OpenEye®

4MP WDR IP Dome Camera

User Manual

Camera

OE-C7564-AWR REVB

OE-C7564-AWR REVB WDR IP Dome Camera
User Manual

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OPENEYE
Liberty Lake, WA ● U.S.A.

Important Safeguards

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

2. **Retain Instructions**
   Save these instructions for future reference.

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

4. **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 ensure proper mounting, follow the manufacturer's instructions and use only mounting accessories recommended by manufacturer.

5. **Power source**
   This product is intended to be powered by a UL listed power supply suitable for use at (Tma = 55°C) whose output meets SELV/ES1 and LPS/PS2, and is rated (1) 12Vdc, 1.2A min., 24Vac, 50/60Hz or 50-60Hz, 0.55A min.

Precautions

Operating

- Before using, make sure power supply and others 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.

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. Compliance is evidenced by written declaration from our suppliers, assuring that any potential trace contamination levels of restricted substances are below the maximum level set by EU Directive 2002/95/EC, or are exempted due to their application.

Disposal and Recycling Information

When this product has reached the end of its useful life, please dispose of it according to your local environmental laws and guidelines.

Installation and Storage

- Do not install the camera in areas of extreme temperatures in excess of the allowable range; install the camera in areas with temperatures within the camera's operating temperature, including the following: -67°~131°F (-55°~55 °C)

- 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.

- Never face the camera toward the sun. Do not aim at bright objects. 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.

- While running cables, slightly bend the cables into a U-shaped curve to make a low point (as illustrated below). The purpose is to prevent water from entering the camera along the cables from above.
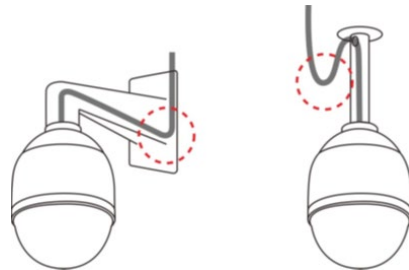
Cleaning
If the video image becomes blurry or smudged in areas, it may be because the lens cover requires cleaning.
To clean the lens cover:
- Use hand soap or a non-abrasive detergent to wash off dirt or fingerprints.

- Use a microfiber cloth or non-abrasive fabric to dry the dome bubble.

  - o **Important**: Failure to use the recommended cleaning materials may result in a damaged or scratched lens cover. A damaged lens cover may negatively impact image quality and cause unwanted IR light reflecting into the lens.

To clean the camera body:
- Use a dry or lightly dampened cloth to clean the camera body.

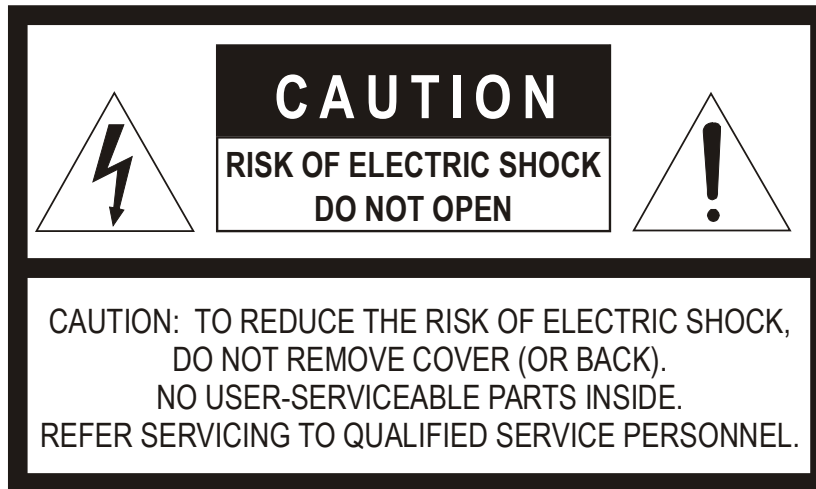- Do not use strong or abrasive detergents.

Warning

DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE.
DO NOT OPEN THE CABINET.
REFER SERVICING TO QUALIFIED PERSONNEL ONLY.
THE CAMERA IS TO BE CONNECTED ONLY TO POE NETWORKS WITHOUT ROUTING TO THE OUTSIDE PLANT.

Caution

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

TABLE OF CONTENTS

INTRODUCTION

OVERVIEW

The new OE-C7564-AWR REVB dome IP camera provides superior video quality, recording at resolutions up to 4MP. This camera is capable of dual and quad streaming, allowing up to three simultaneous streams. The OE-C7564-AWR REVB comes equipped with high-powered IR LEDs and a mechanical IR cut filter for true day/night operation. 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. This camera uses a 2.7~12mm autofocus lens with a 31°~ 99° field of view, which decreases camera setup and installation time. It is also equipped with an integrated heater, which allows operation in temperatures as low as -67°F (-55°C). The camera operates using 24vAC, 12vDC, or a PoE switch, allowing it to seamlessly fit into your existing infrastructure.

All OpenEye IP cameras are compatible with the OpenEye Web Services platform, allowing multiple users to view high quality images and perform remote setup using a Web browser.

PRODUCT FEATURES

- 4MP Resolution
- True Wide Dynamic Range
- 2.7-12mm Focal Length
- H.264 & H.265 support with Smart Encoding
- MJPEG video compression
- True Day / Night Function
- Adaptive IR Technology
- BNC Analog Output
- IP66 Rating
- IK10 Rating
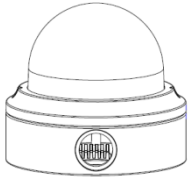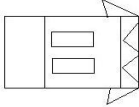- 128GB microSD™ Card support
- ONVIF Profile S / G / T Support
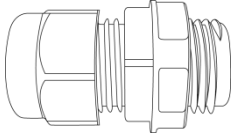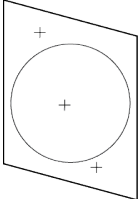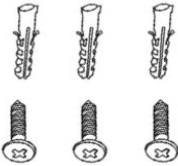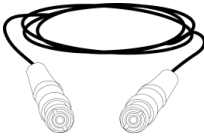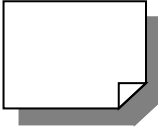
(*) Dependent on environmental variables

GETTING STARTED

BOX CONTENTS

Before proceeding, please check that the box contains the items listed here. Contact your dealer for assistance if any item is missing or has defects.

OE-C7564-AWR REVB IP Dome Camera	**2-Pin Power Terminal Block**
Plastic Conduit NPT	**Mounting Template Sheet**
Screws and Plastic Anchors x3	**Security Torx Tool**
BNC Cable	**Quick Start Guide**

CAMERA DIMENSIONS

Ø 5.26"

4.6"

4.60"

Unit: in
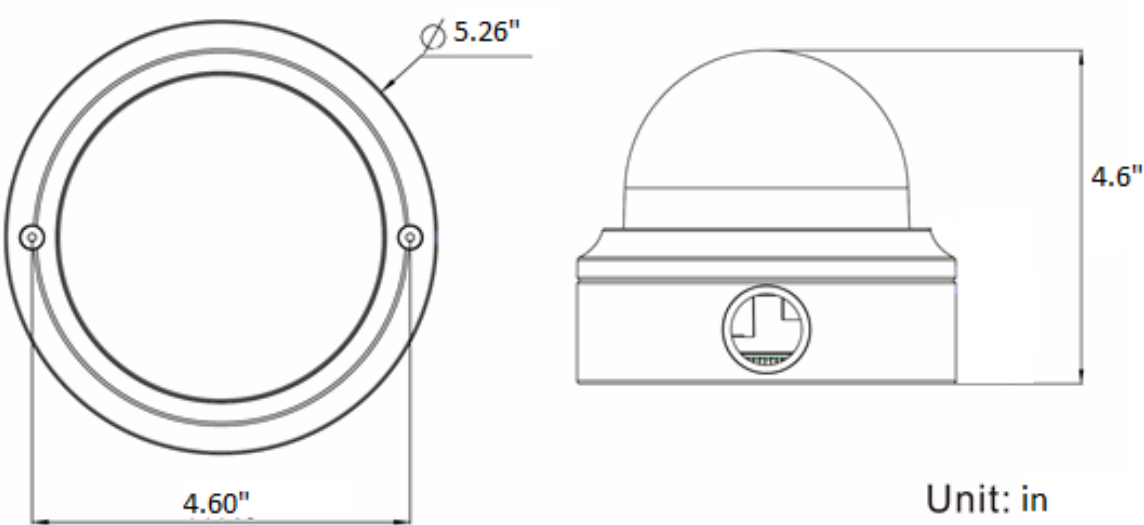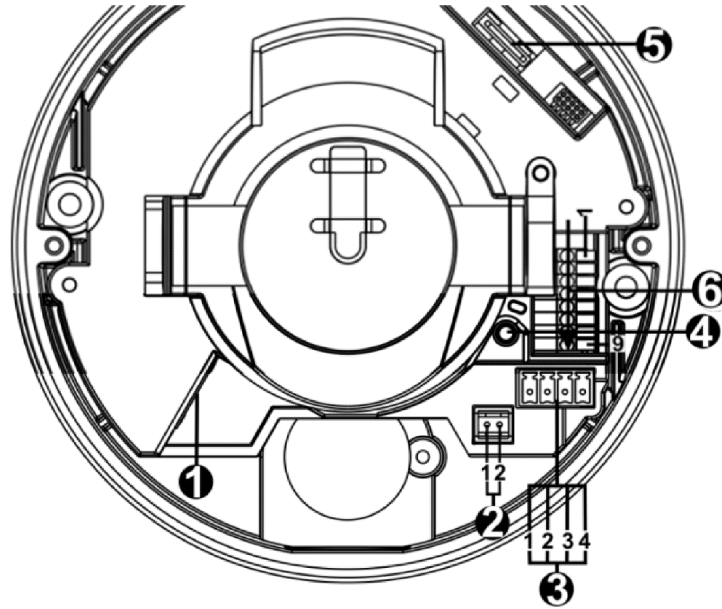
CONNECTIONS

Pin	Connection	Definition		
1	RJ-45	For network and PoE connections		
2	BNC	1	GND	For analog video output
		2	BNC	
3	Power (12vDC / 24vAC)	1	24vAC 1	Power connection
		2	24vAC 2	
		3	12vDC 1	
		4	12vDC 2	
4	Reset Button	To restore the camera to factory defaults: 1. Disconnect power for 30 seconds. 2. Reconnect power and wait 30 seconds. 3. Press the reset button with a proper tool for 20 seconds.		
5	Micro SD Card Slot	Insert the microSD™ card into the card slot to store videos and snapshots. Supports up to 128GB microSD™ card. **Do not add or remove the microSD™ card when the camera is powered on.**		
6	Alarm & Audio I/O	1	Audio In L	Audio In (Line In)
		2	Audio in R	
		3	GND	
		4	Audio Out L	Audio Out (Line Out)
		5	Audio Out R	
		6	Alarm Out +	Alarm connection
		7	Alarm Out -	#Do NOT connect external power supply to the alarm I/O connector of the IP camera.
		8	Alarm In +	
		9	Alarm In -	

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 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 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

Launch from Apex Windows Platforms

Network Camera Manager can be found on the desktop.

Launch from Linux

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

CAMERA CONFIGURATION

Finding Network Devices

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

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

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

VIEWING A NETWORK CAMERA

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

2. Enter the **Username** and **Password** for the camera. The username and password are case sensitive.

USERNAME AND PASSWORD

OpenEye IP cameras ship without a default password.

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

1. Network Camera Manager

2. Camera Web Browser

3. Any Apex recorder with onboard PoE will check for a password once connected; Apex will set the admin password if one is not detected.

4. If cameras are connected to a DHCP server, Apex will automatically set the password once the camera is selected and added.

✎	**Note**	Refer to your Apex recorder manual or quick start guide for instruction on adding cameras. Passwords must be 8-16 characters, contain at least 1 capital and 1 lower case letter, 1 number, and 1 unique character.

VIEWER TABS

Live – Monitor video and perform other video related functions.

Setup – Set the camera name, IP address, and define users. This tab also allows you to configure the camera settings and view streams.

Advanced – Perform advanced setup configurations, like network setup, security, alarms and maintenance.

Logout – Change user.
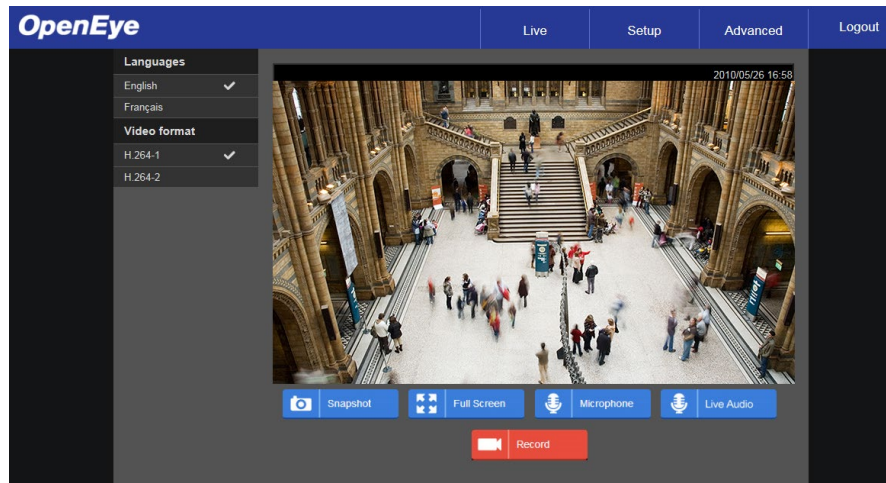
LIVE

Snapshot – Click the button, and a JPEG snapshot will automatically be saved in the appointed place. The default location is: C:\

Full Screen – This will display the live feed in full screen.

Microphone – PC audio to camera, enables audio through an audio out on the camera.

Live Audio – Camera to PC, enables audio if the camera is equipped with a microphone.

Record – Click **Record** to start recording live video. Click **Record** again to stop recording video. Recorded video will be saved automatically to the designated location on the local workstation.

	Note	The Microphone and Live Audio functions are only available on enabled cameras.

SETUP

The Setup menu includes System Settings, Picture Setup, and Streaming Settings.

	Note	The Setup menu displays limited setup options. For a complete list of setup options, see the *Advanced* section.

SYSTEM SETTING

Camera Name

Host Name – The Host Name is used to identify the camera on your system. If camera side Motion Detection is enabled and is set to send alarm message by Mail/FTP, the host name entered here will display in the alarm message.

Time zone – Select your time zone.

Enable daylight saving time – Manually enter daylight saving time start and stop date, time, and time offset.

Date format – Select your desired date format.

Sync with computer time – Select to synchronize the camera date and time with the connected recorder.

Manual – Manual allows you to define the date and time manually.

Sync with NTP server –Network Time Protocol (NTP) is an alternate way to synchronize your camera's clock with a NTP server. Specify the server you wish to synchronize in the **NTP Server** box. Then select an **Update Interval**. For more information about NTP, visit ntp.org.

USER SETUP

Admin Password

Manage the password for the Administrator account.

To change the administrator password:

1. Type a new **Administrator Password**, and then type again to confirm the password.
2. Click **Save**.

Add User

The username and passwords are limited to 16 characters with no spaces permitted. There is a maximum of twenty user accounts.

1. Type the new **Username** and **Password**.
2. Select I/O Access, Camera Control, Talk, and/or Listen as permissions for the User.

    I/O Access – All functions in the Setup and Advanced menus are available to the User.

    Camera Control– Allows the User to change camera controls in the Setup menu.

    Talk – Allow the user to speak through the camera microphone.

    Listen – Allow the user to listen to audio captured by the camera.
3. Click **Add**.

Delete User

1. Select the username on the **Username list.**

2. Click **Delete** to remove the user.

3. Click **OK** in the confirmation window.

There is a momentary wait time while the Network Camera Manager saves parameters. When this period is complete, the User will be deleted.

Modify User

1. Select the username on the **Username list**.

2. Click **Edit.**

3. In the resulting window, modify the Password and/or feature permissions.

4. Click **Save**.

Note	For security reasons, every time the user properties are opened the access check boxes are automatically cleared. Make sure you select any user access options each time you edit the user properties.

HTTP Authentication Setting

Choose between **basic** for non-encrypted authentication or **digest** for encrypted authentication.

Streaming Authentication Setting

Choose between **basic** or **digest** authentication for streaming video or disable streaming authentication.

IP ADDRESS

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

Get IP Address Automatically (DHCP)

The camera comes preconfigured with a static IP address, selecting **Get IP address automatically** requires a router or DHCP server to assign an IP address to the camera.

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.

Use Static IP Address

To set up a new static IP address:

1. Select the Use static IP address option.

2. Type a new IP address in the **IP address** box.

3. Type a new address in the **Default Gateway** box.

4. Click **Apply** to confirm the new setting.

When using 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.

General

- **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.

- **Primary DNS –** The primary domain name server that translates hostnames into IP addresses.

- **Secondary DNS –** A secondary domain name server that backups the primary DNS.

- **Use PPPoE –** Use Point-to-Point Protocol over Ethernet instead of IP. Username and password are required.

Advanced

- **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).

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

- **MJPEG over HTTP port –** The default HTTP Port is 8008; setting range: 1024 ~65535.

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

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

IPv6 Address Configuration

To enable IPv6 select **Enable IPv6** and click **Save**. See your network administrator if you are unsure of your network configuration.

FILE LOCATION

This is the destination location that snapshot photos and recorded videos will be saved to.

To select a destination location:

1. Click **Select.**

2. Choose a location or folder.

3. Click **Save** in the file window, and then click **Save** again.

PICTURE SETUP

Camera Tab

Use the Camera Tab 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 CCTV professional, or at the instruction or a technical support representative.

Exposure

Camera Tab

> **P-Iris Priority Iris Size Setting:**
>
> **P-Iris –** Adjust the aperture to change depth of field.
>
> **Max Gain –** Choose a pre-determined gain to adjust amplification of the image signal.
>
> **Min Shutter Speed –** Choose a pre-determined shutter speed to adjust light exposure.
>
> **Manual Mode –** Changing the shutter mode to manual will allow you to increase changes in max gain and min shutter speed.
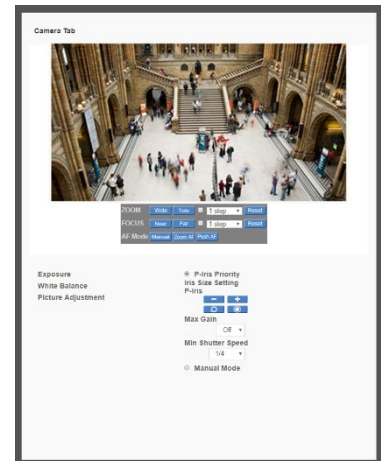
White Balance

> Use the white balance setting to change color representation in difficult lighting conditions.
>
> **Auto –** White balance works within its color temperature range and calculates the best-fit white balance.
>
> **ATW –** Auto-tracing white balance, the camera removes the signals within a range of 2000K to 10000K, which helps to even out the bright white portions of an image.
>
> **One Push –** Balances color temperature based on a white object within the viewing area.
>
> **Manual –** Change the white balance value by specifying the R gain and B gain.

Each of the Picture Adjustment settings is set to the recommended default.

Brightness – Adjust the image's brightness on the camera. The Backlight value is adjustable from **0** (dim) ~ **+20** (brightest).

Sharpness – Increasing the sharpness level can make the image looked sharper; it especially enhances an object's edge. The value of sharpness is adjustable from **0 ~ +10** (sharpest).

Contrast– Adjust the contrast value from **-6 to 19**.

Saturation– Adjust the color saturation from **-6 to 19** (most saturation)**.**

Hue– Adjust the hue from **-12 to 13**.

Backlight– Backlight compensation can correct for overly-bright backlit sceneries.

Note	Backlight is only enabled by selecting TV System setting to 60 fps (NTSC).

WDR Function– Turn the Digital Wide Dynamic Range Off, or adjust between Low/Mid/High.

Click **Set** after making changes to the Picture Adjustment settings to save the settings and update the Live screen.

Motion Detection

Use the Motion Detection menu to configure the motion detection areas. Here, Motion Detection can be turned On or Off, and other general settings can be specified.

To enable motion detection:
1. Use the **Motion Detection** dropdown to select a motion detection preset (1-4). If choosing an additional preset after 1, select the **On** radio button.

Note	A motion detection preset can be turned **Off** at a later time.

2. If desired, select the **By Schedule** radio button and use the dropdown menu to select a schedule.
3. Designate the **Motion Detection Setting** values.
4. Check the appropriate boxes to designate the **Triggered Action**.
5. Click **Save**.

Motion Indication Bar

Motion Detection 1 ▾

○ Off
○ On
○ By schedule
Please select ... ▾

Motion Detection Setting

Sampling pixel interval [1-10]   [1]

Detection level [1-100]   [10]

Sensitivity level [1-100]   [80]

Time interval(sec) [0-7200]   [10]

[Save]

Motion Region Paint

☐ Enable brush 1x1 ▾

Triggered Action

☐ Enable alarm output 1 high ▾

☐ Enable alarm output 2 high ▾

☐ Send alarm message by FTP
☐ Send alarm message by E-mail
☐ Upload image by FTP
☐ Upload image by E-Mail
☐ Send HTTP notification
☐ Record video clip

File Name

File Name : [image.jpg]

○ Add date/time suffix
○ Add sequence number suffix (no maximum value)
○ Add sequence number suffix up to [0] and then start over
○ Overwrite

Add Detection Area

1. Use the **Motion Detection** dropdown to select a motion detection preset.

2. Select the **Enable brush** check box under **Motion Region Paint** and then use the cursor on the live view pane to highlight the desired motion detection area.

3. Click **Save**.

Delete Motion Detection Area

1. Use the **Motion Detection** dropdown to select a motion detection preset.

2. Select the **Enable brush** check box under **Motion Region Paint** and then use the cursor on the live view pane to remove the highlight area.

3. Click **Save**.

Motion Indication Bar

The Motion Indication Bar indicates the level of motion in the live view pane.

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STREAMING SETTINGS

VIDEO RESOLUTION

The camera allows you to configure each of the streams independently.

Encoding – enable Stream 2~Stream 4 encoding.

Encode Type – select the preferred encode type (H.265, H.264, MJPEG).

Resolution – set the resolution of stream.

Rate Control – select the H.265/H.264 bitrate mode: CBR (Constant Bit Rate), VBR (Variable Bit Rate), and LBR (Low Bit Rate).

- **CBR** – the outgoing video bitrate will be fixed and consistent to maintain bandwidth.

- **VBR** – video bitrate varies according to the activity of the monitoring environment to achieve better image quality.

- **LBR** – keeps bitrate low to ensure superior image quality. To use LBR, set up the compression level and dynamic GOV for each stream first.

Compression – based on the current application area and streaming bitrate, select the most suitable compression level, high/mid/low.

- High – bitrate will be vastly reduced but image quality may be degraded.

- Low – bitrate will stay low while image quality remains high.

Dynamic GOV/Max GOV –According to the amount of motion in the area, the GOV length of the video will be adjusted dynamically to reduce bitrate, especially for scenes with minor changes. If there is small or zero activity in the scene, set Max GOV larger and the GOV length will be longer, resulting in lower bitrate and bandwidth. If there are constant dynamic changes in the scene, it is suggested to adjust GOV Length and disable Dynamic GOV.

Profile – Set H.265/H2.64 to High Profile or Main Profile according to compression needs. With the same bit rate, the higher the compression ratio, the better the image quality is.

Framerate -- Setting the camera to transmit fewer frames can save bandwidth (1 ~ 30)

Note	Higher frame rate will increase video smoothness, as well as file size and bandwidth usage.
Note	Lower frame rate will decrease video smoothness, as well as file size and bandwidth usage.

Bitrate – The default setting of the H.265/H.264 bitrate for Stream 1 / Stream 2 is 4096 kbit/s; for Stream 3 / Stream 4 is 2048kbit/s. The setting range is from 512 to 10240, and the total bit rate should not exceed 26624 kbps.

GOV Length – set the GOV length to determine the frame structure (I-frames and P-frames) in a video stream to save bandwidth. Less bandwidth is needed if the GOV length is set to a high value. However, the shorter the GOV length, the better the video quality is.

STREAM URLS / RTSP

It is possible to connect to OpenEye IP cameras using third party software like VLC media player. To connect some types of software will need to know the stream URL. All OpenEye IP cameras are capable of delivering two RTSP streams, as well as streaming MJPEG over HTTP.

The stream URLs are as follows:
- rtsp://<ip address>/jpeg
- rtsp://<ip address>/mpeg4
- rtsp://<ipaddress>/h264
    - H.264 Stream 1
- rtsp://<ipaddress>/h264_2
    - H.264 Stream 2
- rtsp://<ipaddress>/h264_3
    - H.264 Stream 3
- rtsp://<ipaddress>/h265
    - H.265 Stream 1
- rtsp://<ipaddress>/h265_2
    - H.265 Stream 2
- rtsp://<ipaddress>/h265_3
    - H.265 Stream 3
- http://<ipaddress>:8008

Note: The MJPEG over HTTP stream is identified by a port number. The default port is 8008; this port can be configured in the cameras Network page.

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Video Rotation

Mirror

> **Yes** - Flip the video across the vertical axis.

> **No** - Do not mirror video.

Rotate Type

> **0** - The video will be oriented as the camera position dictates.

> **90** - Rotate video 90 degrees clockwise.

> **180** - Rotate video 180 degrees clockwise.

> **270** - Rotate video 270 degrees clockwise.

Save after making any changes.

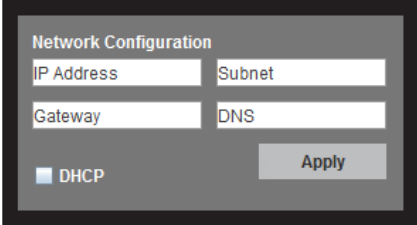|		
	Note	Higher frame rate will increase video smoothness, as well as file size and bandwidth usage.
	Note	Lower frame rate will decrease video smoothness, as well as file size and bandwidth usage.

ADVANCED

SYSTEM SETTING

NETWORK SETUP

OpenEye IP cameras are set to DHCP by default. If a DHCP server is not detected after 2 minutes, the camera will default to IP address 192.168.51.2.
If you are not using a DHCP server, NCM will allow you to batch configure a static IP address.
The IP address for the camera network on your Apex recorder is 192.168.51.1.

| Note | To change this IP address please refer to your Apex recorder manual. Selecting multiple cameras and entering IP address 192.168.51.2 will set an IP address on all selected cameras, starting at 192.168.51.2 and increase per camera. |

1. Open Network Camera Manager
2. Select applicable camera(s)
3. Input starting IP address, Subnet Mask, Gateway, DNS

| Note | NCM requires entry in all fields. |

4. Apply changes
5. Wait 60 seconds before refreshing NCM

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 ISPs 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.

Enable DDNS – Select the check box to enable DDNS.
Provider – Select a DDNS host from the Provider list.
Host 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.
Password/Key – Type the password or key required by the DDNS provider for authentication.

NETWORK ADVANCED

QoS

Quality of Service allows you to prioritize network traffic services of the camera's functions. The QoS function utilizes the Differentiated Services prioritized using Codepoint values (DSCP).

	Note	Routers and switches on the network must be QoS or DSCP capable, and have these settings enable for this function to operate on your network.

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.

UPnP (Universal Plug N' Play)

Enable UPnP – When enabled, the camera will appear in My Network Places on Windows computers running UPnP on the same network.

Enable UPnP Port Forwarding – When enabled, the camera will attempt to open the web server port on the router automatically.

Friendly Name – Set a name to easily identify the camera.

NETWORK SECURITY

Enable HTTP

The camera can send alarm messages to a specific Hypertext Transfer Protocol (HTTP) site when motion is detected or when the sensor input is activated. You can assign alarm messages to up to two HTTP / HTTPS sites.

IP Filtering

IP Filtering allows you limit access to your IP cameras by IP address. You can "Allow" or "Deny" a specific IP address by adding it to the appropriate list. IP addresses on the "Allowed IP List" will be able to access the IP camera. IP addresses on the "Deny IP List" will NOT be able to access the IP camera.

IEEE 802.1XSEAP-TLS

This is a well-supported security protocol commonly used by wireless vendors. This security method requires a valid CA certification and key. When properly configured, all communication between the client (usually a recorder) and the camera is encrypted.

ALARM APPLICATION

The alarms menu is where alarm connections are configured.

Alarm Switch – Designate when the alarm will be active; Off, On, or By Schedule.

Alarm Type – Designate if the alarm is normally open or normally closed.

> *Example:* A door sticker consists of two contacts that are connected when under normal conditions. This type of input would be a NC/L or normally closed alarm. The alarm will trigger when the two contacts are no longer connected, such as an abnormal condition when the door is opened.

Triggered Action – Specify which actions the camera should take.

- **Enable alarm output** - Select high or low.

- **Send message by FTP** - Select to send an alarm message to a configured FTP when motion is detected. When sending to FTP, the alarm notification will upload a text file to the FTP location.

- **Upload Image by FTP** - Select to upload a snapshot image to configured FTP location.

- **Send HTTP notification** - Select to send alarm notification to up to 2 HTTP addresses.

- **IR cut filter** - Select on/off.

- **Send message by E-Mail** - Select to send an alarm message to a e-mail address when motion is detected. When sending to email, the alarm notification is text only.

- **Upload image by E-Mail** - Select to upload a snapshot image to an e-mail address.

- **Record video clip** - Select to record a video clip and save it to the SD card, if installed, or NAS.

	Note	Make sure SMTP or FTP configuration has been completed. See the Mail and FTP sections for more information.

- **File Name –** Enter a file name in the box, ex. Image.jpg. The uploaded image's file name format can be set in this section. Select the one that meets your requirements.

Consult the documentation to the sensor input device to determine which of these to use.

TAMPERING AND NETWORK FAILURE DETECTION

Tampering Alarm – Turn the Tampering Alarm On, Off, or On By Schedule.

Tampering Duration – Designate the amount of time (in seconds) that tampering must occur in order for a Tampering Alarm to activate.

Triggered Action – Designate the actions that will occur upon a Tampering Alarm activating.

Network Failure Detection – Turn the Network Failure Detection On, Off, or On By Schedule.

Detection Type – Designate the IP Address that will be tested and how often (in minutes).

Triggered Action – Designate the actions that will occur upon Network Failure Detection activation.

File Name – Enter a file name in the box, ex. Image.jpg. The uploaded image's file name format can be set in this section. Select the one that meets your requirements.

MAIL, HTTP AND FTP SETUP

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. The configuration page is shown as follows:

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

SD CARD

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 64GB.

Device Information – Displays the storage total size and free space information of the included microSD™ card.

Recording source – Set the SD recording source.

Recording filename format – Allows you to set filename format of Start Time Only or Start Time + End Time.

Device Setting – Allows you to format the microSD™ card.

Disk Cleanup Setting – Allows you to enable and configure automatic disk cleanup.

Recording List – Displays a list of files saved to the card. You can delete files from the card or save them to your local PC.

	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.

NETWORK SHARE

Network Share is a network protocol that runs a variety of different system platforms, allowing for file sharing between computers operating on Windows and computers operating on Unix. This serves as an additional storage type.

Configuration requires the host IP address, share name, and credentials. Once configured, cameras can record events to the network share.

Note	Network Share can be hosted on a Windows, Mac, or Linux system.

RECORDING SCHEDULE

The recording schedule allows you to set up scheduled recording to the microSD™ card or to Network Sharing.

Recording

This section allows you to define recording schedules for the camera.

For continuous recording:

1. Select type of **Recording Storage**.
   - **microSD™ card**: save recorded data to the microSD™ card located in the camera.
   - **Network Share**: save recorded data to the designated Network Share location.
2. Select **Always** as the type of **Recording Schedule**.
3. Click **Save**.

To set up scheduled recording:

1. Select type of **Recording Storage**.
2. Select **Only during time frame** as the type of **Recording Schedule**.
3. Use the appropriate check box to designate a day of the week.
4. Type a **Start Time** and **Duration**.
5. Click **Save**.
6. Repeat steps 3-5 for each desired day of the week until the desired schedule is completed.

Note	Start Time and Duration are measured in 24-hour format (HH:MM).

To delete a recording schedule, click on the desired weekday schedule and then click **Delete**.

Schedule

This section allows you to establish schedules to use in other section.

To create a schedule:

1. Select a Schedule set **(1-10).**

2. Check the desired **weekday** check boxes.

3. Select **Day** or **Night**.

4. Designate a **Start Time** and **Duration**.

5. Click **Save**.

Interval Recording

Interval recording allows you to record in consistent intervals and save the files for later viewing.

1. Turn Interval Recording **On** or **Off**.

2. Designate the **Time Interval** (seconds).

3. Designate the **Trigger Action** using the appropriate checkbox, and then use the dropdown menus to further manage the Trigger Action.

4. Type a **file name**, and then choose how the file name is multiplied for multiple files.

Add date/time suffix – add the date/time to the end of the file name for each interval file saved.

Add sequence number suffix – add a sequence number suffix to the end of the file name for each interval file saved.

Add sequence number suffix up to *x* and start over – add a sequence number suffix to the end of the file name for each file saved up to *x,* and then start over.

Overwrite – overwrite each previous interval file with the new interval file.

MAINTENANCE

On the Maintenance page you can export the cameras current configuration or import the configuration for a camera.

	Note	Do not import configuration files from different models of cameras.

Configuration

Export Configuration:

1. Click **Export Configurations.**
2. The .bin file will be saved.

> ✎ **Note** The default location for exported configurations is C:\

Upload (Import) Configuration:

1. Click **Browse** in the Configuration Import box.
2. Select a .bin file that you want to import.
3. Click **Import.**
4. Click **Yes** when prompted that the import will cause a system reboot.

Factory Default

Full Restore - restores all settings to default, including network settings.

Partial Restore - restores all settings to default, excluding network settings.

System reboot is also available; this reboots the camera with no changes to settings.

> ✎ **Note** Full or Partial Restore will require NCM to find the desired camera and set the Admin password.

SOFTWARE

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. 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 the Live view page.
3. Close the internet browser.
4. Go to **Advanced > Maintenance > Full Restore**.
5. Use NCM to discover the camera, set the Admin password, and IP address if necessary.

LOG FILE

Use the Log File to view the System Log and **generate syslog**.

PICTURE SETTING

CAMERA SETUP

These are enhanced functions to set Camera Settings under the Advanced section.

IR Function – Allows you to set the Day / Night IR function of the camera.

- **Day / Night Function** – Set the Day / Night function to automatically transition or be permanently set to Day mode or Night mode. Additionally, the camera can transition based on the light sensor or be permanently set to Light On or Light Off. The Smart setting allows the IR to capture a dynamic range of images.

  Auto
  Night
  Day
  Light Sensor
  Light On
  Light Off
  Smart

- **Day / Night Threshold** – Set the transition sensitivity needed for a specific environment.

IR Light Compensation – Select On/Off.

Noise Reduction – Allows you to set the Noise Reduction levels for the camera.

Profile – Allows you to set and save profiles based on different settings.

VIDEO MASK

You can use the video mask page to define a privacy mask to keep users from viewing parts of the image. You can enable up to five privacy masks and choose a color to obscure the live view form users.

HOT SPOT

The Hot Spot feature allows you to transmit different parts of the camera image on separate streams. Each stream displays a portion of the image at the full size of a regular image. This is useful for focusing on details in different areas of a single camera view.

TEXT OVERLAY

Text Overlay allows you to select text to be displayed over the video. Four options are available:

> Include date & time
>
> Include subtitle
>
> Include text string (up to 20 alphanumeric characters)
>
> Include Image

The Text Overlay setting allows the user to select the overlay text color and size.

TV SYSTEM

Set the desired TV mode for your camera.

The default setting is WDR 2 Shutter (NTSC), which is the optimal mode for high contrast scenes.

The alternative is 60 fps (NTSC), which is optimal for scenes that do not have high contrast.

WEB VIEWER

Select the desired Video OCX protocol setting to transmit video over the network

RTP over UDP – Provides an up-to-date video stream although some images may be dropped - suitable for both an intranet and the Internet where there is no NAT firewall.

RTP over RTSP (TCP) – Uses TCP for increased delivery reliability - suitable for internet where firewalls are used and where an RTSP proxy is available.

RTSP over HTTP – Tunnels RTSP by HTTP - able to pass through firewalls between the camera and the viewer.

MJPEG over HTTP – Streams a sequence of JPEG images by HTTP - able to pass through firewalls between the camera and the viewer.

Multicast mode – Provides the most efficient use of bandwidth when a large number of viewers are viewing video simultaneously - suitable for a subnet or intranet. This mode will not broadcast over the internet.

STREAMING SETTING

AUDIO

Transmission Mode:

Full-duplex (Talk and list simultaneously)

Half-duplex (Talk or listen, not at the same time)

Simplex (Talk only)

Simplex (Listen Only)

Disable

Server Gain Setting:

Input gain – sets the amplification that the camera applies to the incoming audio before transmitting.

Output gain – sets the amplification that the camera applies to the outgoing audio before transmitting.

Bit Rate – Allows you to select the audio bitrate.

Recording to Storage – Allows you to enable or disable recording to storage.

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1-888-542-1103

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