



## **HD838IRM**

HD Indoor/Outdoor IP Camera

### **User Manual**



AVX-HD838IRM HD Indoor/Outdoor IP Camera

Operations Manual

Manual Edition 37084AA – October 2019

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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.

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## IMPORTANT SAFEGUARDS

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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.

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## Precautions

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### 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.

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## REGULATION

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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.

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## WARNING

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DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE.  
REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

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## CAUTION

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# INTRODUCTION

## OVERVIEW

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The AVX-HD838IRM is capable of streaming real time ultra HD 4K video, with built-in machine learning analytics and true WDR, improving detection in scenes with varied lighting. 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 AVX-HD838IRM is equipped with machine learning technology, developed for the purpose of person and vehicle detection. Person and vehicle detection analytics reduces false alerts dramatically and insures you will be notified when it matters most.

### Camera Default Settings

<b>IP Address</b>	192.168.51.2
<b>Username</b>	admin
<b>Password</b>	---
<b>Management Port</b>	80
<b>Streaming Port (RTSP)</b>	554

### Product Features


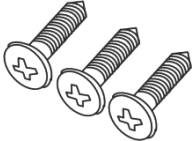


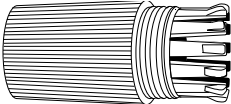

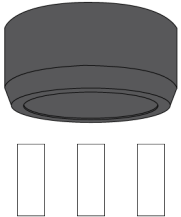
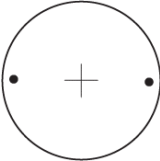

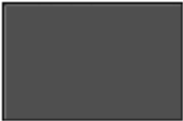
- Built-In Smart Analytics
- 4K Resolution
- MicroSD Card (up to 128GB)
- Record still shots to edge storage
- H.264 / H.265 / H.265+
- Smart Compression
- Dual Streaming
- True Wide Dynamic Range (WDR)
- Motion Detection
- Up to 4 Privacy Mask zones
- True Day/Night
- IP67 Outdoor Rated



# GETTING STARTED

## BOX CONTENTS

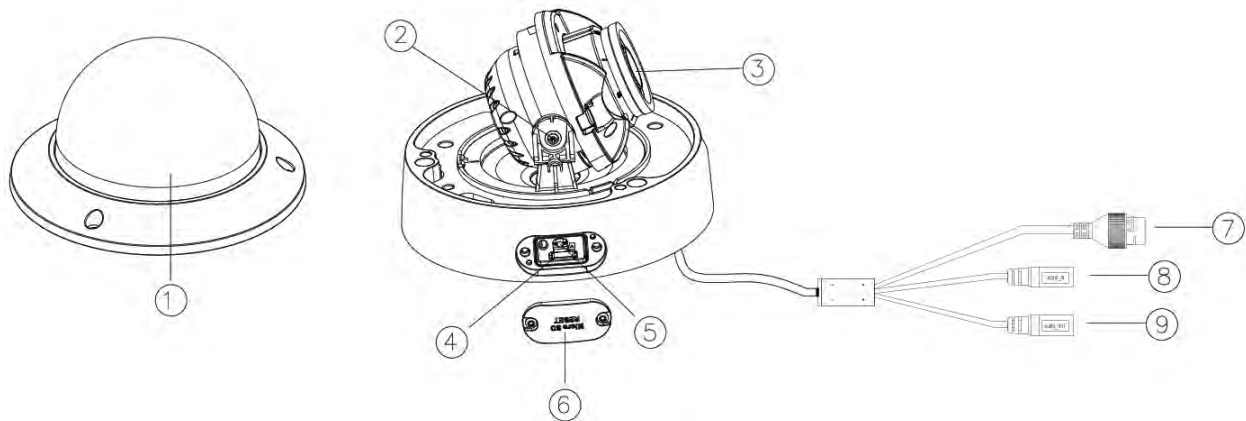
Before proceeding, please check that the box contains the items listed here. If any item is missing or has defects, do not install or operate the product and contact your dealer for assistance.

 <p><b>AVX-HD838IRM Camera</b></p>	 <p><b>Self-Tapping Mounting Screws</b></p>	 <p><b>Plastic Anchors (includes extra)</b></p>
 <p><b>Quick Start Guide</b></p>	 <p><b>IP66 Cable Connector</b></p>	 <p><b>Torx Tool</b></p>
 <p><b>Paintable Cover With Adhesive Strips</b></p>	 <p><b>Mounting Template</b></p>	 <p><b>Mounting Bracket</b></p>
 <p><b>Microfiber Cloth</b></p>		

# CAMERA OVERVIEW

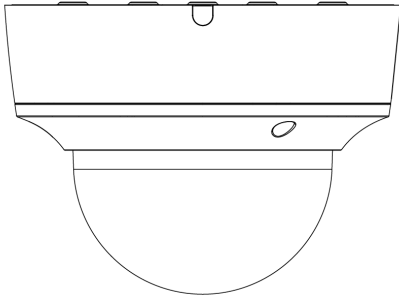
Before installing or connecting the bullet camera, please refer to this section and complete preparations for camera setup and all switch settings.

## Camera Diagram



1	Dome Cover	
2	Adjustment Screws	
3	Lens	
4	MicroSD Card Slot	Supports up to 128GB MicroSD card
5	Reset Button	<p>The reset button will restore the camera to factory default settings.</p> <p>To reset your camera:</p> <ol style="list-style-type: none"> <li>1. Disconnect the cat5e cable from the camera for 30 seconds.</li> <li>2. Hold the reset button down while reconnecting cat5e.</li> <li>3. The IR lights will illuminate when power is reconnected: continue holding the reset button until the IR lights turn off (approximately 30 seconds).</li> <li>4. Allow 2 minutes before attempting to rediscover camera.</li> </ol>
6	Removable Cover	
7	RJ-45 Connector	
8	Audio In/Out	Line In
9		Line 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-HD838IRM cameras use Power over Ethernet (PoE). 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.



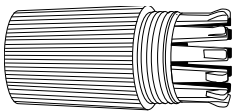

AvertX recommends using Cat5e cable to connect the camera to your network. For the best transmission quality, the cable length should not exceed 300 feet.

## 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.

*You do not need to re-terminate the cable to use the waterproof cable connector.*

### Included Pieces:

	
<b>Thread Lock Cap</b>	<b>Silicone Seal Ring</b>
	
<b>RJ45 Enclosure</b>	<b>Silicone "O" Ring</b>

To Install the weather resistant cable connector:

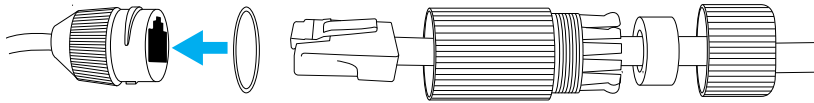
1. Slide all pieces of the waterproof cable connector over the cable plug in this order:
  - Thread Lock Cap
  - Flexible silicone seal ring. You will need to stretch the silicone seal over the RJ-45 plug.

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**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.

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- 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.

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## INSTALLING THE CAMERA

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

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The camera can be installed directly onto the wall or ceiling. Be sure that the structure is strong enough to support the camera.

### 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.**

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Dome cameras are ideal for installation on a ceiling or soffit location. If you are installing the camera on a wall, AvertX recommends using the camera specific wall mount available for purchase on AvertX.com.

1. For outdoor installations, seal any holes in the wall or ceiling with silicone caulk to protect against water intrusion.
2. Affix the base of the camera to the wall with the included screws and wall anchors. Do not over tighten the mounting screws.
3. Loosen adjustment screws and adjust the camera to the desired angle. Re-tighten adjustment screws being cautious not to over-tighten.
4. If surface mounting the cable, make sure the cable is routed through the cable notch on the side of the camera.
5. Replace the dome cover. 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.

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

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

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## Resetting the Camera

Your AVX-HD838IRM camera is equipped with a reset button to return the camera to factory default settings, if necessary.

To reset your camera:

1. Disconnect the cat5e cable from the camera for 30 seconds.
2. Hold the reset button down while reconnecting cat5e.
3. The IR lights will illuminate when power is reconnected; continue holding the reset button until the IR lights turn off (approximately 30 seconds).
4. Allow 2 minutes before attempting to rediscover camera.

## Focusing the Camera

If the picture from your camera looks blurry, it may need to be focused. The AVX-HD838IRM camera is equipped with a motorized auto focus/zoom lens, and will focus when you activate the zoom function.

To access Focus and Zoom functions you will need to connect through a web browser or mobile app;

### On a computer web browser:

1. In Live view, move the mouse arrow to the top of the camera tile that you would like to focus. The + (zoom in) and – (zoom out) buttons will appear.
2. Momentarily click the + (zoom in) button. The camera lens will zoom in a little bit and then find its focus.
3. If you would like the original wider view of the camera, momentarily click the - (zoom out) button. The camera lens will zoom out a little bit and then find its focus.

### On mobile app:

1. In Live view, select the camera that you would like to focus.
2. Tap the PTZ icon at the bottom of the screen.
3. Pinch out on the video image to zoom. The camera lens will zoom in a little bit and then find its focus. If you would like the original wider view of the camera, pinch in.

If the camera is still blurry, repeat the zoom in / zoom out process. Depending on the location of objects in the camera's view, autofocus may set focus on an object you don't want. Repeating the process may allow it to find your desired focus. If your camera is still not focusing, please consult our FAQs at [avertx.com/faqs/](http://avertx.com/faqs/) or call the AvertX ProTeam.

## 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 clear dust or loose dirt, use compressed air.
- Use the included microfiber cloth to clean the camera dome cover.

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**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.

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# CONNECTING

## BENCH TEST

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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

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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](http://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).

---

***Tip:** The default IP address of your IP camera is 192.168.51.2.*

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### 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.
2. Enter the **IP address**, **Subnet Mask**, **Gateway**, and **DNS**.
3. Click **Apply**.
4. Wait 10 seconds and click **Refresh**.



## CONNECTING TO THE CAMERA

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### Connecting in a Web Browser

1. 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

<b>IMPORTANT</b> AvertX cameras ship without a default password; the Admin password is required to gain access or establish a connection. If the camera password is changed, AvertX must be updated with the new camera password or connection loss will occur.
---

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

1. Network Camera Manager
2. Camera Web Browser
3. AvertX ProConnect recorders will check the camera for a password once connected:
  - If AvertX software does not detect a password, it will set the camera password to a secure text string of 8-16 characters, containing at least 1 capital and 1 lower case letter, 1 number, and 1 unique character.

### 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 (<http://www.videolan.org>).

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>/h264`
  - H.264 Stream 1
- `rtsp://<ipaddress>/h264_2`
  - H.264 Stream 2

---

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

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## LOGGING INTO THE WEB INTERFACE

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The default static IP address of the camera is 192.168.51.2, and the default subnet mask is 255.255.255.0. 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 **User Name** and **Password**, and then click **Login**.
  - Default User Name: **admin**
  - You will be prompted to change the password.

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**Note:** The camera protects itself from illegal access by limiting the number of failed login attempts. If login fails 7 times consecutively, the camera locks automatically for 20 minutes.

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# LIVE VIEW



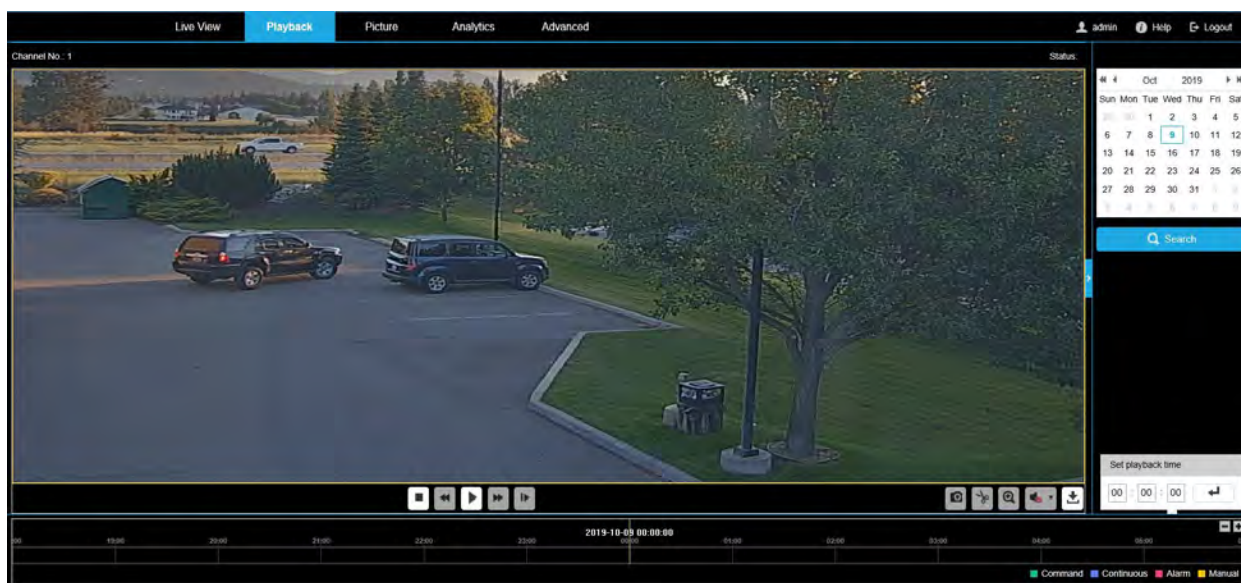
No.	Description
1	Browse to Live View page to view live video
2	Browse to Playback page to search video recorded to onboard storage
3	Browse to Picture page to enter the picture searching interface
4	Browse to Analytics Page.
5	Browse to Advanced Page
6	Change Aspect Ratio in Live View
7	Select which stream displays in Live View
8	Click to select the third-party plug-in
9	Pixel Counter
10	Start/Stop Live View
11	Capture live view image and save to selected location
12	Start/Stop Live View recording
13	Start/Stop Digital Zoom
14	Mute/adjust volume
15	Current user account

## PLAYBACK

This section explains how to view the recorded video files stored on the microSD card.

**Notes:** Playback menu can only be accessed in Internet Explorer.

You must be running Internet Explorer as admin to retrieve images or recorded video on the microSD card.





1. Click **Playback** on the menu bar to enter playback interface.
2. Select the **date** and click **Search**.
3. Click to play the video files found on this date.

The toolbar on the bottom of Playback interface can be used to control playing process.

Button	Operation	Button	Operation
	Play		Capture a picture
	Pause		Start/Stop clipping video files
	Stop		Audio on and adjust volume/Mute
	Speed down		Download
	Speed up		Playback by frame
	Enable/Disable digital zoom		

**Note:** Choose the file paths locally for downloaded playback video files and pictures in Local Configuration interface.

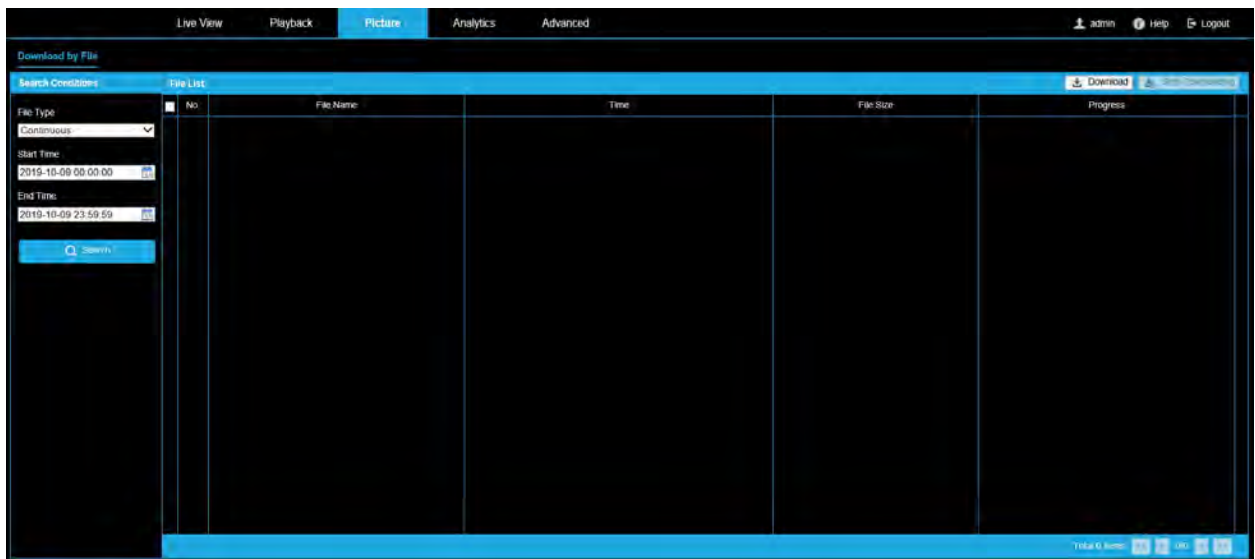
You can also input the time and click  to locate the playback point in the Set playback time field. You can also click  to zoom out/in the progress bar.



The different colors of the video on the progress bar stand for the different video types.

## PICTURE

The picture searching interface allows user to search, view, and download the pictures stored in the local storage or network storage.



To search for pictures:

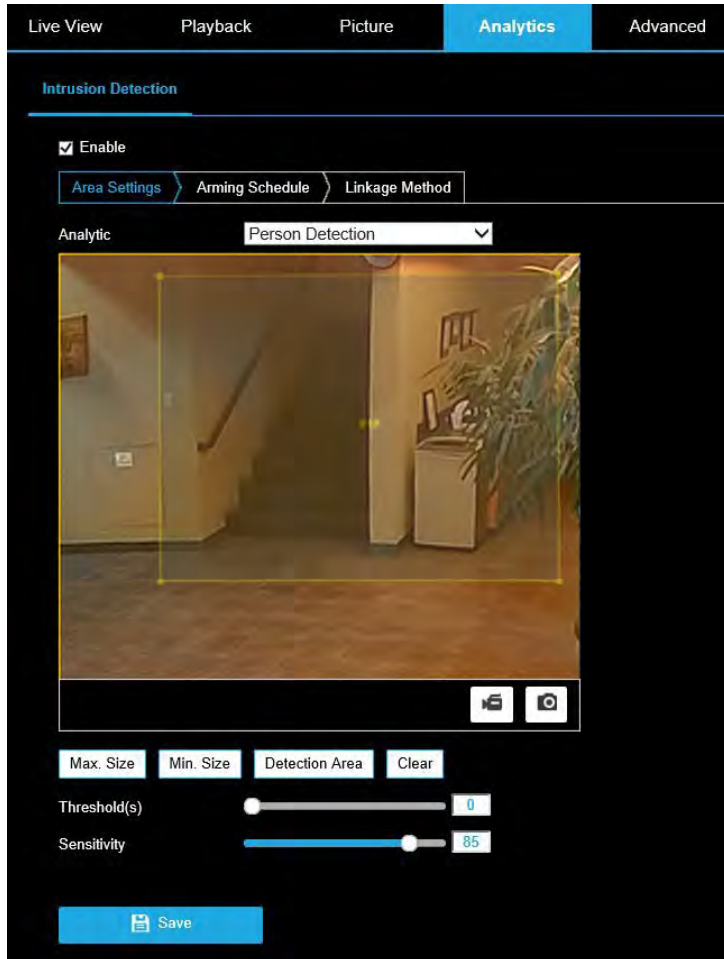
1. Select the **File Type** from the dropdown list.
2. Select the **Start Time** and **End Time**.
3. Click **Search** to search the matched pictures.
4. Check the checkbox of the pictures and then click **Download** to download the selected pictures.

---

**Note:** Up to 4000 pictures can be displayed at one time.

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# ANALYTICS



## Intrusion Detection

Check **Enable** to activate Intrusion Detection.

### Area Settings

**Analytic:** Choose between **Person Detection** and **Vehicle Detection**.

**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:**

1. Click on Min Size.
2. 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, in seconds, a person or vehicle must be detected in the detection area to trigger an alert. For example, if threshold is set to 2, an event is triggered when a person or vehicle has been detected for 2 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.*

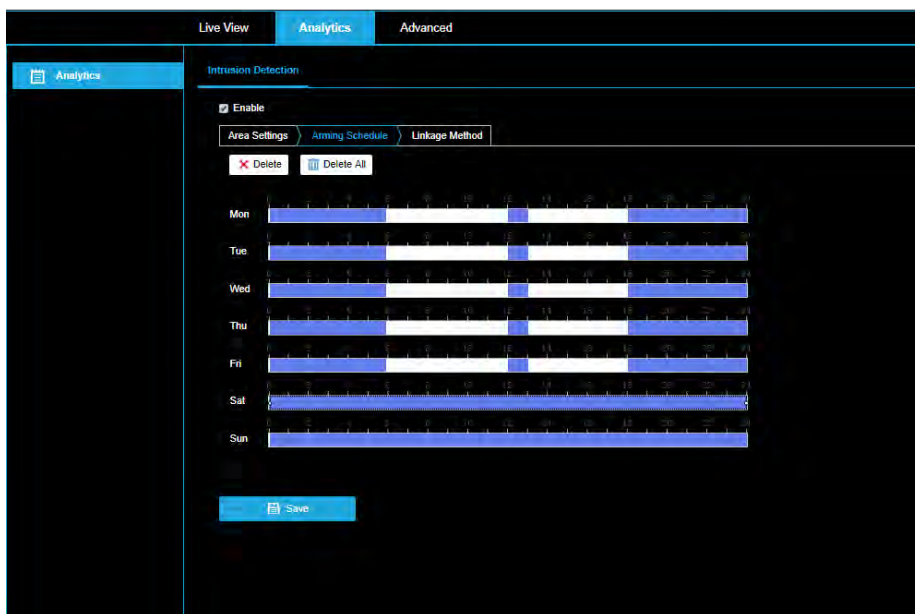
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**Save** after configuring area settings.



## Arming Schedule

Analytics Arming Schedule allows user to define when analytics events will trigger snapshot images and/or recorded video and save the outputs the on-board storage.




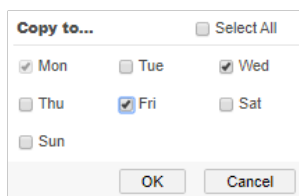
**Delete:** Select a scheduled block of time and  to remove it from the schedule.

**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

Live View   **Analytics**   Advanced

**Analytics**

Intrusion Detection

☒ Enable

Area Settings > Arming Schedule > **Linkage Method**

Normal Linkage	Trigger Recording
<input type="checkbox"/> Notify Surveillance Center	<input type="checkbox"/> A1
<input type="checkbox"/> Upload to Memory Card/NAS	
<input type="checkbox"/> Audible Warning	

Save

### Normal Linkage

**Upload to Memory Card/NAS** – Capture the image when an alarm is triggered and upload the snapshot to onboard storage.

---

**Note:** *Arming Schedule must be configured for this function.*

---

### Trigger Recording

**A1** – The video will be recorded to onboard storage when intrusion is detected by a person or vehicle.

---

**Note:** *Arming Schedule must be configured for this function.*

---

Click **Save** after configuring Linkage Methods.



# ADVANCED

## SYSTEM

### System Settings

#### Basic Information

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

System

System Settings

Maintenance

Security

User Management

Network

Video/Audio

Image

Event

Storage

Live View

Analytics

Advanced

Basic Information

Time Settings

DST

metadata Settings

About

Device Name

IP CAMERA

Device No.

88

Model

Serial No.

Firmware Version

Encoding Version

Web Version

Plugin Version

Number of Channels

Number of HDDs

Number of Alarm Input

Number of Alarm Output

Firmware Version Property

Save

#### Time Settings

Configure the time synchronization and DST settings.

System

System Settings

Maintenance

Security

User Management

Network

Video/Audio

Image

Event

Storage

Basic Information

Time Settings

DST

metadata Settings

About

Time Zone

(GMT-08:00) Pacific Time (US&Canada)

NTP

NTP

Server Address

2.cctv.pool.ntp.org

NTP Port

123

Interval

1440

minute(s)

Test

Manual Time Sync.

Manual Time Sync.

Device Time

2019-09-11T09:19:57

Set Time

2019-09-11T09:19:51

Sync. with computer time

Save

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:
  - **Server Address:** IP address of NTP server.
  - **NTP Port:** Port of NTP server.
  - **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.

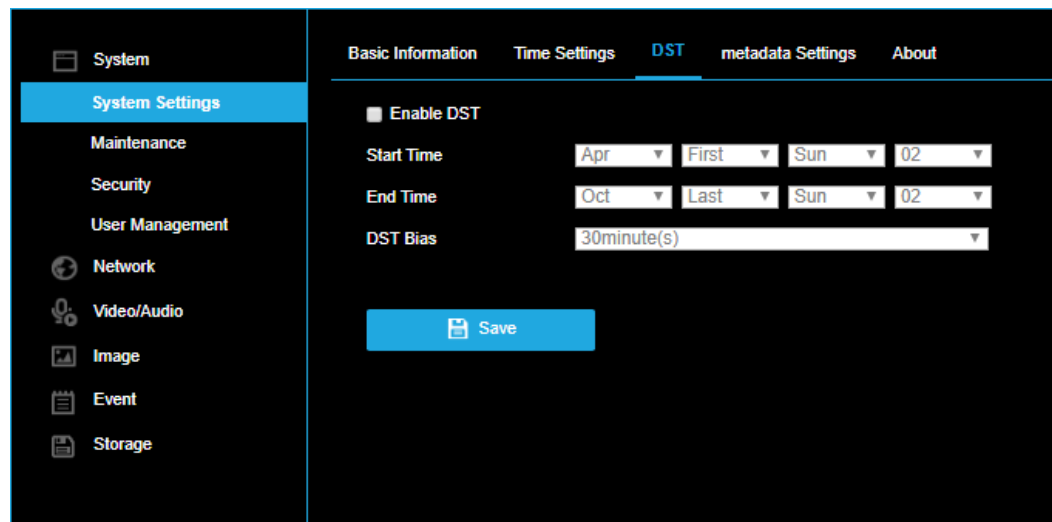
---

**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.

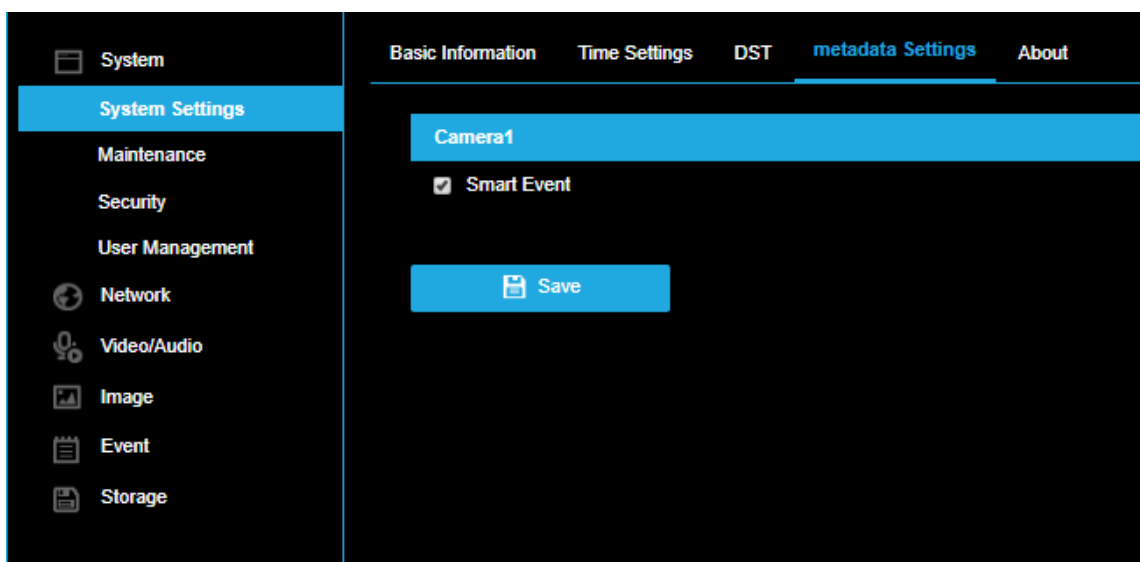


The screenshot shows a system settings application with a sidebar on the left and a main content area on the right. The sidebar has a 'System' icon at the top, followed by 'System Settings' (highlighted in blue), 'Maintenance', 'Security', 'User Management', 'Network', 'Video/Audio', 'Image', 'Event', and 'Storage'. The main content area has tabs for 'Basic Information', 'Time Settings', 'DST' (highlighted in blue), 'metadata Settings', and 'About'. Under the 'DST' tab, there is a checkbox labeled 'Enable DST' which is checked. Below this are three rows of settings: 'Start Time' with dropdowns for 'Apr', 'First', 'Sun', and '02'; 'End Time' with dropdowns for 'Oct', 'Last', 'Sun', and '02'; and 'DST Bias' with a dropdown set to '30minute(s)'. At the bottom of the settings area is a blue button with a save icon and the text 'Save'.

### To configure DST:

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

## Metadata Settings

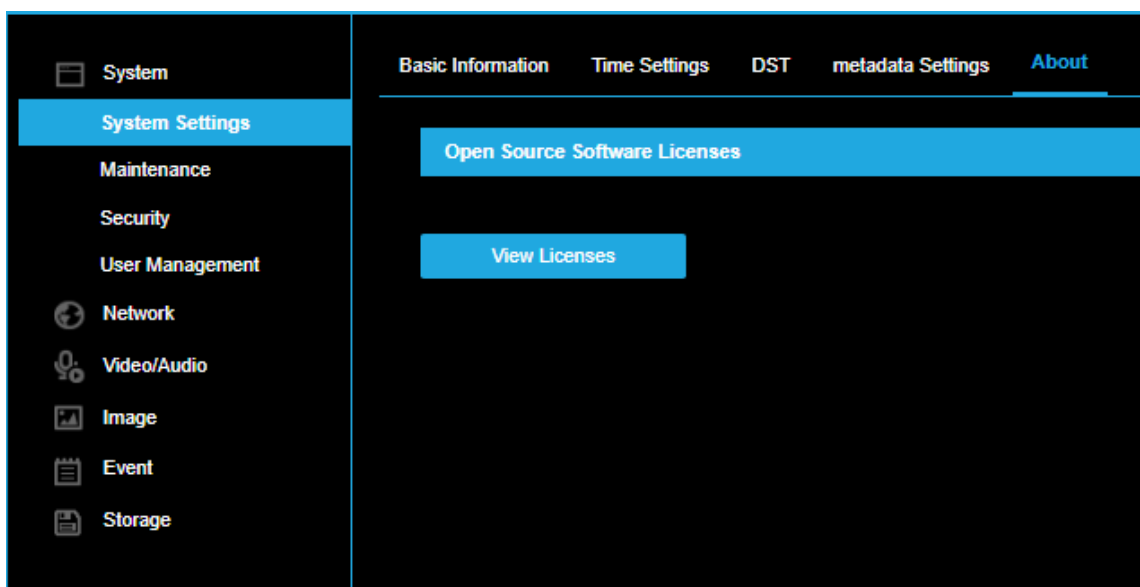


The metadata of the smart event includes the target ID, target coordinate and time information.

To enable **Smart Event**:

1. Click **Smart Event**.
2. Click **Save**.

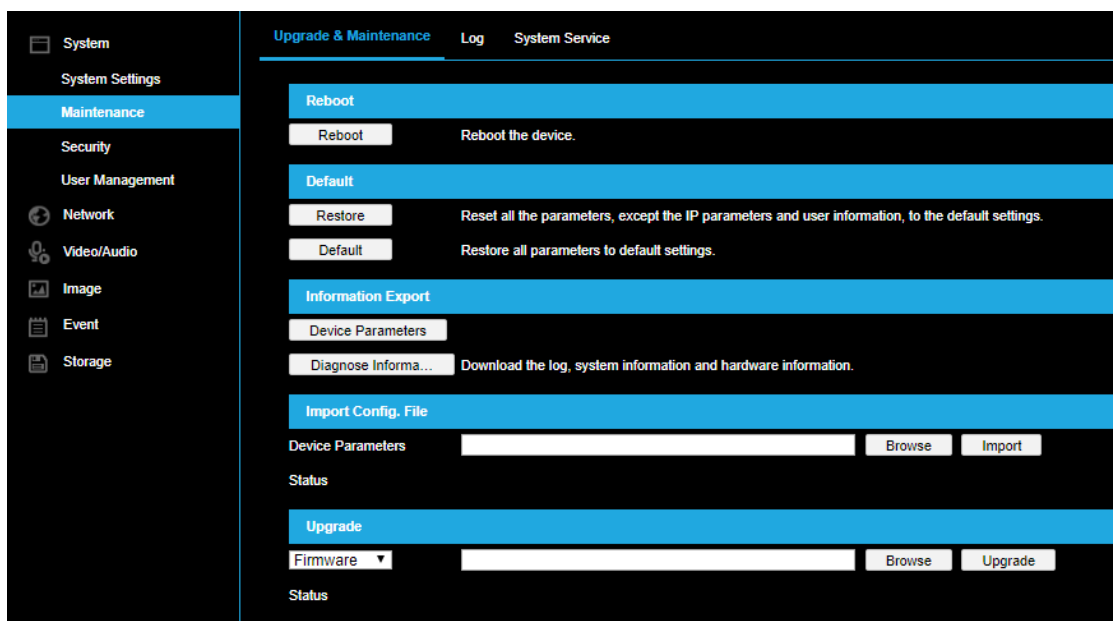
## About



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 network 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.

- **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.

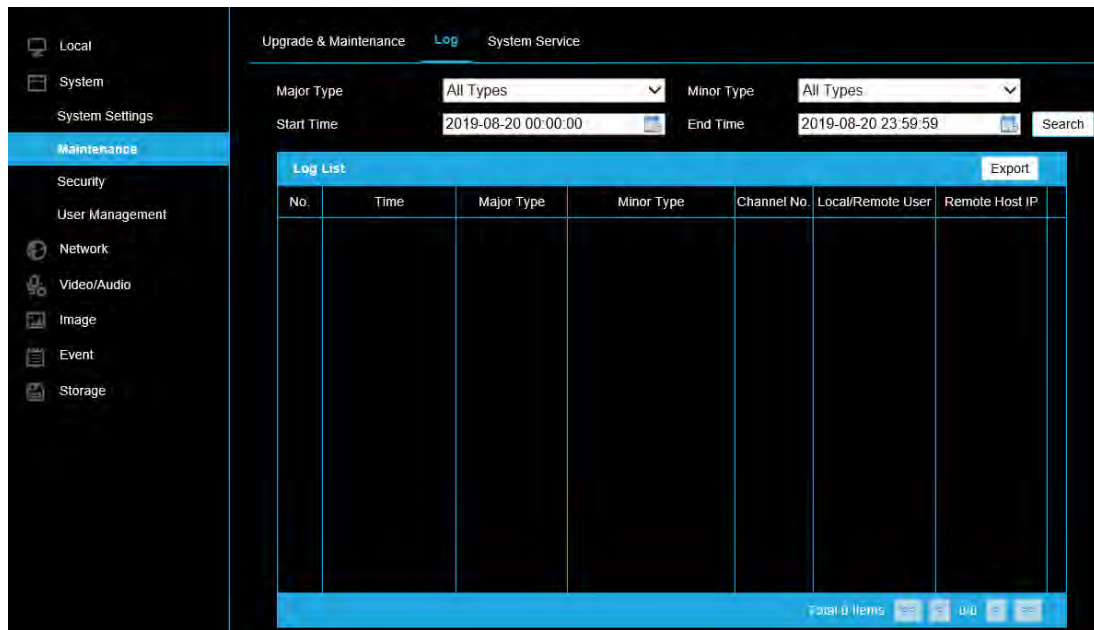
---

**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. To insure all changes are made, the camera must be defaulted after upgrade and reboot have completed.

---

## Log

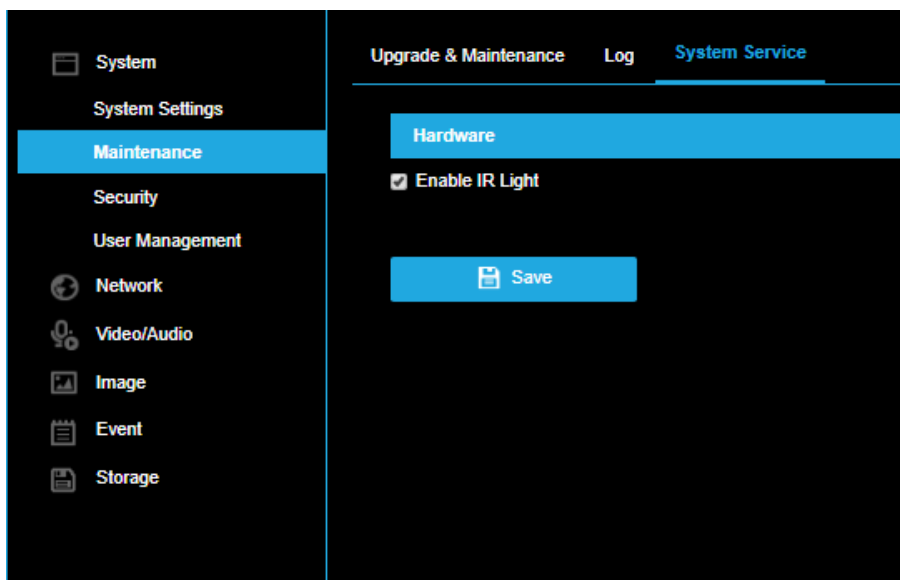
Export the camera log files.



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**, and **Security Service**.

### Authentication

The screenshot shows the 'Authentication' tab selected in the Security settings. The left sidebar contains a menu with 'System', 'System Settings', 'Maintenance', 'Security' (highlighted), 'User Management', 'Network', 'Video/Audio', 'Image', 'Event', and 'Storage'. The main content area has three tabs: 'Authentication', 'IP Address Filter', and 'Security Service'. Under the 'Authentication' tab, there are two dropdown menus: 'RTSP Authentication' and 'WEB Authentication', both set to 'digest'. A 'Save' button is located at the bottom.

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

The screenshot shows the 'IP Address Filter' tab selected in the Security settings. The left sidebar is the same as in the previous screenshot. The main content area has three tabs: 'Authentication', 'IP Address Filter' (highlighted), and 'Security Service'. Under the 'IP Address Filter' tab, there is a checkbox 'Enable IP Address Filter' which is checked. Below it is a dropdown menu 'IP Address Filter Type' set to 'Forbidden'. There is a table with columns 'No.' and 'IP'. Above the table are buttons 'Add', 'Modify', and 'Delete'. A 'Save' button is at the bottom.

No.	IP
-----	----

### 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.

## 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.

User Management			
User Management		Online Users	
User List			
			<a href="#">Add</a> <a href="#">Modify</a> <a href="#">Delete</a>
No.	User Name	Level	
1	admin	Administrator	

---

**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.

User Management		Online Users			
User List					Refresh
No.	User Name	Level	IP Address	User Operation Time	
1	admin	Administrator	10.0.30.166	1970-03-03 20:50:50	
2	admin	Administrator	10.0.21.186	1970-03-03 20:59:35	

## NETWORK

### 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

TCP/IP **DDNS** PPPoE Port NAT

☐ Enable DDNS

DDNS Type: DynDNS

Server Address: members.dyndns.org

Domain:

User Name:

Port: 0

Password:

Confirm:

Save

**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:

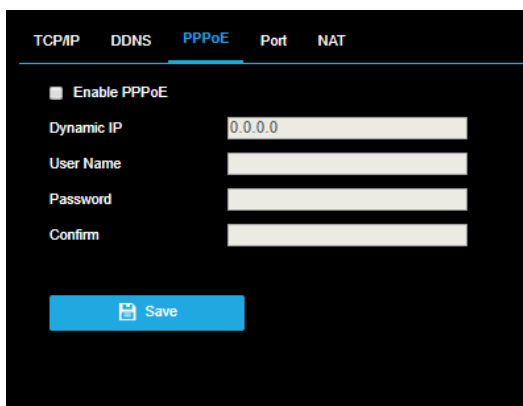
1. Choose the **DDNS Type** as NO-IP.
2. Enter the **Server Address** as www.noip.com
3. Enter the **Domain** name you registered.
4. Enter the **User Name** and **Password**.
5. Click **Save** and then you can view the camera with the domain name.

---

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

---

## Basic Settings > PPPoE



1. Check **Enable PPPoE**.
2. Enter **User Name**, **Password**, and **Confirm password**.

---

**Note:** The User Name and Password should be assigned by your ISP.

---

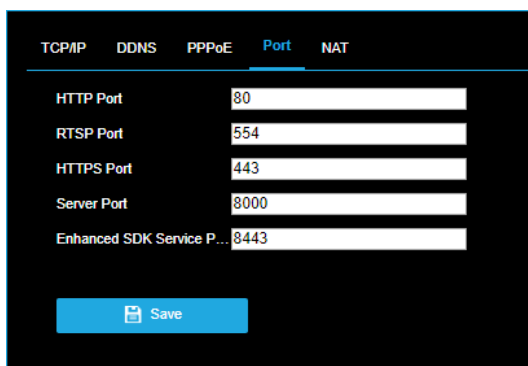
3. Click **Save**.

---

**Note:** A reboot is required for the settings to 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.

## Basic Settings > NAT

NAT interface allows you to configure the UPnP™ parameters. Universal Plug and Play (UPnP™) is a networking architecture that provides compatibility among networking equipment, software and other hardware devices. The UPnP protocol allows devices to connect seamlessly and to simplify the implementation of networks in the home and corporate environments. With the function enabled, you don't need to configure the port mapping for each port, and the camera is connected to the Wide Area Network via the router.

1. Check the checkbox to enable the UPnP™ function.

---

**Note:** Only when the UPnP™ function is enabled, ports of the camera are active.

---

2. Choose a friendly name for the camera, or use the default name.
  3. Select the port mapping mode. **Manual** and **Auto** are selectable.
- 

**Note:**

- If you select **Auto**, you should enable UPnP™ function on the router.
  - If you select **Manual**, you can customize the value of the external port and complete port mapping settings on router manually.
- 

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

Port Type	External Port	External IP Address	Internal Port	Status
HTTP	80	0.0.0.0	80	Not Valid
HTTPS	443	0.0.0.0	443	Not Valid
RTSP	554	0.0.0.0	554	Not Valid
Server Port	8000	0.0.0.0	8000	Not Valid
Enhanced SDK ...	8443	0.0.0.0	8443	Not Valid

## Advanced Settings

### Advanced Settings > SNMP

The screenshot displays the 'Advanced Settings > SNMP' configuration interface. The left sidebar contains a menu with 'System', 'Network', 'Basic Settings', 'Advanced Settings' (highlighted), 'Video/Audio', 'Image', 'Event', and 'Storage'. The top navigation bar includes 'Live View', 'Analytics', and 'Advanced' (highlighted). The main content area features tabs for 'SNMP', 'HTTPS', 'QoS', '802.1x', 'Integration Protocol', 'Network Service', and 'HTTP Listening'. The 'SNMP' tab is active, showing three sections: 'SNMP v1/v2', 'SNMP v3', and 'SNMP Other Settings'. The 'SNMP v1/v2' section includes checkboxes for 'Enable SNMPv1' and 'Enable SNMP v2c', and text input fields for 'Read SNMP Community' (set to 'public'), 'Write SNMP Community' (set to 'private'), 'Trap Address', 'Trap Port' (set to '162'), and 'Trap Community' (set to 'public'). The 'SNMP v3' section includes a checkbox for 'Enable SNMPv3', and text input fields for 'Read UserName', 'Security Level' (set to 'no auth, no priv'), 'Authentication Algorithm' (radio buttons for 'MD5' and 'SHA'), 'Authentication Password', 'Private-key Algorithm' (radio buttons for 'DES' and 'AES'), 'Private-key password', 'Write UserName', 'Security Level' (set to 'no auth, no priv'), 'Authentication Algorithm' (radio buttons for 'MD5' and 'SHA'), 'Authentication Password', 'Private-key Algorithm' (radio buttons for 'DES' and 'AES'), and 'Private-key password'. The 'SNMP Other Settings' section includes a text input field for 'SNMP Port' (set to '161'). A 'Save' button is located at the bottom of the configuration area.

1. Check **Enable SNMPv1** and/or **Enable SNMP v2c**.
2. Configure the SNMP settings.

---

**Note:** The settings of the SNMP software should be the same as the settings you configure here.

---

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

---

**Note:** A reboot is required for the settings to take effect.

---

## Advanced Settings > HTTPS

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

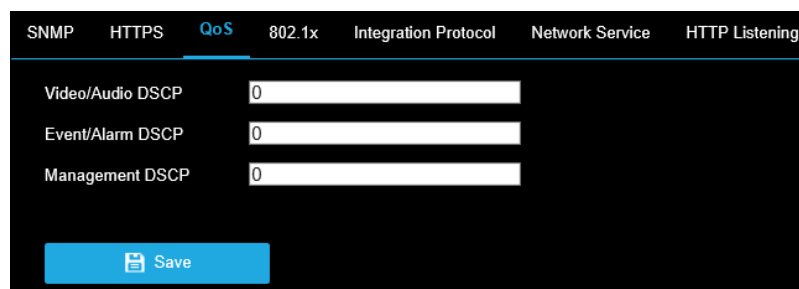
### Note:

- 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 > QoS

QoS (Quality of Service) can help resolve network delay and network congestion by defining the data priority.



1. Configure the QoS settings, including **Video/Audio DSCP**, **Event/Alarm DSCP** and **Management DSCP**.
  - The valid value range of the DSCP is 0 to 63. The bigger the DSCP value is, the higher the priority is.

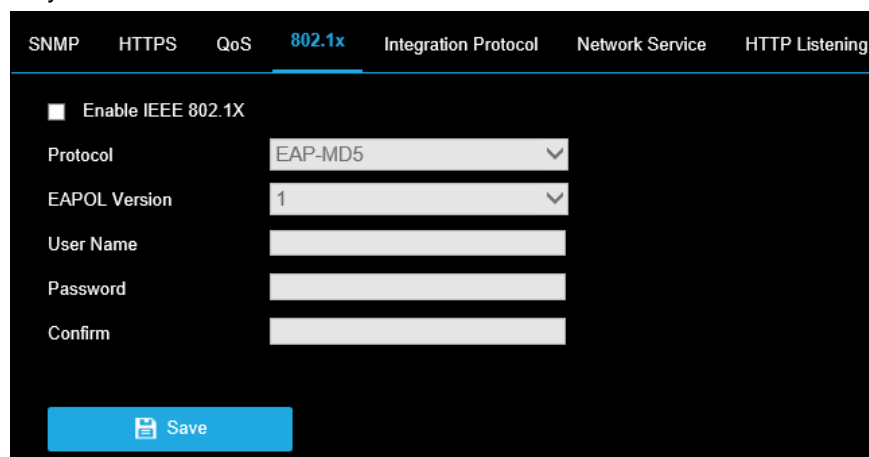
**Note:** DSCP refers to the Differentiated Service Code Point; and the DSCP value is used in the IP header to indicate the priority of the data.

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

**Note:** A reboot is required for the settings to take effect.

## Advanced Settings > 802.1x

The IEEE 802.1X standard is supported by the network cameras, and when the feature is enabled, the camera data is secured and user authentication is needed when connecting the camera to the network protected by the IEEE 802.1X.



### Before you start:

The authentication server must be configured. Please apply and register a user name and password for 802.1X in the server.

1. Check the **Enable IEEE 802.1X** checkbox to enable the feature.
2. Configure the 802.1X settings, including **Protocol**, **EAPOL Version**, **User Name**, **Password** and **Confirm**.

---

**Note:** The EAPOL version must be identical with that of the router or the switch.

---

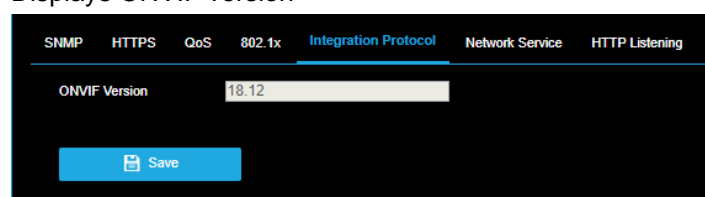
3. Enter the **User Name** and **Password** to access the server.
  4. Click **Save** to finish the settings.
- 

**Note:** A reboot is required for the settings to take effect.

---

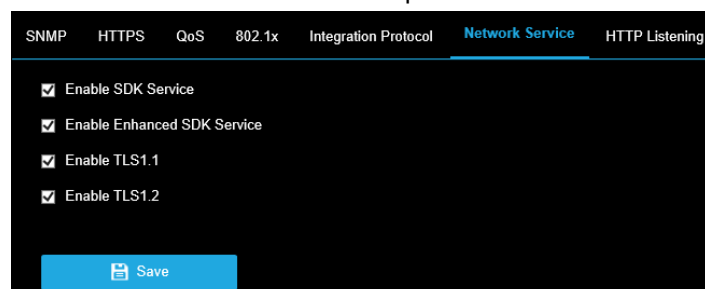
## Advanced Settings > Integration Protocol

Displays ONVIF version



## Advanced Settings > Network Service

In Network Service, you can control the use of the listed protocols and services the device offers. You are recommended to disable unused protocol or service for network safety concern.



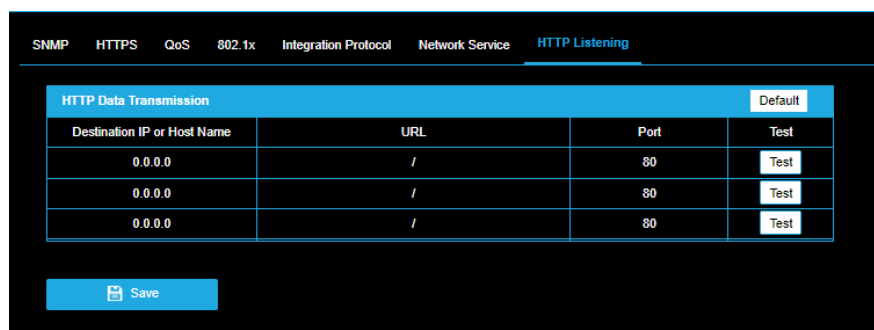
### SDK Service and Enhanced SDK Service

If you want to add the device to the client software, you should enable SDK Service or Enhanced SDK Service.

### TLS (Transport Layer Security)

The device offers TLS 1.1 and TLS 1.2. Enable one or more protocol versions according to your need.

## Advanced Settings > HTTP Listening



Destination IP or Host Name	URL	Port	Test
0.0.0.0	/	80	Test
0.0.0.0	/	80	Test
0.0.0.0	/	80	Test

Alarm information can be sent to destination IP or Host via HTTP protocol.

---

**Note:** HTTP data transmission should be supported by the destination IP or Host.

---

1. Input destination IP or host name, URL, and port number.
2. Click **Test** to see if the service is available.
3. Click **Save** to save settings.

## VIDEO/AUDIO

---

### Video

Configure parameters for the main and sub video streams.

The screenshot shows a configuration window with a dark background and light text. At the top, there are two tabs: 'Video' (selected) and 'Audio'. Below the tabs, there are several settings, each with a label and a value field (usually a dropdown menu). The settings are: Stream Type (Main Stream(Normal)), Video Type (Video Stream), Resolution (3840\*2160), Bitrate Type (Variable), Video Quality (Medium), Frame Rate (15) with 'fps' next to it, Max. Bitrate (8192) with 'Kbps' next to it, Max. Average Bitrate (5120) with 'Kbps' next to it, Video Encoding (H.264), H.264+ (ON), Profile (Main Profile), and I Frame Interval (30). At the bottom left, there is a blue button with a save icon and the text 'Save'.

Select the **Stream Type**.

Supported stream types are listed in the drop-down:

- **Main stream** is used for high resolution recording of motion events and viewing live video.
- **Sub-stream** is used for low resolution 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:** Set the bitrate type to constant or variable.

---

**Note:** Variable bitrate is the default and recommended option.

---

- **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.
- **H.264+ / H.265+:**

**H.264+:** If you set the main stream as the stream type, and H.264 as the video encoding, you can see H.264+ available. H.264+ is an improved compression coding technology based on H.264. By enabling H.264+, users can estimate the HDD consumption by its maximum average bitrate. Compared to H.264, H.264+ reduces storage by up to 50% with the same maximum bitrate in most scenes.

**H.265+:** If you set the main stream as the stream type, and H.265 as the video encoding, you can see H.265+ available. H.265+ is an improved compression coding technology based on H.265. By enabling H.265+, users can estimate the HDD consumption by its maximum average bitrate. Compared to H.265, H.265+ reduces storage by up to 50% with the same maximum bitrate in most scenes.

**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 video encoding.**

**Notes:**

- Upgrade your video player to the latest version if live view or playback does not work properly due to compatibility.
- With H.264+/H.265+ enabled, the parameters such as profile, I frame interval, video quality, and SVC are greyed out.
- With H.264+/H.265+ enabled, some functions are not supported.
- H.264+/H.265+ can spontaneously adjust the bitrate distribution according to the requirements of the actual scene in order to realize the set maximum average bitrate in the long term. The camera needs at least 24 hours to adapt to a fixed monitoring scene.

- **Profile:** When you select H.264 or H.265 as video encoding, you can set the profile.
- **I Frame Interval:** Set I Frame Interval from 1 to 400.

## Audio

Configure the following audio settings:



**Audio Encoding**

G.722.1, G.711 ulaw, G.711alaw, G.726, MP2L2 and PCM are selectable. For MP2L2, the Sampling Rate and Audio Stream Bitrate are configurable. For PCM, the Sampling Rate can be set.

**Audio Input**

MicIn and LineIn are selectable for the connected microphone and pickup respectively.

**Input Volume**

0-100 adjustable.

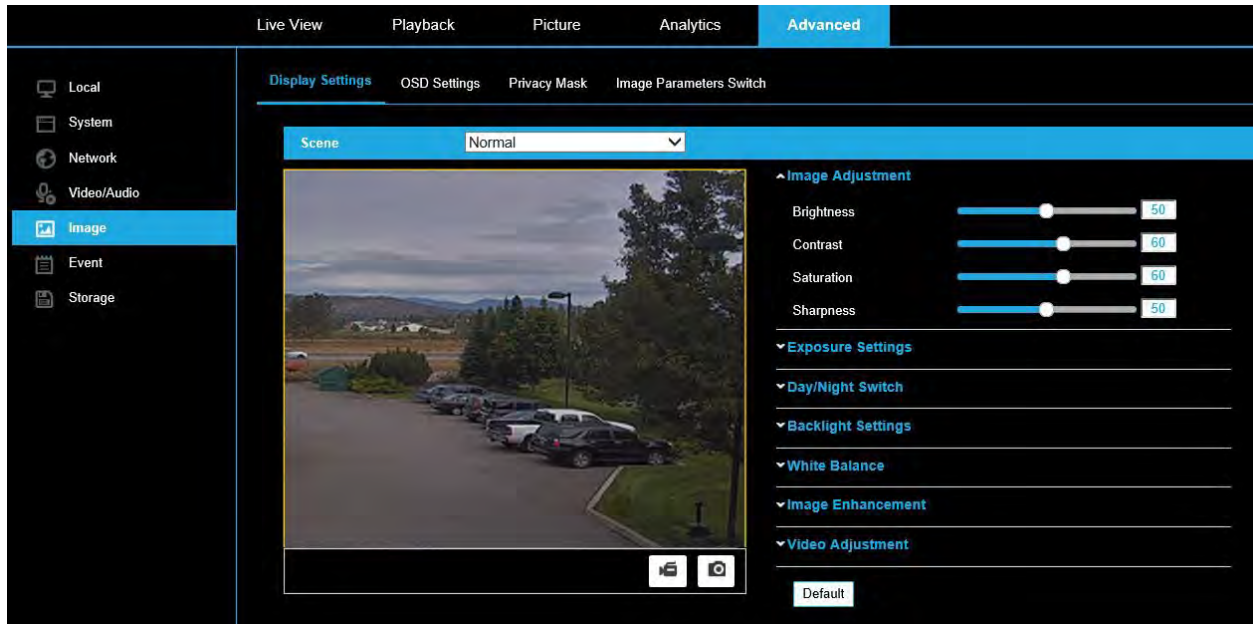
**Environmental Noise Filter**

Set it as OFF or ON. When the function is enabled, the noise in the environment can be filtered to some extent.

# IMAGE

## Display Settings

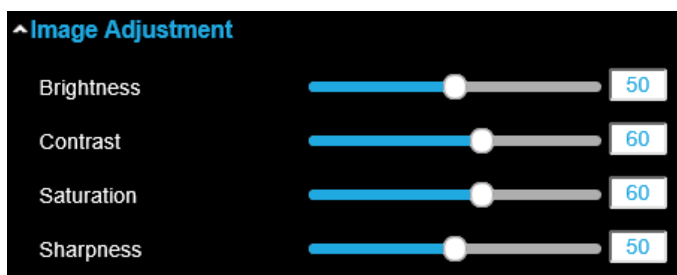
Configure the image adjustment, exposure settings, day/night switch, backlight settings, white balance, image enhancement, video adjustment, and other parameters in display settings, OSD settings, and privacy mask.







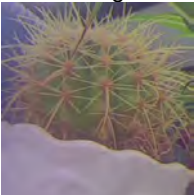
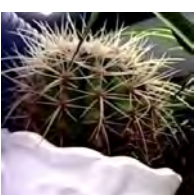

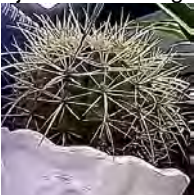
### Scene

Use the Scene dropdown to enable a preset configuration: Normal, Back light, Front light, Low Illumination, Custom 1 or Custom 2.

### Image Adjustment

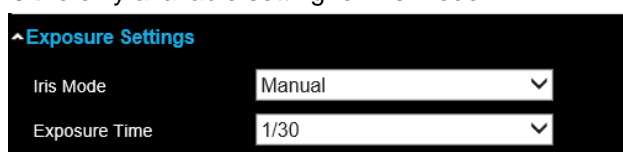


- **Brightness** describes brightness of the image, which ranges from 1 to 100.
- **Contrast** describes the contrast of the image, which ranges from 1 to 100.
- **Saturation** describes the intensity of the image color, which ranges from 1 to 100.
- **Sharpness** describes the edge contrast of the image,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

Item	Description
Brightness	<p>Set the degree of brightness of images.</p> <div>   </div> <p>Low brightness      High brightness</p>
Saturation	<p>Set the intensity of color in the image.</p> <div>   </div> <p>Low saturation      High saturation</p>
Contrast	<p>Set the degree of difference between the blackest pixel and the whitest pixel.</p> <div>   </div> <p>Low contrast      High contrast</p>
Sharpness	<p>Contrast of boundaries of objects in an image.</p> <div>   </div> <p>Low sharpness      High sharpness</p>
Digital Noise Reduction	<p>Reduce the noise of images. The function may cause image blurring.</p>

## Exposure Settings

Manual is the only available setting for Iris Mode.

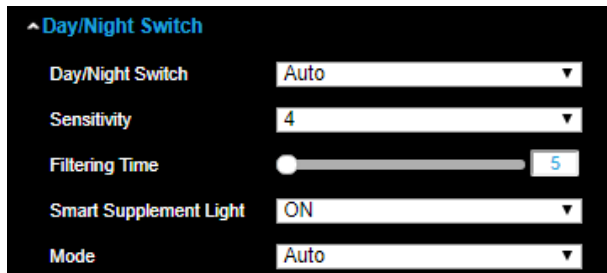


**Exposure Time** refers to the electronic shutter time, which ranges from 1/3 to 1/100,000s. Adjust it according to the actual luminance condition.

## 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

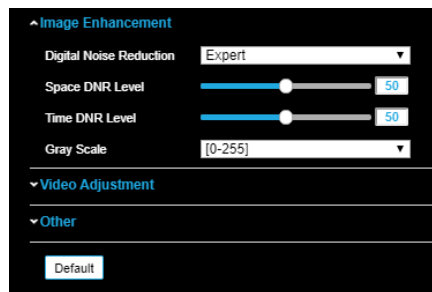
- **Digital Noise Reduction:** DNR reduces the noise in the video stream. OFF, Normal and Expert are the available options.

**Normal Mode:** 0 to 100



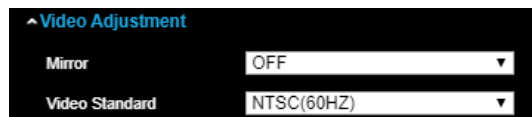
**Expert Mode:**

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



**Gray Scale:** You can choose the range of the grey scale as [0-255] or [16-235].

## Video Adjustment



- **Mirror:** It mirrors the image so you can see it inverted. Left/Right, Up/Down, Center, and OFF are selectable.
- **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.

---

## Other



Click on **Default** to restore original settings.

## OSD Settings

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

Display Settings   **OSD Settings**   Privacy Mask   Image Parameters Switch

Display Name ☐   Display Date ☐   Display Week ☐

Camera Name

Time Format

Date Format

**Text Overlay**

1

2

3

4

Display Mode

OSD Size

Font Color

Alignment

Save

### 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.
  - 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.

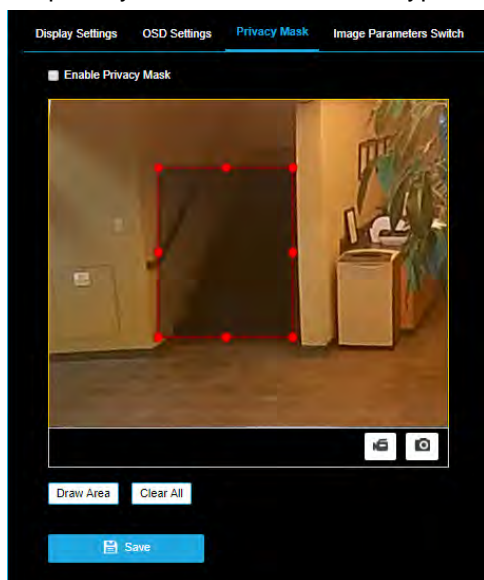
---

**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.

---

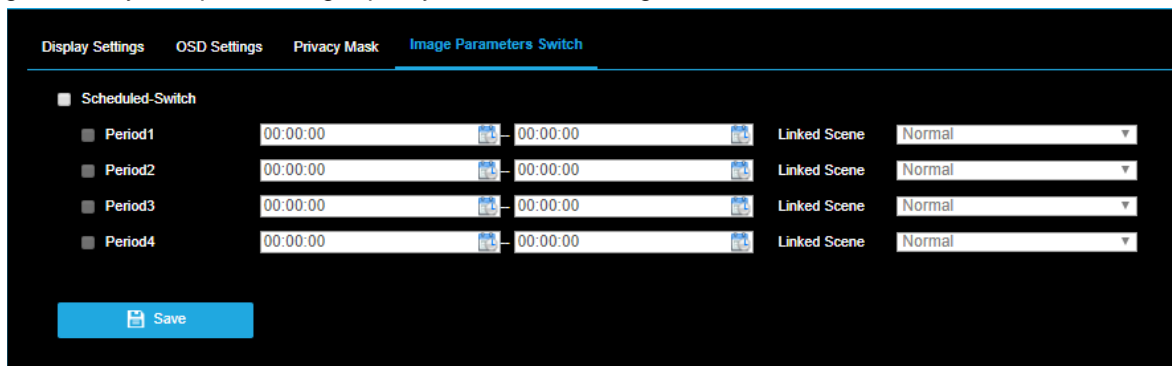
**Note:** Draw up to 4 areas on the same image.

---

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

## Image Parameters Switch

Scheduled-Switch provides the ability to set the camera parameters for different times of day separately, providing the ability for optimal image quality in different settings.

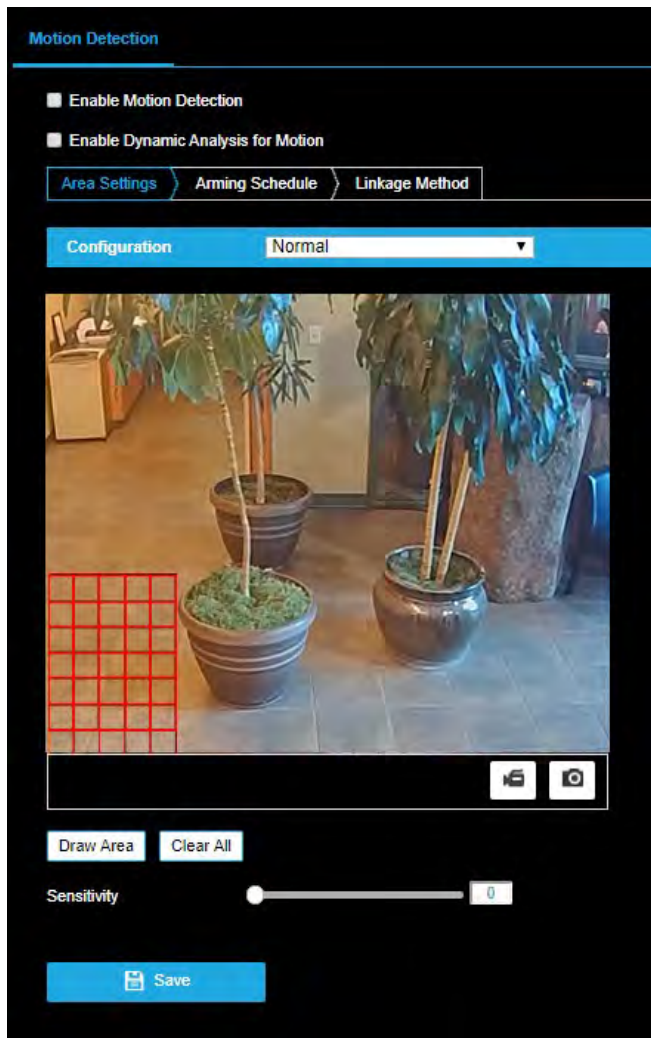


1. Check the checkbox for **Scheduled-Switch** and then up to four Periods.
2. Use the calendar dropdowns to select the range for each Period.
3. Used the **Linked Scene** dropdown to associate the Period with a Scene in **Display Settings**.
4. **Save** when finished.



### 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.



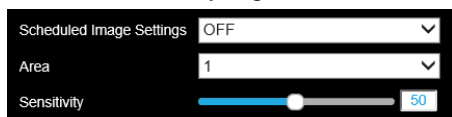
To configure Normal motion detection:

1. Check **Enable Motion Detection**.
2. Check **Enable Dynamic Analysis for Motion** if you want to mark the detected objects with green rectangles.
3. Click **Draw Area**.
  - Click and drag the mouse on the live video to draw a motion detection area.
  - 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

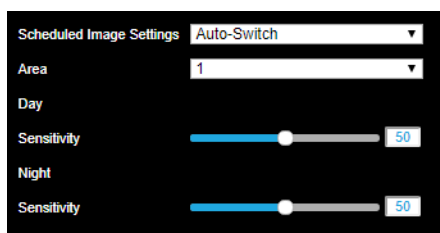
Expert motion detection is primarily used to configure the sensitivity and proportion of object on each area for different day/night switch.



Scheduled Image Settings: OFF  
Area: 1  
Sensitivity: 50

1. Draw the detection area.
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.

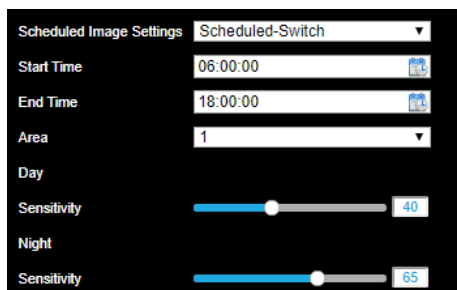
## Auto-Switch



Scheduled Image Settings: Auto-Switch  
Area: 1  
Day Sensitivity: 50  
Night Sensitivity: 50

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.

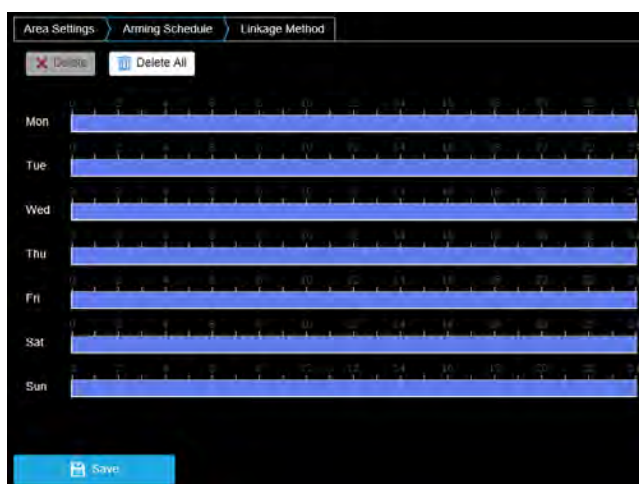
## Scheduled-Switch



Scheduled Image Settings: Scheduled-Switch  
Start Time: 06:00:00  
End Time: 18:00:00  
Area: 1  
Day Sensitivity: 40  
Night Sensitivity: 65

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.

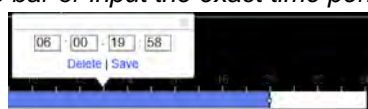
## Set the Arming Schedule for Motion Detection



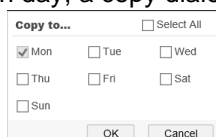
To configure the motion detection schedule:

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.

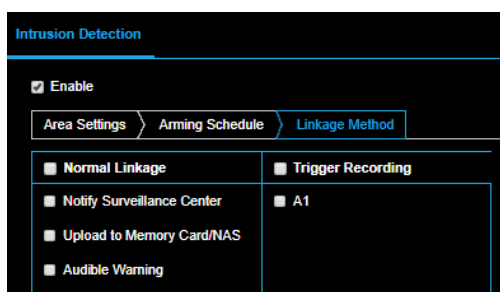


- (Optional) Click **Delete** to delete the current arming schedule.
2. Move the mouse to the end of each day, a copy dialogue box pops up, and you can copy the current settings to other days.
3. Click **Save** to save the settings.



**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



**Note:** This camera model does not support email or surveillance center notification.

To configure Linkage Method for Motion Detection:

- Check **Upload to Memory Card/NAS** to capture images and/or record video when motion is detected and upload the output to the on-board storage.
  - Requires microSD card installed in camera. (Not Included)

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

# 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.

The screenshot shows the 'Record Schedule' interface. At the top, there are tabs for 'Record Schedule' and 'Capture'. Below the tabs, there is an 'Enable' checkbox. To the right of the checkbox is a dropdown menu set to 'Continuous'. Further right are 'Delete' and 'Delete All' buttons. On the far right is an 'Advanced' button. The main area is a grid for the days of the week (Mon, Tue, Wed, Thu, Fri, Sat, Sun) and hours (0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24). A legend on the right side lists the recording modes: Continuous (blue), Motion (green), Alarm (red), Motion | Alarm (orange), Motion & Alarm (light blue), and Event (purple). At the bottom left, there is a 'Save' button.

To configure record schedule:

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

The screenshot shows the 'Advanced' settings dialog. It has a title bar with 'Advanced' and a close button. Inside, there is a checked 'Overwrite' checkbox. Below it are three dropdown menus: 'Pre-record' set to '5s', 'Post-record' set to '5s', and 'Stream Type' set to 'Main Stream(Normal)'. At the bottom are 'OK' and 'Cancel' buttons.

- **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 pre-record 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 Substream).

3. Select the **Record Type**:

- **Continuous**

- If you select **Continuous**, the video will be recorded automatically according to the time of the schedule.

- **Motion**

- If you select **Motion Detection**, the video will be recorded when the motion is detected. Besides configuring the recording schedule, you have to set the motion detection area in **Area Settings** and check the checkbox of **Trigger Recording** in the **Linkage Method** in the **Motion Detection** settings interface.

- **Alarm**

- If you select **Alarm**, the video will be recorded when the alarm is triggered via the external alarm input channels. Besides configuring the recording schedule, you have to set the **Alarm Type** and check the checkbox of **Trigger Recording** in the **Linkage Method** in the **Alarm Input** settings interface.

- **Motion & Alarm**

- If you select **Motion & Alarm**, the video will be recorded when the motion and alarm are triggered at the same time. Besides configuring the recording schedule, you have to configure the settings in the **Motion Detection** and **Alarm Input** settings.

- **Motion | Alarm**

- If you select **Motion | Alarm**, the video will be recorded when the external alarm is triggered or the motion is detected. Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input** settings.

- **Events**

- If you select **Event**, the video will be recorded if any of the events is triggered. Besides configuring the recording schedule, you have to configure the event settings.

4. Click-and-drag the mouse on the time bar to set the record schedule.

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

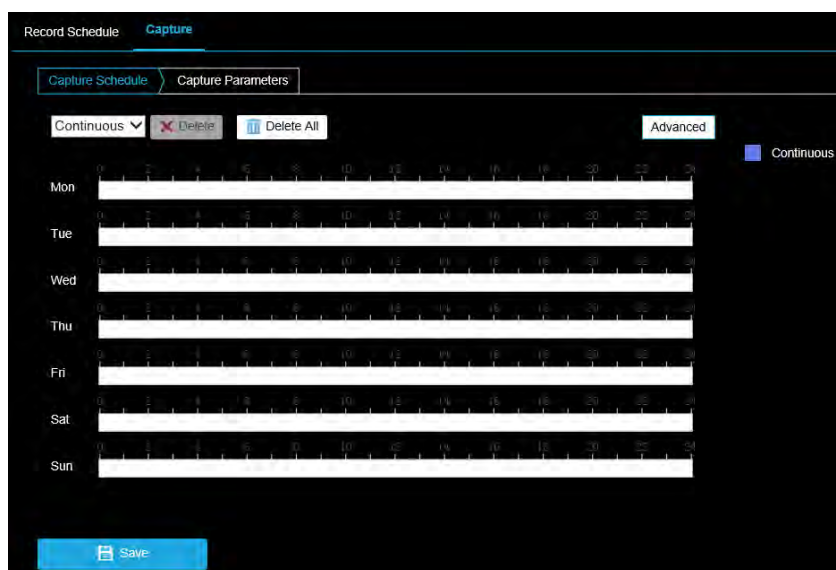
---

**Note:** Motion detection area must be enabled and configured for this function.

---

## Schedule Settings > Capture Schedule

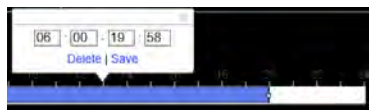
This camera includes an integrated microSD™ card slot that can be used to record images. The card slot is compatible with a microSD™ card up to 128GB. This section is used to define when images should be saved to the microSD card.



### 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.

Copy to...			<input type="checkbox"/> Select All
<input checked="" type="checkbox"/> Mon	<input type="checkbox"/> Tue	<input type="checkbox"/> Wed	
<input type="checkbox"/> Thu	<input type="checkbox"/> Fri	<input type="checkbox"/> Sat	
<input type="checkbox"/> Sun			
<div>OK</div>			<div>Cancel</div>

## Schedule Settings > Capture Parameters

Capture Schedule Capture Parameters

**Timing**

☒ Enable Timing Snapshot

Format: JPEG

Resolution: 3840\*2160

Quality: High

Interval: 1000 milliseconds

**Event-Triggered**

☐ Enable Event-Triggered Snapshot

Format: JPEG

Resolution: 3840\*2160

Quality: High

Interval: 1000 milliseconds

Capture Number: 4

Save

1. Check **Enable Timing Snapshot**.
2. Select the **Quality** and **Interval**.
  - **Quality:** Low, Medium, High
  - **Interval:** length of time between images
    - **Capture Intervals:**
      - Days: 1-7
      - Hours: 1-168
      - Minutes: 1-10080
      - s (seconds): 1-604800
      - Millisecond: 1000-604800000

1. Check **Enable Event-Triggered Snapshot**.
2. Select the **Quality**, **Interval**, and **Capture Number**.
  - **Quality:** Low, Medium, High
  - **Interval:** Length of time between images
    - **Capture Intervals:**
      - s (seconds): 1-65
      - Millisecond: 1000-65535
  - **Capture Number:** Quantity of images to capture; choose a number between 1 and 120.
3. Click **Save** to save the settings.

## HDD Management

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

[illegible]

**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.

## Net HDD

HDD Management

Net HDD

Net HDD

HDD No.	Server Address	File Path	Type	Delete
1			NAS	X
2			NAS	X
3			NAS	X
4			NAS	X
5			NAS	X
6			NAS	X
7			NAS	X
8			NAS	X

Save

View, add and delete network storage locations.

### To add Net HDD:

1. Enter IP address of the network disk.
2. Enter the file path of the network disk.
3. Click Save.

---

**Note:** A Net HDD can be Deleted by clicking **X** under the **Delete** column.

---

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**Note:** Once added, a network disk can be initialized in the HDD Management tab.

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Are any parts of this manual incomplete or unclear? Please let us know! Contact us at [support@avertx.com](mailto:support@avertx.com) with your comments.

[www.avertx.com](http://www.avertx.com)

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