

NETWORK FISHEYE CAMERA

User Manual

Please read this instruction carefully before using the product and preserve it for further reference

- Please use the specified power supply to connect.
- Do not attempt to disassemble the camera; in order to prevent electric shock, do not remove screws or covers.
- There are no user-serviceable parts inside. Please contact the nearest service center as soon as possible if there is any failure.
- Avoid from incorrect operation, shock vibration, heavy pressing which can cause damage to product.
- Do not use corrosive detergent to clean main body of the camera. If necessary, please use soft dry cloth to wipe dirt; for hard contamination, use neutral detergent. Any cleanser for high grade furniture is applicable.
- Avoid aiming the camera directly towards extremely bright objects, such as, sun, as this may damage the image sensor.
- Please follow the instructions to install the camera. Do not reverse the camera, or the reversing image will be received.
- Do not operate it in case temperature, humidity and power supply are beyond the limited stipulations.
- Keep away from heat sources such as radiators, heat registers, stove, etc.
- Do not expose the product to the direct airflow from an air conditioner.
- This manual is for using and managing the product. We may reserve the rights of amending the typographical errors, inconsistencies with the latest version, software upgrades and product improvements, interpretation and modification. These changes will be published in the latest version without special notification.
- All pictures, charts, images in this manual are only for description and explanation of our products. The ownerships of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google belong to the above-mentioned companies.
- This manual is suitable for network fisheye camera.

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1 Introduction

The network fisheye camera which adopts high-definition fisheye lens and high performance image sensor can meet 360° all-around high definition surveillance requirements. With the advanced H.265/H.264 video compression technology, high compression rate, accuracy and stable stream control, the camera ensures higher quality image and less occupancy of storage space.

This product can be widely used in banks, telecommunication systems, electricity power departments, law systems, factories, storehouses, uptowns, etc. In addition, it is also an ideal choice for surveillance sites with middle or high risks.

Main Features

- ICR auto switch, true day/night
- 3D DNR, digital WDR
- ROI coding
- Support BLC, HLC, Anti-flicker
- Support smart phone, iPad, remote monitoring

Surveillance Application



Installation Recommended Distance:

Performance	Face details	Facial contour	Human movement
Object distance	3 m	6 m	12 m

2 IE Remote Access

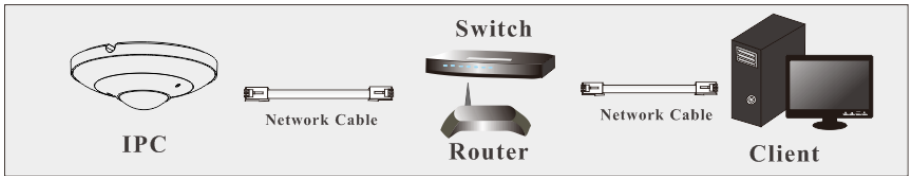
You may connect IP-Cam via LAN or WAN. Here only take IE browser for example. The details are as follows:

2.1 LAN

In LAN, there are two ways to access IP-Cam: 1. access through IP-Tool; 2. directly access through IE browser.

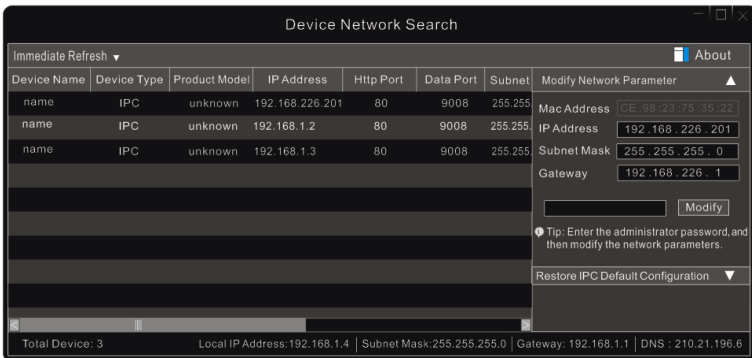
2.1.1 Access through IP-Tool

Network connection:

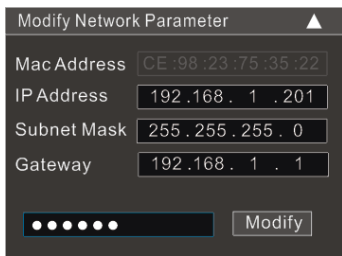


① Make sure the PC and IP-Cam are connected to the LAN and the IP-Tool is installed in the PC from the CD.

② Double click the IP-Tool icon on the desktop to run this software as shown below:



③ Modify the IP address. The default IP address of this camera is 192.168.226.201. Click the information of the camera listed in the above table to show the network information on the right hand. Modify the IP address and gateway of the camera and make sure its network address is in the same local network segment as that of the computer. Please modify the IP address of your device according to the practical situation.



For example, the IP address of your computer is 192.168.1.4. So the IP address of the camera shall be changed to 192.168.1.X. After modification, please enter the password of the administrator and click “Modify” button to modify the setting.



The default password of the administrator is “**123456**”.

④ Double click the IP address and then the system will pop up the IE browser to connect IP-CAM. Follow directions to download and install the Active X control. The login interface is as follow.



Enter the username and password to log in.



The default username is “**admin**”; the default password is “**123456**”.

2.1.2 Directly Access through IE

The default network settings are as shown below:

IP address: **192.168.226.201**

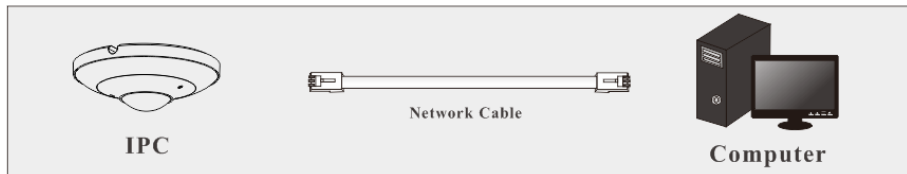
Subnet Mask: **255.255.255.0**

Gateway: **192.168.226.1**

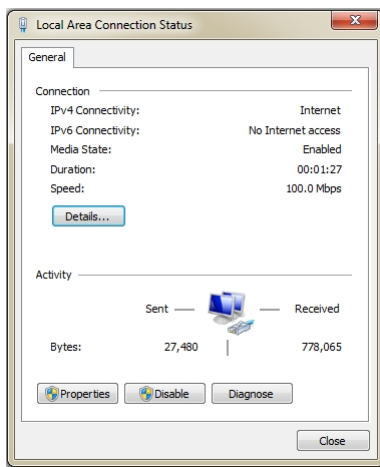
HTTP: **80**

Data port: **9008**

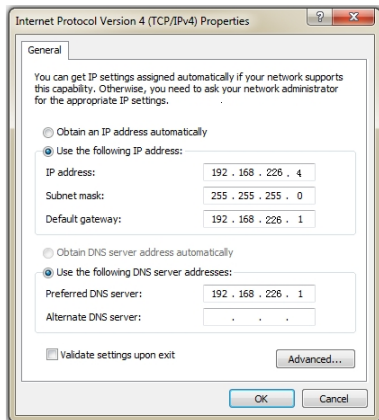
You may use the above default settings when you log in the camera for the first time. You may directly connect the camera to the computer through network cable.



① Manually set the IP address of the PC and the network segment should be as the same as the default settings of the IP camera. Open the network and share center. Click “Local Area Connection” to pop up the following window.



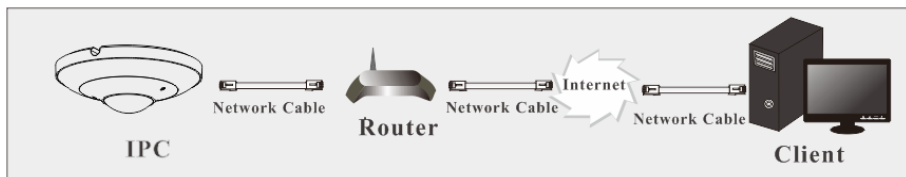
Select “Properties” and then select internet protocol according to the actual situation (for example: IPv4). Next, click “Properties” button to set the network of the PC.



- ② Open the IE browser and enter the default address of IP-CAM and confirm.
- ③ Follow directions to download and install the applicable plug-in.
- ④ Enter the default username and password and then click “Login” to view.

2.2 WAN

➤ Access through the router or virtual server



- ① Make sure the camera is connected via LAN and then log in the camera via LAN and go to Config→Network→Port menu to set the port number.

Port	Server	DDNS	SNMP	RTSP	UPnP	Email	FTP
HTTP Port	<input type="text" value="80"/>						
Data Port	<input type="text" value="9008"/>						
RTSP Port	<input type="text" value="554"/>						
<input type="button" value="Save"/>							

Port Setup

- ② Go to Config →Network→TCP/IP menu to modify the IP address.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input type="radio"/> Obtain an IP address automatically			
<input checked="" type="radio"/> Use the following IP address			
IP Address	192.168.226.201		
Subnet Mask	255.255.255.0		
Gateway	192.168.226.1		
Preferred DNS Server	192.168.226.1		
Alternate DNS Server	8.8.8.8		
<input type="button" value="Save"/>			

IP Setup

③ Go to the router’s management interface through IE browser to forward the IP address and port of the camera in the “Virtual Server”.

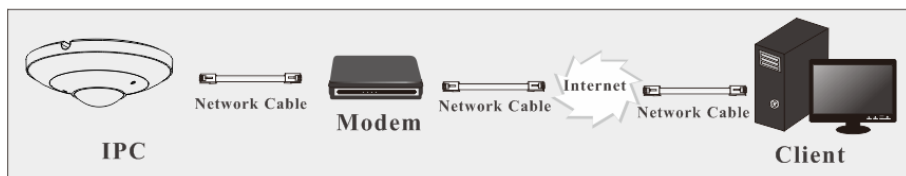
Port Range					
Application	Start	End	Protocol	IP Address	Enable
1	9007	to 9008	Both	192.168.1.201	<input checked="" type="checkbox"/>
2	80	to 81	Both	192.168.1.201	<input checked="" type="checkbox"/>
3	10000	to 10001	Both	192.168.1.166	<input type="checkbox"/>
4	21000	to 21001	Both	192.168.1.166	<input type="checkbox"/>

Router Setup

④ Open the IE browser and enter its WAN IP and http port to access. (for example, if you change your http port as 81, you may enter “192.198.1.201:81” in the address bar of web browser to access).

➤ **Access through PPPoE dial-up**

Network connection



You may access the camera through PPPoE auto dial-up. The setting steps are as follow:

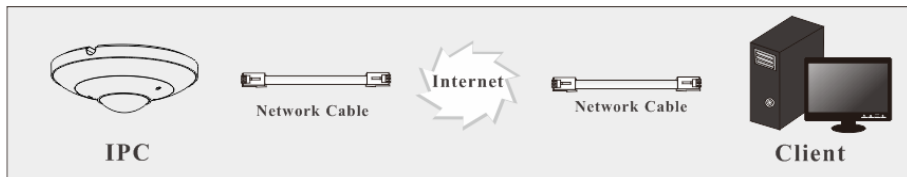
- ① Go to Config→Network→Port menu to set the port number.
- ② Go to Config →Network→TCP/IP→PPPoE Config menu. Enable PPPoE and then enter the user name and password which you can get from your internet service provider.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input checked="" type="checkbox"/> Enable			
User Name	<input type="text" value="xxxxxxx"/>		
Password	<input type="password" value="•••••"/>		
<input type="button" value="Save"/>			

- ③ Go to Config →Network→DDNS menu. Before you configure the DDNS, please apply for a domain name first. Please refer to DDNS configuration for detail information.
- ④ Open the IE browser and enter the domain name and http port to access.

➤ **Access through static IP**

Network connection

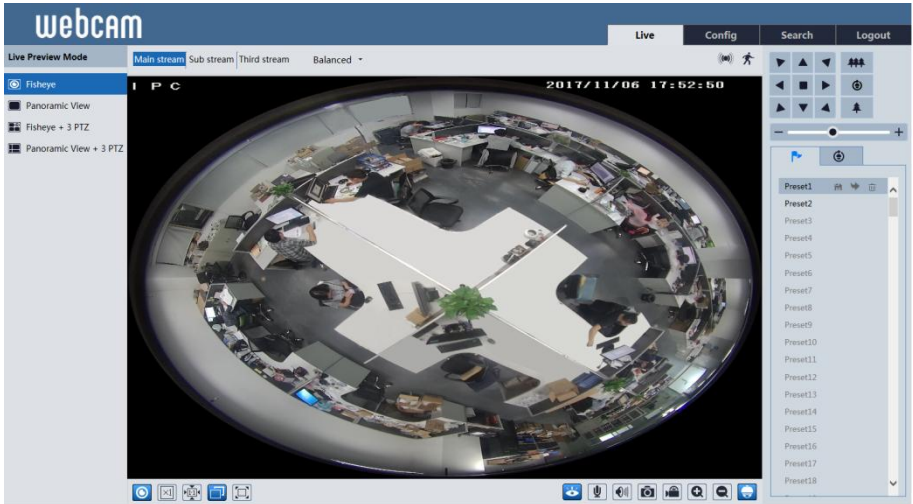


The setting steps are as follow:

- ① Go to Config→Network→Port menu to set the port number.
- ② Go to Config →Network→TCP/IP menu to set the IP address. Check “Use the following IP address” and then input the static IP address and other parameters.
- ③ Open the IE browser and enter its WAN IP and http port to access.
















3 Live View

After you log in, you will see the following window. Before you view the live image, please set the stream mode and installation method as required (see Set Fisheye Parameters for details).




In the live mode, you can switch different streams and live preview modes, capture live images, enable live audio and record, etc.

The following table is the instructions of the icons on the live view interface.

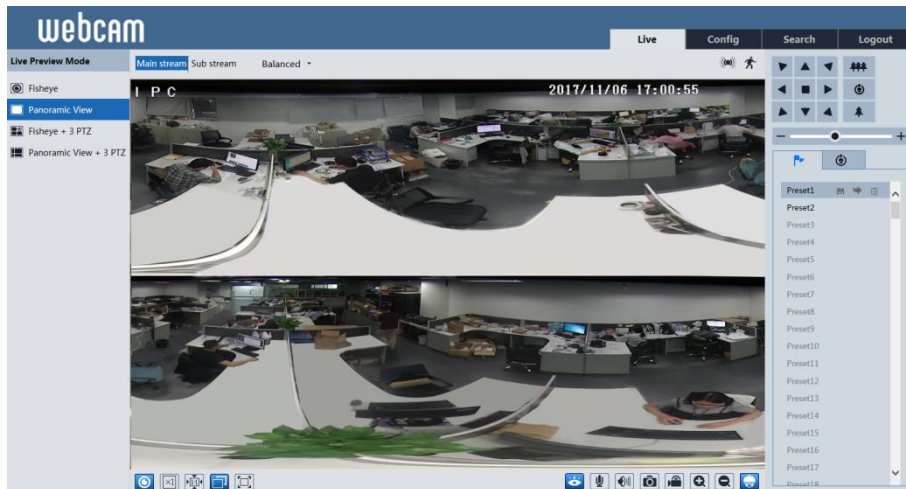
Icon	Description	Icon	Description
	Select live preview mode		Snap
	Original size		Start/stop recording
	Appropriate size		PTZ control
	Auto		Sensor alarm indicator icon
	Full screen		Motion alarm indicator icon
	Start/stop live view		Zoom in
	Start/stop two-way audio		Zoom out
	Enable/disable audio		

- In full screen mode, double click to exit.

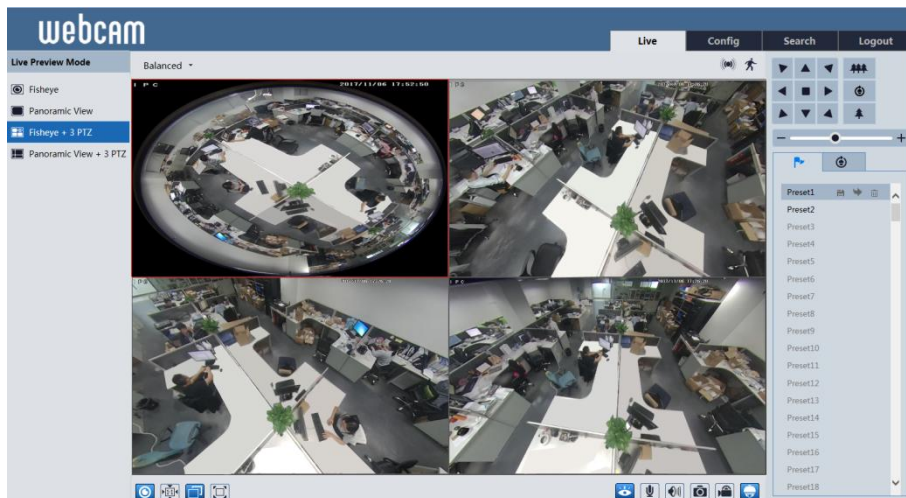
Click  to select the live view mode.

Fisheye view mode: See the picture as shown above.

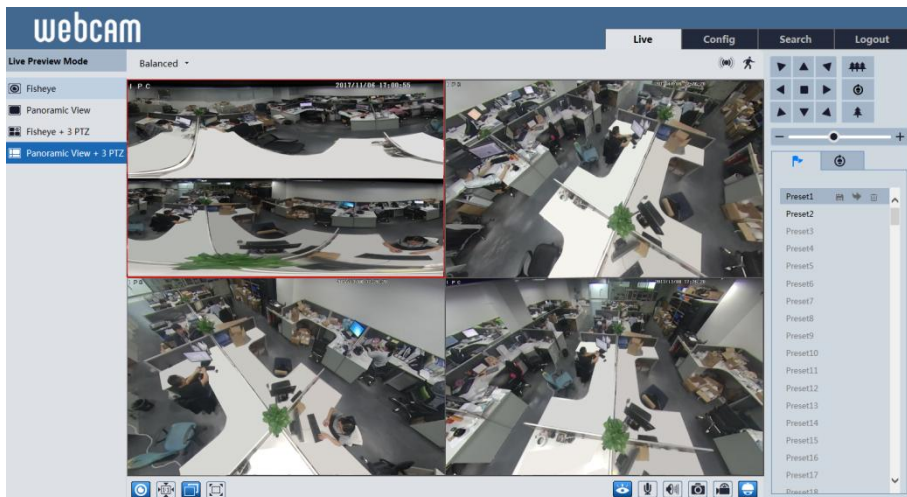
Panoramic view mode



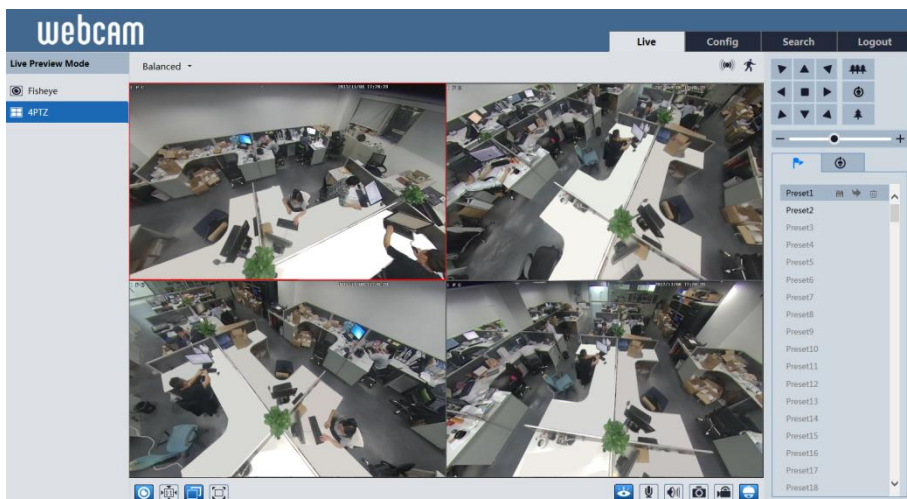
Fisheye+ 3PTZ view mode




Panoramic + 3PTZ view mode





















4PTZ view mode (you need to switch the stream mode in the fisheye parameter interface)






In panoramic + 3PTZ view mode or fisheye + 3PTZ view mode or 4PTZ view mode, select a PTZ window and view the image from every direction by controlling PTZ panel.

Click  to display the control panel. The descriptions of the control panel are as follows:

Icon	Description	Icon	Description
	Click it to rotate the dome diagonally up-left		Click it to rotate the dome diagonally up-right.
	Click it to rotate the dome upwards.		Click it to stop rotating the dome.
	Click it to rotate the dome towards left		Click it to rotate the dome towards right.
	Click it to rotate the dome diagonally down-left		Click it to rotate the dome diagonally down-right.
	Click it to rotate the dome downwards.		Drag the scroll bar to adjust rotating speed of the dome.
	Click it to zoom out the live image.		Click it to zoom in the live image.
	Automatic cruise		Preset
	Create and call cruise		

Select preset and click  to call the preset. Select and set the preset and then click  to save the position of the preset. Select the set preset and click  to delete it.

Select cruise and click  to set the cruise and add presets to this cruise. Click  to start cruise; click  to stop cruise.

4 Remote Configuration

4.1 System Configuration

The “System” configuration includes four submenus: Basic Information, Date and Time, Local Config and Storage.

4.1.1 Basic Information

In the “Basic Information” interface, you can check the relevant information of the device.

Device Type	xxxx
Brand	Customer
Software Version	4.1.1.0(13772)
Software Build Date	2017-11-01
Kernel Version	20170828
Hardware Version	1.3
Onvif Version	2.3
OCX Version	2.0.2.3
MAC	00:18:ad:36:8c:a9

4.1.2 Date and Time

Go to Config→System→Date and Time. Please refer to the following interface.

Zone	Date and Time
Time Zone:	GMT+08 (Beijing, Hong Kong, Shanghai, Taipei) ▼
	<input type="checkbox"/> DST

Please select the time zone and DST as needed.
Click “Date and Time” tab to set the time mode.

Zone	Date and Time
Time Mode:	
<input checked="" type="radio"/> Synchronize with NTP server NTP server: <input type="text" value="time.windows.com"/>	
<input type="radio"/> Synchronize with computer time Date: <input type="text" value="2016-08-11"/> Time: <input type="text" value="10:44:20"/>	
<input type="radio"/> Set manually Date: <input type="text" value="2016-08-11"/> <input type="text" value="10:44:13"/>	
<input type="button" value="Save"/>	

4.1.3 Local Config

Go to Config→System→Local Config. Set the storage path of the captured pictures and video records on the local PC. There is also an option to enable or disable the audio.

Picture Path	<input type="text" value="C:\Users\Administrator\Favorites"/>	<input type="button" value="Browse"/>
Record Path	<input type="text" value="C:\Users\Administrator\Favorites"/>	<input type="button" value="Browse"/>
Video Audio Settings	<input type="radio"/> Enable <input checked="" type="radio"/> Disable	

4.1.4 Storage

Go to Config→System→Storage to go to the interface as shown below.

SD Card	Record
Capacity	<input type="text" value="3325 MB"/>
Used Capacity	<input type="text" value="3325 MB"/>
Remaining Capacity	<input type="text" value="0 MB"/>
State	<input type="text" value="Normal"/>
<input type="button" value="Pop Up"/> <input type="button" value="Format"/>	

Click “Format” button to format the SD card.

Click “Pop Up” button to stop writing data to SD card. Then the SD card can be ejected safely.

Go to Config→System→Storage→Record to go to the interface as shown below. The SD card record stream can be selected. Set the pre record time if you enable pre record. Click “Save” button to save the settings.

Pre Record Time: Set the time to record before the actual recording begins.

SD Card	Record
Record Stream	Third ▾
<input checked="" type="checkbox"/> Enable Pre Record	
Pre Record Time (second)	3 ▾
Save	

4.1.5 Set Fisheye Parameters

Before viewing the live image, please go to Config→System→Fisheye Parameters menu to set the stream mode and installation method.

Stream Mode	Fisheye or 4 PTZ ▾
Installation Method	Desktop ▾
Notice: To modify installation method will affect live preview, image effect, PTZ mode and Preset, etc.	
Save	

Stream mode: Fisheye + Panoramic view + 3PTZ and Fisheye or 4PTZ mode are optional.

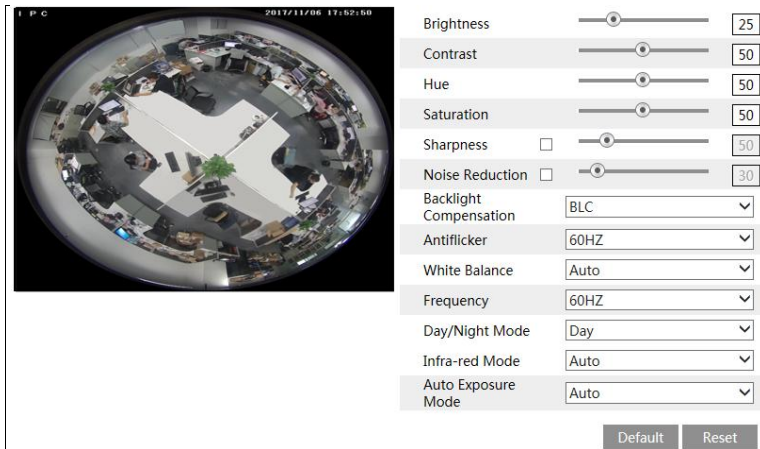
Installation method: Wall, ceiling and desktop are optional. Please select the installation mode according to the actual way of installation.

4.2 Image Configuration

Image Configuration includes Display, Video/Audio, OSD, Video Mask and ROI Config.

4.2.1 Display Configuration

Go to Image→Display interface as shown below. The picture's brightness, contrast, hue and saturation and so on can be set here.



Brightness: Set the brightness level of the camera's image.

Contrast: Set the color difference between the brightest and darkest parts.

Hue: Set the total color degree of the image.

Saturation: Set the degree of color purity. The purer the color is, the brighter the image is.

Sharpness: Set the resolution level of the image plane and the sharpness level of the image edge.

Noise Reduction: Decrease the noise and make the image more thorough. Increasing the value will make the noise reduction effect better but it will reduce the image resolution.

Backlight Compensation:

- Off: close the backlight compensation function. It is the default mode.
- HWDR
- ◆ WDR can adjust the camera to provide a better image when there are both very bright and very dark areas simultaneously in the field of the view by lowering the brightness of the bright area and increasing the brightness of the dark area.
- ◆ There will be some record lost in a few seconds during mode changing from non-WDR to WDR mode.
- HLC: lower the brightness of the whole image by suppressing the brightness of the image's highlight area and reducing the size of the halo area.
- BLC: if enabled, the auto exposure will activate according to the scene so that the object of the image in the darkest area will be seen clearly.

Antiflicker:

- Off: disables the anti-flicker function. This is used mostly in outdoor installations.
- 50Hz: reduces flicker in 50Hz lighting conditions.
- 60Hz: reduces flicker in 60Hz lighting conditions.

White Balance: Adjust the color temperature according to the environment automatically.

Frequency: 50Hz and 60Hz can be optional.

Day/night Mode: Please choose the mode as needed.

Sensitivity: High, middle and low can be selected.

Infrared Mode: Choose "ON", "OFF" or "Auto".

Exposure Mode: Choose “Auto” or “Manual”. If manual is chosen, the digital shutter speed can be adjusted.

4.2.2 Video / Audio Configuration

Go to Image→Video / Audio interface as shown below. In this interface, you can set the resolution, frame rate, bitrate type, video quality and so on subject to the actual network condition.

The screenshot shows the 'Video' configuration tab. At the top, there is a 'Channel ID' dropdown set to 'IP Channel 1'. Below this is a table with 3 rows representing different streams. Each row has columns for Index, Stream Name, Resolution, Frame Rate, Bitrate Type, Bitrate(Kbps), Video Quality, I Frame, Video, and Profile. Below the table, there are options for 'Send Snapshot' (set to 2), 'Size: (960x960)', a checked box for 'Video encode slice split', and an unchecked box for 'Watermark' with a 'Watermark content:' input field. A 'Save' button is located at the bottom right.

Index	Stream Name	Resolution	Frame Rate	Bitrate Type	Bitrate(Kbps)	Video Quality	I Frame	Video	Profile
1	Main stream	2160x2160	30	CBR	6144	Medium	120	H264	High Profile
2	Sub stream	960x960	30	CBR	1536	Highest	120	H264	High Profile
3	Third stream	480x480	30	CBR	768	Higher	120	H264	High Profile

Click “Audio” tab to go to the interface as shown below.

The screenshot shows the 'Audio' configuration tab. It features two dropdown menus: 'Audio Encoding' set to 'G711A' and 'Audio Type' set to 'MIC'. A 'Save' button is positioned at the bottom center.

You can select streams for different channels.

IP Channel 1: Fisheye view channel, 3 streams can be set. Please set them according to the actual network condition.

IP Channel 2: Panoramic view channel, 2 streams can be set. Please set them according to the actual network condition.

IP Channel 3/4/5: PTZ view channel, 2 streams can be set for each channel. Please set them according to the actual network condition.

Resolution: The size of image.

Frame rate: The higher the frame rate is, the video is smoother.

Bitrate type: CBR and VBR are optional. Bitrate is related to image quality. CBR means that no matter how much change is seen in the video scene, the compression bitrate will be kept constant. VBR means that the compression bitrate will be adjusted according to scene changes. For example, for scenes that do not have much movement, the bitrate will be kept at a lower value. This can help optimize the network bandwidth usage.

Bitrate: It can be adjusted when the mode is set to CBR. The higher the bitrate, the better the image quality will be.

Video Quality: It can be adjusted when the mode is set to VBR. The higher the image quality, the more bitrate will be required.

I Frame interval: It determines how many frames are allowed between a “group of pictures”.

When a new scene begins in a video, until that scene ends, the entire group of frames (or pictures) can be considered as a group of pictures. If there is not much movement in the scene, setting the value higher than the frame rate is fine, potentially resulting in less bandwidth usage. However, if the value is set too high, and there is a high frequency of movement in the video, there is a risk of frame skipping.

Video Compression: H264 and H265 are optional. If H.265 is chosen, make sure the client system is able to decode H.265.

Profile: For H.264. Baseline, main and high profiles are selectable.

Send Snapshot: Please select it according to the actual situation.

Video encode slice split: If this function is enabled, smooth image can be gotten even though using the low-performance PC.

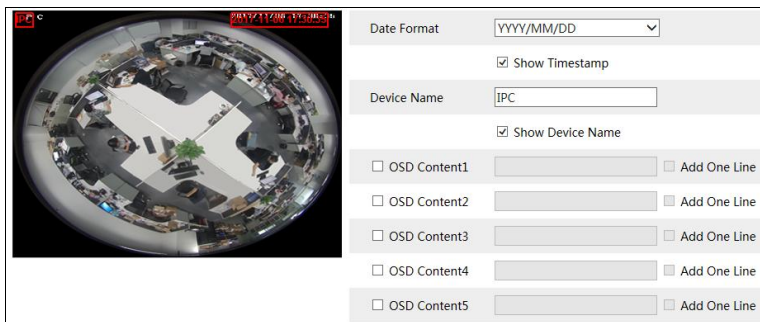
Watermark: When playing back the local recorded video in the search interface, the watermark can be displayed. To enable it, check the watermark box and enter the watermark text.

Audio Encoding: G711A and G711U are selectable.

Audio Type: MIC and LIN are selectable.

4.2.3 OSD Configuration

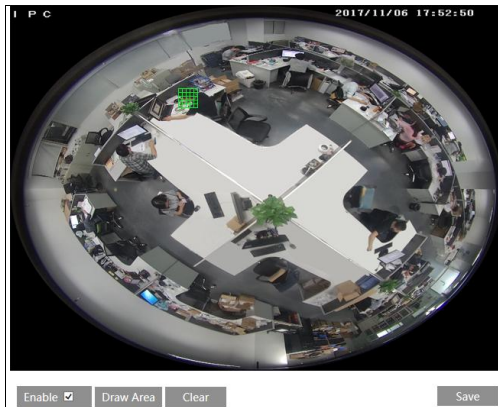
Go to Image→OSD interface as shown below.



You may set time stamp, device name and OSD content here. After enabling the corresponding display and entering the content, drag them to change their position. Then click “Save” button to save the settings.

4.2.4 Video Mask

Go to Image→Video Mask interface as shown below. You can set 4 mask areas at most.



To set up video mask:

1. Enable video mask.
2. Click “Draw Area” button and then drag the mouse to draw the video mask area.
3. Click “Save” button to save the settings.
4. Return to the live to verify that the area have been drawn as shown as blocked out in the image.



Clear the video mask:

Go to video mask interface and then click “Clear” button to delete the current video mask area.

4.2.5 ROI Configuration

Go to Image→ROI Config interface as shown below. An area in the image can be set as a region of interest. This area will have a higher bitrate than the rest of the image, resulting in better image quality for the identified area.



1. Check “Enable” and then click “Draw Area” button.
2. Drag the mouse to set the ROI area.
3. Set the level.
4. Click “Save” button to save the settings.

4.3 PTZ Configuration

The PTZ of this camera can be controlled by the keyboard. Connect the keyboard and the camera through RS485 interface and then set the corresponding protocol and baud-rate in the camera and keyboard.

Go to PTZ→Protocol interface as shown below.

Protocol	PELCOD
Baud-Rate	9600
Address	1: PTZ1
	2: PTZ2
	3: PTZ3
	4: PTZ4
Save	

Here the protocol and baud-rate must be the same with these of the keyboard.
 Address: 1; you can control PTZ channel 1 by using this address in the keyboard.
 Address: 2; you can control PTZ channel 2 by using this address in the keyboard.

4.4 Alarm Configuration

Alarm configuration includes four submenus: Motion Detection, Alarm In, Alarm Out and Alarm Server.

4.4.1 Motion Detection

Go to Alarm → Motion Detection to set motion detection alarm.

1. Check “Enable Alarm” check box to activate motion based alarms. If unchecked, the camera will not send out any signals to trigger motion-based recording to the NVR or CMS, even if there is motion in the video.

Alarm Out: If selected, this would trigger an external relay output that is connected to the camera on detecting a motion based alarm.

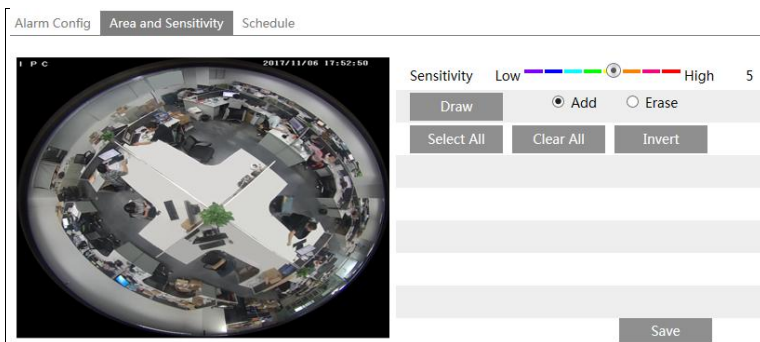
Trigger Snap: If selected, the system will capture images on motion detection and save the images on an SD card.

Trigger SD Recording: If selected, video will be recorded on an SD card on motion detection.

Trigger Email: If “Trigger Email” and “Attach Picture” are checked (email address must be set first in the Email configuration interface), the captured pictures and triggered event will be sent into those addresses.

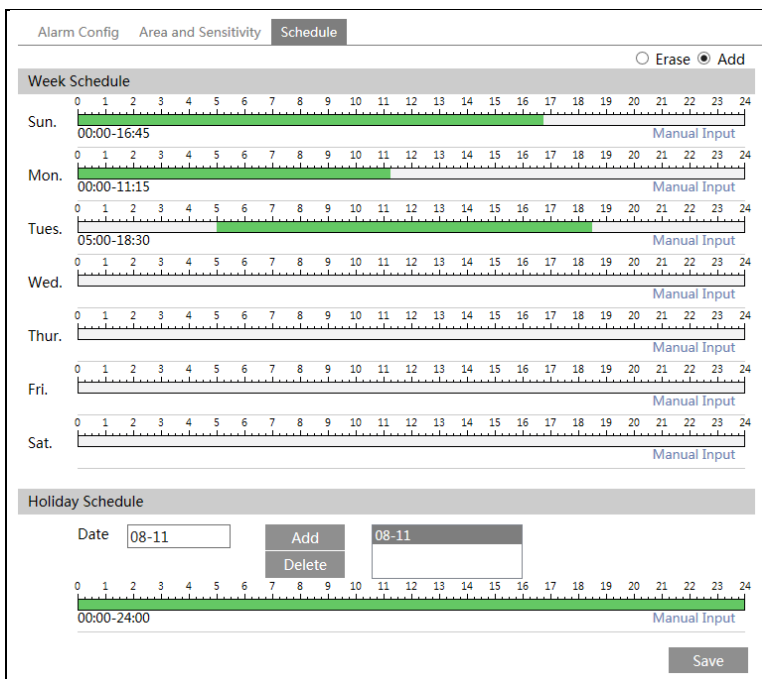
Trigger FTP: If “Trigger FTP” and “Attach Picture” are checked, the captured pictures will be sent into FTP server address. Please refer to FTP configuration chapter for more details.

2. Set motion detection area and sensitivity. Click “Area and Sensitivity” tab to go to the interface as shown below.



Move the “Sensitivity” scroll bar to set the sensitivity.
 Select “Add” and click “Draw” button and drag mouse to select the motion detection area;
 Select “Erase” and drag the mouse to clear motion detection area.
 After that, click “Save” to save the settings.

3. Set the schedule of the motion detection. Click “Schedule” tab to go to the interface as shown below.



Weekly schedule

Set the alarm time from Monday to Sunday for a single week. Each day is divided in one hour

increments. Green means scheduled. Blank means unscheduled.

“Add”: Add the schedule for a special day. Drag the mouse to set the time on the timeline.

“Erase”: Delete the schedule. Drag the mouse to erase the time on the timeline.

Manual Input: Click it for a specific day to enter specific start and end times. This adds more granularities (minutes).

Day schedule

Set the alarm time for alarm a special day, such as a holiday.

Note: Holiday schedule takes priority over weekly schedule.

4.4.2 Alarm In

To set sensor alarm (alarm in):

Go to Config→Alarm→Alarm In interface as shown below.

1. Enable alarm and set the alarm type, alarm holding time and sensor name.
2. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection chapter for details.
3. Click “Save” button to save the settings.
4. Set the schedule of the sensor alarm. The setup steps of the schedule are the same as the motion schedule setup. Please refer to motion detection chapter for details.

4.4.3 Alarm Out

Go to Config→Alarm→Alarm Out interface as shown below:

Alarm Out	Alarm Holding Time	Manual Operation	
<input type="text" value="alarmOut1"/>	<input type="text" value="30 Seconds"/>	<input type="button" value="On"/>	<input type="button" value="Off"/>

Select alarm holding time at the “Alarm Holding Time” pull down list box.
 Click “On” to trigger alarm out. Click “off” to stop alarm out.
 Click “Save” button to save the settings.

4.4.4 Alarm Server

Go to Alarm→Alarm Server interface as shown below.
 You may input the alarm server address and port. When the alarm happens, the camera will automatically transfer the alarm event to the alarm server. If the alarm server is not used, there is no need for you to configure here.

Server Address	<input type="text"/>
Port	<input type="text" value="0"/>
<input type="button" value="OK"/>	

4.5 Network Configuration

4.5.1 TCP/IP

Go to Config→Network→TCP/IP interface as shown below. There are two ways for network connection.

<input checked="" type="radio"/>	Obtain an IP address automatically
<input checked="" type="radio"/>	Use the following IP address
IP Address	<input type="text" value="192.168.226.201"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Gateway	<input type="text" value="192.168.226.1"/>
Preferred DNS Server	<input type="text" value="192.168.226.1"/>
Alternate DNS Server	<input type="text" value="8.8.8.8"/>
<input type="button" value="Save"/>	

Use IP address (take IPv4 for example)-There are two options for IP setup: obtain an IP address automatically by DHCP and use the following IP address. Please choose one of the options as needed.

Test: Test the effectiveness of the IP address by clicking this button.

Use **PPPoE**-Click the “PPPoE Config” tab to go to the interface as shown below. Enable PPPoE and then enter the user name and password from your ISP.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input checked="" type="checkbox"/> Enable			
User Name	<input type="text" value="xxxxxxx"/>		
Password	<input type="password" value="••••••"/>		
<input type="button" value="Save"/>			

Either method of network connection can be used. If PPPoE is used to connect internet, the camera will get a dynamic WAN IP address. This IP address will change frequently. To be notified, the IP change notification function can be used.

Click “IP Change Notification Config” to go to the interface as shown below.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input type="checkbox"/> Trigger Email			
<input type="checkbox"/> Trigger FTP			
<input type="button" value="Save"/>			

Trigger Email: when the IP address of the device is changed, the new IP address will be sent to the email address that has been set up.

Trigger FTP: when the IP address of the device is changed, the new IP address will be sent to FTP server that has been set up.

4.5.2 Port

Go to Config→Network→Port interface as shown below. HTTP port, Data port and RTSP port can be set.

Port	Server	DDNS	SNMP	RTSP	UPnP	Email	FTP
HTTP Port	<input type="text" value="80"/>						
Data Port	<input type="text" value="9008"/>						
RTSP Port	<input type="text" value="554"/>						
<input type="button" value="Save"/>							

HTTP Port: The default HTTP port is 80. It can be changed to any port which is not occupied.

Data Port: The default data port is 9008. Please change it as necessary.

RTSP Port: The default port is 554. Please change it as necessary.

4.5.3 Server Configuration

This function is mainly used for connecting network video management system.

Port	Server	DDNS	SNMP	RTSP	UPnP	Email	FTP
<input checked="" type="checkbox"/> Enable							
Server Port	<input type="text" value="10"/>						
Server Address	<input type="text"/>						
Device ID	<input type="text" value="1"/>						
<input type="button" value="Save"/>							

1. Check “Enable”.
2. Check the IP address and port of the transfer media server in the ECMS/NVMS. Then enable the auto report in the ECMS/NVMS when adding a new device. Next, input the remaining information of the device in the ECMS/NVMS. After that, the system will automatically allot a device ID. Please check it in the ECMS/NVMS.
3. Input the above-mentioned server address, server port and device ID in the corresponding boxes. Click “Save” button to save the settings.

4.5.4 DDNS


If the camera is set up with a DHCP connection, DDNS should be set for the internet.

1. Go to Config→Network→ DDNS.

Port	Server	DDNS	SNMP	RTSP	UPnP	Email	FTP
<input checked="" type="checkbox"/> Enable							
Server Type	<input type="text" value="mintdns"/>						
Server Address	<input type="text" value="www.dvrmyndns.com"/>						
User Name	<input type="text"/>						
Password	<input type="text"/>						
Domain	<input type="text"/>						
<input type="button" value="Save"/>							

2. Apply for a domain name. Take www.dvrmyndns.com for example. Input www.dvrmyndns.com in the IE address bar to visit its website. Then click “Registration” button.

NEW USER REGISTRATION

USER NAME	<input type="text" value="XXXX"/>
PASSWORD	<input type="password" value="•••••"/> ?
PASSWORD CONFIRM	<input type="password" value="•••••"/>
FIRST NAME	<input type="text" value="xxx"/>
LAST NAME	<input type="text" value="xxx"/>
SECURITY QUESTION.	My first phone number. ▾
ANSWER	<input type="text" value="xxxxxxxx"/>
CONFIRM YOU'RE HUMAN	 New Captcha <input type="text"/> Enter the text you see above
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

Create domain name.

You must create a domain name to continue.

Domain name must start with (a-z, 0-9). Cannot end or start, but may contain a hyphen and is not case-sensitive.

<input type="text"/>	dvrtydns.com ▾	<input type="button" value="Request Domain"/>
----------------------	----------------	---

After you successfully request your domain name, you will see your domain in the list.

Search by Domain.

Click a name to edit your domain settings.

NAME	STATUS	DOMAIN
654321ABC	✔	654321abc.dvrtydns.com

Last Update: Not yet updated IP Address: 210.21.229.138

[Create additional domain names](#)

3. Input the username, password, domain you apply for in the DDNS configuration interface.
4. Click “Save” button to save the settings.

4.5.5 SNMP

To get camera status, parameters and alarm information and remotely manage the camera, you can set the SNMP function. Before using the SNMP, please download the SNMP software and set the parameters of the SNMP, such as SNMP port, trap address.

1. Go to Config→Network→SNMP.
2. Check the corresponding version checkbox (Enable SNMPv1, Enable SNMPv2, Enable SNMPv3) according to the version of the SNMP software you download.
3. Set the “Read SNMP Community”, “Write SNMP Community”, “Trap Address”, “Trap

Port” and so on. Please make sure the settings are the same as that of your SNMP software.

Note: Please use the different version in accordance with the security level you required. The higher the version is, the higher the level of the security is.

SNMP v1/v2	
<input type="checkbox"/> Enable SNMPv1	
<input type="checkbox"/> Enable SNMPv2	
Read SNMP Community	<input type="text"/>
Write SNMP Community	<input type="text"/>
Trap Address	<input type="text"/>
Trap Port	<input type="text" value="0"/>
Trap community	<input type="text"/>
SNMP v3	
<input type="checkbox"/> Enable SNMPv3	
Read User Name	<input type="text"/>
Security Level	<input type="text" value="auth, priv"/>
Authentication Algorithm	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password	<input type="text"/>
Private-key Algorithm	<input checked="" type="radio"/> DES <input type="radio"/> AES
Private-key Algorithm	<input type="text"/>
Write User Name	<input type="text"/>
Security Level	<input type="text" value="auth, priv"/>
Authentication Algorithm	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password	<input type="text"/>
Private-key Algorithm	<input checked="" type="radio"/> DES <input type="radio"/> AES
Private-key Algorithm	<input type="text"/>
Other Settings	
SNMP Port	<input type="text" value="0"/>

4.5.6 RTSP

Go to Config→Network→RTSP.

Enable

Port

RTSP Address

Allow anonymous login (No username or password required)

1. Select “Enable”.
2. **RTSP Port:** Access port of the streaming media. The default number is 554.
3. **RTSP Address:** The RTSP address is what you need to input in the media player. You shall input it in the media player according to the format listed above.
4. Check “Allow anonymous login...”.

4.5.7 UPNP

If this function is enabled, the camera can be quickly accessed through the LAN. Go to Config→Network→UPnP. Enable UPNP and then enter UPnP name.

Port Server DDNS SNMP RTSP **UPnP** Email FTP

Enable

UPnP Name

Save

4.5.8 Email

If you need to trigger Email when an alarm happens or IP address is changed, please set the Email here first. Go to Config→Network →Email.

Port Server DDNS SNMP RTSP UPnP **Email** FTP

Sender

Sender Address

User Name

Password

Server Address

Secure Connection ▼

SMTP Port

Send Interval(S) (0-3600)

Recipient

Recipient Address

Sender Address: sender's e-mail address.

User name and password: sender's user name and password.

Server Address: The SMTP IP address or host name.

Select the secure connection type at the "Secure Connection" pull-down list according to actual needs.

SMTP Port: The SMTP port.

Send Interval(S): The time interval of sending email. For example, if it is set to 60 seconds and multiple motion detection alarms are triggered within 60 seconds, they will be considered as only one alarm event and only one email will be sent. If one motion alarm event is triggered and then another motion detection alarm event is triggered after 60 seconds, two emails will be sent. When different alarms are triggered at the same time, multiple emails will be sent separately.

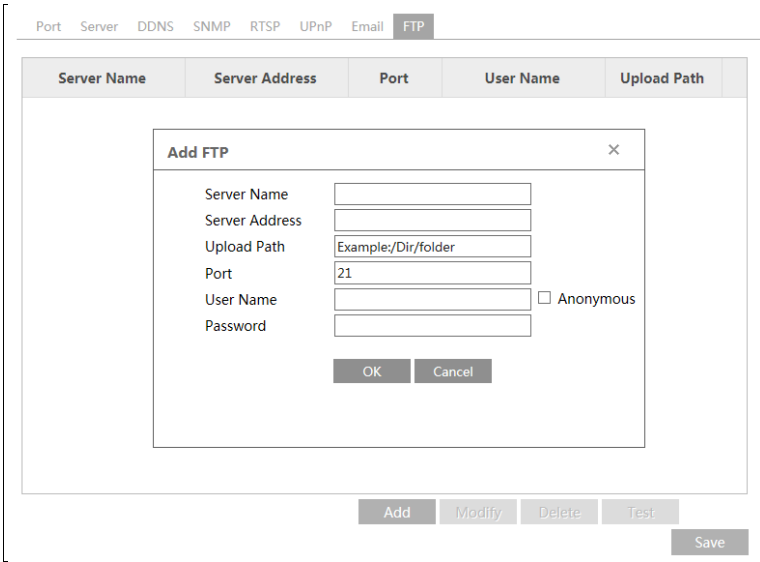
Click "Test" button to test the effectiveness of the account.

Recipient Address: receiver's e-mail address.

4.5.9 FTP

After you set the FTP server, the captured pictures on an alarm will be uploaded to the FTP server.

Go to Config→Network →FTP.



Server Name: The name of the FTP server.

Server Address: The IP address or domain name of the FTP.

Upload Path: The directory where files will be uploaded to.

Port: The port of the FTP server.

User Name and Password: The username and password that are used to login to the FTP server.

4.6 Security Configuration

4.6.1 User Configuration

Go to Config→Security→User interface as shown below.

Add Modify Delete			
Index	User Name	User Type	Binding MAC
1	admin	Administrator	

Add user:

1. Click “Add” button to pop up the following textbox.

The 'Add User' dialog box includes the following fields and controls:

- User Name:
- Password:
- Confirm Password:
- User Type: (dropdown menu)
- Bind MAC:
- Buttons: OK, Cancel

2. Enter user name in “User Name” textbox.
3. Enter letters or numbers in “Password” and “Confirm Password” textbox.
4. Choose the user type. Administrator has all permissions. Normal user can only view the live video. Advanced user has the same permissions as an Administrator except for user, backup settings, factory reset and upgrading the firmware.
5. Enter the MAC address of the PC in “Bind MAC” textbox.
If this option is enabled, only the PC with the specified MAC address can access the camera for that user.
6. Click the “OK” button and then the newly added user will be displayed in the user list.

Modify user:

1. Select a user to modify password and MAC address if necessary in the user configuration list box.
2. The “Edit user” dialog box pops up by clicking the “Modify” button.

The 'Edit User' dialog box includes the following fields and controls:

- Modify Password
- User Name:
- Old Password:
- New Password:
- Confirm Password:
- Bind MAC:
- Buttons: OK, Cancel

3. Enter the old password of the user in the “Old Password” text box.
4. Enter the new password in the “New password” and “Confirm Password” text box.
5. Enter computer’s MAC address as necessary.
6. Click the “OK” button to save the settings.

Note: To change the access level of a user, the user must be deleted and added again with the new access level.

Delete user:

1. Select the user to be deleted in the user configuration list box.
2. Click the “Delete” button to delete the user.

Note: The default administrator account cannot be deleted.

4.6.2 Online User

Go to Config→Security→Online User to view the user who is viewing the live video.

4.6.3 Block and Allow Lists

Go to Config→Security→Block and Allow Lists interface as shown below.

IP Address Filter Settings

Enable IP address filtering

Block the following IP address Allow the following IP address

Add

Delete

0.0.0.0

IPv4 IPv6

Block the following MAC Address

Enable MAC address filtering

Block the following MAC address Allow the following MAC address

Add

Delete

00:00:00:00:00:00

Save

Setting steps are as follows:

Check “Enable IP address filtering” check box.

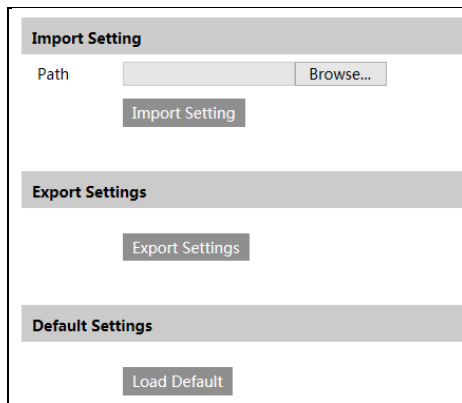
Select “Block the following IP address”, input IP address in the IP address list box and click “Add” button. The operation step of “Allow the following IP address” and MAC address filter settings are the same as “Block the following IP address”.

After you set the IP address or MAC address, the system will block or allow the user using the added IP address or MAC address to access the camera.

4.7 Maintenance Configuration

4.7.1 Backup and Restore

Go to Config→Maintenance→Backup & Restore.



● **Import & Export Settings**

Configuration settings of the camera can be exported from a camera into another camera.

1. Click “Browse” to select save path for import or export information on the PC.
2. Click “Import Setting” or “Export Setting” button.

● **Default Settings**

Click “Load Default” button to restore all system settings to default factory settings.

4.7.2 Reboot

Go to Config→Maintenance→Reboot.

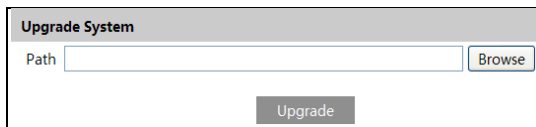
Click “Reboot” button to reboot the device.

Timed Reboot Setting:

If necessary, the camera can be set up to reboot on a time interval. Enable “Time Settings”, set the date and time and then click “Save” button to save the settings.

4.7.3 Upgrade

Go to Config→Maintenance→Upgrade. In this interface, the camera firmware can be updated.



1. Click the “Browse” button to select the save path of the upgrade file
2. Click the “Upgrade” button to start upgrading the firmware.
3. The device will restart automatically

Caution! Do not close the browser or disconnect the camera from the network during the upgrade.

4.7.4 Operation Log

To query and export log:

1. Go to Config→Maintenance→Operation Log.

Main Type:	<input type="text" value="All log"/>	Sub Type:	<input type="text" value="All log"/>		
Start Time:	<input type="text" value="2017-07-10 00:00:00"/>	End Time:	<input type="text" value="2017-07-10 23:59:59"/>	<input type="button" value="Search"/>	<input type="button" value="Export"/>
Index	Time	Main Type	Sub Type	User Name	Login IP
1	2017-07-10 11:15:18	Operation	Log in	admin	192.168.12.53
2	2017-07-10 11:12:02	Exception	Disconnected		192.168.12.53
3	2017-07-10 19:12:17	Exception	Disconnected		192.168.12.52

2. Select the main type, sub type, start and end time.
3. Click “Search” to view the operation log.
4. Click “Export” to export the operation log.

5.1 Photo Search




Click Search→Photo to go to the interface as shown below. Images that are saved on the SD card can be found here.



1. Set time: Select date and choose the start and end time in the top left corner.
2. Check events.
3. Click “Search” button to search the photos.
4. Click a file name in the list to view captured photos as shown above.

The descriptions of the buttons are shown as follows.

Icon	Description	Icon	Description
	Close: Select an image and click this button to close the image.		Close all: Click this button to close all images.
	Save: Click this button to select the path for saving the image on the PC		Save all: Click this button to select the path for saving all images on the PC.
	Fit size: Click to fit the image on the screen		Actual size: Click this button to display the actual size of the image.
	Zoom in: Click this button to digitally zoom in.		Zoom out: Click this button to digitally zoom out.

Icon	Description	Icon	Description
	Slide show play: Click this button to start slide show mode		Stop: Click this button to stop the slide show.
	Play speed: Play speed of the slide show.		









5.2 Video Search

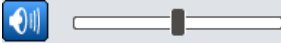

5.2.1 Local Video Search

Click Search→Video→Local Video to go to the interface as shown below. Videos were recorded locally to the PC can be played in this interface.



Choose the date and the start time and end time and then click “Search” button to search the record files. Double click the record file to play the record. The descriptions of the buttons on the playback interface are as follows.

Icon	Description	Icon	Description
	Play button. After pausing the video, click this button to continue playing.		Pause button.
	Stop button.		Speed down.
	Speed up.		Click it to play the previous record.
	Click it to play the next record.		Watermark display.

Icon	Description	Icon	Description
	Click it to enable / disable audio; drag the slider to adjust the volume after enabling audio.		Full screen. Click it to display full screen. Double click to exit full screen.

5.2.2 SD Card Video Search


Click Search→Video→SD Card Recording to go to the interface as shown below. Videos that were recorded on the SD card can be played in this interface.



1. Set the date and the start and end time, select the record type and then click “Search” button to search the record.

2. Double click the searched file name to play the record.

Please refer to Local Video Search for the descriptions of the buttons on the playback interface.

Click  button to download the record saved in the SD card.

Appendix 1 Q & A

Q: How to find my password if I forget it?

A: Reset the device to the default factory settings.

Default IP: 192.168.226.201; User name: admin; Password: 123456

Q : Fail to connect devices through IE browser, why?

A: Network is not well connected. Check the connection and make sure it is connected well.

B: IP is not available. Reset the valid IP.

C: Web port number has been revised: contact administrator to get the correct port number.

D: Exclude the above reasons. Recover default setting by IP-Tool.

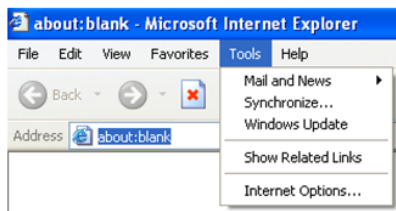
Q : IP tool cannot search devices, why?

A: It may be caused by the anti-virus software in your computer. Please exit it and try to search device again.

Q : IE cannot download ActiveX control. How can I do?

a. IE browser blocks ActiveX. Please do setup as below.

① Open IE browser and then click Tools-----Internet Options....

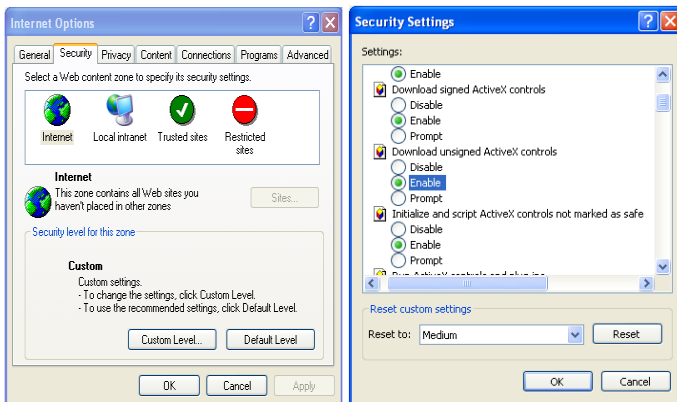


② Select Security-----Custom Level....

③ Enable all the sub options under "ActiveX controls and plug-ins".

④ Then click OK to finish setup.

b. Other plug-ins or anti-virus blocks ActiveX. Please uninstall or close them.



Q: No sound can be heard, why?

A: Audio input device is not connected. Please connect and try again.

B: Audio function is not enabled at the corresponding channel. Please enable this function.

Appendix 2 Specifications

Specification /Model		Network IR Fisheye Camera	
Camera	Image Sensor	1/2.9 " CMOS	
	Effective Pixels	2160×2160	
	Electronic Shutter	1/25s~1/100000s	
	Min. Illumination	0.068@F2.0, AGC ON; 0 lux with IR	
	Lens	1.07mm@F2.5, horizontal field of view: 180 °(wall mounting), 360 °(ceiling mounting)	
	Day&Night	ICR	
	WDR	Digital WDR	
	BLC	Support	
	HLC	Support	
Digital NR	3D DNR		
Image	Video Compression	H.265/H.264/MJPEG	
	H.265 Type	Main Profile @Leve4,1 High Tier	
	Video Bit Rate	128Kbps~10Mbps	
	Main Stream Max.Frame Rate	① Fisheye + panorama + 3PTZ 50Hz: 25fps@(2160×2160/1920×1920/1440×1440); 25fps@(1920×1080); 25fps@(960×540)*3 60Hz: 30fps@(2160×2160/1920×1920/1440×1440); 30fps@(1920×1080); 30fps@(960×540)*3 ② Fisheye + 4PTZ 50Hz: 25fps@(2160×2160/1920×1920/1440×1440); 25fps@(960×540)*4 60Hz: 30fps@(2160×2160/1920×1920/1440×1440); 30fps@(960×540)*4	
	Image Settings	Saturation, Brightness, Chroma, Contrast, Wide Dynamic, Sharpen, NR, etc. adjustable through client or web browser	
	ROI	Support	
Interfaces	Network	RJ45	
	Video	CVBS output (BNC ×1)	
	Auido	MIC IN×1; MIC OUT×1	
	Storage	Support SD card, up to 128 GB	
	RS485	Support	
	Alarm	1CH alarm input; 1 CH alarm output	
Fuction	Remote Monitoring	IE browser, CMS remote control	
	Online Connection	Support simultaneous monitoring for up to 10 users and multi-stream transmission	
	Network Protocol	TCP/IP, UDP, DHCP, NTP, RTSP, PPPoE, DDNS, SMTP, FTP	
	Interface Protocol	ONVIF, GB-T/28181-2011	
	Storage	SD card storage; network remote storage	
	Smart Alarm	Motion alarm; sensor alarm	
	IR Distance	20~30m	
	Protection Grade	IP67	NO
	Power Supply	DC12V/PoE	
	Power Consumption	< 12W	
	Operating Environment	Temperature: -30 °C~50 °C; Relative humidity: 10%~90%	
	Dimension (mm)	Ø130×41	Ø130×39
	Weight (net)	Approx. 0.45KG	Approx. 0.43KG
Installation	Wall mounting; ceiling mounting		