



4MP HDR IP Dome Camera

User Manual



Camera

OE-C7564-AWR

OE-C7564-AWR WDR IP Dome Camera
User Manual

Manual Edition 33748AE – March 2019

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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 insure proper mounting, follow the manufacturer's instructions and use only mounting accessories recommended by manufacturer.
5. **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 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.

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: (without heater: -22 ~ 122 °F (-30 ~ 50 °C) with heater: -58 ~ 122 °F (-50 ~ 50 °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.

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.

Warning

DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE.
DO NOT OPEN THE CABINET.
REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

Caution

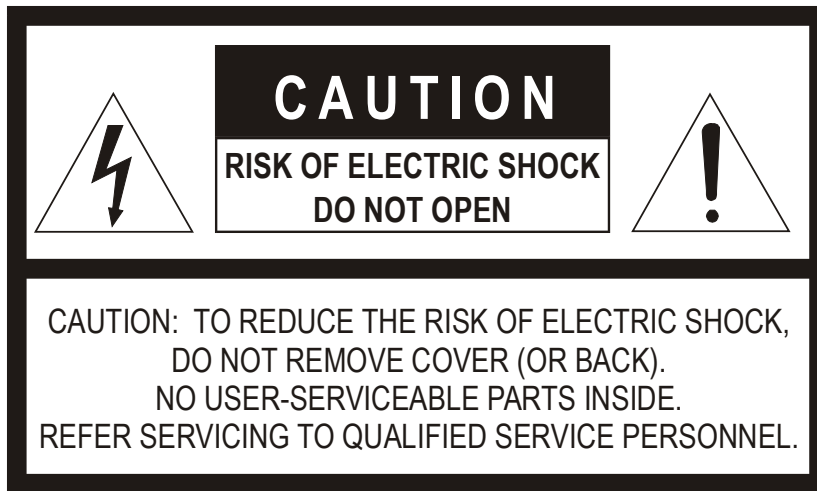


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INTRODUCTION

OVERVIEW

The new OE-C7564-AWR 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 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 3~9mm autofocus lens with a 33°~109° 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 -58°F (-50°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 fully ONVIF™ compliant and 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

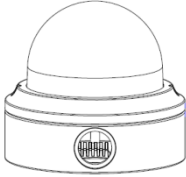
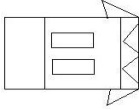
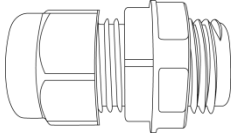
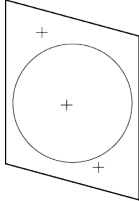
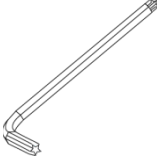
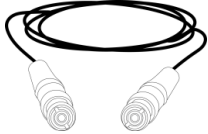
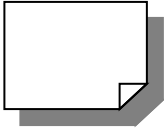
- Multiple Progressive Scan CMOS Sensor Support 4M Resolution
- Multi-exposure WDR
- Low Latency Streaming
- Low Power Consumption on Encoding
- Quad codec support (H.264 Baseline / Main Profile / High Profile / MJPEG)
- Tri Streams Support
- Smart Event Function
- Tampering Alarm / Motion Detection / Network Failure Detection
- 3D Motion Compensated Noise Reduction (MCTF)
- True Day / Night Function (ICR)
- IR LED Module support (working distance up to 40m)*
- BNC Analog Output
- Weatherproof (IP66 International)
- 64GB SDXC SD Card support
- ONVIF Profile S Support

(*) Dependent on environmental variables

GETTING STARTED

BOX CONTENTS

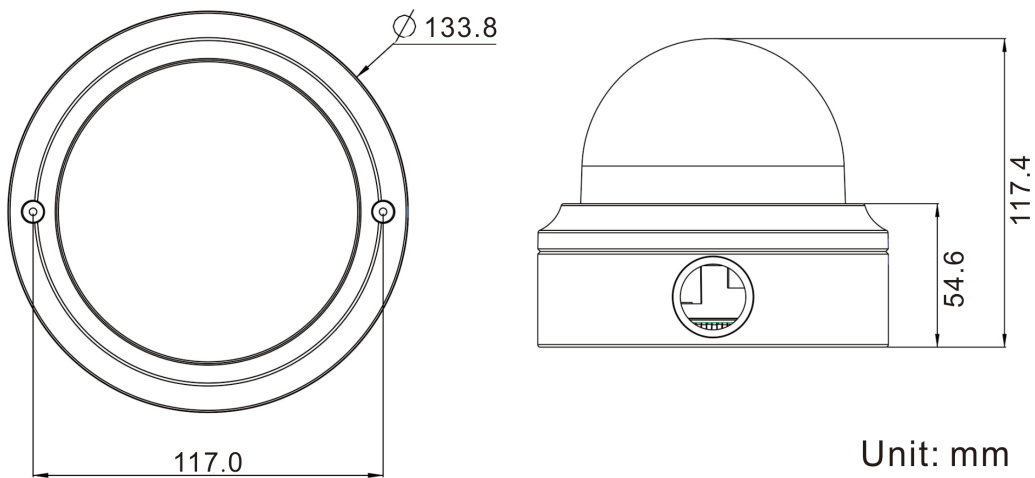
Before proceeding, please check that the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact your dealer for assistance.

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

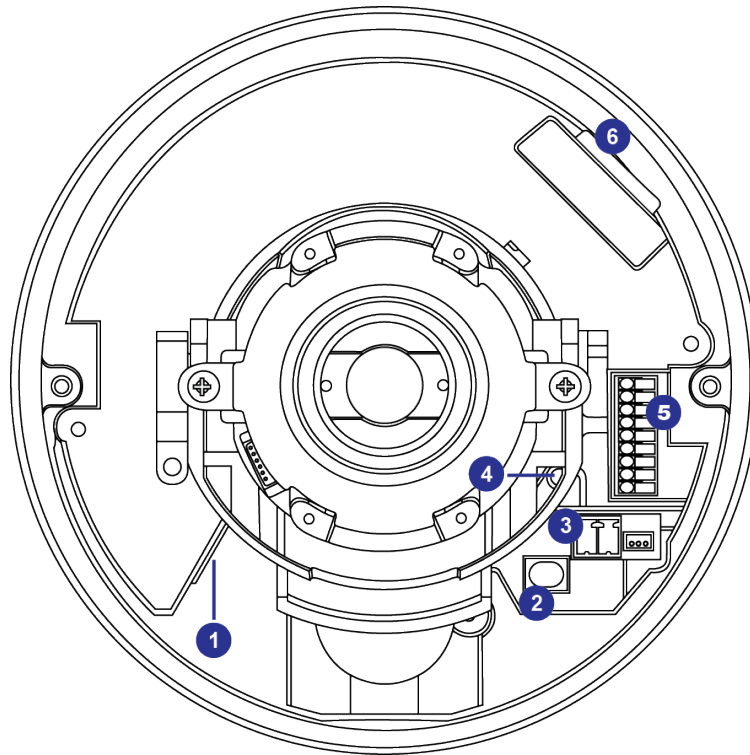
CAMERA OVERVIEW

Before installing or connecting the dome camera, please refer to this section and complete preparations for dome setup and all switch settings.

CAMERA DIMENSIONS



CONNECTIONS



Pin	Connection	Definition			
1	RJ-45	For network and PoE connections			
2	BNC	1	For analog video output		
		2			
3	Power (12vDC / 24vAC)	1	12vDC / 24vAC 1	Power connection	
		2	GND / 24vAC 2		
4	Default Button	Press the reset button with a proper tool for at least 20 seconds to return the camera to factory defaults.			
5	Alarm & Audio I/O	1	Audio In L	Audio in	
		2	Audio in R		
		3	GND		
		4	Audio Out L	Audio out	
		5	Audio Out R		
		6	Alarm Out +	Alarm connection	
		7	Alarm Out -		
		8	Alarm In +		
		9	Alarm In -		
6	SD Card Slot	Insert the SD card into the card slot to store videos and snapshots			

NETWORK CAMERA MANAGER SOFTWARE

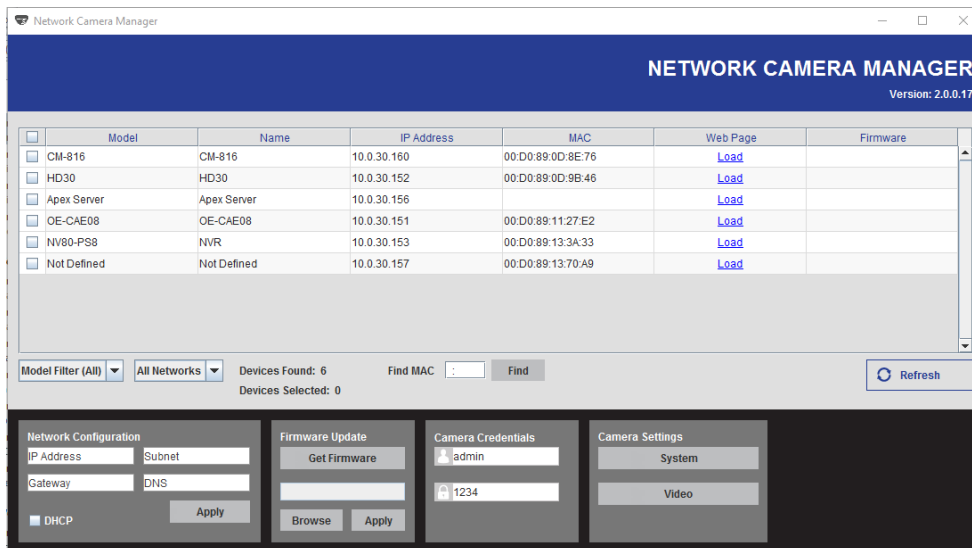
OpenEye Network Camera Manager (NCM) is a software tool that allows you to quickly and easily connect and configure your OpenEye IP Cameras. This software allows you to assign IP addresses, manage users, configure video settings, and update firmware on multiple cameras at once.

The Network Camera Manager software is pre-installed on all OpenEye Recorders, and is also available for download on the OpenEye website for installation on your personal computer or laptop.

INSTALLATION

LAUNCHING NETWORK CAMERA MANAGER

After installing the program on your PC or laptop, open the program to begin configuring your cameras.



Because Network Camera Manager is a Java application, you are able to install NCM on both Windows and Linux platforms.

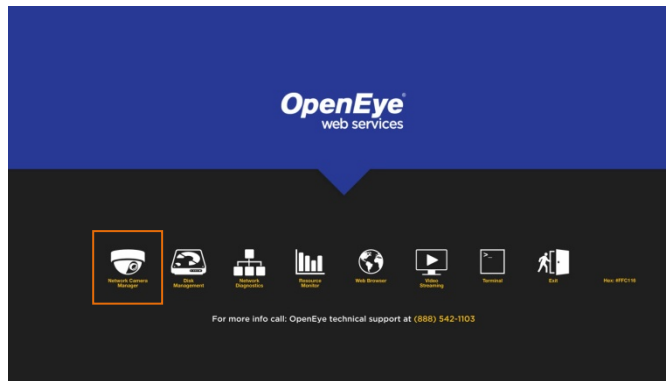
For Apex Windows and Linux platforms, Apex will be pre-installed on your OpenEye recorder. Follow the instructions below to launch Network Camera Manager.

Launch from Apex Windows Platforms and Apex Linux Platforms

1. Exit the recorder **Live Screen**.
2. From the Windows Start menu, launch **Network Camera Manager**.

Launch from Linux

1. In the Apex Settings menu, click **Launch Support Tools**.



2. Click the **Network Camera Manager** icon.

CAMERA CONFIGURATION

DEVICE ADDRESSING

The functions on the Device Addressing tab allow you to find, configure, and view network cameras.

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.

Load in Web Browser

The screenshot shows the 'Network Camera Manager' web interface. At the top, there's a header with the title 'NETWORK CAMERA MANAGER' and version '2.0.0.17'. Below the header is a table with columns: Model, Name, IP Address, MAC, Web Page, and Firmware. The table lists several devices: CM-816, HD30, Apex Server, OE-CAE08, NV80-PS8, and Not Defined. Each device has a 'Load' link in the 'Web Page' column. Below the table are two dropdown menus: 'Model Filter (All)' and 'All Networks'. To the right of these are fields for 'Find MAC' and a 'Find' button. A 'Refresh' button is also present. At the bottom, there are four panels: 'Network Configuration' (with IP Address, Subnet, Gateway, DNS, and DHCP checkboxes), 'Firmware Update' (with 'Get Firmware', 'Browse', and 'Apply' buttons), 'Camera Credentials' (with 'admin' and '1234' fields), and 'Camera Settings' (with 'System' and 'Video' tabs). Annotations with orange lines point to the 'All Networks' dropdown (labeled 'Network'), the 'Model Filter (All)' dropdown (labeled 'Camera Model'), and the 'Load in Web Browser' text (pointing to the 'Load' links in the table).

Model	Name	IP Address	MAC	Web Page	Firmware
☐ CM-816	CM-816	10.0.30.160	00:D0:89:0D:8E:76	Load	
☐ HD30	HD30	10.0.30.152	00:D0:89:0D:9B:46	Load	
☐ Apex Server	Apex Server	10.0.30.156		Load	
☐ OE-CAE08	OE-CAE08	10.0.30.151	00:D0:89:11:27:E2	Load	
☐ NV80-PS8	NVR	10.0.30.153	00:D0:89:13:3A:33	Load	
☐ Not Defined	Not Defined	10.0.30.157	00:D0:89:13:70:A9	Load	

Model Filter (All) All Networks Devices Found: 6 Find MAC: Find Devices Selected: 0 Refresh

Network Configuration: IP Address Subnet Gateway DNS DHCP Apply

Firmware Update: Get Firmware Browse Apply

Camera Credentials: admin 1234

Camera Settings: System Video

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. It is strongly recommended that the password be changed after the initial setup to prevent unauthorized access. The default username and password for OpenEye IP cameras are as follows.

Username – admin
Password – 1234
3. The viewer software is now opened in Internet Explorer.



Note The viewer software will install automatically the first time you connect to the camera. If your internet browser does not install the viewer software, check the security settings or ActiveX controls and plug-in settings. If your internet browser asks for permission to install the ActiveX control, you must allow the ActiveX control to continue the installation. If you are prompted to allow an add-on, click **Allow**.

4. You can now configure your camera using the Viewer Software. For more information on using Viewer software, please see the user manual for your camera.

SETUP & CONFIGURATION

CONNECTING TO THE CAMERA

1. Locate the camera on the **Device List**.
2. Click Load to open the camera in the web viewer.
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.

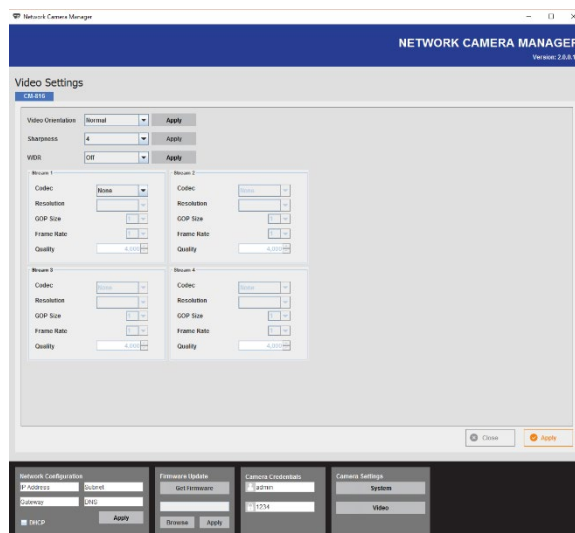
Administrator/User Privileges

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 codec(s).

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.

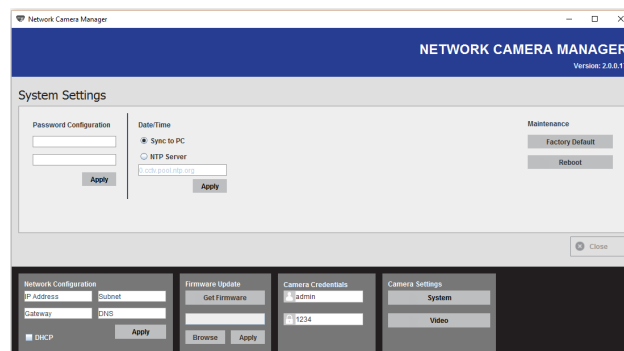


SYSTEM SETTINGS

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 firmware.

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



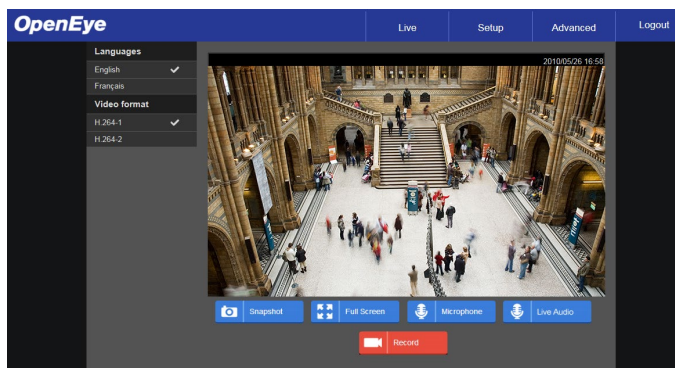
VIEWER TABS

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.



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

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



Note If you are using Windows Vista or 7, you will need to change the Snapshot location. Windows UAC does not allow internet programs to write directly to C:\ for security reasons.

Record – Click **Record** to star recording live video. Click **Record** again to stop recording video. Recorded video will be saved automatically to the designated location on the local workstation. The default location is C:/. This location can be changed in **File Location**, in the **System** menu.



Note If you are using Windows Vista or 7, 8, or 10, you will need to change the video clip location. Windows UAC does not allow internet programs to write directly to C:\ for security reasons.

Microphone – PC Network Camera Manager Software audio to camera, enables audio through an audio out on the camera.

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



Note The Microphone and Live Audio functions are only available on enabled cameras. If the camera is not enabled for these features, an error message will display.

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 based 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.

Time Format – Select your desired time format.

Sync With Computer Time – Select to synchronize the camera date and time with the connected recorder.

Sync with NTP Server – Manual allows you to define the date and time manually. 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 www.ntp.org.

IP ADDRESS

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

Get IP an Address Automatically (DHCP)

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

IP Address

General

☒ Get IP address automatically

☐ Use fixed IP address

IP address: 10.0.30.104

Subnet mask: 255.255.255.0

Default gateway: 10.0.30.254

Primary DNS: 10.0.0.21

Secondary DNS: 10.0.0.10

☐ Use PPPoE

User name:

Password:

Save

Advanced

Web Server port: 80

RTSP port: 554

MJPEG over HTTP port: 8080

HTTPS port: 443

Save

IPv6 Address Configuration

☐ Enable IPv6

Address:

Save



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.

- **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.



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

- **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.

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 user name 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 user name on the **User Name** 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 user name on the **User Name** 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.

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.



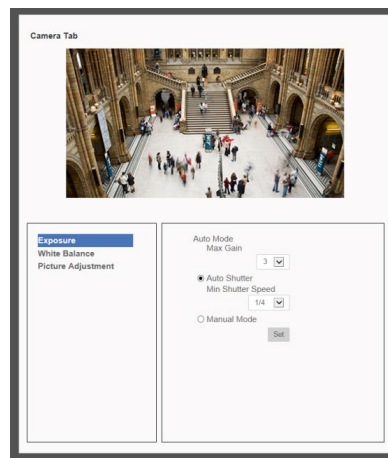
Note These settings can drastically affect the camera image. OpenEye suggests that these settings are only modified by a CCTV professional, or at the instruction of a technical support representative.

Exposure

Min Shutter Speed – Choose a pre-determined shutter speed.

Manual Mode – Changing the shutter mode to manual will allow you to select the minimum shutter speed that the camera will use. This can drastically change the amount of light entering the camera.

Click **Set** to save your changes.



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.

Click **Set** to save your changes.

Picture Adjustment

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 form **-6** to **19** (most saturation).

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

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

D-WDR Function– Turn the Digital Wide Dynamic Range Off, or adjust between **1** and **3**.

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 window(s). 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, check the **On** checkbox.



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

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

Motion Detection

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

Motion Detection Windows

Triggered Action

☐ Enable alarm output low

☐ Record video clip

☐ Send alarm message by FTP ☐ Send alarm message by E-mail

☐ Upload image by FTP ☐ Upload image by E-Mail

☐ Send HTTP notification

Note: Email image attachments and FTP uploads require MJPEG streaming.

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

Save

Add Detection Window

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



Note The selected motion detection square will be red.

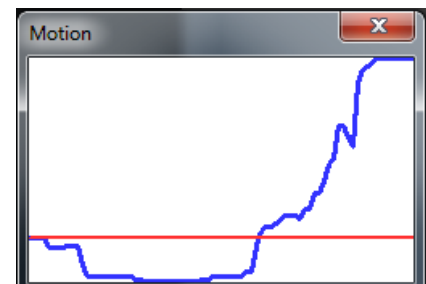
3. Arrange and size the motion detection window as desired.
4. Click **Save**.

Delete Motion Detection Window

1. Click to select the desired motion detection window.
2. Click **Delete**.

Motion Window

The motion window displays a red line and a dynamic blue line. The red line represents the Detection Level. The blue line will also be present if motion is present in the camera frame. The blue line will react accordingly based on the motion in the camera frame.



STREAMING SETTINGS

VIDEO RESOLUTION

The camera provides eight codec options under video resolution (two single streaming options, two sets of dual streaming options, and two sets of tri-streaming options):

- H.264 Only
- MJPEG Only (MJPEG reserved for Live View only)
- H.264 + H.264
- H.264 + MJPEG (MJPEG reserved for Live View only)
- H.264 + H.264 + H.264
- H.264 + H.264 + MJPEG (MJPEG reserved for Live View only)
- H.264 + H.264 + H.264 + MJPEG (MJPEG reserved for Live View only)



The screenshot shows a 'Video Format' configuration window. It includes sections for 'Video Resolution' (with a dropdown for 'H.264 + H.264' and input fields for 'H.264-1 format' and 'H.264-2 format'), 'Video Orientation' (with a dropdown for 'Normal video'), 'GOP Settings' (with input fields for 'H.264-1 GOP Length', 'H.264-2 GOP Length', 'H.264-3 GOP Length', and 'H.264-4 GOP Length'), and 'H.264 Profile' (with dropdowns for 'H.264-1', 'H.264-2', 'H.264-3', and 'H.264-4'). Each section has a 'Save' button.

Once a codec option is selected, multiple resolutions are available for each stream.



Note Due to resource management, some resolutions may be unavailable when selecting a dual stream option.

Video Orientation

Normal Video – The video will be oriented as the camera position dictates.

180 Degree Rotate – Rotate the video 180 degrees.

90 Degree Clockwise – Rotate the video 90 degrees clockwise.

90 Degree Counter Clockwise – Rotate the video 90 degrees counter clockwise.

Mirror Video – Flip the video across the vertical axis.

Mirror + 180 Degree Rotate – Flip the video across the vertical axis and rotate 180 degrees.

GOP Size

The Group of Pictures settings allow 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 (2~64). 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. Decreasing this number decreases the number of P-Frames between each I-frame; increasing the file size of the stream, but decreasing the risk of video decoding errors. OpenEye recommends setting the GOP to be approximately twice the frame rate (e.g.: if the frame rate is 10 IPS, then set the GOP to 20).

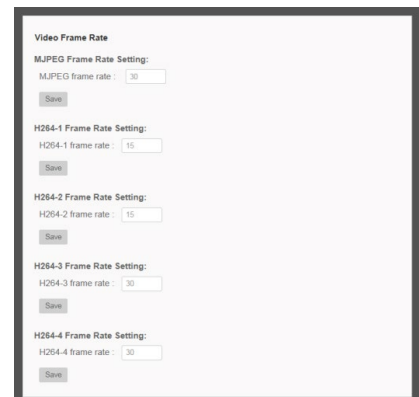
H.264 Profile

The H.264 Profile may need to be changed if you are using a third party recorder that is not capable of decoding H.264 Main Profile video compression. Select compatible compression type for each stream if necessary.

VIDEO FRAME RATE

Setting the camera to transmit fewer frames can save bandwidth. Use the Frame Rate Control screen to adjust the frame rate of each stream.

Each of the MJPEG and H.264 streams can have a separate frame rate setting from 1 to 30 frames per second.



The screenshot shows a 'Video Frame Rate' control interface. It contains four sections, each with a 'Save' button and a numeric input field for 'frame rate':

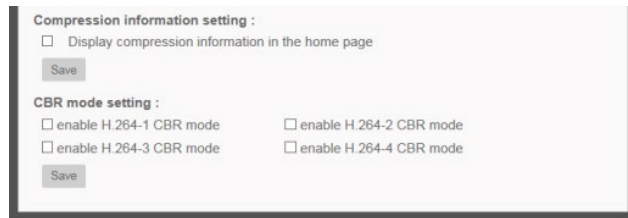
- MJPEG Frame Rate Setting:** Input field shows 30.
- H264-1 Frame Rate Setting:** Input field shows 15.
- H264-2 Frame Rate Setting:** Input field shows 15.
- H264-3 Frame Rate Setting:** Input field shows 30.
- H264-4 Frame Rate Setting:** Input field shows 30.



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.

VIDEO COMPRESSION



The screenshot shows a web interface for video compression settings. It is divided into two main sections. The first section, titled 'Compression information setting:', contains a single checkbox labeled 'Display compression information in the home page' and a 'Save' button below it. The second section, titled 'CBR mode setting:', contains four checkboxes arranged in two columns: 'enable H.264-1 CBR mode', 'enable H.264-2 CBR mode', 'enable H.264-3 CBR mode', and 'enable H.264-4 CBR mode'. A 'Save' button is located at the bottom left of this section.

You can select an MJPEG / H.264 compression mode on the video compression page appropriate for your application. You can also select to display compression inflation on the Live Screen.

MJPEG compression settings include:

- High compression, low bitrate, low quality
- Middle compression, default
- Low compression, high bitrate, high quality

H.264 compression settings include:

- 1024kbps, highest compression, lowest quality
- 2048kbps
- 4096kbps, middle compression, default
- 6144kbps
- 8192kbps, low compression, highest quality

CBR Mode Setting

- The Constant Bit Rate mode allows you to lock in the bit rate of the H.264 stream. If this setting is not enabled, bit rate may fluctuate based on available bandwidth.

LBR Mode Setting

- Low Bit Rate mode enables H.264+ encoding (smart compression) to reduce bit rate. It is recommended not to set the frame rate below 15FPS when LBR is enabled.

ADVANCED

SYSTEM SETTING

NETWORK SETUP

The Network Setup settings will automatically be set at the recommended default after the camera connection is made.

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

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 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.

- **NOH** – NO stands for Normally Open.
- **NC/L** – NC stands for Normally Closed.

The screenshot shows the 'Alarm Application' configuration window. It includes sections for 'Alarm Switch' (radio buttons for Off, On, By schedule), 'Alarm Type' (radio buttons for Normal close, Normal open), 'Alarm Output' (radio buttons for Output high, Output low), and 'Triggered Action' (checkboxes for Enable alarm output, Send message by FTP, Upload image by FTP, Send HTTP notification, IR cut filter, Send message by E-Mail, Upload image by E-Mail, Record video clip). There is also a 'File Name' field and checkboxes for 'Add date/time suffix', 'Add sequence number suffix', and 'Overwrite'. A 'Save' button is at the bottom.

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.

Alarm Output – Choose high or low.

Trigger Action – Specify which actions the camera should take when motion is detected.

- **Send Alarm Message by FTP / E-mail** – Select to send an alarm message to a configured FTP and/or e-mail address when motion is detected. When sending to email, the alarm notification is text only. When sending to FRP, the alarm notification will upload a text file to the FRP location.
- **Upload Images by FTP** – Select to assign an FTP site and configure various parameters as shown in the figure below. When motion is detected, event images will be uploaded to the appointed FRP site.
- **Upload Image by E-mail** – Select to assign an e-mail address and configure various parameters as shown in the figure below. When motion is detected, event images will be sent to the appropriate e-mail address.



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.

The screenshot shows a web-based configuration interface titled "Tampering and Network Failure Detection". It is divided into two main sections: "Tampering Alarm" and "Network failure detection".

Tampering Alarm Section:

- Tampering Alarm:** Radio buttons for "Off" (selected), "On", and "By schedule". A "Please select ..." dropdown is next to "By schedule".
- Tampering Duration:** A label "Minimum duration" followed by a text input field containing "20" and a "sec" unit label.
- Triggered Action:** A group of checkboxes:
 - ☐ Enable alarm output (with a dropdown menu showing "low")
 - ☐ Record video clip
 - ☐ Send message by FTP
 - ☐ Send message by E-Mail
 - ☐ Upload image by FTP
 - ☐ Upload image by E-Mail
 - ☐ Send HTTP notification
- Note:** "Email image attachments and FTP uploads require MJPEG streaming."
- File Name:** A label "File name:" followed by a text input field containing "image.jpg".
- File Name Options:** Radio buttons for "Add datetime suffix" (selected), "Add sequence number suffix (no maximum value)", "Add sequence number suffix up to" (with a text input field containing "0" and "and then start over"), and "Overwrite".
- Save:** A button at the bottom of the section.

Network failure detection Section:

- Detection Switch:** Radio buttons for "Off" (selected), "On", and "By schedule". A "Please select ..." dropdown is next to "By schedule".
- Detection Type:** A label "Ping the IP address" followed by a text input field containing "0.0.0.0", a "every" label, a text input field containing "1", and a "minutes" unit label.
- Triggered Action:** A group of checkboxes:
 - ☐ Enable alarm output (with a dropdown menu showing "low")
 - ☐ Record video clip
 - ☐ Send message by FTP
 - ☐ Send message by E-Mail
- Save:** A button at the bottom of the section.

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

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.

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

If you are using Windows Vista, 7, 8, or 10, you will need to change the Snapshot location. Windows UAC does not allow internet programs to write directly to C:\ for security reasons.



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.

The screenshot shows a web-based configuration interface for a Network Share. It is divided into several sections:
1. **Device Information**: A table showing 'Device type: Network Share', 'Free space: 0GB', 'Status: offline', 'Total size: 0GB', and 'Full: No'.
2. **Storage Settings**: Includes a 'Protocol' dropdown set to 'SMB/CIFS', and input fields for 'Host', 'Share', 'User name', and 'Password'. A 'Save' button is below.
3. **Storage Tools**: Contains a 'Format device' button.
4. **Disk cleanup setting**: Features a checkbox for 'Enable automatic disk cleanup', a field for 'Remove recordings older than' (set to 1) with a 'day(s)' dropdown, and a field for 'Remove oldest recordings when disk is' (set to 85) with a '% full' label. A 'Save' button is below.
5. **Recording list**: Includes a date range selector from '2010-05-31' to '2010-05-31' with a 'Search' button. Below this is a table with columns 'FileName' and 'Size', an empty table body, and 'Remove', 'Sort', and 'download' buttons at the bottom.

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**.

Weekday	Start time	Duration
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

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:

1. Select **Disable** for the type of **Recording Schedule**.

—OR—

Click on the desired weekday schedule and then click **Delete**.

Schedule

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

The screenshot shows a 'Schedule' configuration window. It contains a table with 10 rows (numbered 1-10) and 3 columns: 'Weekday', 'Start time', and 'Duration'. Each row has a series of checkboxes for the days of the week. Below the table, there are checkboxes for 'Sun', 'Mon', 'Tue', 'Wed', 'Thu', 'Fri', and 'Sat'. Below these are radio buttons for 'Day', 'Night', and 'Time' (which is selected). To the right of the 'Time' radio button are input fields for 'Start time' (set to '00:00') and 'Duration' (set to '24:00'). At the bottom are 'Save' and 'Delete' buttons.

	Weekday	Start time	Duration
1	- - - - -	----	----
2	- - - - -	----	----
3	- - - - -	----	----
4	- - - - -	----	----
5	- - - - -	----	----
6	- - - - -	----	----
7	- - - - -	----	----
8	- - - - -	----	----
9	- - - - -	----	----
10	- - - - -	----	----

☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

☐ Day
☐ Night
☒ Time

Start time : 00:00 Duration : 24:00

Save Delete

To create a schedule:

1. Select a Schedule set (1-10).
2. Check the desired **week day** 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.

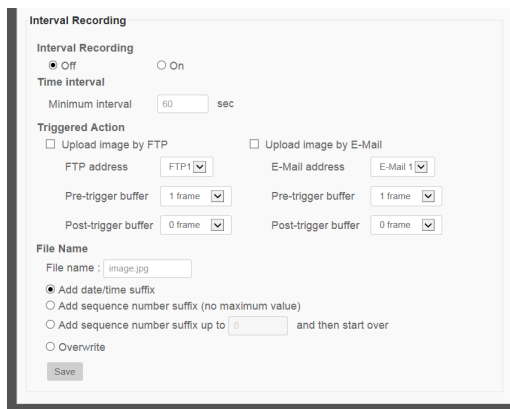
1. Turn Interval Recording **On** or **Off**.
2. Designate the **Time Interval** (seconds).
3. Designate the **Trigger Action** using the appropriate checkbox, and then use the dropdown menus to further manage the Trigger Action.
4. Type a **file name**, and then choose how the file name is multiplied 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.



The screenshot shows the 'Interval Recording' settings panel. At the top, there's a section for 'Interval Recording' with radio buttons for 'Off' (selected) and 'On'. Below this is the 'Time Interval' section with a 'Minimum interval' input field set to '60' and a unit dropdown set to 'sec'. The 'Triggered Action' section has two checkboxes: 'Upload image by FTP' (unchecked) and 'Upload image by E-Mail' (unchecked). Under 'FTP address', there's a dropdown menu set to 'FTP1'. Under 'E-Mail address', there's a dropdown menu set to 'E-Mail 1'. Below these are two pairs of dropdown menus for 'Pre-trigger buffer' and 'Post-trigger buffer', both set to '1 frame' and '0 frame' respectively. The 'File Name' section has a 'File name' input field with 'image.jpg' entered. Below this are four radio buttons: 'Add date/time suffix' (selected), 'Add sequence number suffix (no maximum value)', 'Add sequence number suffix up to [input field] and then start over', and 'Overwrite'. A 'Save' button is at the bottom.

MAINTENANCE

On the Maintenance page you can export the cameras current configuration, 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 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

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 Factory Default is used, you will need to use the Network Camera Manger to find the desired camera(s) again.

SOFTWARE



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

PICTURE SETTING

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 from users.

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

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.

TV SYSTEM

Set the desired TV mode for your camera. The default setting is NTSC60, which is optimal for scenes that do not have high contrast.

WDR2 enables WDR mode which is the optimal mode for high contrast scenes.

HOT SPOT

The Spot feature allows you to transmit different parts of the camera image on separate streams. Each stream is displaying 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. Three options are available: Date, Time, and a Custom String (up to 20 alphanumeric characters).

STREAMING SETTING

AUDIO

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

Audio Output Delay – Sets a delay in the audio transmission. This is used when there is significant lag in video transmission to help sync the audio and video.

Volume – Sets the audio output volume level (for listening to live audio).

Network Transfer – Sets the camera to continue transmitting audio even if the video stops.

LOGOUT

The Logout tab allows you to switch between users.

1. Click **Logout**.
2. If prompted to close the browser window, click **Yes**.
3. Using the Network Camera Manager Software, select the camera you wish to view in the Viewer Software.
4. Click **Browse**.
5. Login as the appropriate user.

SPECIFICATIONS

CAMERA SPECIFICATIONS

Model	OE-C7564-AWR
Maximum Resolution	4MP
Image Sensor	1/3" Progressive CMOS
Video Compression	H.264 / MJPEG
Frame Rate	25/30 IPS @ 4MP H.264
ONVIF	Profile S
Streaming	Up to 3 simultaneous streams
Browse Support	Internet Explorer (6.0+) / Chrome / Firefox / Safari
Day / Night	True Day/Night (IR Cut Filter)
Wide Dynamic Range	Shutter WDR On / Off @ 3.6MP
Lens	3-9mm
Horizontal Field of View	109° (Wide), 33° (Tele)
Iris	P-Iris F 1.7
Minimum Illumination @ 30IRE	Color: 0.1 Lux B/W: 0.01 Lux
White Balance	Auto, Manual, ATW, One Push
Auto White Balance Range	2700K~7800K
Backlight Compensation	Yes
Auto Gain Control	Yes
IP Rating	IP66 Outdoor
Operating Temperature	w/o Heater: -30 ~ 50 °C (-22 ~ 122 °F) w/Heater: -50 ~ 50 °C (-58 ~ 122 °F)
Heater (Cold Start)	w/o Heater: -10 ~ 50 °C (14 ~ 122 °F) w/Heater: -40 ~ 50 °C (-40 ~ 122 °F)
Heater Operational Threshold	0 °C On, 2°C Off
Power Consumption	System: 3.2W Zoom/Motorized Lens: + 0.55W / IR LED: +3.2W / ICR Switching: +0.5W / Heater: +5.5W
Input Voltage	DC 10V-48V / AC 24V / PoE (802.3af)
PoE Class	3
IR Range	Up to 131ft (40m)
IR LED	Auto / LED On / LED Off / Smart IR / Light Sensor/Day/Night
Analog Output	1.0 Vp-p / 75 Ω, BNC

Model	OE-C7564-AWR
Audio In/Out	1 / 1 Stereo phone jack, Φ 3.5 mm
Alarm In/Out	1 / 1 4-Pin Terminal Block
microSD Card Slot	microSD / SDXC 64GB Support
Weight	1.69lb (770g)
Dimensions	$\emptyset$ 5.2 x 4.6 in ($\emptyset$ 133.8 x 117.4 mm)
Housing / Dome Cover	Plastic / Metal Housing
Tilt / Rotation	Tilt :80° / Pan: 355° / Rotation: -100~100 °
Country of Origin	Taiwan

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