OpenEye®

The Cloud Video Platform

12MP ULTRA HIGH-DEFINITION FISHEYE 360° IP CAMERA

HARDWARE MANUAL

OE-C97512 12MP 360° Panoramic Fisheye IP Camera
User Manual

Manual Edition 36870AE – February 2021

OPENEYE
Liberty Lake, WA ● U.S.A.

Important Safeguards

Read Instructions

Read all of the safety and operating instructions before using the product.

Retain Instructions

Save these instructions for future reference.

Attachments / Accessories

Do not use attachments or accessories unless recommended by the appliance manufacturer as they may cause hazards, damage product and void warranty.

Installation

Do not place or mount this product in or on an unstable or improperly supported location. Improperly installed product may fall, causing serious injury to a child or adult, and damage to the product. Use only with a mounting device recommended by the manufacturer, or sold with the product. To insure proper mounting, follow the manufacturer's instructions and use only mounting accessories recommended by manufacturer.

Power source

This product should be operated only from the type of power source indicated on the marking label.

Precautions

Operating

- Before using, make sure power supply and other cables are properly connected.
- While operating, if any abnormal condition or malfunction is observed, stop using the camera immediately and then contact your local dealer.

Handling

- Do not disassemble or tamper with parts inside the camera.
- Do not drop or subject the camera to shock and vibration as this can damage camera.
- Care must be taken when you clean the clear dome cover. Scratches and dust will ruin the image quality of your camera. Do not use strong or abrasive detergents when cleaning the camera body. Use a dry cloth to clean the camera when it is dirty. In case the dirt is hard to remove, use a mild detergent and wipe the camera gently.

Installation and Storage

- Install electricity wiring carefully. Please note that input electricity to the unit is at tolerance of DC 12V±25%.
- Do not install the camera in areas of extreme temperatures in excess of the allowable range. (-31 °F ~ 140 °F)
- Avoid installing in humid or dusty places. The relative humidity must be below 90%.
- Avoid installing in places where radiation is present.
- Avoid installing in places where there are strong magnetic fields and electric signals.
- Avoid installing in places where the camera would be subject to strong vibrations.
- Whether the camera is in use or not, never aim it at the sun or other extremely bright objects. Otherwise the camera may be smeared and damaged.

Regulation

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

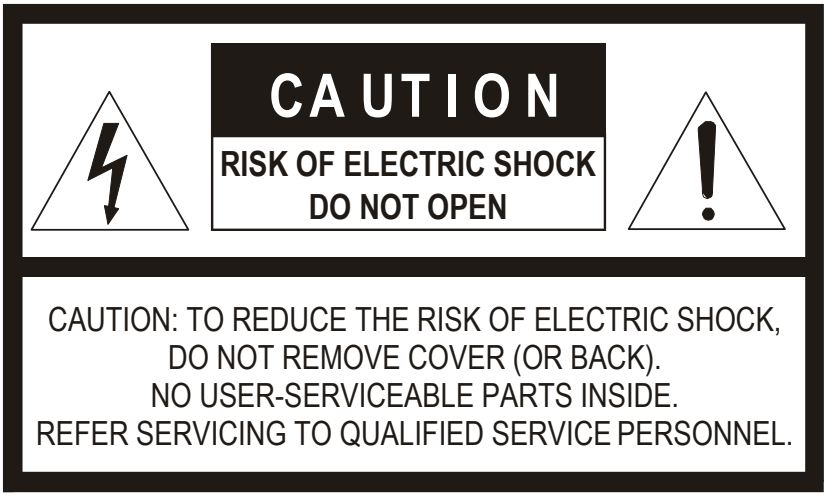
Warning

DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO

NOT OPEN THE CABINET.

REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

Caution



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INTRODUCTION

OVERVIEW

The OE-C97512 Ultra High Definition 360° 12MP camera delivers superior IP video quality while capturing activity in all directions. This camera comes with embedded IR LEDs to enhance the quality of nighttime images. Additional features include a movable IR cut filter for true day/night images, dual streaming capability, and (camera side) encoding. The Smart Compression option reduces storage requirements by up to 70% while maintaining high resolution video allowing you to meet video retention and resolution requirements for less. The OE-C97512 is IK10 rated and comes in IP66-rated weatherproof housing.

All OpenEye cameras are fully ONVIF compliant and compatible with the OpenEye Web Services platform, allowing multiple users to view high quality images and perform setup through a remote web browser.

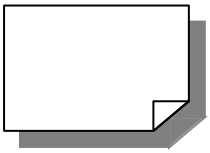
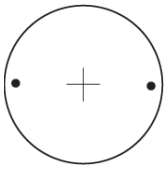
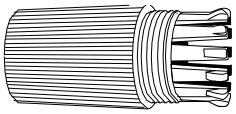
PRODUCT FEATURES

- 12MP (4000x3000) maximum resolution
- 1.8mm @ F2.4 focal length
- IP66 outdoor rating
- True Day/Night (movable IR cut filter)
- Digital Wide Dynamic Range
- Smart Compression
- Panoramic Image
- IK10 vandal resistant rating
- ONVIF Profile S compliant
- Up to 8 Regions of Interest

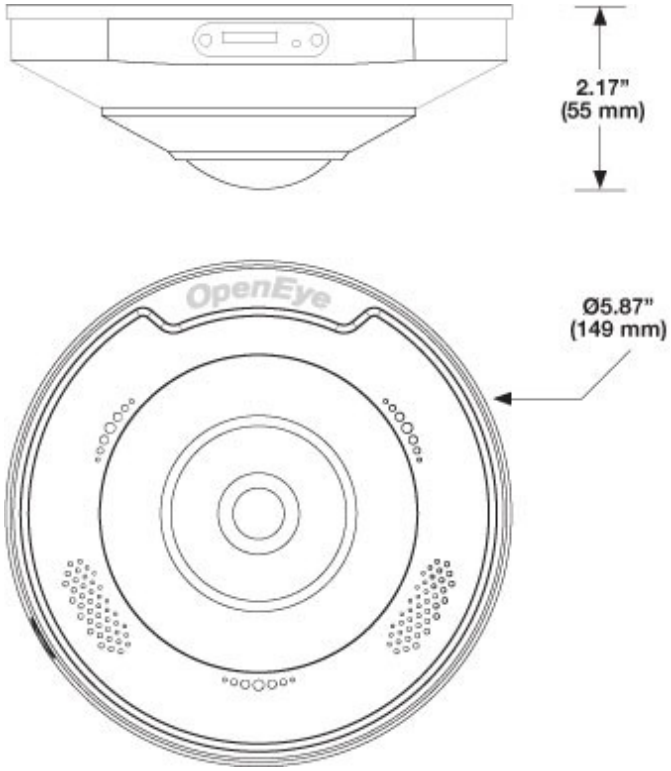
CONNECTIONS

CAMERA BOX CONTENTS

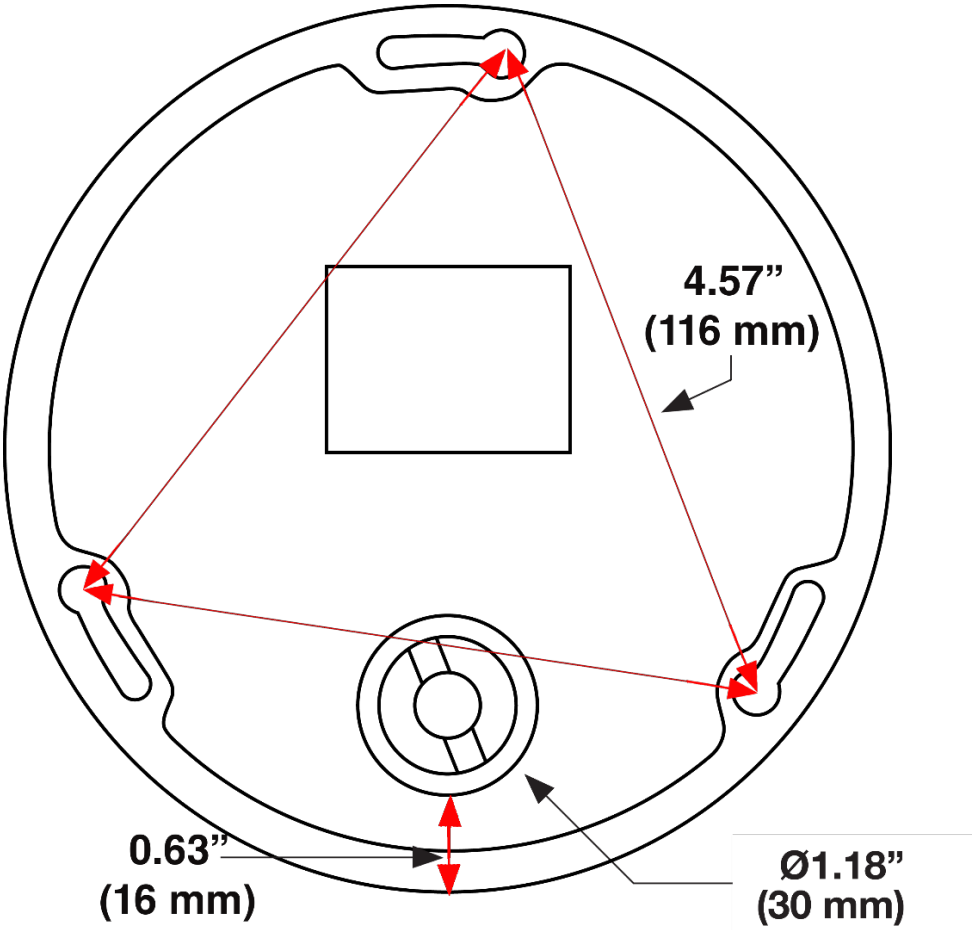
Before proceeding, please check that the box contains the items listed here. If any item is missing or has defects, do not install or operate the product and contact your dealer for assistance.

<table>
<tr><td colspan="2"> 
OE-C97512 IP Camera</td></tr>
<tr><td> 
Plastic Anchors and Screws</td><td> 
Quick Start Guide</td></tr>
<tr><td> 
Mounting Template</td><td> 
Waterproof Cable Connector</td></tr>
</table>

DIMENSIONS

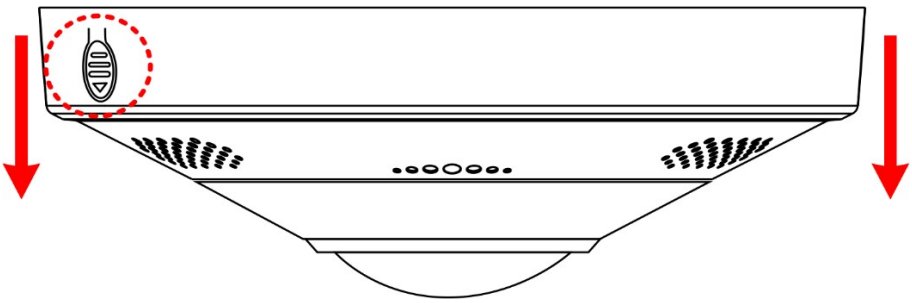


BOTTOM OF CAMERA

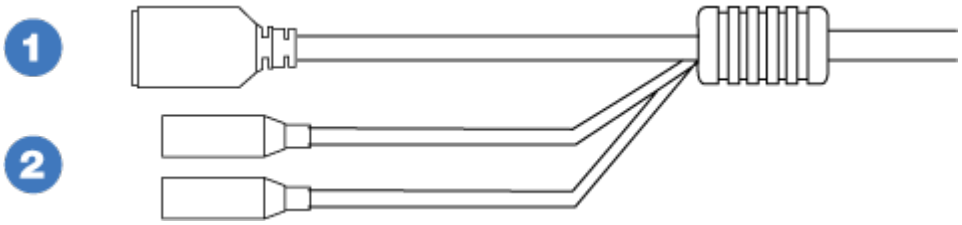


REMOVING THE CAMERA COVER

Press locking tab and slide cover forward to remove the camera cover.



CONNECTIONS

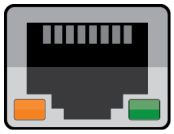


Cable Connections		
RJ-45	1	Data Connection & PoE Power
Audio I/O	2	Audio In
		Audio Out

ETHERNET CABLE CONNECTION

Connect one end of the CAT 5 Ethernet cable to the RJ-45 connector of the camera and the other end of the cable to the network switch or recorder.

Check the status of the link indicator and activity indicator LEDs. If the LEDs are unlit, check the LAN connection.



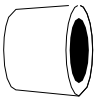
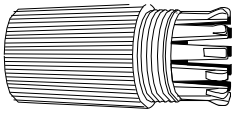
The Green link light indicates a good network connection.
The Orange activity light flashes to indicate network activity.

WEATHER RESISTANT CABLE CONNECTOR

This camera features an IP66-rated weather resistant connector. For unprotected outdoor connections, screw the connector on the included Ethernet camera cable onto the camera dongle. If your installation location does not require a water-resistant connection, loosen and slide the connector back on the cable until it's out of the way.

This camera features an IP66-rated waterproof cable connector for unprotected outdoor connections. You do not need to re-terminate the cable to use the waterproof cable connector.

Included Pieces:

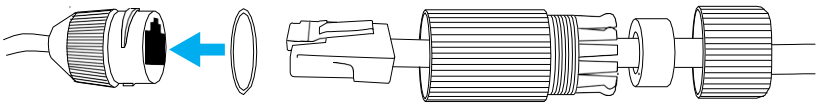
 Thread Lock Cap	 Silicone Seal Ring
 RJ45 Enclosure	 Small Silicone "O" Ring

To Install the weather resistant cable connector, follow these steps:

1. Slide all pieces of the waterproof cable connector over the cable plug in this order:
    - Thread Lock Cap
    - Flexible silicone seal ring. You will need to stretch the silicone seal over the RJ-45 plug.

Note: Insert the flexible silicone seal ring onto the tip of a pair of needle nose pliers and stretch the seal over the RJ45 plug.

    - RJ45 Enclosure



2. Stretch the small silicone "O" ring onto the camera dongle.
3. Connect the camera cable to the plug on the dongle. Screw the RJ45 Enclosure into the dongle.
4. Insert the flexible silicone seal into the "crown" section of the large plastic ring.
5. Screw the small plastic ring into the large plastic ring.

Note: To remove the RJ45 enclosure from the plug, tape down the locking tab with electrical or office tape.

CAUTION: Do not attempt to disconnect the camera connection without loosening the smaller thread lock cap. Do not force. Forcing the assembly will break the camera dongle and will void camera warranty.

NETWORK CAMERA MANAGER

OpenEye Network Camera Manager (NCM) is a software tool that allows you to quickly and easily connect and configure your OpenEye IP Cameras. This software allows you to apply the camera password, assign IP addresses, configure video settings, and update firmware on multiple cameras at once.

NCM is pre-installed on all OpenEye Recorders and is also available for download www.OpenEye.net for installation on your personal computer or laptop. Network Camera Manager is a Java application, this allows it to be installed on Windows and Linux operating systems.

LAUNCHING NETWORK CAMERA MANAGER

Apex Windows Platforms

Network Camera Manager can be found on the desktop.

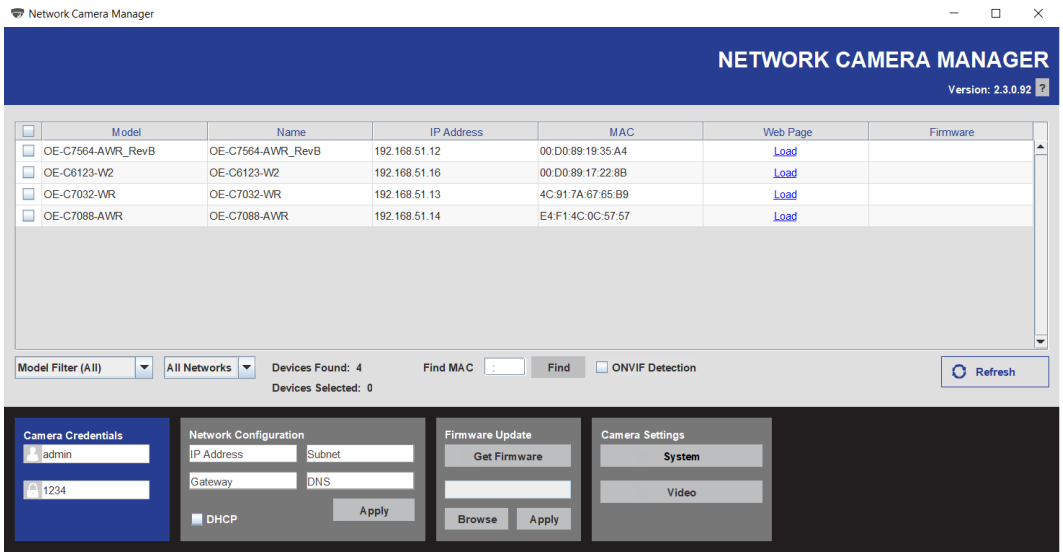
Linux Platforms

In the Apex Settings menu, go to the **Cameras** page and click **Advanced**.

FINDING NETWORK DEVICES

Click **Refresh** to reload the Device List.

To narrow your search by **Camera Model** or **Network**, use the **Model Filter** and **Networks** dropdowns.



A Mac Address search is also available if you are looking for a specific device.

USERNAME AND PASSWORD

OpenEye IP cameras ship without a default password.

Username: **admin**

> **Note** Passwords must be 9-32 characters including at least two elements of the following three: digits, letters, and special characters.

The **admin** user password can be set using the following methods:

1. OpenEye recorders running Apex 2.1 or newer will automatically set a new unique password if:
   - Connected to an M-Series recorder with a built in PoE switch.
   - Connected to a network switch through the camera network port and selected then added in setup, if a new password has not already been set.
2. Connect to the camera directly through a Web Browser and follow the onscreen prompts.
3. Use the Network Camera Manager (NCM) Utility.

> **Note** The NCM Software Manual can be found at https://www.openeye.net/ncm-manual.

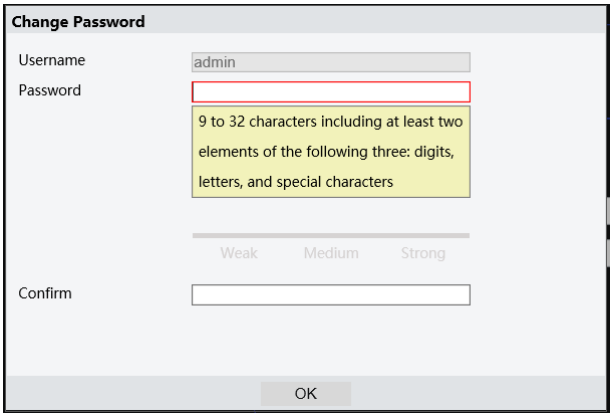
> **Note** Refer to your Apex recorder manual or quick start guide for instruction on adding cameras.

VIEWING A NETWORK CAMERA

Click **Load** in the row of the desired camera.

Enter a new Admin password.

- Passwords must be a minimum of 9 characters
- Accepted characters: A-Z, a-z, 0-9, all special characters are allowed.



SETUP & CONFIGURATION

CONNECTING TO THE CAMERA

1. Locate the camera on the Device List.
2. Click Load to open the camera in the webviewer.
3. Log in to the camera with the appropriate Username and Password.

Note The default Username is “admin” and the default Password is “1234”. The username and password are case sensitive.

Resetting the Camera

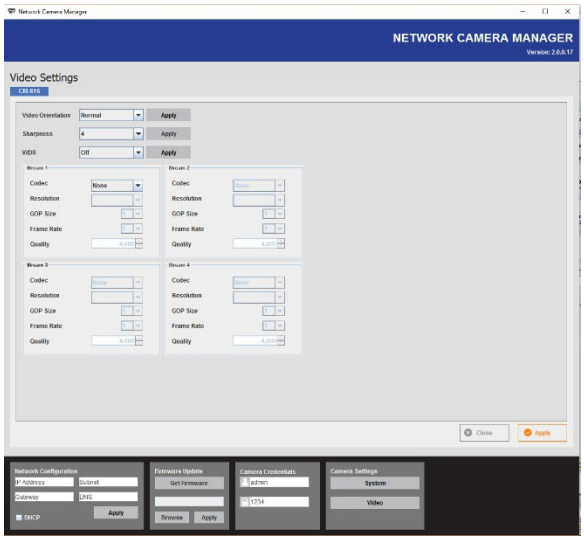
If it is necessary to reset the camera to the factory default settings, hold down the Reset button (see Camera Overview) for 30 seconds. This will return all settings, including network setup, to the factory default.

Administrator/User Privileges

The Administrator account has the authority to configure the IP camera and authorize users’ access to the camera. The User accounts have access to the camera with limited authority.

VIDEO SETTINGS

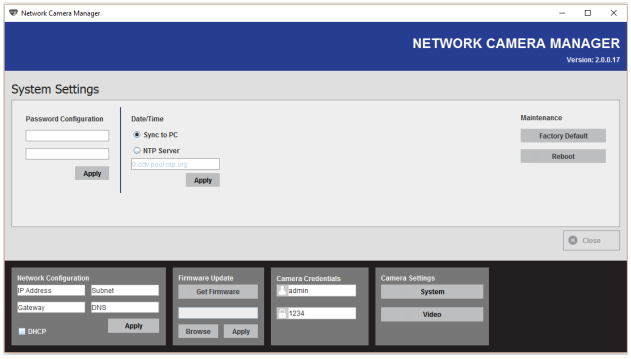
The Video Settings menu configures the camera's basic settings, including frame rate, bitrate, and the streaming codecs.



1. Use the dropdown menus to configure the Video Orientation, Sharpness, and Wide Dynamic Range.
2. Click Apply to save each selection.
3. Use the Codec options dropdown to configure the desired Streams.
4. Click Apply at the bottom of the window to save all changes.

SYSTEM SETTINGS

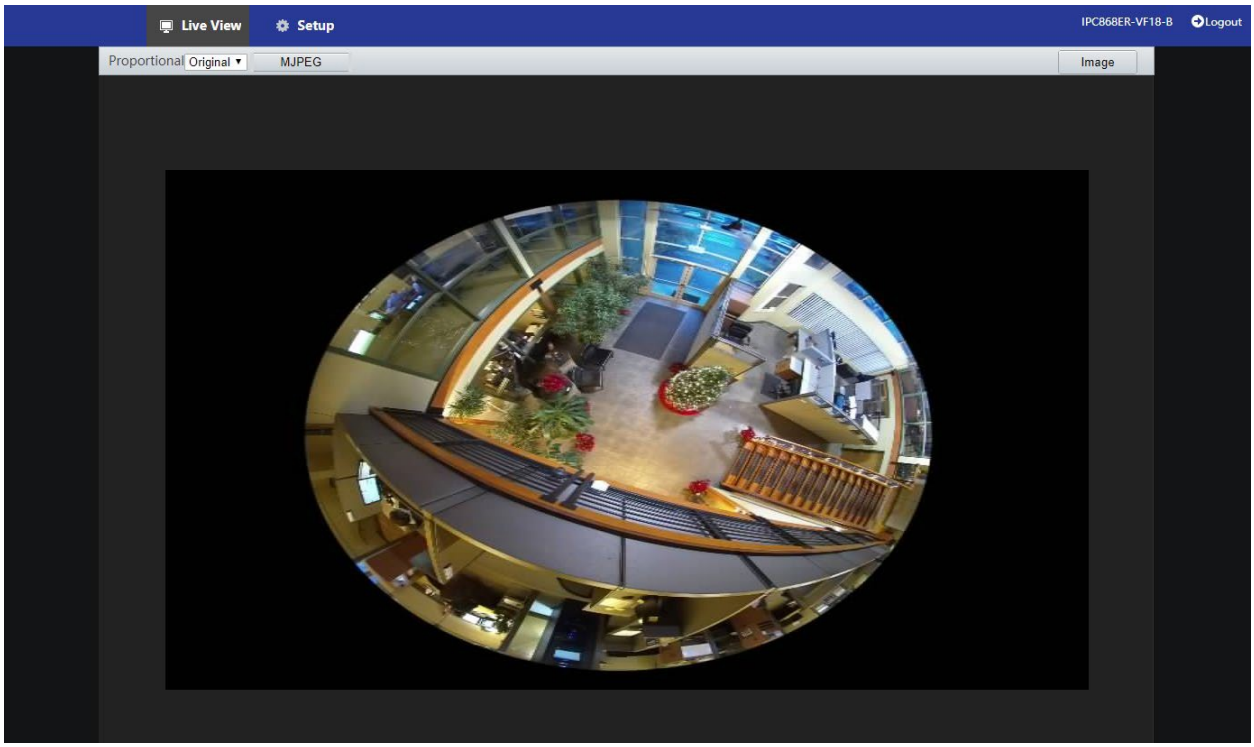
The System Settings menu allows you to change your Password, specify the Date / Time, and perform camera Maintenance.



Factory Default — Return camera to original factory settings. This maintains the firware.

Reboot — Reboot the camera. This maintains the firmware and current settings.

LIVE



The camera displays a live view using the MJPEG stream for setup purposes.

Proportional – Select the image ratio for the live preview image (Original, Stretch, Scale).

Image – Links to the Image setup section. See Image setup for full details.

SETUP

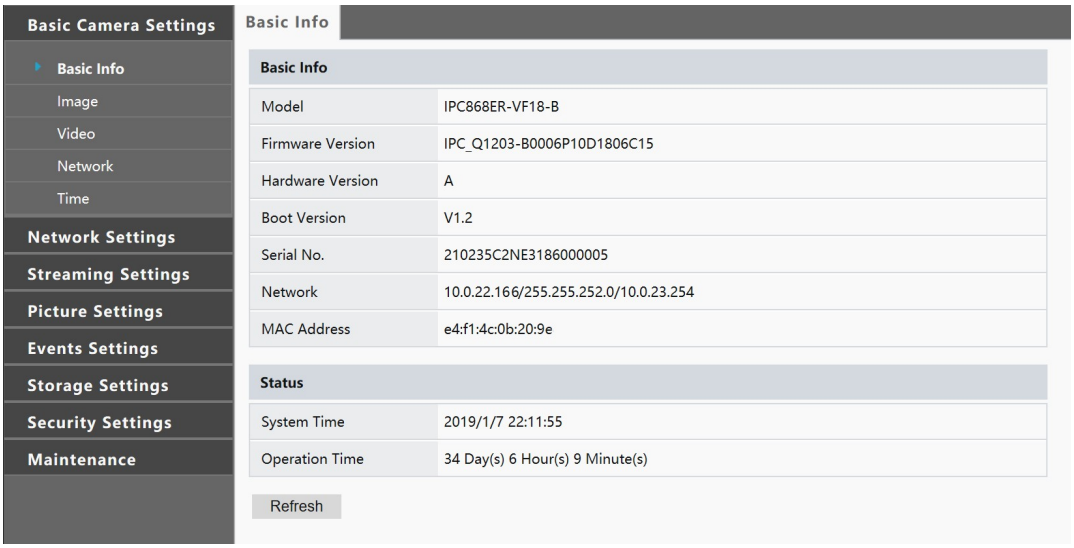
The Setup menu includes Basic Camera Settings, Network and Streaming Settings, Picture, Events, Storage and Security Settings.

BASIC CAMERA SETTINGS

The Basic Camera Settings is a quick access menu for the most accessed setup options.

Basic Info

The Basic Info setting displays the product model, firmware, network, and MAC address for the connected camera, along with the current camera status.

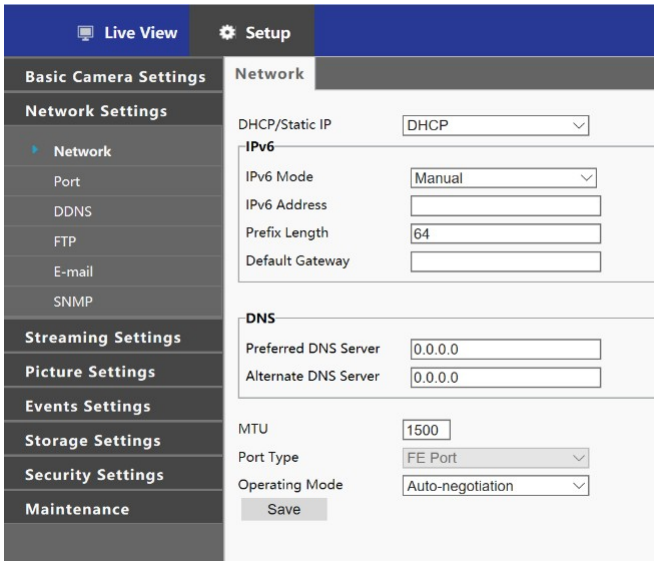


The nested Image, Video, Network, and Time tabs are shortcuts to the more advanced menu options further down the Setup list. For more information about these tabs, see the appropriate sections later in the manual.

Note Every network device has a unique Media Access Control (MAC) address that can be used for identification. The MAC address is located on the bottom of each camera, and on the box label (OpenEye Network Camera Manager also displays the MAC address for identification). Record your camera's MAC address for identification in the future.

NETWORK SETTINGS

The Network setting allows you to configure the connected camera network settings.



Network

DHCP/Static IP/PPPoE

You can use the dropdown menu to choose to use a static (fixed) IP address, PPPoE, or a dynamic IP address (assigned by a DHCP server or router) for the camera.

DHCP

The Dynamic Host Configuration Protocol (DHCP) is enabled by default when the camera is delivered. If a DHCP server is deployed in the network, the camera can automatically obtain an IP address from the DHCP server.

To manually configure DHCP, follow the steps below:

1. Select DHCP from the DHCP/Static IP dropdown list.
2. Click Save.

Static Address

1. Select the Static IP dropdown option.
2. Type a new IP address in the IP address box.
3. Type a new address in the Subnet Mask box.
4. Type a new address in the Default Gateway box.
5. Click Save to confirm the new setting.

PPPoE

If the camera is connected to the network through Point to Point Over Ethernet (PPPoE), you need to select PPPoE as the IP obtainment mode.

1. Select PPPoE from the dropdown list.
2. Type the username and password provided by your Internet Service Provider (ISP).
3. Click Save.

IPv6 Address Configuration

When using a static IP address to log in to the IP Camera, you can access it either through OpenEye IP Finder software or type the IP address directly in the address bar of your Internet Explorer.

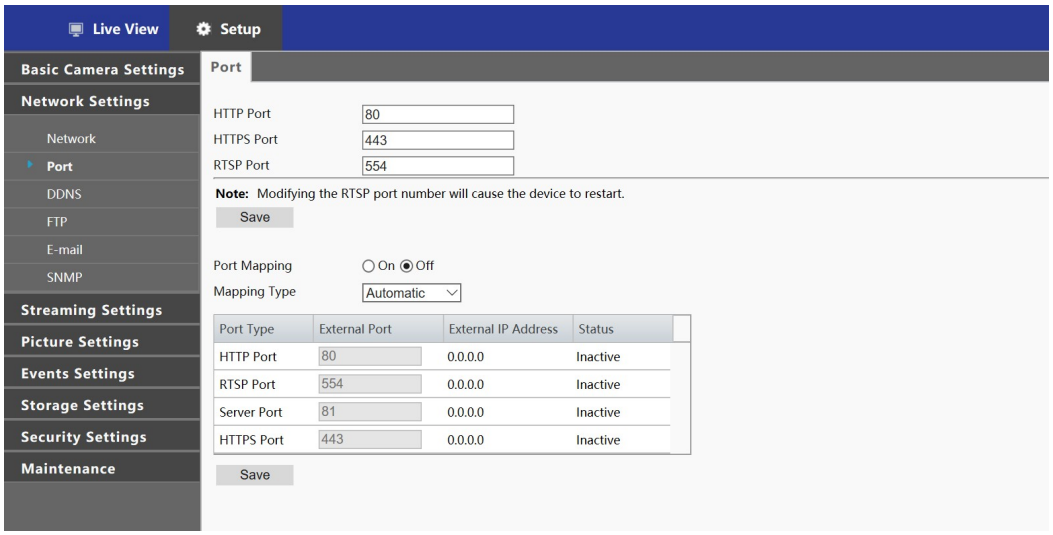
- IP Address – The IP Address is necessary for network identification.
- Subnet mask – Used to determine if the destination is in the same subnet. The default value is 255.255.255.0.
- Default gateway – Used to forward frames to destinations on different subnets or for internet access.
- Web Server port – Defines the port that Internet Explorer uses to connect over the web and view video. If this port is changed then the new port must be defined when attempting to web connect (ex: if your camera's IP address is 192.168.0.100 and you change the web port to 8001, then you must type http://192.168.0.100:8001 in your browser).

DNS

- Preferred DNS – The primary domain name server that translates hostnames into IP addresses.
- Alternate DNS – A secondary domain name server that backups the primary DNS.

Note This is also the port used in OpenEye Server Software.

Port



To configure relevant port numbers, manually type numbers into HTTP Port, HTTPS Port and RTSP Port, then click Save.

HTTP Port – Configure your relevant port number.

Note	If the HTTP port number has been occupied already, a "Port conflicts" message will display. Ports 23, 81, 82, 85, 3260, and 49152 are occupied by default.

HTTPS Port – The default HTTPS Port is 443; setting range: 1024 ~65535.

RTSP Port – The default RTSP port is 554; setting range: 1024 ~65535.

Server Port – Defines the port that Internet Explorer uses to connect over the web and view video. If this port is changed then the new port must be defined when attempting to web connect (ex: if your camera's IP address is 192.168.0.100 and you change the web port to 8001, then you must type http://192.168.0.100:8001 in your browser).

Note	No port number can be used in duplication on more than one item.

Port-Mapping

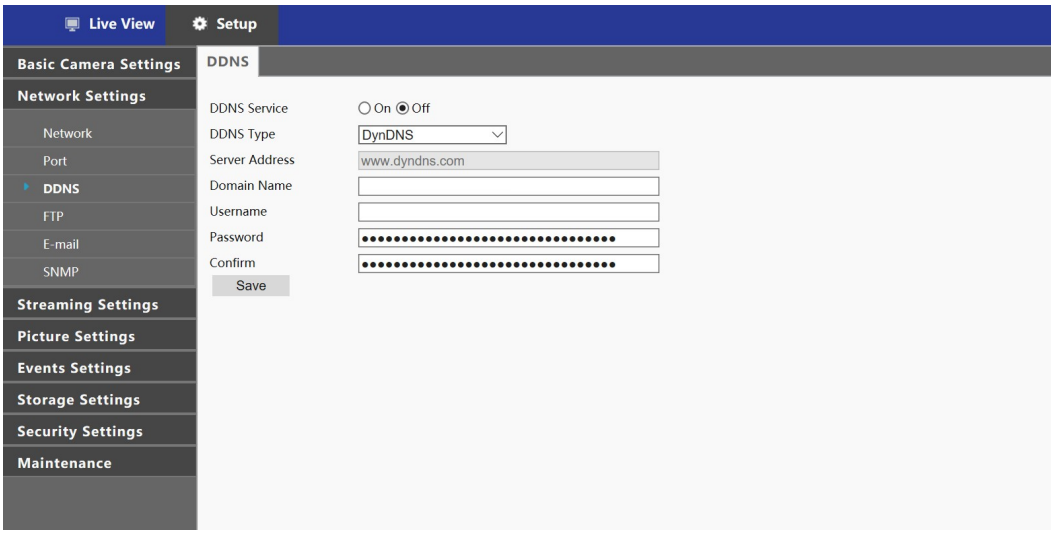
To enable Port-Mapping:

1. Turn Port-Mapping to On.
2. Use the Mapping Type dropdown menu to select a type.
3. If selecting Manual, the external ports must be configured.
4. Click Save.

Note	If the configured port is already occupied, then the Status will show as inactive and a new port must be selected.

DDNS

DDNS (Dynamic Domain Name Service) is a service that allows a connection to an IP address using a hostname (URL) address instead of a numeric IP address. Most Internet Service Providers use Dynamic IP Addressing that frequently changes the public IP address of your internet connection; this means that when connecting to the camera over the internet, you need to know if your IP address has changed. DDNS automatically redirects traffic to your current IP address when using the hostname address.



To enable DDNS:

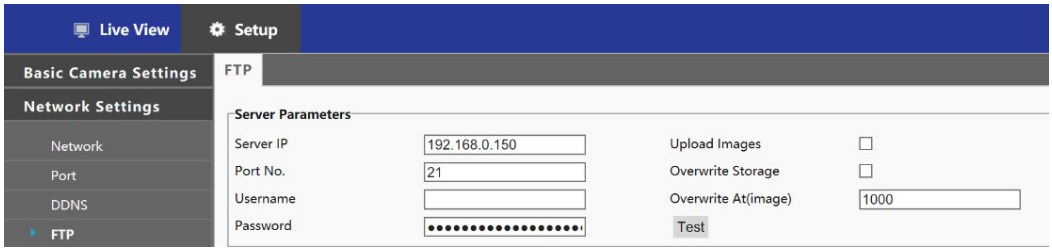
1. Turn DDNS Service On.
2. Type DDNS info provided by your DDNS provider.
3. Click Save.

DDNS Type / Server Address – Select the DDNS type provided by your DDNS server. Domain Name – Type the registered domain name in the field.

Username/E-mail – Type the username or e-mail required by the DDNS provider for authentication.

FTP

After the configuration of FTP, you will be able to upload snapshots from network cameras to a specified FTP server.

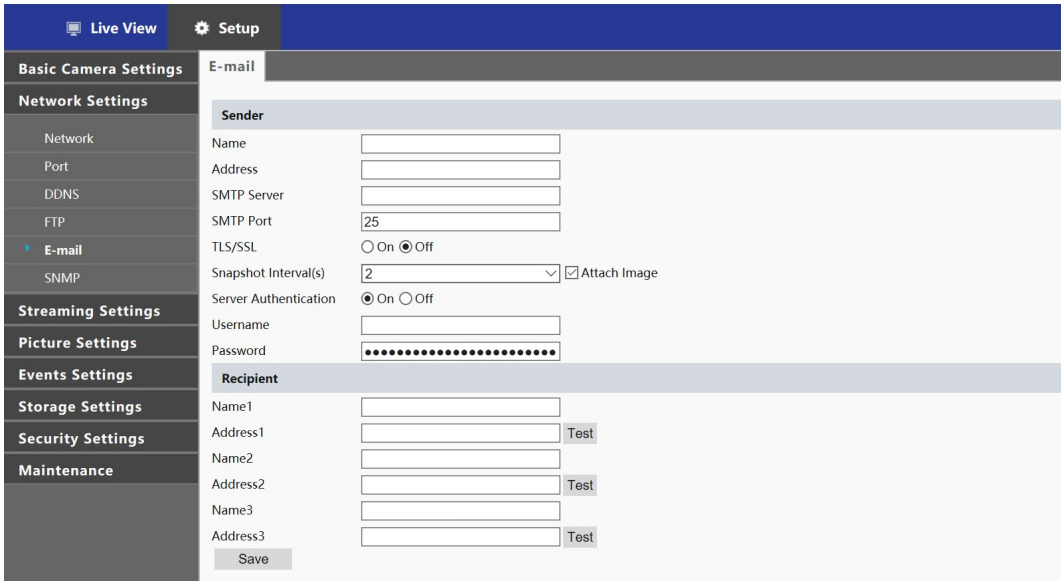


To configure FTP:

1. Type the Server IP address and Port Number.
2. Type the Username and Password for the upload account.
3. Check Upload Images and/or Overwrite Storage, and set the Overwrite Image threshold.
4. Click Save.

E-Mail

After the configuration of E-mail, when alarms are triggered, you will be able to send messages to the specified E-mail address.

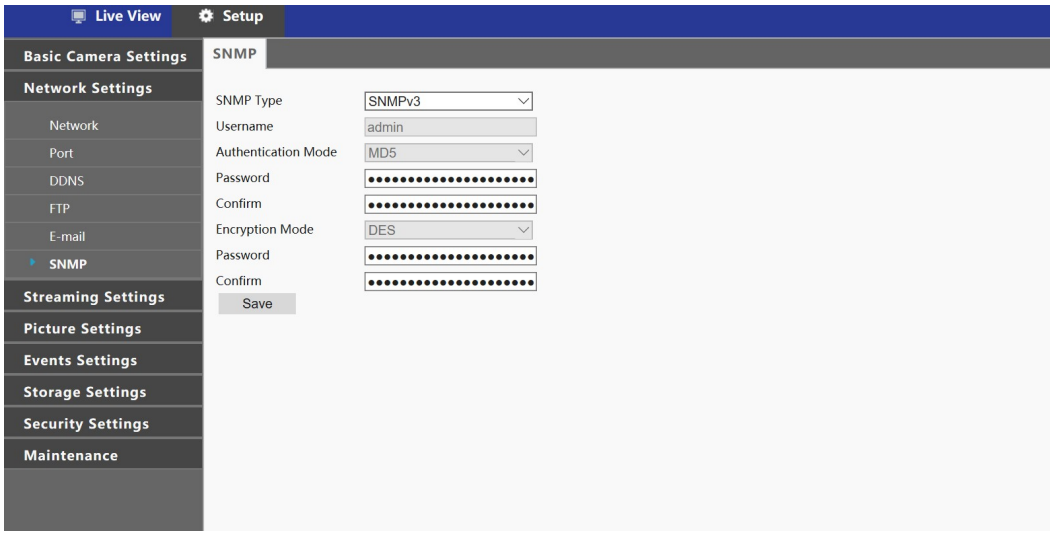


The camera can send an e-mail via Simple Mail Transfer Protocol (SMTP) when a variety of events occur. SMTP is a protocol for sending e-mail messages between servers. SMTP is a relatively simple, text-based protocol, where one or more recipients of a message are specified and the message text is transferred. Consult your email provider to get your SMTP server information.

Three accounts can be configured. Each set includes Account Name, Password and E-mail Address settings. For SMTP server, contact your network service provider for more specific information.

SNMP Settings

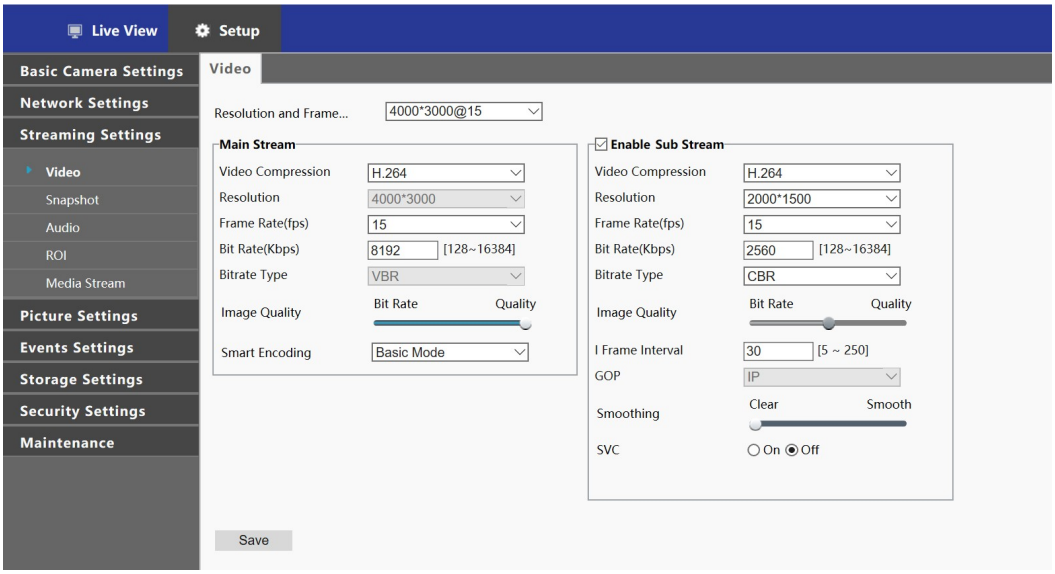
With Simple Network Management Protocol (SNMP) enabled, the camera can be monitored and managed remotely with a network management system. Contact your network administrator if you are not familiar with SNMP setup.



STREAMING SETTINGS

Video

The Video settings menu configures the camera's basic settings, including Frame Rate(fps), Bit Rate(Kbps), and the Image Quality.



To configure the camera streams:

Use the dropdown menus to configure the Video Compression, Frame Rate, Bitrate Type and Smart Encoding.

1. Check and configure the Sub-Stream if desired.
2. Click Save to save each selection.

Video Compression – H.264, H.265, and MJPEG are available for video compression.

Resolution and Frame Rate(fps) – Use the dropdown menu to select the base resolution and frame rate for the main stream.

Bit Rate(Kbps) and Bitrate Type – Change Bit Rate by manually typing a number within the range. Select either CBR or VBR for Bitrate Type.

Note Higher frame rate will increase video smoothness, but will increase file size and bandwidth usage. Lowering the frame rate will conserve file size and bandwidth usage at the expense of video smoothness.

Image Quality – If the Encoding Mode is set to VBR, you can adjust the quality level for images by moving the sliding bar. The Quality side of the bar improves video quality, and the Bit Rate side of the bar reduces Bit Rate. The Constant Bit Rate mode allows you to lock in the bit rate of the H.264 and H.265 streams. If this setting is not enabled, bit rate may fluctuate based on available bandwidth.

Smart Encoding – The camera may be equipped with smart compression (H.264+), which drastically reduces the overall bit rate. Turn on Smart Encoding to enable H.264+ encoding to reduce bit rate.

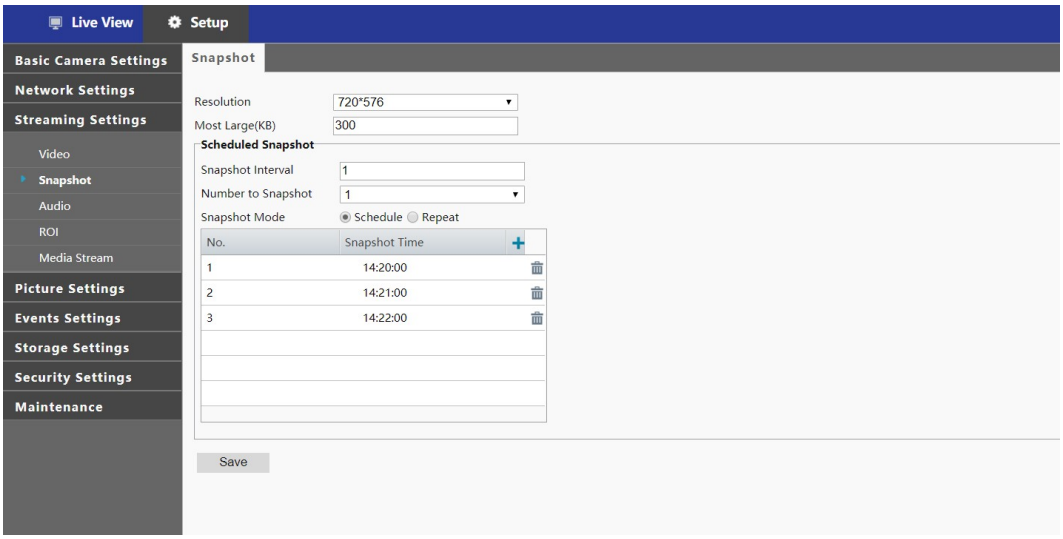
I- Frame Interval / GOP – The Group of Pictures setting allows you to modify the frame structure of the video stream. This setting changes the frequency of the I-frames that occur within the stream of P-frames. Increasing this number increases the number of P-frames between each I-frame, decreasing the file size of the stream, but increasing the risk of video decoding errors. It is recommended setting the GOP to be approximately twice the frame rate.

Smoothing – Configure the amount of video smoothing. Moving the sliding bar toward Smoothing increases the level of smoothing but may affect image quality.

Note	In a poor network environment, you can enable smoothing to get more fluent video.

Snapshot

The Snapshot setting is used to configure the settings for timed or continual snapshots.



Resolution – Select a snapshot Resolution from the drop-down menu.

Most Large(KB) – Designate a size limit (between 1-800).

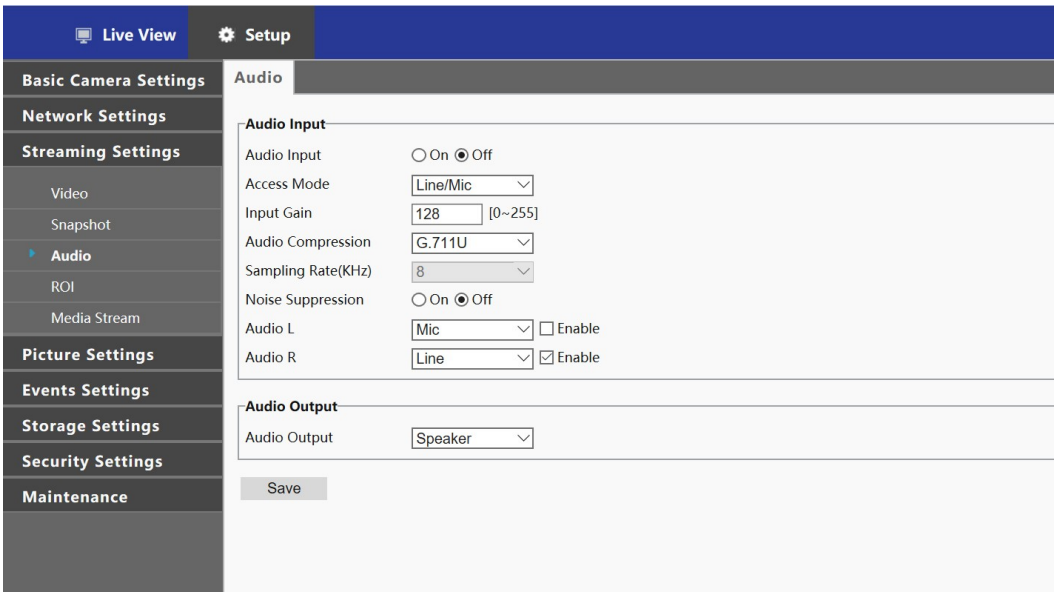
Snapshot Interval – Designate a Snapshot Interval between snapshots.

Number of Snapshot – Select the number of snapshots from the dropdown (1, 2, or 3).

Snapshot Mode –

- Schedule – Click the + to schedule a time for the snapshot. Click the 🗑 to delete a scheduled time.
- Repeat – Set a regular interval for snapshots.

Audio



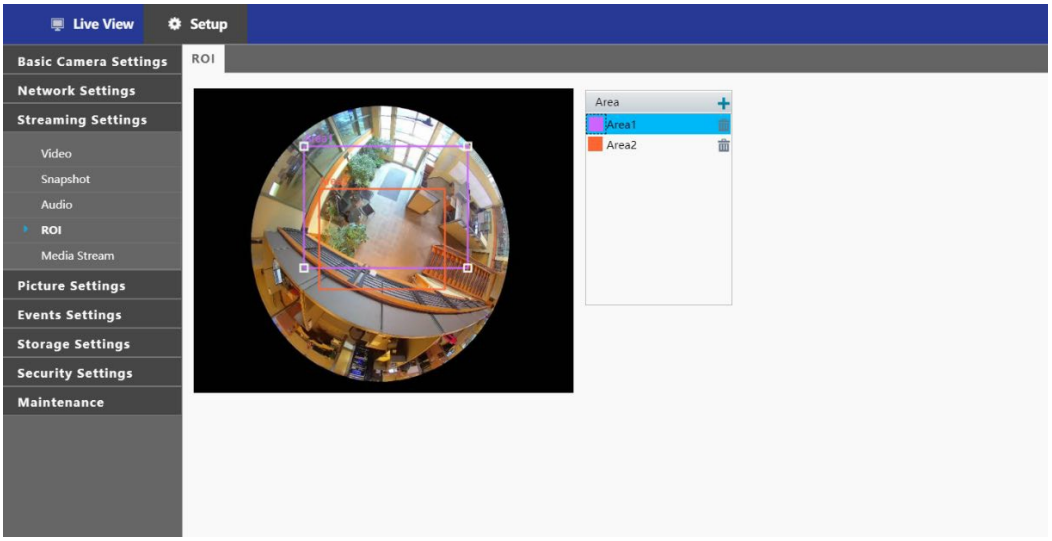
Audio Input – Turn On to enable audio input devices.

- Access Mode – Access Mode allows for line in or microphone in.
- Input Gain - Sets the amplification that the camera applies to the incoming audio before transmitting. Designate a number between 0-255.
- Audio Compression and Sampling Rate(KHz) – Select G.711U and G.711A on the dropdown menu. Both default to 8 kHz.
- Noise Suppression – Turn On to diminish background noise.
- Audio L and Audio R – Check to Enable left and right channels.

Audio Output – Select Speaker or Line from the dropdown menu.

ROI

When a ROI (Region of Interest) is added, the system ensures the image quality for the ROI first if the bit rate is insufficient. Eight Regions of Interest can be added or deleted, but only one can be selected.



To set ROI:

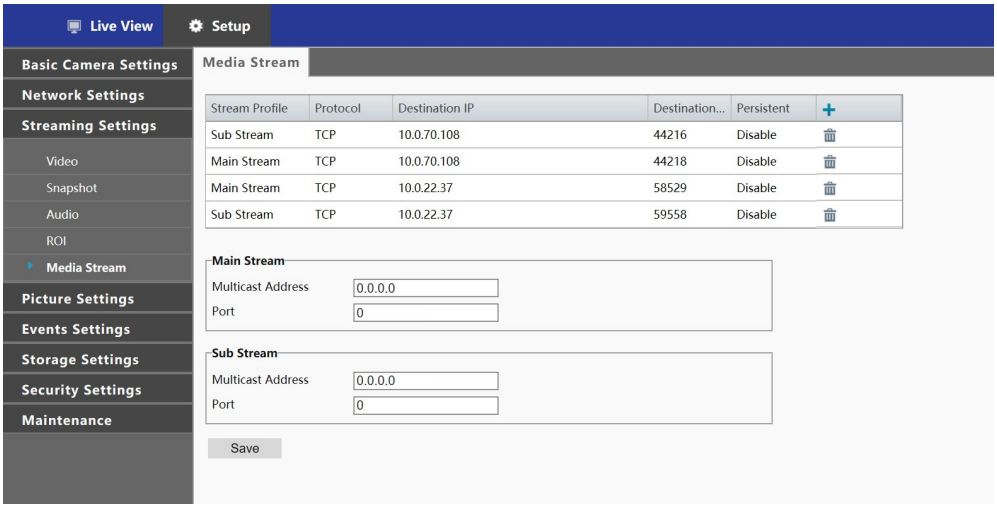
1. Click  on the Area box.
2. Arrange the ROI square as desired in the camera image. Click and drag to move the square, and use the corner markers to expand the square. The interior of the ROI square will be considered the ROI.
3. Click  again to add additional ROIs.
4. Click the  to delete a created ROI.

Your changes will be saved automatically.

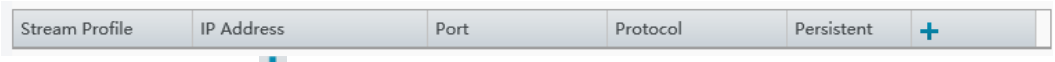
Media Stream

You can display the established media streams from a camera. You can also set the camera to transmit code streams by the UDP or TCP protocol to a specified IP address and port number.

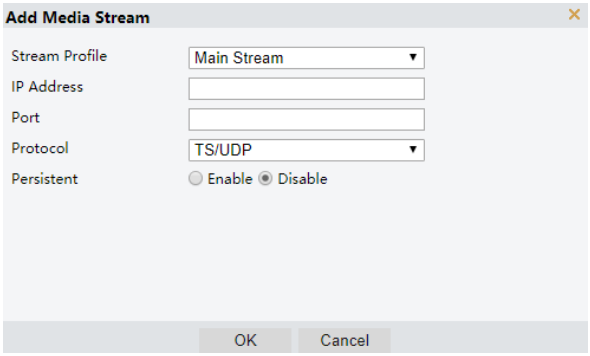
Note Changes to the media stream will take effect after the camera has been restarted.



To configure media streams:



1. Click the + on the right side of the title bar and the Add Media Stream page will appear.
2. Select a Stream Profile, and then set the IP Address and Port number of the unicast or multicast group for the decoding device that receives audio and video streams from the camera.

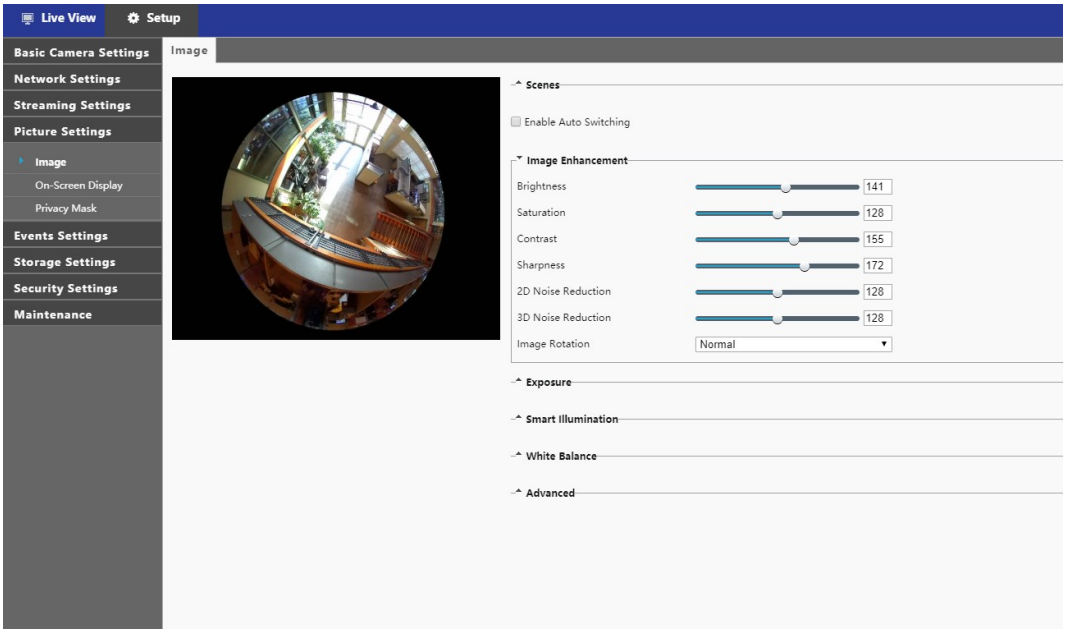


3. Check the Enable Persistent checkbox if you want the device to establish the media stream that you have just configured automatically upon each subsequent restart.
4. Click OK.
5. Click the 🗑 to delete a created media stream.

PICTURE SETTINGS

Image

Use the Image section to modify picture settings for the camera. The sample image will change as you modify the picture settings.



Note These settings can drastically affect the camera image. OpenEye suggests that these settings are only modified by a professional, or at the instruction or a technical support representative.

Scenes

Set up to five scenes with different image settings. Current – Switch to the scene to be displayed.

Scene Name – Select either default Indoor or Custom to name the scene.

Auto Switching – Check the box to set the scenes that will be displayed when Enable Auto Switching is checked.

Setup – Click the calendar icon to set the Schedule and Illumination for the Auto Switching scenes. Click the pin icon to set a scene as the Default Scene.

Current Illumination – Refresh to measure illumination of scene.

Enable Auto Switching – Check to enable the scenes checked as Auto Switching. Default – To restore the default settings, click Default.

Image Enhancement

Each of the Image Enhancement settings is set to the recommended default. Use the sliders to change the settings. You may also type values directly.

Brightness – Set the image's brightness on the camera. The backlight value is adjustable from 0 (dim) ~ +255 (brightest).

Saturation – Set the intensity of color in the image. Adjust the color saturation from 0 to 255 (most saturation).

Contrast – Set the degree of difference between the blackest pixel and the whitest pixel. Adjust the contrast value from 0 to 255.

Sharpness – Set the contrast of boundaries of objects in an image. Increasing the sharpness level enhances an object's edge. The value of sharpness is adjustable from 0 to 255 (sharpest).

2D Noise Reduction and 3D Noise Reduction – Reduces graininess or blurriness in video images. Adjust noise reduction from 0 to 255 (clearest).

Image Rotation – Use the drop-down menu to change the orientation of the camera image between Normal, Flip Vertical, Flip Horizontal, and 180°.

Exposure

Exposure Mode – Select the correct exposure mode to achieve the desired exposure effect.

Shutter(s) – Shutter is used to control the light that comes into the lens. A fast shutter speed is ideal for scenes in quick motion. A slow shutter speed is ideal for scenes that change slowly.

Gain (dB) – Control image signals so that the camera outputs standard video signals according to the light condition. Parameter can only be set on Manual or Custom Exposure Modes.

Slow Shutter – Improves image brightness in low light conditions.

Slowest Shutter – Set the slowest shutter speed that the camera can use during exposure. You can set this parameter only when Slow Shutter is set to On.

Compensation – Adjust the compensation value as required to achieve the desired effects. You can set this parameter only when Exposure Mode is not set to Manual.

Metering Control – Set the way the camera measures the intensity of light.

- Center-Weighted Average Metering: Measure light mainly in the central part of image.
- Evaluative Metering: Measure light distributed in the customized area of image.
- Spot Metering: Measure light in specific area of

image. You can set this parameter only when Exposure Mode is not set to

Manual. Day/Night Mode –

- Automatic: The camera outputs the optimum images according to the light condition. In this mode, the camera can switch between night mode and day mode automatically.
- Night: The camera provides high-quality black and white images using the existing light.
- Day: The camera provides high-quality color images using the existing light.

Day/Night Sensitivity – Light threshold for switching between day mode and night mode. A higher sensitivity means that the camera is more sensitive to the change of light and becomes more easily to switch between day mode and night mode. You can set this parameter only when Day/Night Mode is set to Automatic.

Day/Night Switching(s) – Set the length of time before the camera switches between day mode and night mode after the conditions for switching are met. You can set this parameter only when Day/Night Mode is set to Automatic.

WDR – Enable WDR to distinguish the bright and dark areas in the same image. You can set this parameter only when Exposure Mode is not set to Manual.

WDR Level – After enabling the WDR function, you can improve the image by adjusting the WDR level. Use level 7 or higher when there is a high contrast between the bright and dark areas of the scene. In the case of low contrast, it is recommended to disable WDR or use level 1-6.

Suppress WDR Stripes – Turn On to automatically adjust shutter frequency based on the measurement of light.

WDR Open Sensitivity and WDR Close Sensitivity – Adjust WDR Open and Close Sensitivity based on the frequency of light at the camera installation site.

Smart Illumination

Turn Smart Illumination On to enable IR Lighting.

Control Mode –

- Global Mode: The camera adjusts IR illumination and exposure to achieve balanced image effects. Some areas might be overexposed if you select this option. This option is recommended if monitored range and image brightness are your first priority.
- Overexposure Restrain: The camera adjusts IR illumination and exposure to avoid regional overexposure. Some areas might be dark if you select this option. This option is recommended if clarity of the central part of the image and overexposure control are your first priority.
- Manual: This mode allows you to manually control the intensity of IR illumination.

Near-illumination and Far-illumination Level – Set the intensity levels of the IR light. The greater the value, the higher the intensity (0-1000). 0 means that the IR light is turned off. You can set this parameter only when Control Mode is set to Manual.

White Balance

White balance is the process of offsetting unnatural color cast in images under different color temperatures so as to output images that best suit human eyes.

White Balance – The camera adjusts the red and blue offset automatically according to the light condition (the color tends to be blue). Adjust the red or blue offset of the image:

- Auto: Adjusts the red and blue offset automatically according to the light condition (the color tends to be blue).
- Outdoor: It is recommended for the outdoor scenes with a wide range of the color temperature variation
- Fine Tune: Allow you to adjust the red and blue offset manually.

- Sodium Lamp: The camera adjusts red and blue offset automatically according to the light condition (the color tends to be red).
- Locked: Lock the current color temperature settings without adjustment.

Red Offset – Adjust the red offset manually. You can set this parameter only when White Balance is set to Fine Tune.

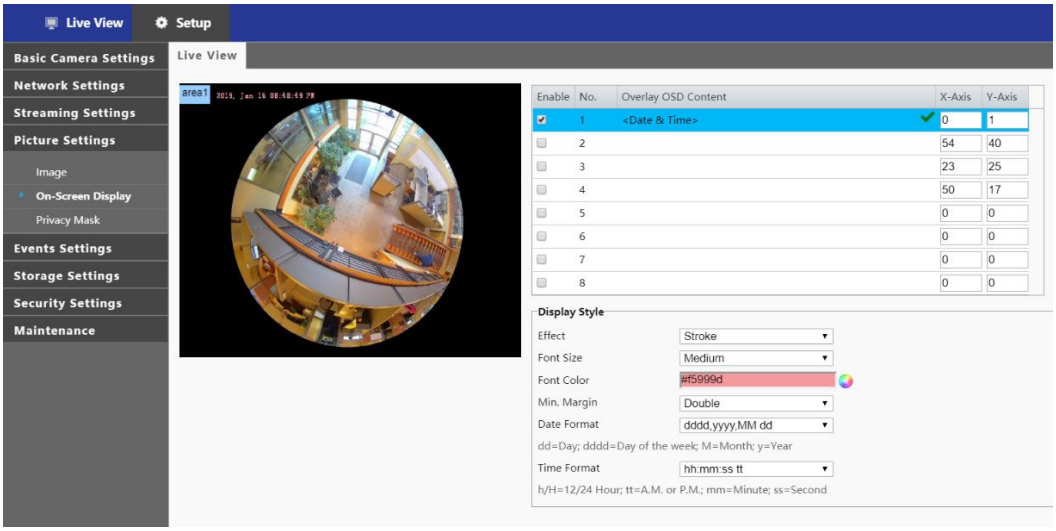
Blue Offset – Adjust the blue offset manually. You can set this parameter only when White Balance is set to Fine Tune.

Advanced

Use the defog function to adjust the clarity of images captured in fog or haze conditions.

Defog – Enable or disable the defog function.

Defog Intensity – Select a level for the scene. 10 achieves the maximum defog effect.



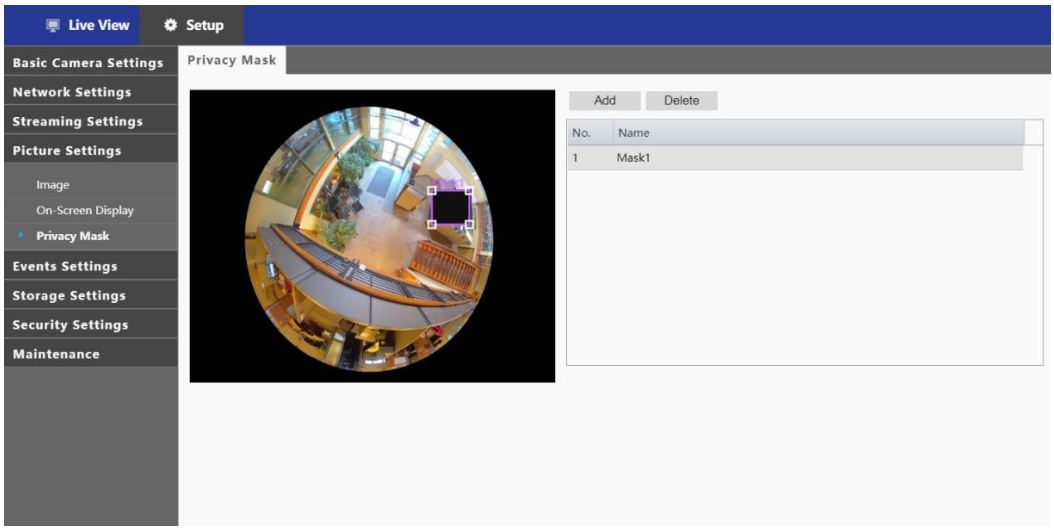
On Screen Display

On Screen Display is the text displayed on the Live View screen with video images and may include time and other customized contents.

1. To Enable OSD Content, check an available box.
2. Select the desired Overlay OSD Content from the drop-down list. The list provides Custom, Date & Time, Serial Port, Time, Date, ScrollOSD, Picture Overlay, and Network Port.
3. Position: Click the desired box in the Live View area. Click and hold the button to move the box to the desired position. To set the position precisely, use the X-Axis and Y-Axis coordinates.
4. After you have set the position and OSD content, the ✔ symbol appears in the Status column, which means that the OSD is set successfully. You may set multiple lines of contents for each area and use and to adjust the sequence of display.
5. After you have completed the settings, a message appears to indicate the successful settings.

Display Style –

- Effect: Change appearance of content displayed inview.
- Font Size: Change size of content displayed inview.
- Font Color: Click on the to change the color of the content displayed in view.
- Min. Margin:Set a margin around content from the dropdown menu.
- Date Format: Set a date format from the dropdown menu.
- Time Format: Set a time format from the dropdown menu.



Privacy Mask

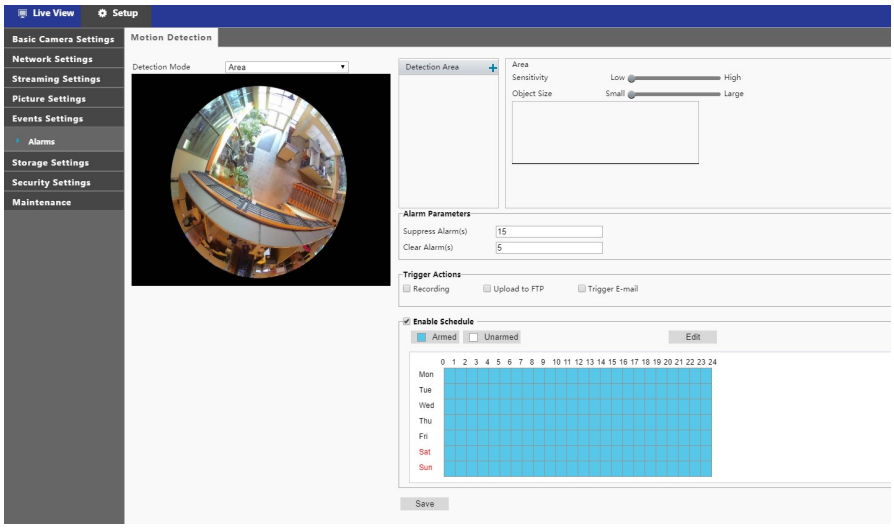
A masked area can be placed on the camera image to protect privacy.

1. Click Add to add a privacy mask, and click Deleteto delete a mask.
2. To mask a position, click the box (with Mask# displayed on it) to activate the mask.
3. Click and drag to resize the box.
4. Drag inside the box to the intended position inside the camera view.

Note	You can also use the mouse to draw a box directly on the area you want to mask.

When privacy mask is configured, the intended area is blocked.

EVENTS SETTINGS



Alarms

Motion detection detects the object motion in a specified rectangular area during a period. You need to set a detection area, sensitivity of detection, object size, and history for the camera to decide whether to report a motion detection alarm when it detects motion.

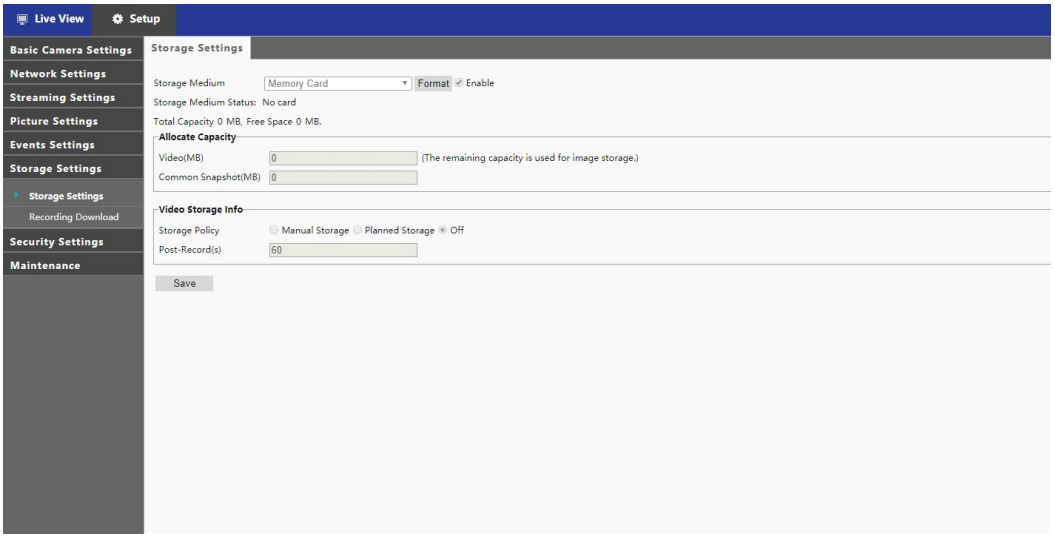
1. In the Detection Area area, click to add a new detection area. To delete a detection area, click .
2. Click and drag the mouse to set a detection area.
3. Set the detection sensitivity and object size for the camera to decide whether to report a motion detection alarm.
4. Moving the slider to the right increases detection sensitivity. When the extent of motion within the detection area exceeds the set object size, the camera reports an alarm.
5. Set the Alarm Parameters:
    - Suppress Alarm(s): After an alarm is triggered, the same alarm will not be reported within the set time.
    - Clear Alarm(s): After an alarm is triggered, If the same alarm is not triggered within the set time, the alarm will be cleared and the same alarm can be reported again. If the same alarm is triggered within the set time, the alarm will not be cleared until the suppress alarm time expires. Then the same alarm can be reportedagain.
6. Set Trigger Actions activated by motion detection alarm:
    - With Recording selected, the camera automatically starts recording after an alarm is triggered.
    - With Trigger E-mail selected, the camera will automatically send snapshots to the specified E-mail address when an alarm is triggered.
    - With Upload to FTP selected, the camera will automatically upload snapshots to the specified FTP server when an alarm is triggered.

7. Enable Schedule by checking the box and set the start and end times during which motion detection alarm is effective.
    - You can directly drag the mouse to draw a schedule and click Edit to edit time periods in the table.
    - The time periods cannot overlap.
    - The camera reports alarms during the specified period(s) only.
    - You can select from Monday to Sunday and set four periods for each day.

STORAGE SETTINGS

Storage Settings

All OpenEye IP cameras include an integrated microSD™ card slot that can be used to record video or images. The card slot is compatible with a microSD™ card up to 128GB.



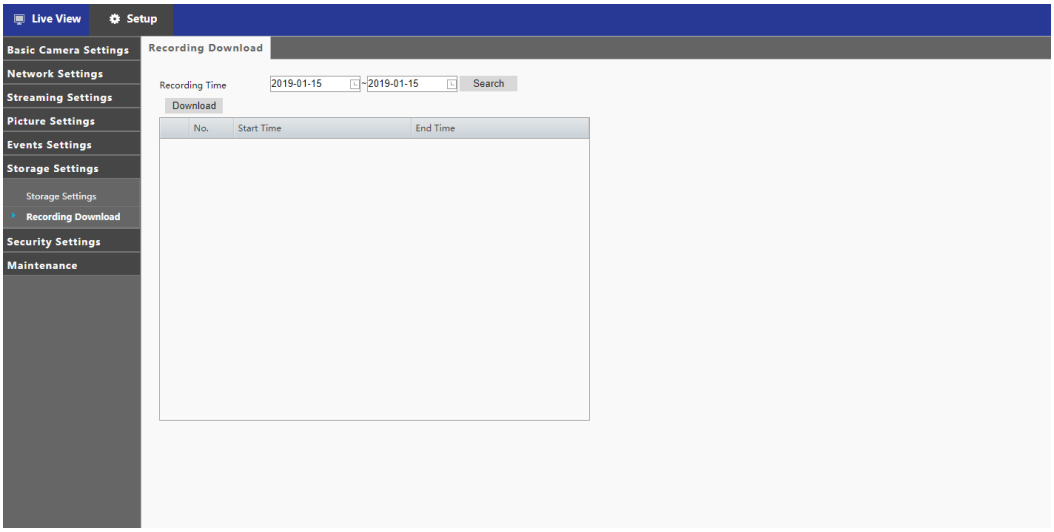
Storage Medium, Storage Status and Total Capacity – Displays memory card information and allows you to Enable and Format card.

Allocate Capacity – Type the amount of card memory designated for Video(MB) and for Common Snapshot(MB).

Video Storage Info – Select either Manual Storage or Planned Storage and designate a Post-Record(s) amount.

Note Video recorded to the microSD card cannot be accessed through Video Management Software. Video recorded to the microSD card must be accessed and exported directly from the camera's web interface.

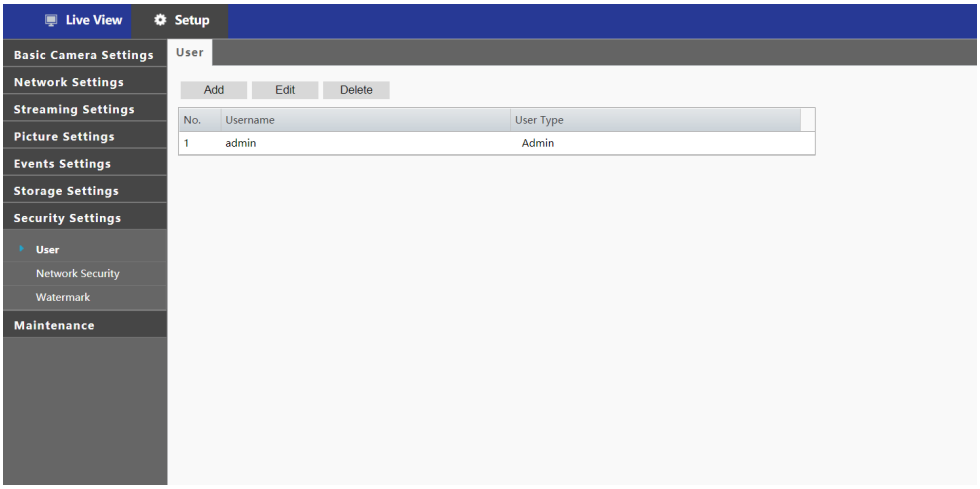
Recording Download



Search a Recording Time range by clicking on the calendar dropdowns.

Click the desired recording and Download.

SECURITY SETTINGS



User

There are two types of users in the system:

Administrator: The default name of the administrator is admin, which cannot be modified. Admin has full permission and can manage all users and devices.

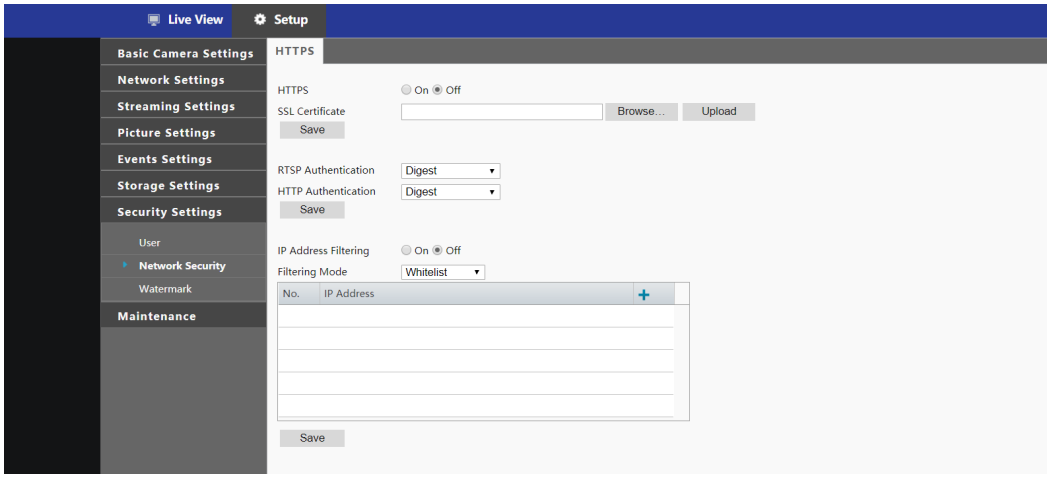
Common User: Common User only has permission to play live and recorded video. Up to 31 common users are allowed in the system.

You can Add a user on the User page.

After the user is added successfully, you can Edit the password by typing the new password or Delete the user by clearing the username.

Note Only admin can change passwords. Changing the username or password for a user when the user is still logged in will force the user to log out. The user must use the new username or password to log in.

Only admin can Add and Delete users. Deleting a user when the user is still logged in will force the user to log out. A deleted user cannot log in.



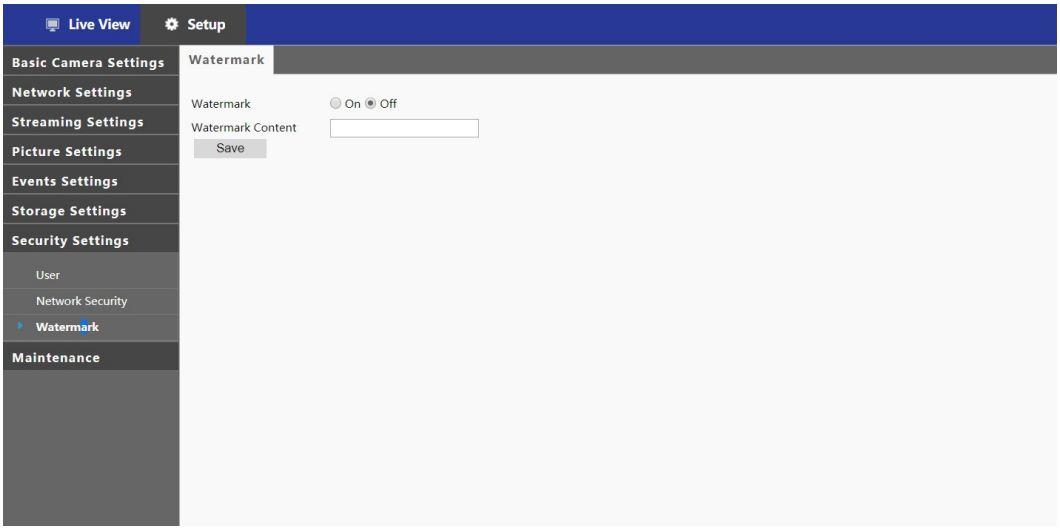
Network Security

HTTPS: Turn On HTTPS and Browse to Upload a certificate. HTTPS allows secure connections between the IP Camera and web browser that protects camera settings or Username/Password info from snooping. To use HTTPS, you are required to upload an SSL certificate.

RTSP and HTTP: Set for RTSP Authentication or HTTP Authentication and select the level of encryption from the dropdown menus.

IP Address Filtering: Turn On IP Address Filtering to limit access to your IP cameras. You can “Allow” or “Deny” a specific IP address by adding it to the appropriate list. IP addresses on the “Whitelist” will be able to access the IP camera. IP addresses on the “Deny Access” will NOT be able to access the IP camera.

Watermark

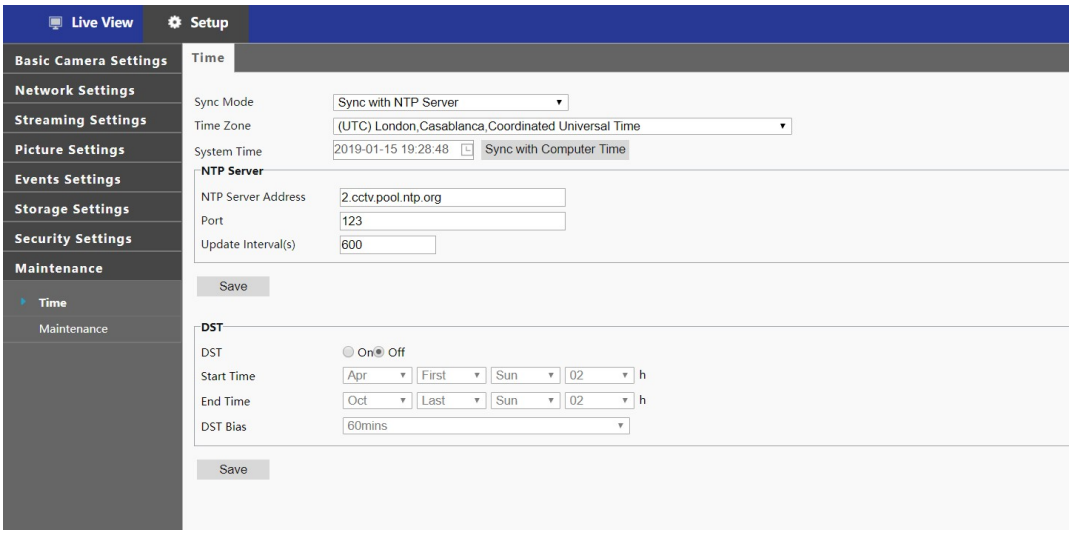


You can set the video watermark for the camera to encrypt the video and protect it from being deleted or modified. Turn On Watermark and type the desired Watermark Content.

MAINTENANCE

Time

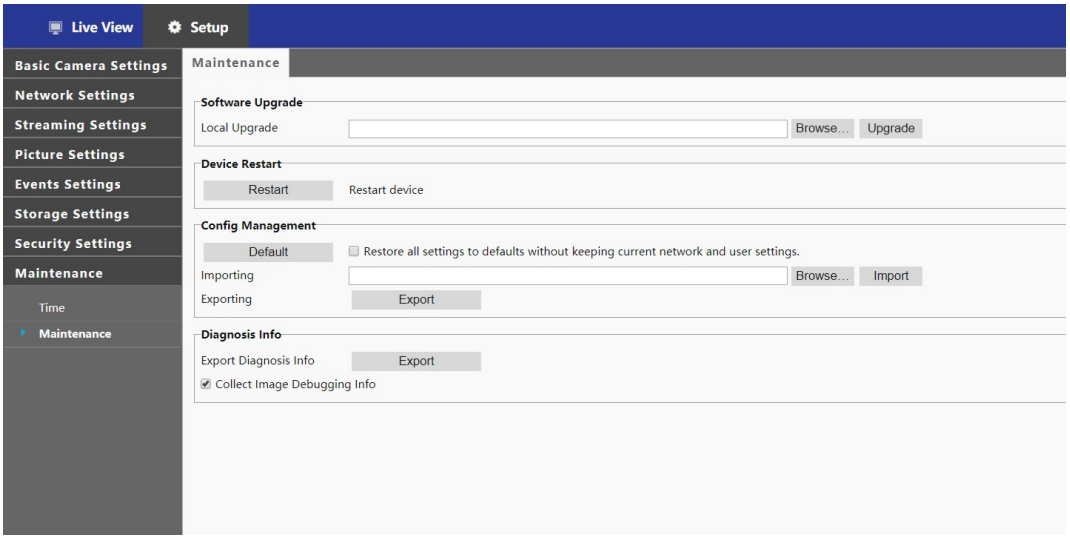
On the Time page you can synchronize camera time with a system or a server as well as set Daylight Saving Time.



Select a system or server from the Sync Mode dropdown menu. Select a Time Zone for a server or sync with System Time for a system. You can type in an NTP Server Address, Port, and Update Interval(s) when synced with an NTP server. Turn On DST to select a time range for Daylight Saving Time.

Maintenance

On the Maintenance page you can export the current configuration of the camera, or import the configuration for a camera. Use the factory default page to reset the IP Camera to factory default settings if necessary.



Note Do not import configuration files from a different camera model.

Software Upgrade

Note Make sure the software upgrade file is available before starting the software upgrade.

1. Click Browse and find the upgrade file.

Note Do not change the file name, or the system will fail to find the file.

2. Select the file name from the list under Step 2.
3. Click Upgrade. The system will check to find the upgrade file, and then start to upload the upgrade file. The upgrade status bar will display on the page. When it reaches 100%, the viewer will return to Home page.
4. Close the internet browser.
5. Go to the Control Panel (in Microsoft Windows) and double-click Add or Remove Programs. Locate the Camera Viewer software on the Currently Installed Programs list and click Remove to uninstall the previous version of Camera Viewer.

Open the internet browser again and log in to the camera. The system will automatically download the new version of the Camera Viewer software.

Device Restart

Restart the camera

Configuration

Export Configuration:

1. Click Export under Export Files.
2. The .bin file will be saved.

Note The default location for exported configurations is C:\

Upload (Import) Configuration:

1. Click Choose File in the Upload Files box.
2. Select a .bin file that you want to import.
3. Click Upload.
4. Click Yes when prompted that the import will cause a system reboot.

Factory Default

There are two factory default settings available: Full Restore that restores default settings including network settings, and a Partial Restore that restores default settings excluding network settings. A system reboot is also available; this preserves all settings.

Note If a Full Restore is used, you will need to use the Network Camera Manger to find the desired camera again.

Diagnosis Info

Export debug information as a .tgz file.

www.openeye.net
1-888-542-1103