

# **HD838IRM**

HD Indoor/Outdoor IP Camera
User Manual





AVX-HD838IRM 8MP Indoor/Outdoor IP Camera
Operations Manual
Manual Edition 37084AC – January 2024
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The following words and symbols mark special messages throughout this guide:

**WARNING:** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

#### **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 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 AvertX Customer Support.

## 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 lens 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.
   (-22°F~ 140°F / -30°C ~ 60°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 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.

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste in accordance with Directive 2002/96/EC. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By proper waste handling of this product you ensure that it has no negative consequences for the environment and human health, which could otherwise be caused if this product is thrown into the garbage bin. The recycling of materials will help to conserve natural resources.

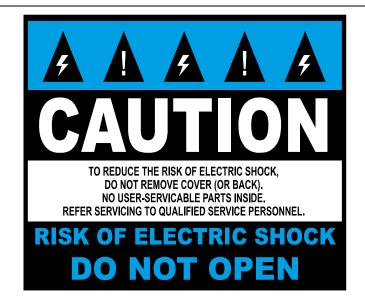
For more details information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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.
REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

## **CAUTION**



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# INTRODUCTION

## **OVERVIEW**

The AVX-HD838IRM HD Indoor/Outdoor IP camera is capable of streaming real time ultra HD 4K video. The dual streaming can be used in a variety of building surveillance installations.

Power over Ethernet (PoE), eliminates the need for separate power cables and significantly reduces installation costs. The light weight and small size allow for quick and simple installation.

The AVX-HD838IRM is equipped with True Wide Dynamic Range, which dramatically improves overall image quality in environments with various levels of illumination. The IR LEDs light up the night and work in tandem with the 8MP resolution and smart compression to bring optimum nighttime video without extreme bandwidth and storage consumption.

## **Camera Default Settings**

IP Address	ss 192.168.51.2		
Username	admin		
Password	All AvertX IP cameras ship without a default password The admin user password can be set using the following methods:  1. ProConnect recorders running software version 2.1 or newer will automatically set a new unique password by:  > Connecting to the built-in PoE switch > Connecting to a network switch through the camera network port and selected then adding the camera in setup  2. Connect to the camera directly through a Web Browser and follow the onscreen prompts.  3. Use the Network Camera Manager (NCM) Utility.		

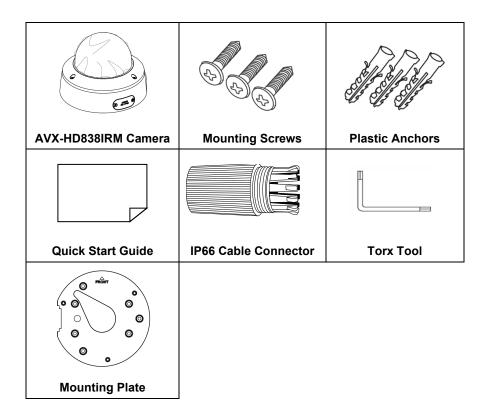
## **Product Features**

- Smart Analytics with Person & Vehicle Detection
- 4K Resolution
- Motorized Auto Focus Zoom Lens
- Edge Storage on a MicroSD Card (up to 128GB)
- Integrated IR
- Record still shots to edge storage
- H.264+ Smart Compression
- Dual Streaming
- True Wide Dynamic Range (WDR)
- Paintable Snap-on Cover
- IK10 Vandal Resistant
- True Day/Night
- Weatherproof (IP67 Outdoor Rated)

# **GETTING STARTED**

# **BOX CONTENTS**

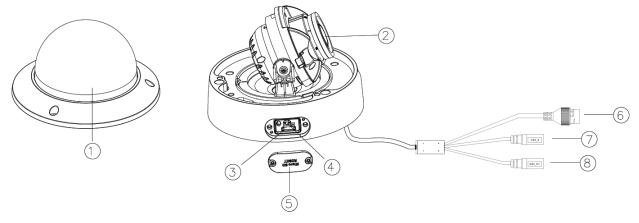
Before proceeding, please check that the box contains the items listed here. If any item is missing or has defects, do not install or operate the product and contact your dealer for assistance.



# **CAMERA OVERVIEW**

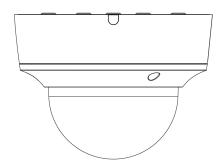
Before installing or connecting the bullet camera, please refer to this section and complete preparations for camera setup and all switch settings.

# **Camera Diagram**



1	Dome Cover	
2	Lens	
3	MicroSD Card Slot	Supports up to 128GB MicroSD card
4	Reset Button	<ul> <li>Use the reset button to restore the factory default settings. To reset your camera:</li> <li>1. Disconnect the cat5e cable from the camera for 30 seconds.</li> <li>2. Hold the reset button down while reconnecting cat5e and continue holding the reset button for 30 seconds after reconnecting.</li> <li>3. Allow 2 minutes before attempting to rediscover camera.</li> </ul>
5	Removable Cover	
6	RJ-45 Connector	
7	Audio In	Requires stereo input
8	Audio Out	

# **Dimensions**



**Dome Width** – 3.95" (100.4 mm)

Base Width - 6.04" (153.3 mm)

**Height** – 4.39" (111.6 mm)

## **Connections**

The AVX-HD838IR cameras use Power over Ethernet (PoE). The only connection on the camera is the RJ45 Ethernet dongle located on the rear of the camera. Connect one end of the Ethernet cable to the dongle, and connect the other end to the recorder, or to a PoE switch.

- Protect the network cable connection from water damage by running the cord inside a wall or ceiling, or through conduit.
- If passing the cord through a wall or ceiling, drill a 7/8" hole.
- For outdoor installations, seal any holes in the wall or ceiling with silicone caulk to protect against
  water intrusion.

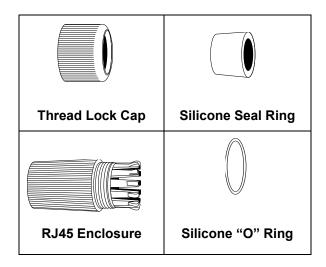
AvertX recommends using Cat5e cable to connect the camera to your network. For the best transmission quality, the cable length should not exceed 300 feet.

## **Weather Resistant Cable Connector**

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

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

#### **Included Pieces:**

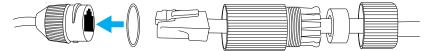


To Install the weather resistant cable connector:

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

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

RJ45 Enclosure



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

Tip: To remove the RJ45 enclosure from the camera cable, tape down the locking tab on the RJ45 plug with electrical or office tape.

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

Note: Before installing this camera, please refer to the Quick Start Guide included in the camera box.

# **Ceiling and Wall Installation**

**CAUTION:** Using the included mounting screws is required to maintain IP67 outdoor rating. Using other screws or modifying the camera may allow water intrusion and void the warranty.

# DO NOT DRILL HOLES OR ATTEMPT TO ENLARGE THE MOUNTING HOLES IN THE BASE OF THE CAMERA.

Dome cameras are ideal for installation on a ceiling or soffit location. If you are installing the camera on a wall without a bracket, see Consideration for Wall Installations.

- 1. If mounting on a concrete surface, use the included nylon anchors for mounting and the provided screws. Using the mounting template, drill a ¼" hole with a masonry bit and insert the nylon anchors. Do not use concrete screws or other screws as they may damage the camera base and/or not seat properly on the rubber gasket in the base of the camera allowing water to potentially enter the camera and void your warranty.
- 2. If mounting the camera onto **dry wall**, **plaster board**, **sheet rock** or similar surfaces, drill a ½" hole for the nylon anchors included in the hardware packet and **use only the screws provided**.
- 3. If mounting the camera onto a wood, OSB, particle board or metal surface, pre-drill a 1/16" pilot hole and use only the screws provided.
- 4. If mounting the camera onto other surfaces such as **fiber glass**, **fiber concrete siding**, etc., use the appropriate anchor suitable for the density and thickness of the surface and **only the screws provided**.
- 5. Remove the dome cover following the instructions on the sticker on the base of the camera.
- 6. Use the included mounting template to pre-drill holes for the mounting screws and, if passing the cable through the ceiling or wall, drill a 3/4" hole for the camera cable connector.
- 7. Connect an Ethernet cable to the dongle on the camera.
  - Protect the network cable connection from water damage by running the cord inside a wall or ceiling, or through conduit.
  - For outdoor installations, seal any holes in the wall or ceiling with silicone caulk to protect against water intrusion.
- 8. Affix the base of the camera to the wall with the included self-tapping screws and wall anchors. Do not over tighten the mounting screws.
- 9. Loosen adjustment screw and adjust the camera to the desired angle.
- 10. If surface mounting the cable, remove the cable knockout on the side of the dome cover.
- 11. Replace the dome cover. To install, align knockout tab in housing to cable. For proper dome alignment and seal, alternate tightening screws. Tighten dome cover screws just enough so the bottom of cover is flush with the base for a good seal.
- 12. Adjust the position of your camera.
- 13. Replace and secure the dome cover.

Tip: Use the AvertX Connect mobile app to view the camera while adjusting view.

**Note:** AvertX recommends sealing the opening at the wall and at the base of the camera with silicone caulking.

# **Resetting the Camera**

Use the reset button to restore the factory default settings. To reset your camera:

- 1. Disconnect the cat5e cable from the camera for 30 seconds.
- 2. Hold the reset button down while reconnecting cat5e and continue holding the reset button for 30 seconds after reconnecting.
- 3. Allow 2 minutes before attempting to rediscover camera.

## **Cleaning the Lens Cover**

The Lens Cover of the AVX-HD838IRM is extremely durable but can be damaged if cleaned improperly.

### To clean the lens cover:

- To clean dust or loose dirt, use compressed air.
- To clean smudges or stuck on dirt, use warm water with a few drops of dish soap and a clean microfiber cloth.

**CAUTION:** Do not use solvents, paper towels, newspaper, or other rough materials to clean the lens cover. This can scratch the lens cover and cause IR distortion.

# CONNECTING

## **BENCH TEST**

AvertX recommends bench testing your camera(s) before installation. This will confirm that your camera is functioning correctly before it is installed and possibly out of reach.

To bench test your camera, attach the camera network connector to your recorder and test whether or not the camera is functioning correctly. Once the camera is connected to the recorder, test all functions to ensure proper operation.

If the camera will not connect or is not functioning correctly, do not install, and contact AvertX Support.

## **NETWORK CAMERA MANAGER**

Network Camera Manager (NCM) is a software tool that allows you to quickly and easily connect and configure your AvertX 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 AvertX ProConnect recorders and is also available for download at **www.avertx.com/support** for installation on your personal computer or laptop.

## Launch Network Camera Manager

Open the Settings menu, go to the **Cameras** page and click **Advanced** (located towards to top-middle on the page).

**Note:** If you cannot connect to the camera you may need to change the camera's IP address to match your network settings.

## Finding Network Devices

Click Refresh to reload the Device List.

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

## Changing the IP Address

AvertX recorders will automatically apply a DHCP IP address. If you are not connecting the camera to an AvertX recorder or DHCP network, you must set a static IP address. NCM allows you to do this in the bottom left corner:

- 1. Select the applicable camera.
- Enter the IP address, Subnet Mask, Gateway, and DNS.
- 3. Click Apply.
- 4. Wait 10 seconds and click Refresh.

## CONNECTING TO THE CAMERA

## Connecting in a Web Browser

Type the IP address of the camera in a web browser.
 OR -

Use the **Network Camera Manager** software and locate the camera on the list, then click **Load** in the row of the desired camera.

2. Log in to the camera with the appropriate User Name and Password.

#### Username and Password

**IMPORTANT:** AvertX cameras ship without a default password; the admin password is required to gain access or establish a connection.

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

- 1. AvertX ProConnect recorders will check the camera for a password once connected.
  - i. If AvertX software does not detect a password, it will set the camera password to a secure text string of 8 to 16 characters (Including upper-case letters, lower-case letters, digits and special characters (!"#\$%&'()\*+,-./:;<=>?@[\]^\_`{|}~ space)).
- 2. Network Camera Manager
- 3. Camera Web Browser

## **Connecting a Stream**

AvertX IP cameras are optimized for use with AvertX ProConnect recorders, but you can also connect to your AvertX IP cameras using third party software like VLC media player (<a href="http://www.videolan.org">http://www.videolan.org</a>). To connect the camera, you may need to provide the stream URL. All AvertX IP cameras are capable of delivering two RTSP streams over HTTP. The stream URLs are listed below:

- rtsp://< IPADDRESS >/Streaming/Channels/101
  - o H.264 Stream 1
- rtsp://< IPADDRESS >/Streaming/Channels/102
  - H.264 Stream 2

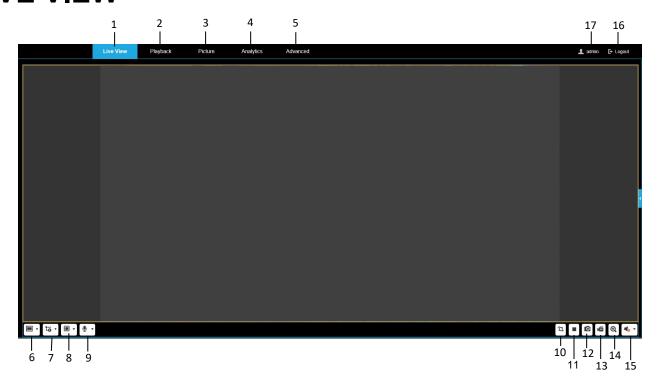
Note: VLC will ask for the user name and password for your AvertX camera.

# LOGGING INTO THE WEB INTERFACE

The default static IP address of the camera is 192.168.51.2, and the default subnet mask is 255.255.25.0. DHCP is turned on by default. If a DHCP server is used in the network, the IP address of your camera will be assigned dynamically.

- Browse to the login page by entering the IP address of your camera in the address bar.
- Enter the username and password, and then click Login.
  - For the first login, use the default username: admin
  - You will be prompted to change the password.

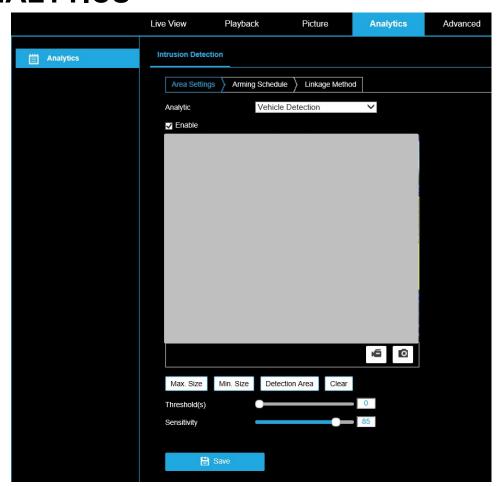
# **LIVE VIEW**



No.	Description
1	Browse to Live View page to view live video
2	Browse to Playback page to view video recorded to onboard storage
3	Browse to the Picture page to view snapshots saved to onboard storage
4	Browse to the Analytics Page
5	Browse to the Advanced Page
6	Change Aspect Ratio in Live View
7	Select which stream displays in Live View
8	Click to select the third-party plug-in
9	Start Two-way Audio (microphone requires stereo input)
10	Pixel Counter
11	Start/Stop Live View
12	Capture live view image and save to selected location
13	Start/Stop Live View
14	Start/Stop Digital Zoom
15	Mute/adjust volume
16	Exit the device interface
17	Current user account

37084AC

# **ANALYTICS**



### **Intrusion Detection**

## **Area Settings**

Analytic: Choose between Person Detection and Vehicle Detection.

Use the checkbox to **Enable/Disable** the selected analytic.

Start Recording: Start/Stop a live video recording and save to selected location.

Capture: Capture live view image and save to selected location.

Max. Size: Create a maximum size detection box.

Min. Size: Create a minimum size detection box.

**Detection Area:** Create a shape to determine the area where Smart Analytics is enabled.

Clear: Clear all previously created areas.

Threshold(s): Time in seconds the target remains in the area before triggering an alert.

**Sensitivity:** The value defines the size of the object which can trigger the alarm.

Save: Save Area Settings.

#### To Create a Detection Area:

- 1. Click on **Detection Area**.
- 2. Click on the image to set the first corner of the detection area.
- 3. Move to the next corner point and click to set. Repeat this process to complete the shape.

Note: The detection area can be adjusted by clicking on a corner and dragging to the new position.

#### To Create a Min Size Detection Box:

- Click on Min Size.
- Click and drag a box around a person or vehicle at the furthest distance from the camera you would like to detect.

#### To Create a Max Size Detection Box:

- 1. Click on Max Size.
- 2. Click and drag a box around a person or vehicle at the closest distance to the camera you would like to detect.

#### To Set a Threshold Time:

Move the slider to the desired time (in seconds).

**Note:** Threshold is the amount of time a person or vehicle must be in the detection area boundaries to trigger an alert. For example, if threshold is 0, an alert is triggered immediately when a person or vehicle is detected; if threshold is 8, an alert is triggered when a person or vehicle has been in the detection area for 8 seconds.

### To Set a Sensitivity Time:

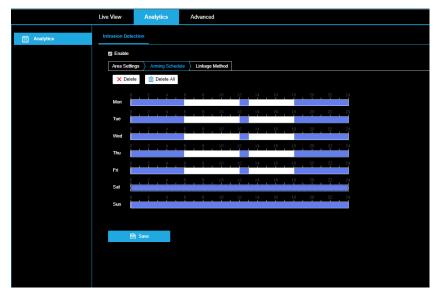
Move the slider to the desired sensitivity (between 1-100).

**Note:** The value of the sensitivity defines the size of the object which can trigger the alarm. Setting the sensitivity too high can result in increased false alerts.

**Save** after configuring area settings.

## **Arming Schedule**

**Note:** Arming Schedule applies only to event-triggered recording video and snapshots to onboard storage and does not impact what, when, or how video is recorded on AvertX recorders.



Check **Enable** and set a weekly schedule for the times when Intrusion Detection is active.

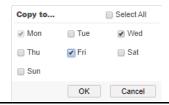
**Delete:** Select a scheduled block of time and to remove it from the schedule.

Delete All: Delete All clears all blocks of scheduled time from the schedule.

## To Set a Weekly Schedule:

- 1. Click and drag inside the timelines to set a time (or times) when an alarm is active.
- 2. Click Save when all of the days are set.

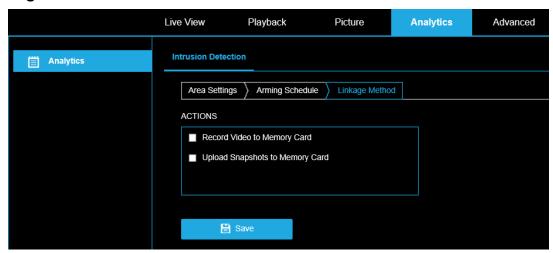
Note: To copy the same hours across multiple days, click to the right of a timeline on Copy to... . . Check the days that will have the same set of hours, then OK.



Note: Enter a range manually by clicking on a timeline. Click Save once the time range has been entered.



## **Linkage Method**



Use the checkboxes to enable the available actions.

**ACTIONS** (Arming Schedule must be configured to enable):

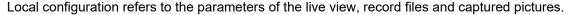
Record Video to Memory Card – Video will be recorded when a person or vehicle is detected.

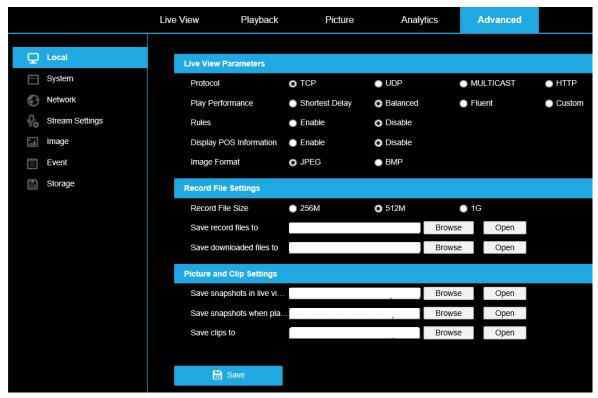
**Upload Snapshots to Memory Card** – Capture the image when a person or vehicle is detected and save the picture to the onboard microSD card.

Click Save after selecting actions.

# **ADVANCED**

## **LOCAL**





#### **Live View Parameters**

Set the protocol type and live view performance.

Protocol Type: TCP, UDP, MULTICAST and HTTP are selectable.

- TCP: Ensures complete delivery of streaming data and better video quality, although the real-time transmission will be affected.
- **UDP:** Provides real-time audio and video streams.
- MULTICAST: It's recommended to select MCAST type when using the Multicast function.
- **HTTP:** Allows the same quality as of TCP without setting specific ports for streaming under some network environments.

Play Performance: Set the play performance to Shortest Delay, Balanced, Fluent or Custom.

**Rules:** It refers to the rules on your local browser, select enable or disable to display or not display the colored marks when the motion detection is triggered.

**Display POS Information:** Your camera does not support this feature.

**Image Format:** Choose the image format for picture capture.

## **Record File Settings**

Set the saving path of the recorded video files. Valid for the record files you recorded with the web browser.

- Record File Size: Select the packed size of the manually recorded and downloaded video files to 256M, 512M or 1G. After the selection, the maximum record file size is the value you selected.
- Save record files to: Set the saving path for the manually recorded video files.
- Save downloaded files to: Set the saving path for the downloaded video files in playback mode.

### **Picture and Clip Settings**

Set the saving paths of the captured pictures and clipped video files. Valid for the pictures you capture with the web browser.

- Save snapshots in live view to: Set the saving path of the manually captured pictures in live view mode.
- Save snapshots when playback to: Set the saving path of the captured pictures in playback mode.
- Save clips to: Set the saving path of the clipped video files in playback mode.

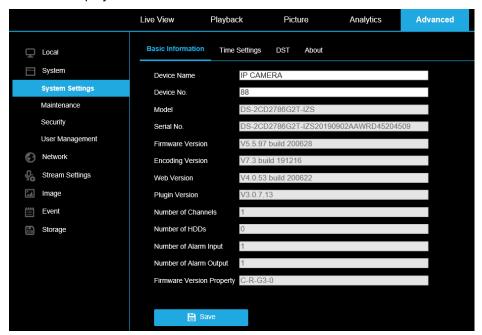
Click Save to save the settings.

## **SYSTEM**

# **System Settings**

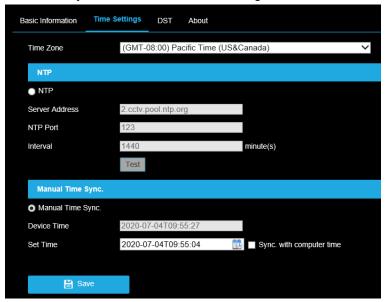
### **Basic Information**

Basic Information displays details about the camera. **Device Name** and **Device No.** are customizable.



## **Time Settings**

Configure the time synchronization and DST settings.



Select the **Time Zone** of your location from the drop-down menu.

## To configure the NTP settings:

- 1. Click to enable the NTP function.
- 2. Configure the following settings:
  - o Server Address: IP address of NTP server.
  - o **NTP Port:** Port of NTP server.
  - o **Interval:** The time between synchronizing actions with NTP server.

Note: You can click the Test button to test the time synchronization function via NTP server.

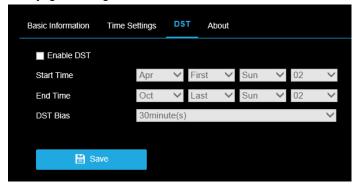
## **To configure Manual Time Sync:**

- 1. Enable the manual time synchronization function. (enabled by default)
- 2. Click the icon to select the date, time from the pop-up calendar.

Note: Check sync with computer time to synchronize the time of the device with that of the local PC.

## DST (Daylight Savings Time)

Configure daylight savings time, if needed.



## To configure DST:

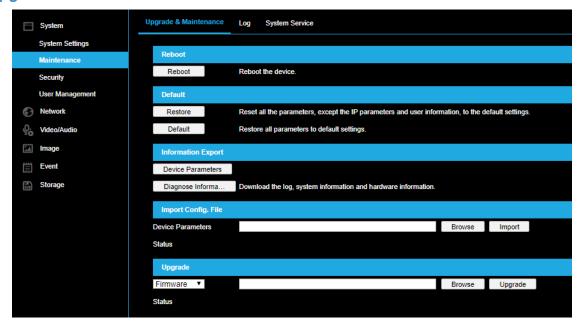
- 1. Select the **Start Time** and the **End Time**.
- 2. Select the DST Bias.
- 3. Click **Save** to activate the settings.

## **About**

Click View Licenses to check information about the open source software that applies to the IP camera.

## **Maintenance**

## **Upgrade & Maintenance**



Process the operations, including reboot, partly restore, restore to default, export/import the configuration files, and upgrade the device.

- Reboot: Restart the device.
- Restore: Reset all the parameters, except the IP parameters and user information, to the default settings.
- **Default:** Restore all the parameters to the factory default.

**Note:** Restoring the default settings will require setting the admin password again; the IP address is also restored to the default IP address.

- **Device Parameters:** Export the current configuration file of the camera. This operation requires the admin password. The user will be required to create an encryption password for the exported file. The encryption password is required when you import the file to other cameras.
- Diagnose Information: Download log and system information.
- Import Config. File: Configuration file is used for the batch configuration of cameras.
- To import a configuration file:
  - 1. Click **Browse** to select the saved configuration file.
  - 2. Click **Import** and input encryption password to start importing configuration file.

Note: The camera will need to reboot after importing configuration file.

• **Upgrade:** Upgrade the device firmware.

## To upgrade your device firmware:

1. Select firmware or firmware directory to locate the upgrade file.

**Firmware:** Locate the exact path of the upgrade file.

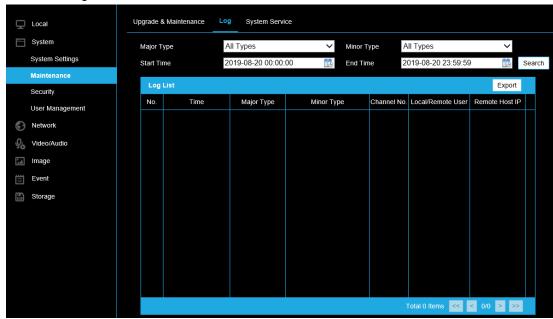
**Firmware Directory**: Only the directory the upgrade file belongs to is required.

2. Click Browse to select the local upgrade file and then click Upgrade to start remote upgrade.

**Note:** The upgrading process will take 1 to 10 minutes. Do not disconnect the camera during the upgrade process; the camera will reboot automatically after upgrade.

## Log

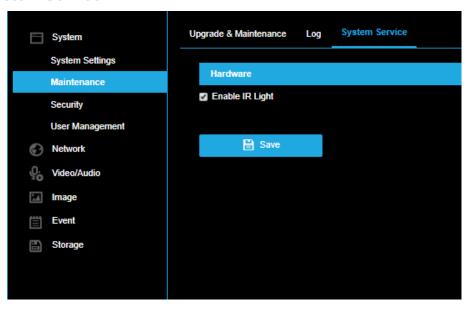
Export the camera log files.



## To export log files:

- 1. Set the log search conditions to specify the search, including **Major Type**, **Minor Type**, **Start Time** and **End Time**.
- 2. Click **Search** to search log files. The matched log files will be displayed on the log list interface.
- 3. Click **Export** to save the log files.

## System Service



Click Enable IR Light and click Save to activate the camera's IR light.

# **Security**

Configure the parameters, including Authentication, IP Address Filter.

### **Authentication**

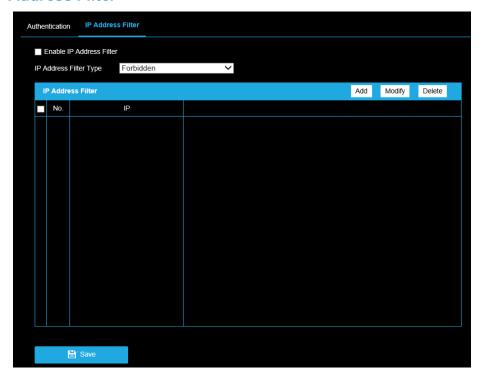


1. Set up authentication method for RTSP Authentication and WEB Authentication.

**CAUTION:** Digest is the recommended authentication method for better data security. Be aware of the risk if you adopt basic as the authentication method.

2. Click Save to save the settings.

### IP Address Filter



## To configure IP Address Filtering:

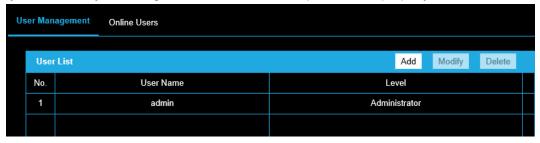
- 1. Check the checkbox of Enable IP Address Filter.
- 2. Select the type of **IP Address Filter** in the drop-down list, **Forbidden** and **Allowed** are selectable.
- 3. Setup the IP Address Filter list:
  - Add: Add an IP Address
  - Modify: Modify an IP Address
  - **Delete**: Delete an IP Address
- 4. Click Save to save the settings.

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# **User Management**

#### As Administrator:

The admin user can **Add, Modify** or **Delete** user accounts, and grant them different permissions. We highly recommend you manage the user accounts and permissions properly.



Note: Admin password is required for adding and modifying a user account.

#### Adding a User

The admin user has all permissions by default and can create, modify or delete other accounts.

The admin user cannot be deleted and you can only change the admin password.

- 1. Click **Add** to add a user.
- 2. Input the Admin Password, User Name, select Level and input Password.
- 3. Check or uncheck permissions for the new user.
- 4. Click **OK** to finish the user addition.

Notes: Up to 31 user accounts can be created.

Users of different levels own different default permissions.

#### Modifying a User

- 1. Select the user from the list and click Modify.
- 2. Modify the User Name, Level and Password.
- 3. You can check or uncheck the permissions.
- 4. Click **OK** to finish the user modification.

## **Deleting a User**

- 1. Click to select the user you want to delete and click **Delete**.
- 2. Click **OK** on the pop-up dialogue box to confirm the deletion.

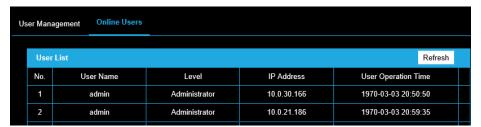
## As Operator or User

An operator or user can modify a password. An old password is required for this action.

#### **Online Users**

Lists current users who are visiting the device through the web interface.

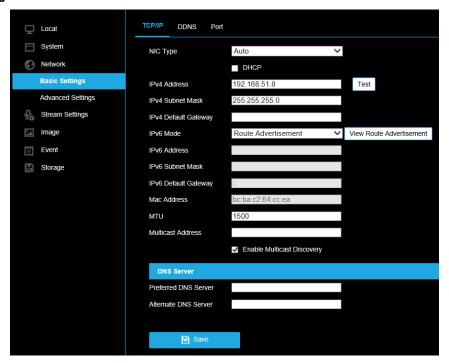
Click Refresh to refresh the list.



## **Basic Settings**

## Basic Settings > TCP/IP

Configure the basic network settings, including the NIC Type, IP Address, Subnet Mask, Gateway, MTU settings and Multicast Address.



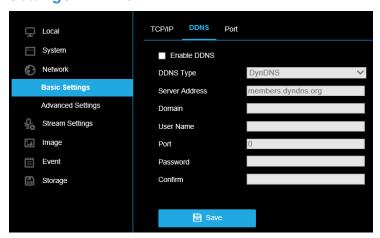
## (Optional):

- 1. Check **Enable Multicast Discovery**, and then the online network camera can be automatically detected by client software via private multicast protocol in the LAN.
- 2. Configure the DNS server. Input the preferred DNS server, and alternate DNS server.
- 3. Click **Save** to save the above settings.

## Notes:

- The valid value range of MTU is 1280 ~ 1500.
- The Multicast sends a stream to the multicast group address and allows multiple clients to acquire
  the stream at the same time by requesting a copy from the multicast group address. Before utilizing
  this function, you have to enable the Multicast function of your router.
- A reboot is required for the settings to take effect.

## Basic Settings > DDNS



**Before you start:** Registration on the DDNS server is required before configuring the DDNS settings of the camera.

- 1. Check the **Enable DDNS** checkbox to enable this feature.
- 2. Select **DDNS Type**. Two DDNS types are selectable: DynDNS and NO-IP.

#### DynDNS:

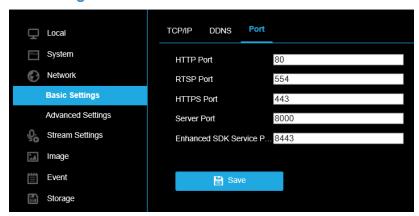
- 1. Enter Server Address of DynDNS (e.g. members.dyndns.org).
- 2. In the **Domain** text field, enter the domain name obtained from the DynDNS website.
- 3. Enter the User Name and Password registered on the DynDNS website.
- 4. Click Save to save the settings.

#### NO-IP:

- 1. Choose the **DDNS Type** as NO-IP.
- 2. Enter the **Server Address** as www.noip.com
- 3. Enter the **Domain** name you registered.
- 4. Enter the User Name and Password.
- 5. Click **Save** and then you can view the camera with the domain name.

Note: Reboot the device to make the settings take effect.

## Basic Settings > Port

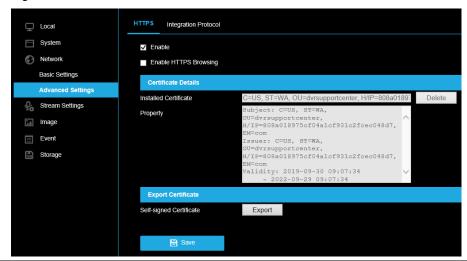


- HTTP Port: The default port number is 80, and it can be changed to any port No. which is not
  occupied.
- RTSP Port: The default port number is 554 and it can be from 1 to 65535.
- HTTPS Port: The default port number is 443, and it can be any port which is not occupied.
- Server Port: The default server port number is 8000, and it can be from 2000 to 65535.

# **Advanced Settings**

## Advanced Settings > HTTPS

HTTPS provides authentication of the web site and its associated web server, which protects against Man-in-the-middle attacks.

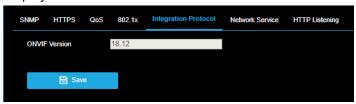


#### Note:

- HTTPS is enabled by default.
- If HTTPS is enabled, the camera creates an unsigned certificate automatically.
  - 1. Check **Enable** to access the camera via HTTP or HTTPS protocol.
  - 2. Check Enable HTTPS Browsing to access the camera only via HTTPS protocol.

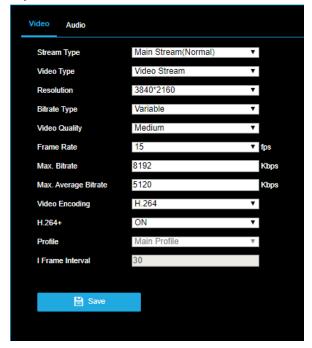
## Advanced Settings > Integration Protocol

Displays ONVIF version



### Video

Configure parameters for the main and sub video streams.



## Select the Stream Type.

Supported stream types are listed in the drop-down:

- Main stream is used for recording motion events and live view with good bandwidth.
- Sub-stream is used for continuous recording and live view.

Customize the following parameters for the selected stream type:

- Video Type: Select between Video Stream and Video & Audio.
- Resolution: Select the resolution of the video output.
- **Bitrate Type:** Select the bitrate type to constant or variable.
- Video Quality: When bitrate type is selected as Variable, 6 levels of video quality are selectable.

Note: Increasing Video Quality increases bitrate.

- Frame Rate: Set the frame rate.
- **Max. Bitrate:** Set the max. bitrate from 32 to 16384 Kbps. The higher value corresponds to the higher video quality and increased bandwidth use.
- Max. Average Bitrate: When you set a maximum bitrate, its corresponding recommended maximum average bitrate will be shown in the Max. Average Bitrate box.
- **Video Encoding:** The camera supports multiple video encodings types, such as H.264, H.264+, H.265, and H.265+. H.265 is a new encoding technology which reduces the transmission bitrate under the same resolution, frame rate and image quality compared with H.264.

Note: The camera will require a reboot to turn H.264+/H.265+ on or off.

#### **IMPORTANT:**

AvertX ProConnect recorders do not currently support H.265/H.265+ video encoding.

## Audio

Configure the following audio settings:



## Input Volume

0-100 adjustable.

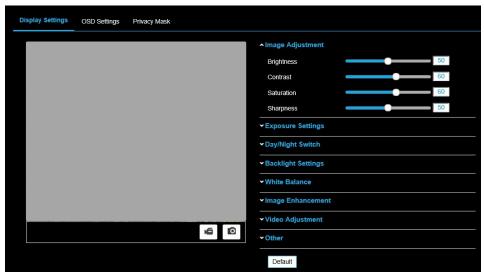
Note: Requires stereo input.

### **Environmental Noise Filter**

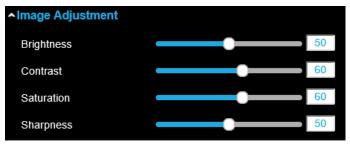
Set it as OFF or ON. When the function is enabled, the noise in the environment can be filtered to improve the clarity of voices.

# **Display Settings**

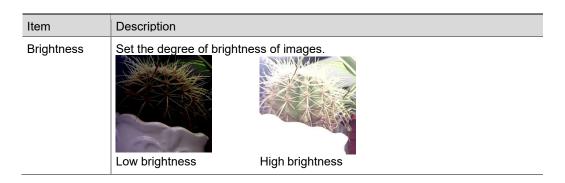
Configure the image adjustment, exposure settings, day/night switch, backlight settings, white balance, image enhancement, video adjustment, and other parameters in display settings, OSD settings, and privacy mask.

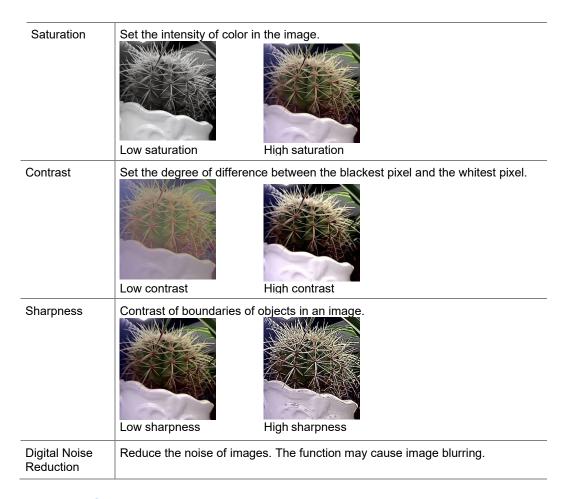


# Image Adjustment



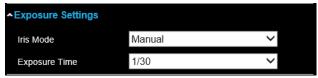
- Brightness describes brightness of the image, which ranges from 1 to 100.
- Contrast describes the contrast of the image, which ranges from 1 to 100.
- Saturation describes the intensity of the image color, which ranges from 1 to 100.
- Sharpness describes the edge contrast of the image, which ranges from 1 to 100.





## **Exposure Settings**

Manual is the only available setting for Iris Mode.

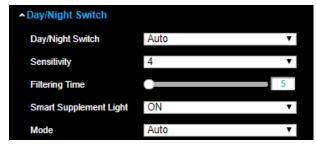


**Exposure Time** refers to the electronic shutter time, which ranges from 1 to 1/100,000s. Adjust it according to the actual luminance condition.

## Day/Night Switch

Select the **Day/Night Switch** mode according to different surveillance demand.

• Day, Night, Auto, Scheduled-Switch are the available options.



Day: The camera provides high-quality color images using the existing light.

- Night: The camera provides high-quality black and white images using the existing light.
- Auto: The camera outputs the optimum images according to the light condition.
   In this mode, the camera can switch between night mode and day mode automatically.
- Scheduled-Switch: Set the start time and the end time to define the duration for day/night mode.
- Triggered by alarm input: The switch is triggered by alarm input. You can set the triggered mode to day or night.
- Sensitivity ranges from 0 to 7, the higher the value is, the easier the mode switches.
- **Filtering Time** refers to the interval time between the day/night switch. You can set it from 5s to 120s.
- Scheduled-Switch: Set the start time and the end time to define the duration for day/night mode.
- Smart Supplement Light/Mode: Set the supplement light as On + Auto, On + Manual, or OFF.
- Auto Supplement light changes according to the actual luminance.
  - For example, if the current scene is bright enough, then the supplement light adjusts itself to lower power; and if the scene is not bright enough, the light adjusts itself to higher power.
- Manual Adjust the supplement light by adjusting the distance.
  - Lower value indicates the object is closer to the camera; the value increases as the object distance increases.

## **Backlight Settings**



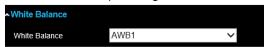
BLC Area: An object against strong backlight will be too dark to be seen clearly. BLC
adjusts light around the object to improve visibility. OFF, Up, Down, Left, Right, Center,
Auto, and Custom are available options. WDR must be set to OFF to access BLC Area.

Note: BLC Custom mode allows the user to draw a BLC area of interest.

- **WDR:** Wide Dynamic Range can be used when there is a high contrast of the bright area and the dark area of the scene.
- **HLC:** High Light Compression can be used when there are strong lights in the scene affecting the image quality.

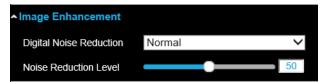
#### White Balance

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



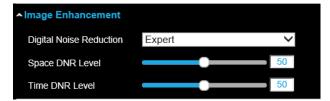
## Image Enhancement

- **Digital Noise Reduction:** DNR reduces the noise in the video stream. OFF, Normal and Expert are the available options.
  - Normal Mode: 0 to 100

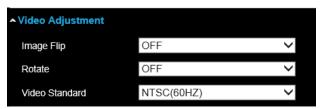


#### **Expert Mode:**

Space DNR level: 0 – 100Time DNR level: 0 – 100



# Video Adjustment



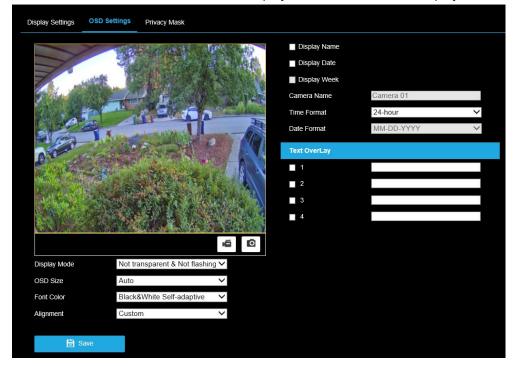
- Image Flip: mirrors the image so you can see it inversed. Flip Horizontal, Flip Vertical, and OFF are selectable.
- Rotate: rotates the image 90° counterclockwise for hallway or corridor mode.
- Video Standard: 50 Hz and 60 Hz are the available options. NTSC (60HZ) is the default mode.

Note: NTSC is the Video Standard in North and South America.

Click **Default** to restore original settings.

# **OSD Settings**

Customize the camera name, time/date format, display mode, and OSD size displayed in live view.



#### To configure OSD settings:

- 1. Check the applicable checkbox to display the camera name, date or week.
- 2. Edit the camera name in the text field of Camera Name.
- 3. Select from the drop-down list to set the **Time Format** and **Date Format**.
- 4. Select from the drop-down list to set the **Display Mode**, **OSD Size**, **Font Color** and **Alignment**.

#### To configure the text overlay settings:

- 1. Check the checkbox in front of the textbox to enable the on-screen display.
- 2. Input the characters in the textbox.

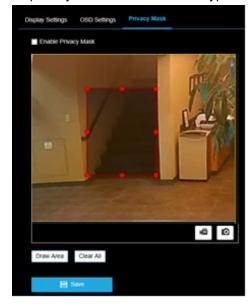
Note: Up to 4 text overlays are configurable.

- Adjust the position and alignment of text frames.
  - o Left align, right align and custom are selectable.
    - Select custom to use the mouse to click and drag text frames in the live view window to adjust their positions.

Note: The alignment adjustment is only applicable to Text Overlay items.

# **Privacy Mask**

Privacy mask enables you to cover certain areas on the live video to prevent certain spots in the surveillance area from being viewed and recorded. Privacy mask areas are used to protect privacy. For example, a privacy mask can cover the keypad of an ATM machine or the entry to fitting rooms.



#### To configure privacy masks:

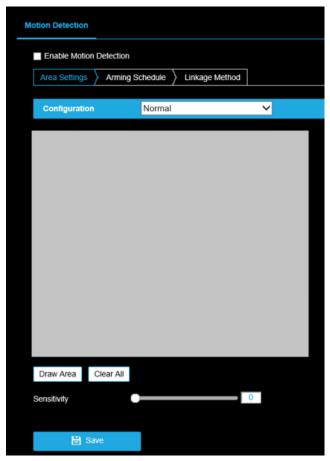
- 1. Check the checkbox of Enable Privacy Mask.
- 2. Click Draw Area.
- 3. Click and drag the mouse in the live video window to draw the mask area.

Note: Draw up to 4 areas on the same image.

- 4. Click **Stop Drawing** to finish drawing.
- 5. Click Clear All to clear all areas.

## **Motion Detection**

Motion detection detects moving objects in the defined areas. In order to detect the moving objects accurately and reduce the false alarm rate, **normal configuration** and **expert configuration** are available for varied motion detection environments.



To configure Normal motion detection:

- 1. Check Enable Motion Detection.
- 2. Click Draw Area.
  - o Click and drag the mouse on the live video to draw a motion detection area.
  - o Click **Stop Drawing** to finish drawing one area.
- (Optional) Click Clear All to clear all detection areas.
- (Optional) Move the slider or type a number in the text box to set the detection Sensitivity level.
  - 0 no detection; 100 Maximum sensitivity.

## **Expert Motion Detection**

Expert motion detection is primarily used to configure the sensitivity and proportion of object on each area for different day/night switch.

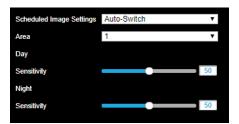


1. Draw the detection area.

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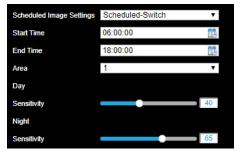
- 2. Select OFF for Scheduled Image Settings.
- 3. Select the Area by number.
- 4. Adjust the **Sensitivity** of an object in the motion detection area.
- 5. Set the Arming Schedule and Linkage Method as in the normal configuration mode.
- 6. Click **Save** to save the settings.

#### **Auto-Switch**



- 1. Draw the detection area as in the normal configuration mode.
- 2. Select Auto-Switch for Scheduled Image Settings.
- 3. Select the Area by number.
- 4. Adjust the **Day Sensitivity** and **Night Sensitivity** of an object in the motion detection area for day and night independently.
- 5. Set the Arming Schedule and Linkage Method as in the normal configuration mode.
- 6. Click **Save** to save the settings.

#### Scheduled-Switch



- 1. Draw the detection area as in the normal configuration mode.
- 2. Select Scheduled-Switch for Scheduled Image Settings.
- 3. Select the **Start Time** and the **End Time** for the day/night switch.
- 4. Select the Area by number.
- 5. Adjust the **Day Sensitivity** and **Night Sensitivity** of an object in the motion detection area for day and night independently.
- 6. Set the Arming Schedule and Linkage Method as in the normal configuration mode.
- 7. Click **Save** to save the settings.

# **Set the Arming Schedule for Motion Detection**



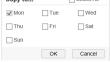
### To configure the motion detection schedule:

1. Click on the time bar and drag the mouse to select the time period.

**Note:** Click on the selected time period, you can adjust the time period to the desired time by either moving the time bar or input the exact time period.

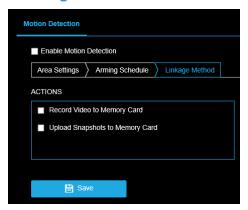


- (Optional) Click **Delete** to delete the current arming schedule.
- 2. Move the mouse to the end of each day, a copy dialogue box pops up, and you can copy the current settings to other days.
- 3. Click **Save** to save the settings.



Note: The time of each period can't be overlapped. 8 periods can be configured for each day.

## Set the Linkage Method for Motion Detection



Use the checkboxes to enable the available actions.

**ACTIONS** (Arming Schedule must be configured to enable):

Record Video to Memory Card – Video will be recorded when a person or vehicle is detected.

**Upload Snapshots to Memory Card** – Capture the image when a person or vehicle is detected and save the picture to the onboard microSD card.

Note: These actions require a microSD card installed in camera. (Not Included)

Click Save after selecting actions.

**Note:** Refer to Storage > Schedule Settings & Storage > Storage Management sections of this manual to configure microSD card storage.

# **Schedule Settings**

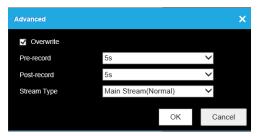
## Schedule Settings > Record Schedule

This camera includes an integrated microSD™ card slot that can be used to record video. The card slot is compatible with a microSD™ card up to 128GB. This section is used to define when video should be recorded to the microSD card.



#### To configure record schedule:

- 1. Check Enable to enable scheduled recording.
- 2. Click **Advanced** to set the camera record parameters.



- Pre-record: length of time set to start recording before the scheduled time or the event.
   The Pre-record time can be configured as No Pre-record, 5s, 10s, 15s, 20s, 25s, 30s or not limited.
  - Example: if motion is detected and triggers recording at 10:00, and the prerecord time is set as 5 seconds, the camera starts to record at 9:59:55.
- **Post-record:** length of time set to record after the end of event. The Post-record time can be configured as 5s, 10s, 30s, 1 min, 2 min, 5 min or 10 min.
  - Example: if a motion event ends at 11:00, and the post-record time is set as 5 seconds, the camera records until 11:00:05.
- Stream Type: Select the stream type for recording (Main Stream or Sub-stream).

#### 3. Select the Record Type:

**Continuous:** video will be recorded automatically according to the time of the schedule.

**Motion:** video will be recorded when the motion is detected.

**Note:** In addition to configuring the recording schedule, the schedule and actions must also be configured in the Motion Detection settings.

Alarm: Not supported

Motion & Alarm: Not supported

Motion | Alarm: video will be recorded when the motion is detected. This device does not

support alarm triggered recording.

Event: video will be recorded when an event occurs.

**Note:** In addition to configuring the recording schedule, the schedule and actions must also be configured in the Analytics settings.

- 4. Click-and-drag the mouse on the time bar to set the record schedule.
- 5. Click **Save** to save the settings.

# Schedule Settings > Capture Schedule

This camera includes an integrated microSD™ card slot that can be used to record images. The card slot is compatible with a microSD™ card up to 128GB. This section is used to define when images should be saved to the microSD card.



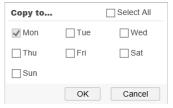
#### To configure the capture schedule:

1. Click on the time bar and drag the mouse to select the time period.

**Note:** Click on the selected time period to adjust the time period to the desired time by either moving the time bar or input the exact time period.

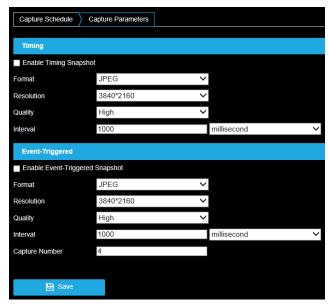


- (Optional) Click **Delete All** to delete all schedules.
- 2. Move the mouse to the end of each day, a copy dialogue box pops up, and you can copy the current settings to other days.



3. Click **Save** to save the settings.

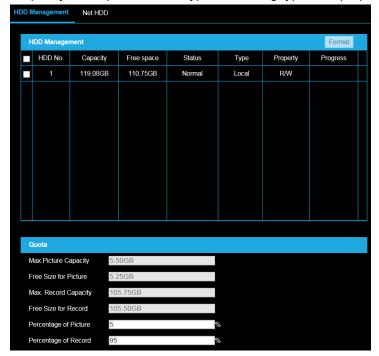
# Schedule Settings > Capture Parameters



- 1. Check Enable Timing Snapshot.
- 2. Select the Quality and Capture Interval.
  - Quality: Low, Medium, High
  - Capture Interval: length of time between images
- 3. Check Enable Event-triggered Snapshot.
- 4. Select the Quality, Capture Interval, and Capture Number.
  - Quality: Low, Medium, High
  - Capture Interval: length of time between images
  - Capture Number: Quantity of images to capture
- 5. Click **Save** to save the settings.

# Storage Management

View the capacity, free space, status, type, formatting type, and property of the disk.



Note: The camera must be powered off when installing the microSD card.

If the status of the disk is Uninitialized, check the corresponding checkbox to select the disk and click **Format** to start initializing the disk. When the initialization completes, the status of disk will become Normal.

- 1. Define the quota for record and pictures:
  - Input the quota percentage for picture and for record.
- 2. Click **Save** and **refresh** the browser page to activate the settings.

Note: This camera model does not support writing to network hard drives.

Are any next of this recovery in community or an along Places let us be said Compact, as a community of the
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