 Preview

After log in successfully, enter Administrator webpages. By default, the page shows Preview interface. The device facilitate the users control PTZ cameras, zoom, focus, snapshot, audio, fullscreen, local recording, SD card recording ,preset settings, etc.



4.2 Playback



(1) Playback the recording file

Firstly record, snapshot and save the file when previewing. Click "Playback" to enter the page of video files and picture files playback.

- Select the storage path for the search: Local PC or SD Card
- Select "Video Files". (Can not choose if the storage path is SD Card.)
- Set date range of the search, click the "search" to search for a recording file.
- Click "Play" to playback the video file.

Video Search

Store	Local PC
File Type	Video Files
Date Start	Video Files
Date End	Picture Files
	08/10/2017
Search Reset	

File Name

Operate

(2) Playback the picture file

Firstly record, snapshot and save the file when previewing. Click "Playback" to enter the page of recording file and picture file playback.

- Select the storage path for the search: Local PC or SD Card
- Select "Picture Files". (Can not choose if the storage path is SD Card.)
- Set date range of the search, click the "search" to search for a recording file.
- Click "Play" to playback the picture file.

Video Search

Store	Local PC
File Type	Picture Files
Date Start	Video Files
Date End	Picture Files
	08/10/2017
Search Reset	

File Name

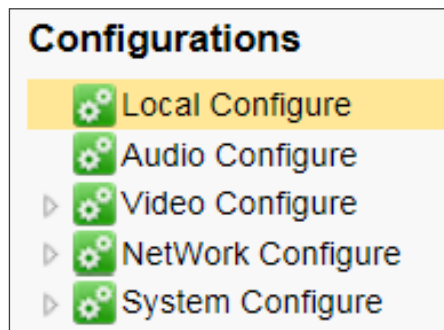
Operate

Local video / picture file default storage directory C:\MyIPCam\

4.3 Configuration

Click Configuration to enter into the device parameters setting page.

Major options: Local configure, Audio configure, Video configure, Network configure and System configure. The detailed description refer to below sheet.



Menu	Explanation
Local configure	Including video stream preview mode, video packaging time, video file packaging type settings etc.
Audio configure	Including audio compressing format, sampling frequency, sampling precision, compressing code rate settings etc.
Video configure	Including video encoding, video parameters, character-overlapping, character size, video output setting etc.
Network configure	Including basic parameters, Ethernet, DNS, wireless network setting etc.
System configure	Including equipment property, system time, user management, version update, Reset, Reboot device settings etc.

4.3.1 Local configure

Preview

Playback

Configuration

Logout

Configurations

Local Configure

Audio Configure

Video Configure

Video Encode

Stream Publish

RTP Multicast

Video Parameters

Video OSD

OSD Font Size

Video Out

NetWork Configure

Network Port

Ethernet

WLAN

DNS

GB28181

System Configure

SystAttr

SysTime

SysUser

Update

Default

Reboot

Local Configure

Video Stream Preview Mode

Real Time Generally(2)

Video Packaging Time(Minutes)

60

Video File Packaging Type

TS

Videos/Pictures Storage Directory

C:\MyIPCam\

Save

Video Stream Preview Mode: User can choose real-time priority or fluency priority: The delay will be small when under real time priority mode and fluency will be good when under fluency priority mode. Setting based on the user need(Default value: real time normal (2). real time best (1), real time normal (2), fluency normal (3), fluency good (4) and fluency best (5) optional).

Video Packaging Time(Minutes): Set recording video packaging time (default is 10, range from 1~120 minutes).

Video File Packaging Type: Set recording video file packaging type(default TS. TS, MP4 optional).

Videos/Pictures Storage Directory: Set videos/pictures storage directory(default C:\MyIPCam\).

Click the Save button to make settings effective.

4.3.2 Audio configure

Preview

Playback

Configuration

Logout

Configurations

Local Configure

Audio Configure

Video Configure

Video Encode

Stream Publish

RTP Multicast

Video Parameters

Video OSD

OSD Font Size

Video Out

NetWork Configure

Network Port

Ethernet

WLAN

DNS

GB28181

System Configure

SystAttr

SysTime

SysUser

Update

Default

Reboot

Audio Configure

Enable ☐

Encode Type

MP3

Sample Rate

16000

Sample Bits

16

Bit Rate

64Kbps

Channel

Mono

Input Volume 4

Save

Switch: Choose to enable the audio or not.

Encode Type: Set audio compressing format and the device will reboot automatically after change (default MP3, AAC optional)

Sample Rate: Set sampling frequency and the device will reboot automatically after change (default 16000).

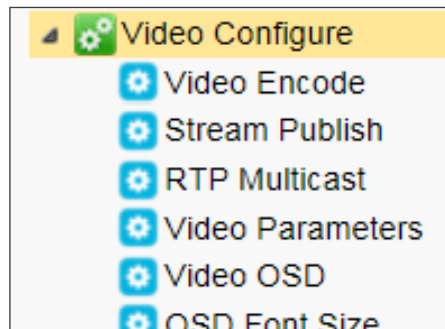
Sample Bit: Set sampling precision (default 16 bits).

Bit rate: Set audio compressing bit rate (default 64kbps, 32, 48, 64, 96, 128 optional).

Click "Save" button and the settings become effective when noting "Open audio or change another parameters need to restart.", restart the device to make settings effective.

4.3.3 Video configure

Major options: Video Encode, Stream Publish, RTP Multicast Video Parameters, Video OSD, OSD Font Size and Video Out. The detailed description refer to below sheet.



Set Option	Explanation
Video Encode	Set video output format of Main stream and Secondary stream.
Stream Publish	Can turn on or off the Main / Sub stream and make the relevant settings.
RTP Multicast	Can turn on or off the RTP Multicast of Main / Sub stream and make the relevant settings.
Video Parameters	Adjust the focus, exposure, color, image, noise reduction, style and other parameters set.
Video OSD	Select whether to display the date and time, title, and adjust the font color and position.
OSD Font Size	Modify the Main / Sub stream font size.
Video Out	Select the video output format.

4.3.3.1 Video encode

[Preview](#) [Playback](#) [Configuration](#) [Logout](#)

Configurations

- Local Configure
- Audio Configure
- Video Configure
 - Video Encode
 - Stream Publish
 - RTP Multicast
 - Video Parameters
 - Video OSD
 - OSD Font Size
 - Video Out
- NetWork Configure
 - Network Port
 - Ethernet
 - WLAN
 - DNS
 - GB28181
- System Configure
 - SystAttr
 - SysTime
 - SysUser
 - Update
 - Default
 - Reboot

Video Encode

	Main Stream	Sub Stream
Compressed Format	H.264	H.264
Profile	HP	HP
Image Size	1920*1080	640*360
Rate Control	CBR	CBR
Image Quality	Best	Best
Bit Rate (Kb/S)	4096	800
Frame Rate (F/S)	30	30
I Frame Interval	75	75
I Frame Min QP	10	10
Stream Name	h264	h264_2

Save

1. **Code stream:** It will call different code stream when setting different video output format. (Main stream and Secondary stream)
2. **Compressed Format:** Set video compressing format and the device will reboot automatically. (Main/ Second code stream default H.264, H.265 optional.)
3. **Profile:** Set H.264 / H.265 encode format and the device will reboot automatically. (H.264 encode format default HP, H.265 encode format default BP, BP, MP, HP optional).
4. **Image Size:** Set resolution, then device will restart automatically. (Main stream default 1920*1080, 1920*1080, 1280*720, 640*480 optional. Secondary stream default 640*360, 640*360, 320*240, 640*480, 320*180, 1280*720 optional).
5. **Rate control:** Set rate control mode and the device will restart automatically. (Main / Sub stream default variable bit rate, fixed rate is for option).

6. **Image quality**: Set image quality. (default for Main / Sub stream is best image, Best, better, good, bad, worse, worst for optional).
7. **Bit Rate(Kb/S)**: Set the video bit rate (Main stream default 4096 Kb/s, 64-40960 Kb/s optional; Sub stream default 800 Kb / s, 64-20480 Kb/s optional).
8. **Frame Rate(F/S)**: Set the video frame rate (Main / Sub stream default 30F/S, 5-30F/S optional).
9. **I Frame Interval**: Set the key frame interval. (Main / Sub stream default 75F, 1-150F optional).
10. **I Frame Min QP**: Set the key frame min QP. (Default 10, 10-51 optional).
11. **Stream Name**: User can revise the name of stream. (Main stream default h264, Sub stream default h264_2.)

Click on the "Save" button to display the "Save successful" message, then set is to take effect

4.3.3.2 Stream publish

[Preview](#) [Playback](#) [Configuration](#) [Logout](#)

Configurations	Stream Publish																											
- Local Configure - Audio Configure - Video Configure - Video Encode Stream Publish - RTP Multicast - Video Parameters - Video OSD - OSD Font Size - Video Out - NetWork Configure - Network Port - Ethernet - WLAN - DNS - GB28181 - System Configure - SysAttr - SysTime - SysUser - Update - Default	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%; text-align: center;">Main Stream</th> <th style="width: 35%; text-align: center;">Sub Stream</th> </tr> </thead> <tbody> <tr> <td>Enable</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>Protol Type</td> <td style="text-align: center;">RTMP ▼</td> <td style="text-align: center;">RTMP ▼</td> </tr> <tr> <td>Host Address</td> <td style="text-align: center;">192.168.5.11</td> <td style="text-align: center;">192.168.5.11</td> </tr> <tr> <td>Host Port</td> <td style="text-align: center;">1935</td> <td style="text-align: center;">1935</td> </tr> <tr> <td>Stream Name</td> <td style="text-align: center;">live/av0 ↑ ↓</td> <td style="text-align: center;">live/av1 ↑ ↓</td> </tr> <tr> <td>User Name</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td>Password</td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td colspan="3" style="text-align: right; padding-top: 10px;"> Save </td> </tr> </tbody> </table>		Main Stream	Sub Stream	Enable	☐	☐	Protol Type	RTMP ▼	RTMP ▼	Host Address	192.168.5.11	192.168.5.11	Host Port	1935	1935	Stream Name	live/av0 ↑ ↓	live/av1 ↑ ↓	User Name			Password			Save		
	Main Stream	Sub Stream																										
Enable	☐	☐																										
Protol Type	RTMP ▼	RTMP ▼																										
Host Address	192.168.5.11	192.168.5.11																										
Host Port	1935	1935																										
Stream Name	live/av0 ↑ ↓	live/av1 ↑ ↓																										
User Name																												
Password																												
Save																												

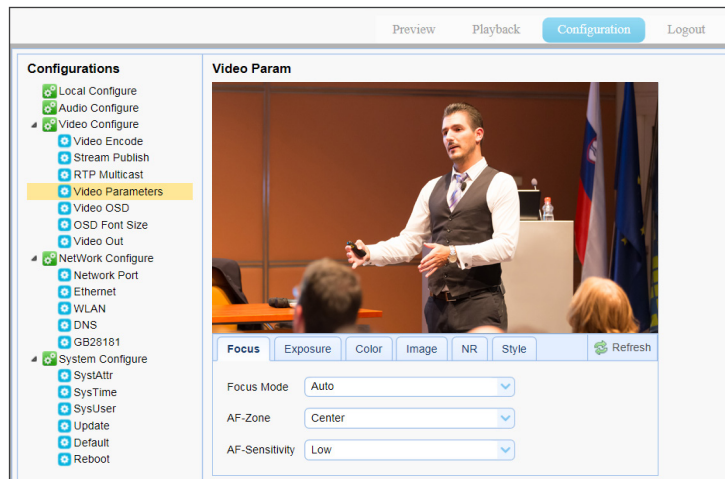
1. **Switch**: To turn on or off the Main / Sub stream.
2. **Protocol Type**: Main / Sub stream are both use RTMP protocol.
3. **Host Address**: Server IP addresses (default 192.168.11.202)
4. **Host Port**: Server port number (default 1935,0-65535 optional)
5. **Stream Name**: choose a different stream name (live/av0, live/av1 optional).
6. **User Name**: Set the user name.
7. **Password**: Set the password.

Click on the "Save" button to display the "Save successful" message, then set is to take effect.

4.3.3.3 Video parameters

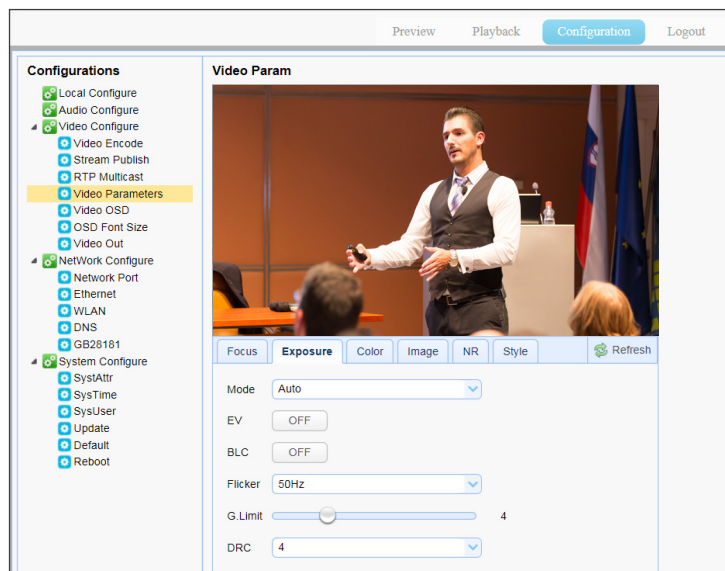
Video Parameters page provide the settings of Focus, Exposure, Color, Image, NR and Style.

(a) Focus: The focus mode, focus range and focus sensitivity are configured here.



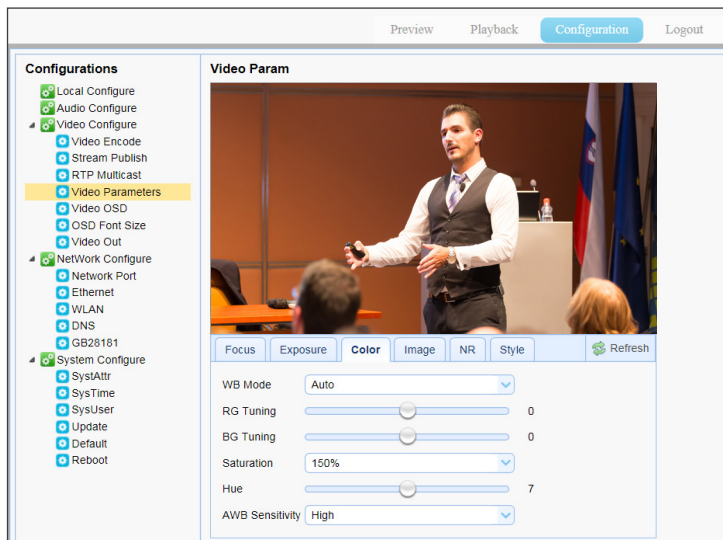
1. **Focus Mode:** Set the focus mode (the default auto, manual optional)
2. **AF-Zone:** set the focus range (the default center, top, bottom and all optional)
3. **AF-Sensitivity:** Set the focus sensitivity (default is low, high and middle optional)

(b) Exposure: This page include the following settings:



1. **Mode:** Set the exposure mode (the default automatic, manual, shutter priority, aperture priority, Brightness priority optional)
2. **EV:** Exposure compensation setting is active when it is auto status (default is off).
3. **EV Level:** Set the exposure compensation value, valid when it is set for auto(default 0, -7 to 7 optional).
4. **BLC:** Set back light compensation, valid when it is auto status (default is off).
5. **Flicker:** Set up anti-flicker mode, valid when status of automatic, aperture or brightness priority (default 50Hz, closed, 60Hz optional).
6. **G.Limit:** Set the gain limits, auto, active when it is status of aperture or brightness priority(default 4, 0-15 optional).
7. **DRC:** Set the dynamic range (default 4, Off, 1-8 optional).
8. **Shutter speed:** Active when it is status of manual or shutter-priority (default 1/100, 1/25, 1/30, 1/50, 1/60, 1/90, 1/100, 1/120, 1/180, 1/250, 1/350, 1/500, 1/1000, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 optional).
9. **Aperture value:** Set the aperture value, active when it is status of manual or aperture-priority(default F1.8, closed, F11.0, F9.6, F8.0, F6.8, F5.6, F4.8, F4.0, F3.4, F2.8, F2.4, F2.0, F1.8 optional).
10. **Brightness:** Set the brightness value, active when it is a state of brightness priority (default 11,0-23 optional).

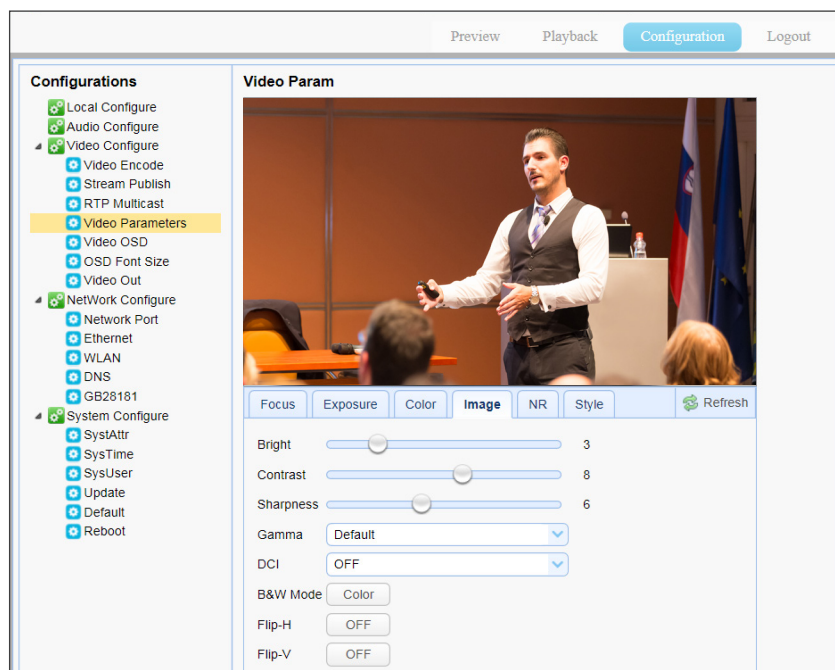
(c) Color: This page include the following settings:



1. **WB Mode:** Set the white balance mode (the default automatic, 3000K, 3500K, 4000K, 4500K, 5000K, 5500K, 6000K, 6500K, 7000K, manual, Onepush optional).
Note: Click the "Adjust" button when selected the One-push white balance mode.
2. **RG Tuning:** Set red fine tuning, Only effective when white balance mode is manual (default 0, -10~10 optional).

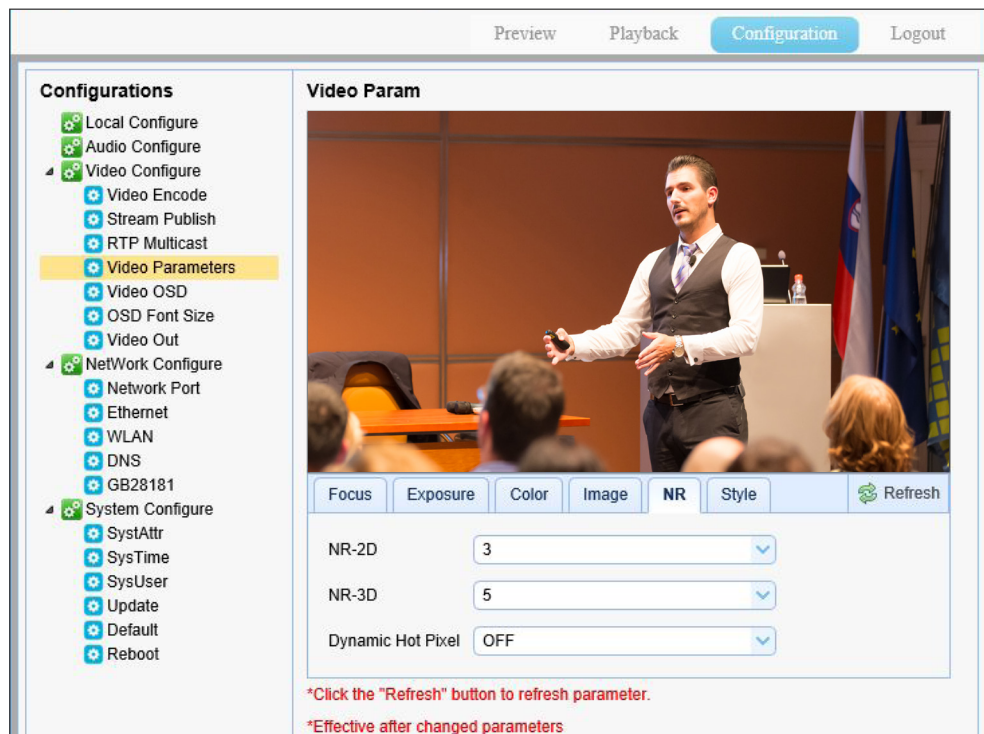
3. **BG Tuning**: Set blue fine tuning. Only effective when white balance mode is manual (default 0, -10~10 optional)
4. **Saturation**: Set the saturation (default 100%, 60%, 70%, 80%, 90%, 100%, 110%, 120%, 130%, 140%, 150%, 160%, 170%, 180%, 190%, 200% optional).
5. **Hue**: Set the chroma (default 7,0-14 optional).
6. **AWB Sensitivity**: Sensitivity Auto white balance settings (default is high, medium, low optional).
7. **Red Gain**: Set Red Gain. Only effective when white balance mode is manual (default 84, 0~255 optional)
8. **Blue Gain**: Set Blue Gain. Only effective when white balance mode is manual (default 73, 0~255 optional)

(d) Image: This page include the following settings:



1. **Bright**: Set the brightness (default 3, 0-14 optional).
2. **Contrast**: set the contrast (default 8, 0-14 optional).
3. **Sharpness**: Sets the sharpness value (default 6, 0-15 optional).
4. **Gamma**: Gamma value setting (default, 0.45, 0.50, 0.52, 0.55 optional).
5. **DCI**: Set the dynamic contrast (default Off, 1-8 optional).
6. **B&W Mode**: Set black and white mode (default color, B&W optional).
7. **Flip-H**: Set flip Horizontal (default Off, On optional).
8. **Flip-V**: Set vertical flip (default Off, On optional).

(e) NR (Noise Reduction):

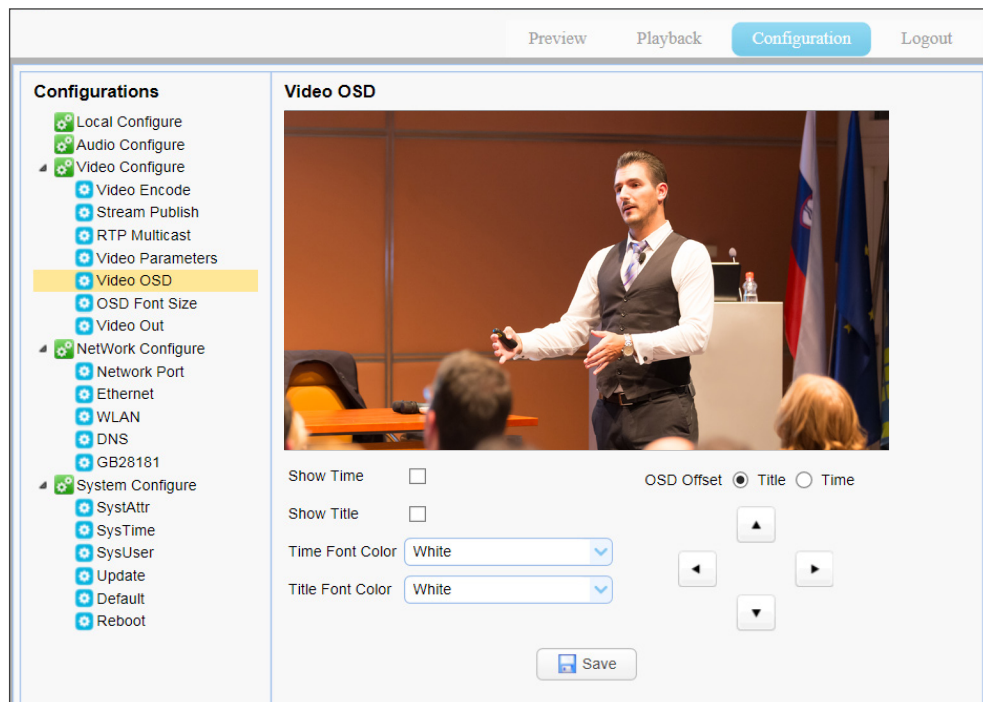


1. **NR-2D**: Set 2D noise reduction level (default 3, 1-7, Auto and Off optional).
2. **NR-3D**: Set 3D noise reduction level (default 5, 1-8 and Off optional).
3. **Dynamic Hot Pixel**: Set Dynamic dead pixel correction (default Off, 1-8 and Off optional).

(f) **Style**: Select display style (default, normal, Clarity, Bright, Soft optional).

Note: Click the "Refresh" to make revision of the a,b,c,d,e,f values become effective in the video.

4.3.3.4 Video OSD



1. **Show date and time:** Set whether to display the time and date (default show).
2. **Show Title:** Set whether to display the title (default show).
3. **Time font color:** Set the time and date font color (default white, black, yellow, red, blue optional).
4. **Title font color:** Set the title font color (default white, black, yellow, red, blue optional).
5. **Moving characters:** Set the date, time and title display position, click on the "up, down, left, right" buttons to move the corresponding character position.
6. **Title Content:** Set title content (default CW-210).
7. **Time Content:** Set time content (default 1970/01/10 05:36:00)

Click on the "Save" button and display the "Save successful" message, then set is to take effect.

4.3.3.5 OSD font size

The screenshot shows the 'Configuration' tab of the CW-210 web interface. On the left, a 'Configurations' sidebar lists various settings, with 'OSD Font Size' highlighted. The main panel, titled 'OSD Font Size', contains the following options:

- According to the resolution**: A checkbox that is checked.
- Scale size automatically**: A checkbox that is checked.
- Master Stream OSD Font Size**: A text input field containing the value '48'.
- Slave Stream OSD Font Size**: A text input field containing the value '48'.
- Save**: A button with a floppy disk icon.

1. **Master Stream OSD Font Size**: Set the character size of the display, the device will restart automatically after changed and saved (default 48, 8-200 optional)
 2. **Slave Stream OSD Font Size**: Set the character size of the display, the device will restart automatically after changed and saved (default 48, 8-200 optional)
- Click on the "Save" button to display "Parameter saved successfully" message, set to take effect.

4.3.3.6 Video out

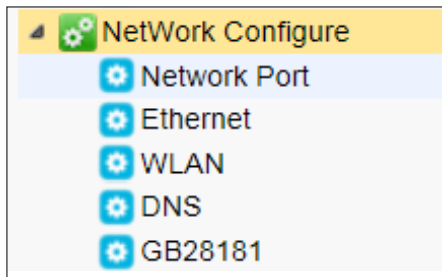
The screenshot shows the 'Configuration' tab of the CW-210 web interface. On the left, a 'Configurations' sidebar lists various settings, with 'Video Out' highlighted. The main panel, titled 'Video Out', contains the following options:

- Video Out Format**: A dropdown menu showing '1080P30' as the selected option. The dropdown list is open, showing the following options: 1080P30, 1080P25, 1080I60, 1080I50, 720P60, and 720P50.

1. **Video Out Format**: Set the video output format (default 1080P30, 1080P25, 1080I60, 1080I50, 720P60, 720P50 optional).
- Click on the "Save" button to display the "Save successful" message, then valid.

4.3.4 Network configure

Major options: The detailed description refer to below sheet.



Set Option	Explanation
Network port	Set the network port, including data, web, onvif, etc.
Ethernet	Set whether to open to obtain IP automatically or set the ip address.
WLAN	Enable wireless network port, and related settings.
DNS	Set the DNS parameters.
GB28181	Enable GB28181, and related settings.

4.3.4.1 Network port

1. **Port Data:** Set the data port, the device will restart automatically after changed (default 3000, 0-65535 optional).
2. **Port Web:** Set Web port, the device will restart automatically after changed (default 80, 0-65535 optional).
3. **Port Onvif:** Set Onvif port, the device will restart automatically after changed (default 2000, 0-65535 optional).
4. **Port Soap:** Set Soap port (default 1936, 0-65535 optional).
5. **Port RTMP :** Set RTMP port (default 1935, 0-65535 optional).
6. **Port Rtsp:** Set RTSP port, the device will restart automatically after changed (default 554, 0-65535 optional).
7. **Port Visca:** Set Visca port, the device will restart automatically after changed (default 1259, 0-65535 optional).

Click "Save" button to display the "Save successful" message, then valid.

the way to get RTMP: rtmp://device IP address:1935/live/av0 (Main stream name:av0; Sub stream name: av1.)

the way to get RTSP: rtsp://device IP address:554/live/av0 (Main stream name:av0; Sub stream name: av1.)

4.3.4.2 Ethernet parameters

Preview

Playback

Configuration

Logout

Configurations

Local Configure

Audio Configure

Video Configure

Video Encode

Stream Publish

RTP Multicast

Video Parameters

Video OSD

OSD Font Size

Video Out

NetWork Configure

Network Port

Ethernet

WLAN

DNS

GB28181

System Configure

SystAttr

SysTime

SysUser

Update

Default

Reboot

Ethernet

DHCP☐

IP Address192.168.11.202

Subnet Mask255.255.255.0

Default Gateway192.168.11.254

MAC AddressE4:77:D4:01:43:F4

Save

1. **DHCP** :Set whether to open to obtain IP automatically. The machine will restart automatically after change(off by default)

2. **IP Address**: Set the IP address, the device will restart automatically after changes (default 192.168.11.202).

Note: Here is the IP address of the web page of the sign-in address

3. **Subnet Mask**: Set the subnet mask (default 255.255.5.0).

4. **Default Gateway**: Set the default gateway (default 192.168.11.254).

5. **MAC Address**: Set the physical address (the parameter is read-only but can not be modified).

Click on the "Save" button to display the "Save successfully" message, then the set is to take effect (Note: To prevent IP conflicts when modify).

4.3.4.3 WLAN

The screenshot displays the CW-210 web interface. On the left, a 'Configurations' sidebar lists various settings, with 'WLAN' selected. The main area is divided into two sections: 'WLAN' and 'WiFi Hotspot'.

WLAN Settings:

- Enable:** Checked (checkbox).
- DHCP:** Unchecked (checkbox).
- IP Address:** 192.168.11.202
- Subnet Mask:** 255.255.255.0
- Default Gateway:** 192.168.11.254
- SSID:** CBOX-WIFI
- Encryption:** Checked (checkbox).
- Password:** (masked with dots)
- Save:** Button

WiFi Hotspot Table:

	ESSID	Address	Quality
1	TP24_TEST	F4:F2:6D:93:DD:C3	100
2	140512080008	AC:22:0B:8D:42:56	100
3	HP-Print-OC-LaserJet 1102	F4:B7:E2:08:8B:0C	100
4	AREC_3F_24G	F8:1A:67:6D:98:56	100
5	HP-Print-FC-LaserJet 1102	7C:E9:D3:91:FE:FC	100
6	CBOX-WIFI	70:B3:D5:13:40:8C	100
7	CBOX-WIFI	70:B3:D5:13:40:94	96
8	SUN235	B8:A3:86:5F:71:74	91
9	ProtableWRT	F0:B4:29:6E:1C:53	86
10	QA_wifi	88:25:93:93:8C:EB	65

Page 1 of 2, Displaying 1 to 10 of 15 items

(a) WLAN Settings

Enable: Set whether to enable WLAN, set the following settings after checked.

DHCP : Set whether to open to obtain IP automatically. The machine will restart automatically after change.

IP Address: Set WiFi IP (default 192.168.11.202. If DHCP is checked, it is automatically assigned).

Subnet Mask: Set the wireless IP subnet mask (default 255.255.255.0).

Default Gateway: Set the wireless IP default gateway (default 192.168.11.254).

SSID: Automatically generated the connection wifi account after connected to the wifi hotspot (default CBOX-WIFI).

Encryption: Automatically checked after connected to the wifi hotspot.

Password: Automatically generated the connection wifi password after connected to the wifi hotspot (default 12345678).

Click on the "Save" button to display the "Save successfully" message, then the set is to take effect.

Note: After the wireless WiFi connection is successful, configure the SSID and password automatically; please save it.

(b) WiFi Hotspot

Click "Search" button to search for the WiFi hotspot.

After search the WiFi hotspot, double click to pop out the dialog, enter password and connect the WiFi. display " Connect successfully" message, then connection is done.

(c) Wireless WiFi web page log in

If you have not checked DHCP (obtain IP automatically) above, please open the browser and input wireless IP address (default 192.168.11.202), press Enter to log in.

If you have checked DHCP above, the specific IP address needs to log in to the user router or switch settings interface to view the assigned IP

4.3.4.4 DNS

Preview

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Configuration

Logout

Configurations

Local Configure

Audio Configure

Video Configure

Video Encode

Stream Publish

RTP Multicast

Video Parameters

Video OSD

OSD Font Size

Video Out

NetWork Configure

Network Port

Ethernet

WLAN

DNS

GB28181

System Configure

SystAttr

SysTime

SysUser

Update

Default

Reboot

DNS

Preferred DNS Server

Alternative DNS Server

Save

1. **Preferred DNS Server** : Set the preferred DNS server. (Default 0.0.0.0).

2. **Alternative DNS Server** : Alternative DNS server settings. (Default 0.0.0.0).

Click on the "Save" button to display the "Save successfully" message, then the set is to take effect.

4.3.4.5 GB28181

[Preview](#) [Playback](#) [Configuration](#) [Logout](#)

Configurations

- Local Configure
- Audio Configure
- Video Configure**
 - Video Encode
 - Stream Publish
 - RTP Multicast
 - Video Parameters
 - Video OSD
 - OSD Font Size
 - Video Out
- NetWork Configure
 - Network Port
 - Ethernet
 - WLAN
 - DNS
 - GB28181**
- System Configure
 - SystAttr
 - SysTime
 - SysUser
 - Update
 - Default
 - Reboot

GB28181

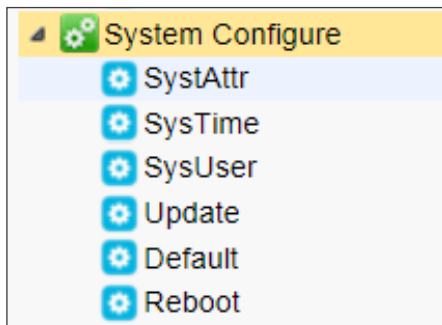
Enable	☐
ClockSync	☐
Video Type	Main Stream
Registration Valid Time(s)	3600
Heartbeat Time(s)	60
Register ID	34020000001320000001
Register Name	IPC
Register Password	
Equipment Belong	
Administrative Region	
Alarm Areas	
Device Address	
Local SIP Port	5060
Server IP	
Server SIP Port	5060
Server ID	34020000002000000001

1. **Enable:** Set whether open GB28181, can check.
2. **ClockSync:** Whether synchronization time is set, you can check
3. **Video Type:** Video stream type setting (the default main stream, secondary stream optional)
4. **Registration Valid Time(s):** 3600. Range 5-65535
5. **Heartbeat Time(s):** 60 Range 1-65535
6. **Register ID:** 34020000001320000001
7. **Register Name:** IPC
8. **Register Password:** 12345678
9. **Equipment Belong:** Users can add their own
10. **Administrative Region:** Users can add their own
11. **Alarm Areas:** Users can add their own
12. **Device Address:** Users can add their own
13. **Local SIP Port:** 5060 Range 0-65535
14. **Server IP :** IP address of the computer
15. **Server SIP Port:** 5060 Range 0-65535
16. **Server ID:** 34020000002000000001

Click on the "Save" button to display "Parameter saved successfully" message, set to take effect.

4.3.5 System configure

Major options: System Attribute, System Time, User Set, Release Upgrade, Restore factory defaults and Reboot. The detailed description refer to below sheet.



Set Option	Explanation
System Attribute	Set the device name, ID and change the system language.
System Time	Set the system date and time.
User Set	Set the user name and password.
Release Upgrade	Show camera and AF Version, you can update the version.
Restore factory defaults	Restore factory defaults.
Reboot	Reboot the device.

4.3.5.1 System attribute

The screenshot displays the Arec CW-210 web interface. At the top, there are navigation tabs: "Preview", "Playback", "Configuration" (which is highlighted), and "Logout". On the left side, there is a "Configurations" menu with a tree structure. The "System Configure" option is selected and highlighted in yellow. The main area on the right is titled "System Attribute" and contains three input fields: "Device Name" with the value "CW-210", "Device ID" with the value "1", and "Language" with a dropdown menu showing "English". Below these fields is a "Save" button with a floppy disk icon.

1. **Device Name:** Set the device name (the default Camera1, user can add their own).
 2. **Device ID:** Set the device ID (default 1, Read-Only).
 3. **Language:** Set the system language (default Simplified Chinese, English optional). Need to re-login after modify and save the setting.
- Click on the "Save" button to display the "Save the parameters successfully" message, then the set is to take effect.

4.3.5.2 System time

(a) System Time

- Date Format:** Set the date format (YYYY-MM-DD default That year - month - day, MM-DD-YYYY namely Month - Day - Year, DD-MM-YYYY date - month - year optional).
 - Date Sprtr:** Set the date separator (default '/', '.', '-' optional).
 - Zone:** Set the time zone (default East eight districts, other time zones optional).
 - Hour Type:** Set the time types (default 24 hours, optional 12 hours).
 - NTP Enable:** Set whether open NTP, can check.
 - Update interval:** Set the NTP server automatic updated time interval.Valid after setting NTP server synchronization (default one day, 2-10 days Optional).
 - Host Uri:** Set NTP server address or domain name (default time.nist.gov). Valid after setting NTP server synchronization.
 - Host Port:** Sets the NTP server port (default 123).Valid after setting NTP server synchronization.
- Click on the "Save" button to display the "Save the parameters successfully" message, then the set is to take effect.

(b) Time Settings

1. **Time settings:** Set time mode (to choose the computer time synchronization, NTP server time synchronization, or set manually).
2. **Computer Time:** Set the computer synchronization valid.
3. **Set the time manually:** Click the calendar icon on the right to set the time manually. Effective when set manually.

Time Settings

Time Settings

Set manually

New Time

08/10/2017 09:54:01

«

◀

Aug 2017

▶

»

S	M	T	W	T	F	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

09:54:01

Today

Ok

Close

4.3.5.3 User set

Preview Playback **Configuration** Logout

Configurations

- Local Configure
- Audio Configure
- Video Configure
 - Video Encode
 - Stream Publish
 - RTP Multicast
 - Video Parameters
 - Video OSD
 - OSD Font Size
 - Video Out
- NetWork Configure
 - Network Port
 - Ethernet
 - WLAN
 - DNS
 - GB28181
- System Configure
 - SystAttr
 - SysTime
 - SysUser**
 - Update
 - Default
 - Reboot

User Set

Authority: admin

User Name: admin

Password: •••••

Confirm Password:

Save

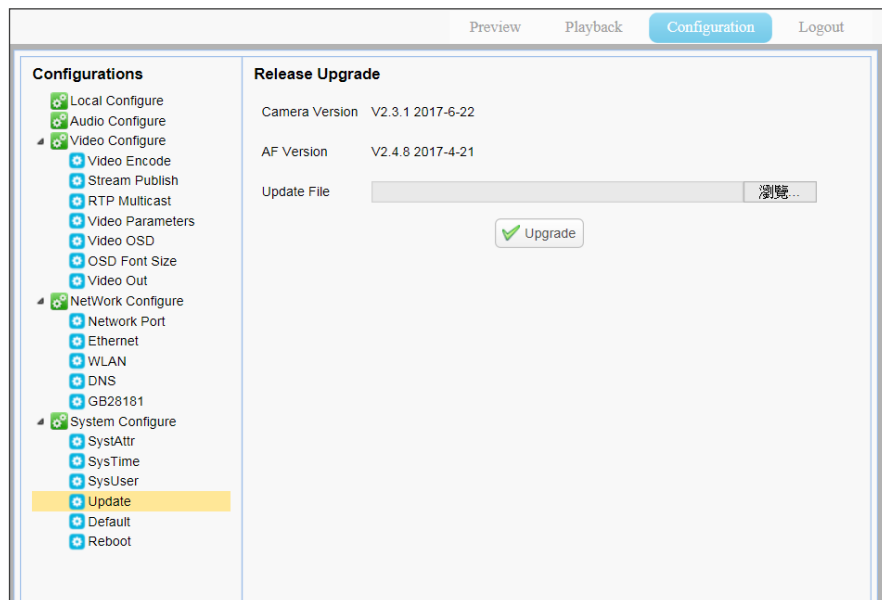
1. **Authority** : Set the user type (the default administrator, User 1, User 2 optional)
2. **User name**: Set the user name (Select User Administrator default admin; select a user1 default user1; to select a user 2 default user2; user can modify their own)
3. **Password**: Set a password (Select User Administrator default admin; select a user1 default user1; to select a user 2 default user2; user can modify their own).
4. **Confirm Password**: Confirm the input passwords are the same or not.

Click on the "Save" button to display the "Save successfully" message, then the set is to take effect.

Note: Please note the case-sensitivity of the user name and password.

Note: If login page by a common user's name and password, one does not have configuration privileges but can only operate to preview, playback, logout.

4.3.5.4 Release upgrade



This page displays the device version. Users only read the version information above which is consistent with the menu version but can not modify. Different types of the machine has different information.

Update file: Click "Browse ..." installation, to select the upgrade file in the pop-up window. Click on the "Upgrade" button, the upgrade dialog will appear. the device will reboot automatically after update successfully.

Note: Make sure the power and network is keeping connected during the process, or the upgrade will fail.

4.3.5.5 Restore factory defaults

Restore factory defaults: Click on pop-up "Restore Factory Defaults" button and choose "yes" or "no", then the device will restart automatically and restore factory setting.

4.3.5.6 Reboot

Rebook the device: Click on the pop-up "Reboot" button and choose "yes" or "no", then the device will restart automatically.

4.4 Logout

Click "logout" and the logout dialog pop out. Click "yes" or "no" to choose to logout the present page and return to the user login page

Chapter 5. Camera Maintenance and Troubleshooting

5.1 Camera maintenance

- (1) If camera is not used for long time, please turn off power adapter switch and AC plug.
- (2) Use soft cloth or tissue to clean the camera cover.
- (3) Use soft cloth to clean the lens; Use neuter cleanser if bad smeared. No use strong or corrosive cleanser or corrosive cleanser avoiding scuffing.

5.2 Troubleshooting

(1) No video output

- (a) Check whether the camera power supply is connected, the voltage is normal, the power indicator is lit.
- (b) Whether the machine could do self-inspection after restarted.
- (c) Check whether the video output and monitor cable is worn.

(2) No image sometimes

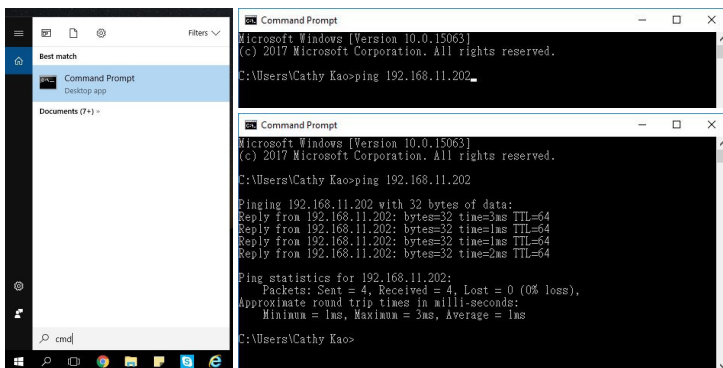
- (a) Check whether the camera power supply is connected, the voltage is normal, the power indicator is lit.
- (b) Check whether the video output or video display interfaces are normal.
- (c) Check whether the video cable is damaged.

(3) Image dithering when zoom-in or zoom-out

- (a) Check whether the camera installation position is solid.
- (b) Whether there is shaking machine or objects around the camera .

(4) Web pages can not log in

- (a) Check whether the camera is showing normally.
- (b) Check whether the network cable is connected properly(Ethernet port indicator is flashing)
- (c) Check whether your computer is added the segment and the segment is consistent with the IP address of the camera
- (d) Click "Start" and select "Run" and then type "cmd" in the computer;Click "OK" then turn on a DOS command window to enter ping 192.168.11.202. Press the Enter key to appear message as follows:
Description network





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Made in Taiwan
Date : 2017.09.01
Version: 2.3.1

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