

# Verint V4750

## User Guide

---

January 26, 2021

**VERINT.**

## Copyright Notice

© 2021 Verint Systems Inc. All Rights Reserved Worldwide.

Confidential and Proprietary Information of Verint Systems Inc.

All materials (regardless of form and including, without limitation, software applications, documentation, and any other information relating to Verint Systems, its products or services) are the exclusive property of Verint Systems Inc. Only expressly authorized individuals under obligations of confidentiality are permitted to review materials in this document. By reviewing these materials, you agree to not disclose these materials to any third party unless expressly authorized by Verint Systems, and to protect the materials as confidential and trade secret information. Any unauthorized review, retransmission, dissemination or other use of these materials is strictly prohibited. If you are not authorized to review these materials, please return these materials (and any copies) from where they were obtained. All materials found herein are provided "AS IS" and without warranty of any kind.

Verint Systems Inc. does not warrant, guarantee or make any representation regarding the use or the results of the use of the information, links, tools, and materials in terms of the accuracy, reliability, quality, validity, stability, completeness, currentness, or otherwise of its content or products. The entire risk as to the use, results and performance of information, links, tools and materials provided or referenced herein is assumed by the user. Verint Systems Inc. shall not be liable for damages resulting from the use, misuse or unlawful use of the information, links, tools, and materials contained or referenced herein.

Any third party technology that may be appropriate or necessary for use with the Verint Product is licensed to you only for use with the Verint Product under the terms of the third party license agreement specified in the Documentation, the Software or as provided online at [www.verint.com/thirdpartylicense](http://www.verint.com/thirdpartylicense). You may not take any action that would separate the third party technology from the Verint Product. Unless otherwise permitted under the terms of the third party license agreement, you agree to only use the third party technology in conjunction with the Verint Product.

The Verint Systems Inc. products are protected by one or more U.S., European or International Patents and other U.S. and International Patents and Patents Pending.

All marks referenced herein with the ® or TM symbol are registered trademarks or trademarks of Verint Systems Inc. or its subsidiaries. All rights reserved. All other marks are trademarks of their respective owners.

Please visit our website at [www.verint.com/intellectualpropertynotice](http://www.verint.com/intellectualpropertynotice) for updated information on Verint Intellectual Property.

# Contents

- Contents** ..... **3**
  
- Safety** ..... **6**
  - Read Before Use ..... 8
  
- Preface** ..... **9**
  - Contacting Verint Sales and Marketing ..... 9
  - Contacting Service and Support ..... 9
  - Documentation and Firmware ..... 10
  
- Summary of Changes** ..... **11**
  - January 2021 ..... 11
  
- Chapter 1: Overview** ..... **12**
  - V4750BX-DN ..... 13
  - V4750BX-DN I/O Connections ..... 14
  - V4750BX-DN Package Contents ..... 14
  - V4750FDW-DN ..... 15
  - V4750FDW-DN I/O Connections ..... 16
  - V4750FDW-DN Package Contents ..... 17
  - Micro SD/SDHC Card Support ..... 17
  
- Chapter 2: Installation** ..... **18**
  - Package Contents ..... 19
  - Grounding ..... 19
  - Power Requirements ..... 19
  - Verint V4750BX-DN Model Installation ..... 19
    - Installing a Lens on the BX Models ..... 20
    - Powering with a PoE Injector ..... 20
    - Powering with a 12V DC or 24V AC Power Supply ..... 21
    - Mounting the Camera ..... 21
    - Adjusting the Zoom and Focus for the BX Model ..... 22
  - Verint V4750FDW-DN Model Installation ..... 23

Installing the VerintV4750FDW .....	23
Powering with a PoE Injector .....	25
Powering with a 12V DC or 24V AC Power Supply .....	25
Adjusting the Viewing Angle .....	26
Reattaching the Dome Cover .....	27
Discovering Verint IP Devices from the EdgeVR .....	28
Connecting with Verint VMS .....	29

## Chapter 3: Configuration .....30

Accessing the IP Camera Home Page .....	31
Home Page Overview .....	31
Playing Recorded Video .....	33
Changing Languages .....	34
Configuring Profiles .....	34
Adjusting the Back Focus (BX Model) .....	39
Adjusting the Lens Control (FDW Model) .....	40
Image .....	41
Configuring Exposure Settings .....	41
Configuring White Balance .....	46
Configuring Image Basic Setting .....	47
Video .....	48
Creating Privacy Zones .....	48
Configuring the Enhanced Codec .....	49
Network .....	51
Configuring the General Network Settings .....	51
Configuring RTSP .....	54
Configuring SNMP .....	56
Configuring 802.1X .....	58
Configure Firewall .....	60
Configuring DDNS .....	60
Configuring SSL .....	61
Configuring QoS .....	63
System .....	64
Setting the Date and Time .....	64
Configuring Audio .....	65
Upgrading the Firmware .....	66
Initializing the Camera .....	67
Configuring the OSD .....	68
Viewing Events .....	69
Configuring RS485 (BX Model) .....	70
Account .....	70
Adding Users .....	70

Configuring LDAP .....	71
Event Source .....	73
Configuring an Alarm Event Source .....	73
Configuring an Audio Event Source .....	77
Configuring a Motion Event Source .....	80
Configuring a Network Event Source .....	83
Configuring a Schedule Event Source .....	85
Configuring a Tampering Event Source .....	89
Configuring a mSD Health Event Source .....	92
Video Analytics .....	94
Configuring the Video Analytics – General Properties .....	94
Configuring the Video Analytics – Line Counting .....	95
Configuring the Video Analytics – Border Line .....	96
Configuring the Video Analytics – Loitering .....	98
Configuring the Video Analytics – Area Counting .....	100
Configuring the Video Analytics – Intrusion .....	101
Configuring the Video Analytics – Departure .....	104
Configuring the Video Analytics – Withdrawn .....	106
Configuring the Video Analytics – Adverse Way .....	109
Configuring the Video Analytics – Abandon .....	112
Event Settings .....	114
Configuring Alarm Out .....	114
Configuring Email .....	115
Configuring FTP .....	117
Configuring NAS .....	118
Configuring the Record Settings .....	119
Configuring the SD Card .....	119
Configuring Snapshot .....	120
Configuring Sound .....	121
Configuring HTTP Generic Event .....	122
<b>Appendix A: Technical Specifications .....</b>	<b>124</b>
V4750BX-DN Specifications .....	125
V4750FDW-DN Specifications .....	127

# Safety

Always observe the following precautions to reduce the risk of injury and equipment damage:

- Installation and service should be performed only by qualified and experienced technicians and comply with all local codes and rules to maintain your warranty.
- Disconnect power from the unit when performing a maintenance task.
- Wipe the camera with a dry soft cloth. For tough stains, slightly apply diluted neutral detergent and wipe with a dry soft cloth.
- Do not apply benzene or thinner to the camera, which may cause the surface of the unit to melt or the lens to fog.
- Do not touch the IP cameras during a lightning storm.
- Only use the recommended power cable for powering the IP cameras. If you are unsure of the actual power requirements, please contact Verint and do not connect the power at will.
- The power cable must be properly secured as improper connections may cause a short.
- Routing of the Ethernet cable from the camera to the power source must be done inside the building.
- Turn off IP cameras as soon as smoke or unusual odors are detected.
- Do not place IP cameras near a heat source.
- Keep indoor IP cameras models away from water. If they become wet, turn off immediately.
- Do not place indoor IP cameras models in a high humidity environment.
- Do not place IP camera on an unstable cart, tripod, or on a tabletop as personal injury and damage to the unit may occur due to a fall. Please use officially certified support, frames, and accessories included with the product. Follow the instructions in this instruction manual during installation to ensure the quality and maintain safety.
- Keep IP cameras away from direct sunlight, except for outdoor models.
- Do not disassemble the IP cameras.
- Do not drop the IP cameras.
- Do not insert sharp or tiny objects into the IP cameras to avoid short circuits.

- Operating temperature:

Verint Model	Operating Conditions
V4750BX	Cold Start Temperature: -40°C (-40°F) Operating Temperature: -40°C ~ 60°C (-40°F ~ 140°F) Storage Temperature: : -40°C ~ 60°C (-40°F ~ 140°F)
V4750FDW	Cold Start Temperature: -20°C (-4°F) Operating Temperature: -10°C ~ 55°C (-14°F ~ 131°F) Storage Temperature: : -40°C ~ 65°C (-40°F ~ 149°F)

# Read Before Use

The use of surveillance devices may be prohibited by law in your country. The camera is not only a high-performance web-ready camera, but can also be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of such devices is legal before installing this unit for its intended use.

It is important to first verify that all contents received are complete according to the package contents. Carefully read and follow the instructions in the installation chapter to avoid damage due to faulty assembly and installation. This also ensures the product is used properly as intended.

These devices are only meant to be installed by licensed technical experts in the area of surveillance and network installation. Installation of this equipment by untrained or unqualified personnel may violate the product warranty and may be illegal in some jurisdictions.



# Preface

The Verint V4750 Series User Guide presents information and procedures on installing, configuring, and using the box and outdoor IP cameras.

## Contacting Verint Sales and Marketing

Verint® (NASDAQ: VRNT) is a global leader in Actionable Intelligence® solutions. Actionable Intelligence is a necessity in a dynamic world of massive information growth because it empowers organizations with crucial insights and enables decision makers to anticipate, respond and take action. Verint Actionable Intelligence solutions help organizations address three important challenges: customer engagement optimization; security intelligence; and fraud, risk, and compliance. Today, more than 10,000 organizations in over 180 countries, including over 80 percent of the Fortune 100, use Verint solutions to improve enterprise performance and make the world a safer place. Learn more at <http://www.verint.com>.

To contact us for sales, pricing and general inquiries, refer to the coordinates below:

Location	Contact Information
Americas	<a href="mailto:videoinfo@verint.com">videoinfo@verint.com</a> +1-800-4VERINT
Europe, Middle East, and Africa	<a href="mailto:marketing.emea@verint.com">marketing.emea@verint.com</a> +44 (0) 1932 839500
Asia/Pacific	<a href="mailto:marketing.apac@verint.com">marketing.apac@verint.com</a> + 852 2797 5678

## Contacting Service and Support

At Verint, we value our users and partners, and we strive to continuously improve the customer service experience. Verint Smart Support™ ensures 24/7, on-demand service and support. Enter support requests, access training and troubleshooting tips, initiate RMAs, check warranty status, access resources, and more. If you encounter any type of problem after reading this document, contact your local distributor or Verint representative.

# Documentation and Firmware

- Download Verint documentation, software and the latest firmware from the extranet: <https://verintconnect.com>
- Send your questions or comments on the current document to our documentation feedback team at [documentationfeedback@verint.com](mailto:documentationfeedback@verint.com)

# Summary of Changes

## January 2021

This is the first edition of the Verint V4750 User Guide.

# Overview

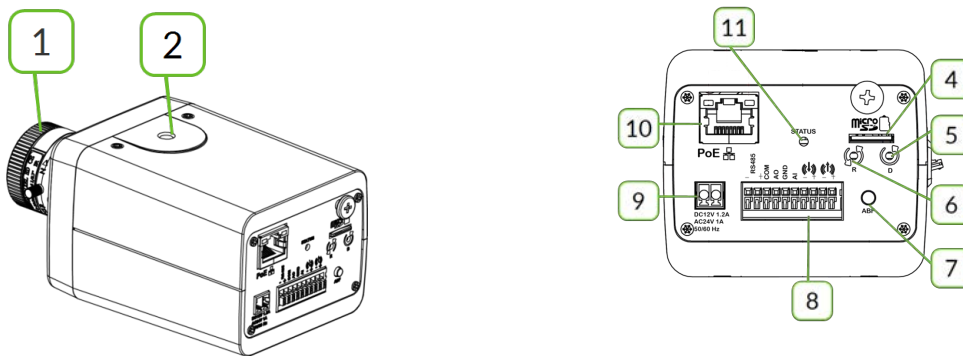
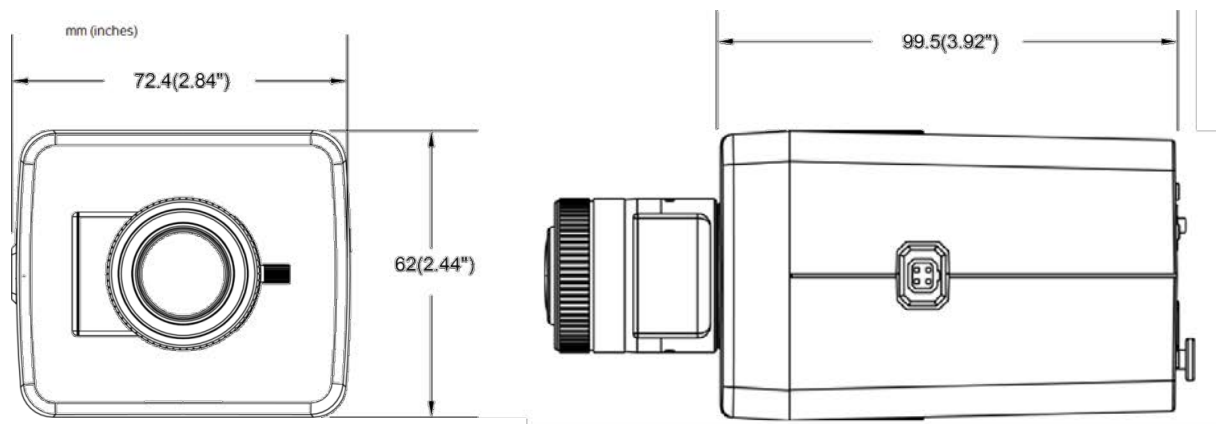
The Verint V4750FDW-DN and V4750BX-DN are a brand-new professional H.264/H.265 network cameras offering a maximum resolution of 2592 x 1944 (5MP) at 30 fps. The V4750 series are powerful camera that features high resolution images, Wide Dynamic Range (WDR), Remote Focus and Zoom, Onboard Analytics and a built-in MicroSD slot for onboard storage.

Using AdaptiveStream the V4750 series can reduce bandwidth and storage consumption while maintaining high image quality. True WDR capability allows the camera to capture both the dark and bright areas of an image, combining the differences to create a highly realistic representation of the original scene. The onboard analytics suite features essentials like Trip Wire, Object Left Behind and Loitering which can be used to alert a user to a potential problem in the field.

With built in butterfly recess mounts, it is excellent for Indoor use and can be easily installed in a wall or ceiling where extra detail is required like casinos, cash counting rooms and other important places.

V4750BX-DN .....	13
V4750BX-DN I/O Connections .....	14
V4750BX-DN Package Contents .....	14
V4750FDW-DN .....	15
V4750FDW-DN I/O Connections .....	16
V4750FDW-DN Package Contents .....	17
Micro SD/SDHC Card Support .....	17

# V4750BX-DN



## Description

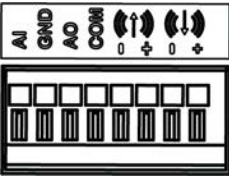
1. Lens
2. Mount Screw Hole
3. DC(Auto) Iris Control Port
4. Micro SD Card Slot
5. Default Button: Press for 6 seconds to restore factory default settings.
6. Reset Button: Press for 1 second to reboot the camera.
7. ABF: Press for approximately 1 second to auto-focus.
8. DI/DO Port: DI/DO (Digital Input/Output) ports for external devices.
9. DC 12V or AC 24V Port
10. RJ-45 Ethernet / PoE Port

- Solid Green Indicates a live connection is established.
- Flashing Orange Indicates data is being transmitted / received between camera and the network.

11. Status LED:

- Solid Red: boot up is running. After 2 ~ 3 seconds:
  - Solid Red to Flashing Green: boot up is normal.
  - Solid Red: an error occurs.
  - Turns off 3 minutes after a successful boot.
- Flashing Amber: firmware upgrade is running.

## V4750BX-DN I/O Connections

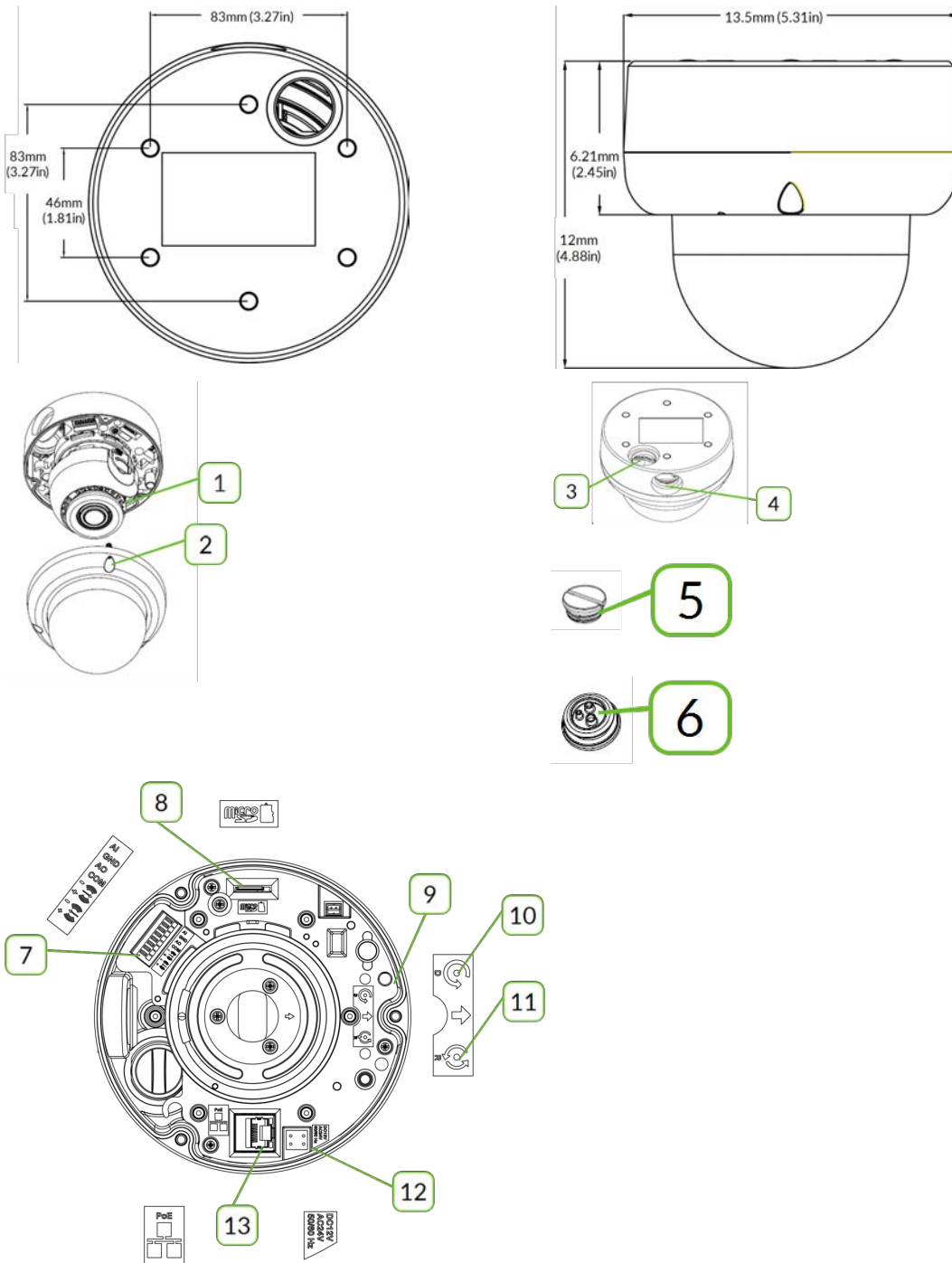


Name	Port
RS485	RS485 + RS485 -
ALARM IN	GND AI
ALARM OUT	COM AO
AUDIO IN (🔊)	+ -
AUDIO OUT (🔊)	+ -

## V4750BX-DN Package Contents

- ABF box camera × 1
- Male terminal block × 1

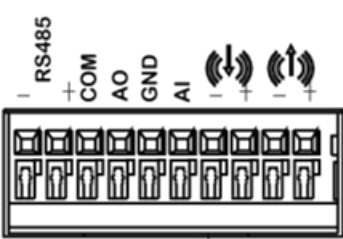
# V4750FDW-DN



## Description



1. IR Board
2. 3 Screws
3. Bottom Conduit Hole
4. Side Conduit Hole
5. Conduit Hole Plug Cover: To cover the unused conduit hole.
6. Conduit Hole Rubber Grommet: For water and dust ingress protection.
7. DI/DO Port: DI/DO (Digital Input/Output) ports for external devices.
8. Micro SD card slot
9. Status LED:
  - Solid Red: boot up is running. After 2 ~ 3 seconds:
    - Solid Red to Flashing Green: boot up is normal.
    - Solid Red: an error occurs.
    - Turns off 3 minutes after a successful boot.
    - Flashing Amber: firmware upgrade is running.
10. Default Button: Press for 6 seconds to restore factory default settings.
11. Reset Button: Press for 1 second to reboot the camera.
12. DC 12V or AC 24V Port
13. RJ-45 Ethernet / PoE Port
  - Solid Green Indicates a live connection is established.
  - Flashing Orange Indicates data is being transmitted / received between camera and the network.

## V4750FDW-DN I/O Connections



Name	Port
ALARM IN	GND AI
ALARM OUT	COM



Name	Port
	AO
AUDIO IN 	+ -
AUDIO OUT 	+ -

## V4750FDW-DN Package Contents

- Dome Camera × 1
- Plastic Anchor × 4
- Pan Head Screw (TP4) × 4
- T20 Security Torx Bit × 1
- Mounting Template × 1
- Conduit Hole Plug Cover × 1
- RJ-45 cable with rubber grommet × 1

## Micro SD/SDHC Card Support

The Verint IP cameras accepts micro SD/SDHC storage cards up to 8GB.

# Installation

The Verint V4750 series IP cameras are designed for easy, secure, and cost-effective installation. Available Power over Ethernet reduces wiring and installation costs, and support for 12V DC or 24V AC enables these cameras to be readily retrofitted into existing systems to facilitate migration to IP. The cameras can be configured from the Verint EdgeVR or Verint Enterprise VMS.

Package Contents .....	19
Grounding .....	19
Power Requirements .....	19
Verint V4750BX-DN Model Installation .....	19
Verint V4750FDW-DN Model Installation .....	23
Discovering Verint IP Devices from the EdgeVR .....	28
Connecting with Verint VMS .....	29

# Package Contents

## Grounding

For outdoor installation, it is important to ground the installation to protect the camera against electrical surges.

If you are using the VPOE-2 housing, refer to the VPOE housing installation guide for grounding instruction. Otherwise, connect wire from the Earth GND pin to the Earth ground connection to ensure the camera is properly grounded.

In order to prevent a ground loop:

- Use a BNC ground loop isolator in case the BNC video out is used permanently.
- Do not connect Earth ground to the camera power connector.
- Do not use shielded Ethernet cables. If using a shielded Ethernet cable, the shield should not be connected to the camera.

▼ [To ground the camera enclosure](#)

1. Connect the earth ground to the ground pin (⊕) in the enclosure terminal block.

## Power Requirements

Model	UL Listed Power Supply
V4750BX-DN	12V DC 1.25A or 24V AC 1A IEEE 802.3af PoE Class 3
V4750FDW-DN	12V DC 1.25A or 24V AC 1A IEEE 802.3af PoE Class 3

## Verint V4750BX-DN Model Installation

This section explains how to install and power the Verint V4750BX-DN.

**Caution**

Verint will not be held liable for damages to persons or property due to the improper installation of the Verint IP cameras.

## Installing a Lens on the BX Models

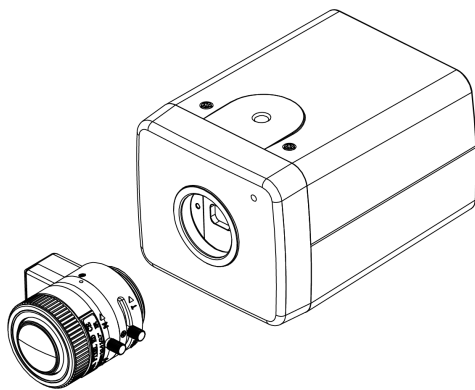
The Verint V4750BX supports CS mount lens that you must purchase separately.

**Tip**

Before installing the camera, look for a shooting area that best suits your needs.

✓ **To install the lens on the BX models**

1. Mount the lens by turning it clockwise onto the camera mount until it stops.
2. Connect the DC iris control line with the port.



## Powering with a PoE Injector

This product is intended for indoor use and should be supplied by a UL listed PoE power supply.

Model	UL Listed Power Supply Required
V4750BX-DN	IEEE 802.3af PoE Class 3
V4750FDW-DN	IEEE 802.3af PoE Class 3

✓ **To power with a PoE Injector**

1. Plug the other end of the cable into a PoE switch or to the Data&PWR port of a PoE injector. If you use a PoE injector, make sure the Data port of the injector is properly

connected to the Ethernet switch.

**Note**

Routing of the Ethernet cable from the camera to the power source must be done inside the building.

## Powering with a 12V DC or 24V AC Power Supply

This product is intended for indoor use and should be supplied by a UL listed power supply.

IP Camera Model	UL Listed Power Supply Required
-----------------	---------------------------------

☑ To power with a 12V DC or 24V AC power supply

1. Connect the power supply cable to the corresponding ports on the rear of the camera.
2. Plug an Ethernet cable into the RJ-45 connector on the back of the IP camera.
3. Plug the power supply cable to the power outlet.

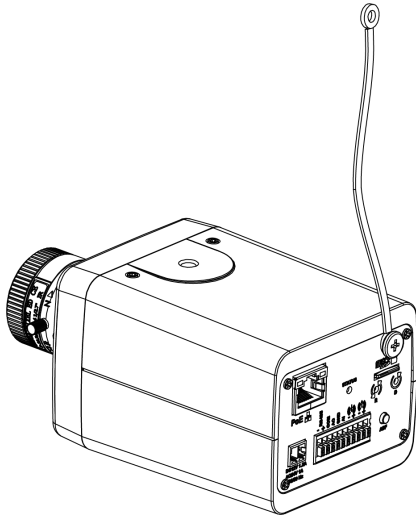
## Mounting the Camera

Following tools might help you complete the installation:

- a drill
- screwdrivers
- wire cutters

☑ To mount the camera

1. Select a bracket or housing (sold separately) which has a standard thumbscrew matching the mounting thread hole and fasten the camera with bracket / housing securely by the mounting thread hole. Depending on different applications, mount your selected bracket / housing onto wall or ceiling to complete mounting procedure.
2. (Optional) Connect a safety fall prevention wire (sold separately) with one end connected to a wall or ceiling stud and the other end to the safety-cord screw on the camera.



### Caution

To prevent the camera from falling, ensure that it is mounted to a firm place (ceiling slab or channel) and use a safety wire strong enough to withstand the total weight of the camera.

## Adjusting the Zoom and Focus for the BX Model

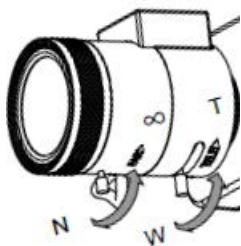
Based on the live image retrieved from the IP camera, you can adjust the field of view and focus.

### ✔ To adjust the zoom and focus

1. In a Web browser, connect to the camera.
2. While viewing the image, loosen the zoom and focus controllers.
3. Adjust the zoom factor and focus range.

### Note

The lens setup varies depending on the manufacturer.



4. Tighten the zoom and focus controller.

# Verint V4750FDW-DN Model Installation

This section explains how to install and power the Verint V4750FDW-DN.

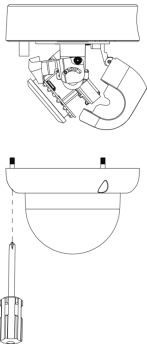
## Caution

Verint will not be held liable for damages to persons or property due to the improper installation of the Verint IP cameras.

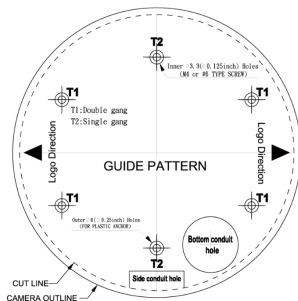
## Installing the VerintV4750FDW

### ✓ To install the VerintV4750FDW

1. Use the supplied T20 security torx bit to loosen the three camera housing screws and remove the camera housing.



2. Attach the supplied alignment sticker to the surface, where you will mount the camera.



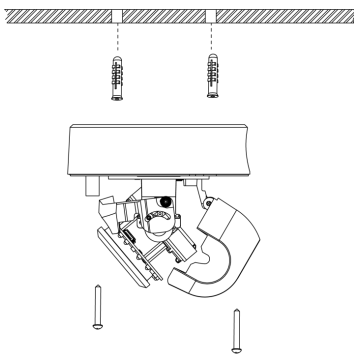
3. Drill 6 mm (0.2") outer holes at the T1 or T2 template positions on the mounting surface. Then insert 4 or 2 supplied plastic anchors into the holes. (T1: for single-gang socket, T2: for double-gang socket, if applicable on mounting surface).

4. Create a circular opening corresponding to the “Bottom conduit hole” of the guide pattern on the mounting surface if you want to feed wiring from the hole on the top of the bottom case.

#### Note

If you are feeding the wiring from the side of the case, you do not need to drill a hole on the mounting surface. The “Side conduit hole” indication on the guide pattern is for you to identify while mounting.

5. Pass the cables through either the Bottom conduit hole or side conduit hole on bottom case.
6. Mount the bottom case on a surface by securing screws (supplied) into the inserted plastic anchors tightly.



7. Connect the power cable to the power plugs with one of the following.
  - DC 12V or AC 24V: Connect the power cable.
  - PoE: Connect an Ethernet cable with a short-bodied RJ-45 connector to the network port for both power supply and network connectivity.
8. Plug the other end of the cable into a PoE switch or to the Data&PWR port of a PoE injector. If you use a PoE injector, make sure the Data port of the injector is properly connected to the Ethernet switch.

#### Note

Routing of the Ethernet cable from the camera to the power source must be done inside the building.

9. (Non-PoE) Connect an Ethernet cable to the RJ-45 port.
10. Connect audio in/out cables and alarm in/out cables to the corresponding terminals of the camera if required.



## Powering with a PoE Injector

This product is intended for indoor use and should be supplied by a UL listed PoE power supply.

Model	UL Listed Power Supply Required
V4750BX-DN	IEEE 802.3af PoE Class 3
V4750FDW-DN	IEEE 802.3af PoE Class 3

### ✓ To power with a PoE Injector

1. Connect an Ethernet cable terminated with a short-bodied RJ-45 connector to the PoE RJ-45 port for both power supply and network connectivity purposes simultaneously.



2. Plug the other end of the cable into a PoE switch or to the Data&PWR port of a PoE injector. If you use a PoE injector, make sure the Data port of the injector is properly connected to the Ethernet switch.

#### Note


Routing of the Ethernet cable from the camera to the power source must be done inside the building.

## Powering with a 12V DC or 24V AC Power Supply

This product is intended for indoor use and should be supplied by a UL listed power supply.

IP Camera Model	UL Listed Power Supply Required
-----------------	---------------------------------

### ✓ To power with a 12V DC or 24V AC power supply

1. Connect the power supply cable to the power terminal (  ).
2. Connect an Ethernet cable terminated with a short-bodied RJ-45 connector to the PoE RJ-45 port.



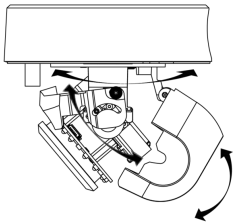
3. Plug the power supply cable to the power outlet.

## Adjusting the Viewing Angle

Set the viewing angle for the scene that you want to capture.

### ✔ To adjusting the viewing angle.

1. In a Web browser, connect to the camera.
2. While viewing the image in the browser, remove the inner liner from the camera lens and adjust the shooting angle by rotating, panning and tilting the camera lens base.



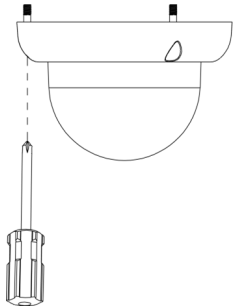
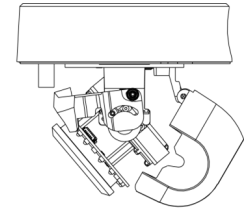
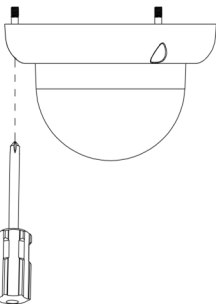
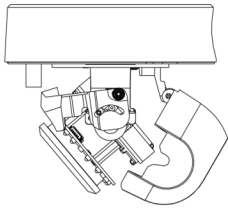
- Pan range : 0° ~ 370°
- Rotation range : 0° ~ 355°
- Tilt range : 15° ~ 90°

## Reattaching the Dome Cover

Once you have adjusted the lens and the field of view and focus have been set, you can reattach the lens hood and dome cover.

✓ To reattach the dome cover


1. Mount the camera housing on the lens base, both of which have a red dot within the interior and on the top side respectively for aligning identification.



2. Use the supplied T20 security torx bit tighten the 3 camera housing screws.

# Discovering Verint IP Devices from the EdgeVR

1. Open the dialog.

In	Do
Vid-Center	From the <b>Task Center</b> pane, select <b>Setup DVRs</b> , then in the <b>Task Actions</b> pane, double-click .
Video Investigator	<ol style="list-style-type: none"> <li>a. From the Device tree, next to an EdgeVR, click  and select <b>Service</b>.</li> <li>b. Select the <b>Setup</b> tab.</li> <li>c. Under the <b>DVR Properties</b> area, click .</li> </ol>

2. In the **IP** boxes, type a value for the editable octets to assign an IP address to the device.

### Note

The number of editable octets depends on the EdgeVR subnet mask where the camera has been discovered.

3. From the **Camera Num** list, assign the device to one of the available inputs from the EdgeVR.
4. Click **OK** and close to reboot the EdgeVR and apply the changes.

# Connecting with Verint VMS

For complete information, refer to the latest *Verint Enterprise Video Management System Administrator Guide*.

1. Launch Verint Enterprise VMS Control Center.
2. Using the System Setup Wizard in Control Center, assign the camera to physical and logical groups.
3. Define a Video Profile for the resolution you want to use.
4. Assign the camera to a Recording Profile.
5. View and configure the Logical Settings for the camera.
6. Configure the camera in Verint VMS Virtual Matrix if you are adding it to a tour or salvo or using a keyboard to assign the input to an HDR.
7. Add the camera to a Verint VMS Event Manager scenario in order to trigger an automatic response for an event recorded by the camera.

# Configuration

Once you have connected the IP camera to the network, you can begin configuring the IP camera to ensure that it can communicate with the attached devices and with a video management software over the network.

## Caution

Any changes made using the Verint Enterprise VMS or Verint EdgeVR will override the changes made using the Verint Camera Configurator or the Web Interface.

Accessing the IP Camera Home Page .....	31
Home Page Overview .....	31
Playing Recorded Video .....	33
Changing Languages .....	34
Configuring Profiles .....	34
Adjusting the Back Focus (BX Model) .....	39
Adjusting the Lens Control (FDW Model) .....	40
Image .....	41
Video .....	48
Network .....	51
System .....	64
Account .....	70
Event Source .....	73
Video Analytics .....	94
Event Settings .....	114

# Accessing the IP Camera Home Page

Using a web browser such as Microsoft Internet Explorer, Microsoft Edge, Mozilla Firefox or Google Chrome, you can view the streaming media, and configure the user access and SD Card settings.

## Note

If you are using Microsoft Internet Explorer, the first time you connect to the Verint IP cameras, an information bar is displayed requiring you to install the Verint Video Viewer. Follow the on-screen instructions to install the video viewer.

## ✓ To access the IP Camera home page

1. In a web browser, type the IP address of the Verint IP camera in the Address bar, and then press ENTER.
2. Type the username and password.

## Note

The default username and password for the Verint IP Camera is admin.

# Home Page Overview



Description	
1. Video Analytics	<p>From the <b>Video Analytics (VA)</b> list, select a function.</p> <p><b>Note</b> Make sure that you have enabled the selected VA function in Video Analytics section. When Off, the camera is not performing any VA. You need to have a Video Analytics function enabled.</p> <ul style="list-style-type: none"> <li>● Select <b>Draw Object Bounding</b> to allow the camera to activate motion detection and draw an area around the detected object. This function can be use only when a VA function is activated.</li> <li>● Click <b>Relearn Background</b> to save new background that will be compared to current background for motion detection purpose.</li> </ul>
2. Lens Control	<ul style="list-style-type: none"> <li>● (FDW Model) <b>Zoom Control</b>: Use the slider to zoom in and out.</li> <li>● <b>Focus Control</b>: Adjust the focus based on the zoom magnification of the lens. <ul style="list-style-type: none"> <li>● <b>Near</b> is for close-up view, while <b>Far</b> goes along with view of wide angle.</li> <li>● (FDW Model) <b>Day Position</b> and <b>Night Position</b> allows you to precisely define a specific value for back focus settings on day mode and night mode individually to improve the accuracy of back focus for different times of the day.</li> </ul> </li> <li>● <b>One-Push AF</b>: One-Push Auto focus is typically found in cameras with motorized lenses. The camera moves the lens during the autofocus process. Click <b>Start</b> to automatically focus.</li> </ul>
3. (BX Model) RS-485 Control Panel	<ul style="list-style-type: none"> <li>● <b>Directional Arrows</b>: Click and hold to make RS485 device move towards the desired direction.</li> <li>● <b>Home Position</b>: Click to restore the RS485 device back to the default position.</li> <li>● <b>Zoom Control</b>: Click to zoom in or out.</li> <li>● <b>Preset Position</b>: Select a defined preset point to move the RS485 device.</li> </ul>
4. <u>Media Player</u>	<p>Different options for live video</p> <ul style="list-style-type: none"> <li>● <b>ActiveX</b> (Internet Explorer Only)</li> </ul>



Description	
	<p><b>Note</b> Stream1/2/3 are only available in ActiveX mode, provided that the streams are enabled in the Encode section</p> <ul style="list-style-type: none"> <li>• JPEG</li> <li>• H264</li> </ul>
5. Configuration Area	<ul style="list-style-type: none"> <li>• Configuration: Access the camera configuration page.</li> <li>• Language: Change the language of the web page.</li> </ul>
6. Live Video Window	Real-time live view.

## Playing Recorded Video

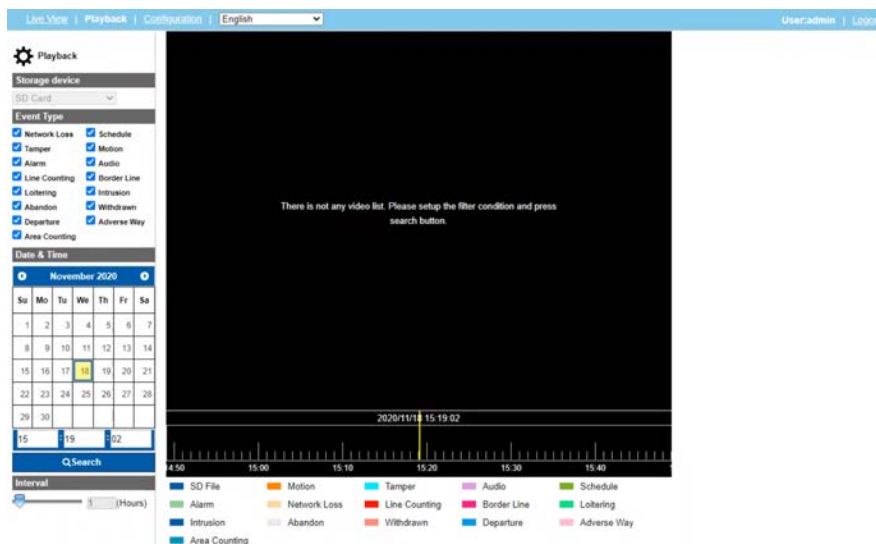
You can play video stored on the micro SD Card. When playing video stored on micro SD Card, both the camera and browser must support the codec video format.

### Note

Verint recommends using Google Chrome to play video.

### ✓ To play recorded video

1. From the menu, click **Playback**.



2. Under **Event Type**, select the type of events to search.

3. Under **Date &Time**, select the Date and time segment to search for recorded video.

**Note**

Selected date will turn into a blue background on the calendar. The current date has a light brown background.

4. Click **Search**.
5. Click and drag the time line to adjust the time range of timeline area in terms of hours, and each step from time line changes half hour in timeline area. Time line helps user to get more details and larger scale view of timeline area for easier search. 6 hours allows search in larger scale while 0.5 hour allows more details.

**Note**

if Video on the micro SD card is color-coded based on type.

6. To play a video, hover over a color bar on the timeline area until a hoverbox is displayed and then click on the color bar for the recorded video to automatically start playing.

## Changing Languages

The camera web page supports the following languages:

- English
- Deutsch (German)
- Español (Spanish)
- Français (French)
- Italiano (Italian)
- Português (Portuguese)
- 簡體中文 (Chinese - Simplified)
- 繁體中文 (Chinese - Traditional)
- ☑ [To change languages](#)

1. From the **Language** list, select a language to use.

## Configuring Profiles

You are strongly recommended to define different settings under each stream to flexibly bring about better video transmission for varied network environments and applications. By default,

there are three profiles to be selected from and each profile contains 3 streams for individual further configuration.

### 📌 To configure Profiles

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Encode**.

The screenshot shows the 'Encode' configuration page. On the left is a navigation menu with 'Advanced Configuration' expanded and 'Encode' selected. The main area is titled 'Encode' and contains the following settings:

- Profile:** Current Profile: 1, Corridor: Off
- Stream1:** Compression: 3264x1840, DSCP: 0 (0-63), Frame Rate: 15, Rate Control: CVBR, Max Bit Rate: 4000 (64-20000), Codec: H264, Profile: Main Profile, SVC-T: Off, GOP: 30 (1-60)
- Stream2:** Compression: 640x360, DSCP: 0 (0-63), Frame Rate: 15, Codec: MJPEG, Quality Level: Mid
- Stream3:** Compression: off, Codec: H265

A 'Save' button is located at the bottom right of the configuration area.

- a. Under the **Profile** area:
    - a. From the **Current Profile** list, select a profile.
    - b. From the **Corridor** list, select **On** to turn on corridor mode.
3. Under the **Stream 1** area:
    - a. From the **Compression** list, select the camera resolution.
    - b. From the **Codec** list, select one of the following:
      - H.264: The widespread video compression format that adopts intelligent technology to record variation in each frame rather than record each full frame.
    - c. In the **DSCP** box, type a value from 0 to 63 to classify and manage network traffic and provide quality of service (QoS) on modern IP networks, Differentiated Services Code Point (DSCP) is a computer networking architecture that specifies a resource allocation to each device on a priority-based pattern for ideal bandwidth management. The larger the value, the higher priority it will be.
    - d. From the **Profile** list, select one of the following:
      - Main Profile
      - High Profile

- e. From the **Frame Rate** list, select a frame rate to limit the maximum refresh frame rate per second. Select a higher frame rate for smooth video quality.

**Note**

When selecting a resolution, the corresponding frame rate is automatically selected.

- f. From the **SVC-T** list, select **On** to turn on Scalable Video Coding(SVC) to overcome a variety of scenarios by providing more subset bitstream layers, which has temporal scalability.
- g. From the **Rate Control** list, select one of the following
- CBR
  - QP
  - VBR
  - CVBR

**Note**

A higher bit rate value will result in better image quality with bigger file size and thus consume more network bandwidth, while lower bit rate value, has slighter loading on network bandwidth due to smaller file size but with inferior image quality.

- h. Move the **GOP** slider to set the Group of picture length.

For	Set
60Hz Cameras	Select the GOP length number from 1 to 60.
50Hz Camera	Select the GOP length number from 1 to 50.

**Note**

A smaller number means the distance between 2 I-frames is smaller, which needs more network bandwidth while having better image quality. By contrast, larger number consumes less bandwidth but in an unstable network connection, video display may not be smooth. The available length number options of GOP will vary based on frame rate settings.

- i. Depending the Rate Control, adjust the settings:

For	Do
CBR	a. Move the <b>CBR Bit Rate</b> slider to set the bit rate value from 64 to 20000.

For	Do
	<p>The default bit rate synchronizes with the maximum resolution. It is recommended to use the default bit rate as it provides better balance between image quality and network bandwidth. When selecting a bit rate that is higher than the default bit rate, there is a correlation between resolution and selected bit rate. Higher maximum resolution cameras are more compliant to selection of bit rate higher than default bit rate than lower maximum resolution cameras.</p> <p><b>Note</b> CBR Bit Rate and Max Bit Rate options are available only when H.264 codec is selected.</p>
CVBR	<p>a. Move the <b>Max Bit Rate</b> slider to set the bit rate value from 64 to 20000.</p> <p>The default bit rate synchronizes with the maximum resolution. It is recommended to use the default bit rate as it provides better balance between image quality and network bandwidth. When selecting a bit rate that is higher than the default bit rate, there is a correlation between resolution and selected bit rate. Higher maximum resolution cameras are more compliant to selection of bit rate higher than default bit rate than lower maximum resolution cameras.</p> <p><b>Note</b> CBR Bit Rate and Max Bit Rate options are available only when H.264 codec is selected.</p>
VBR	<p>a. Move the <b>Quality Level</b> slider to a value between 1 to 10.</p> <p>“High” or “larger value” produces the highest image quality but increases the file size. By contrast, “low” or “smaller value”, produces the lowest image quality with decreased file size and network bandwidth consumption.</p>
QP	<p>a. Move the <b>Maximum QP</b> and <b>Minimum QP</b> sliders to a value between 1 to 51.</p>

4. Under the **Stream 2** area, configure the following:

- a. From the **Compression** list, select the camera resolution.

**Note**

The highest resolution 4000x3000 is only available for Fisheye models and 3840x2160 is for Non-Fisheye models. Frame rate corresponding to the resolution, streams and codec selected.

- b. From the **Codec** list, select one of the following:
  - H.264: The widespread video compression format that adopts intelligent technology to record variation in each frame rather than record each full frame.
- c. In the **DSCP** box, type a value from 0 to 63 to classify and manage network traffic and provide quality of service (QoS) on modern IP networks, Differentiated Services Code Point (DSCP) is a computer networking architecture that specifies a resource allocation to each device on a priority-based pattern for ideal bandwidth management. The larger the value, the higher priority it will be.
- d. From the **Frame Rate** list, select a frame rate to limit the maximum refresh frame rate per second. Select a higher frame rate for smooth video quality.

**Note**

When selecting a resolution, the corresponding frame rate is automatically selected.

- e. From the **Quality Level** list, select one of the following:
    - Low
    - Mid
    - High
5. Under the **Stream 3** area, configure the following:

- a. From the **Compression** list, select the camera resolution.

**Note**

The highest resolution 4000x3000 is only available for Fisheye models and 3840x2160 is for Non-Fisheye models. Frame rate corresponding to the resolution, streams and codec selected.

- b. From the **Codec** list, select one of the following:
  - MJPEG: Each video frame is individually compressed as single jpeg image with full-scale contents itself and can be retouched freely with ease. However, due to completeness of each frame, it results in larger file size and thus easily tends to lose

frames under limited network bandwidth.

- H.264: The widespread video compression format that adopts intelligent technology to record variation in each frame rather than record each full frame. As a result, less network bandwidth is required and file size tends to be smaller compared with the previous MJPEG codec.

6. Click **Save**.

## Adjusting the Back Focus (BX Model)

Back Focus is only available on the BX model.

✓ To adjust the back focus

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Back Focus Control**.



3. Under the **Focus Control** area, configure how to focus the lens.

For	Do
Auto Focus	a. Click <b>Start</b> to have the lens focus automatically and immediately.
Manual Focus	a. From the <b>Focus Mode</b> list, select one of the following: <ul style="list-style-type: none"> <li>• <b>Normal:</b> Move the <b>Absolute</b> slider to manually adjust the back focus setting based on your zoom magnification of optional lens for a proper back focus. “Near” is for close-up view, while “Far” goes along with view of wide angle. The number at the right corner indicates the current back focus value.</li> <li>• <b>Advanced:</b> In the <b>Day Position</b> and <b>Night Position</b> sections define a specific value for the back focus settings on day mode and night mode</li> </ul>

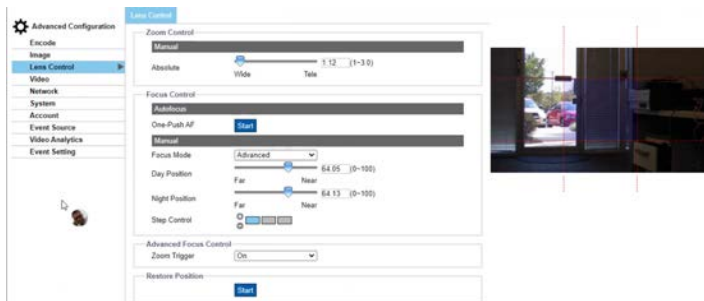
- (Optional) Click **Start** to restore the zoom magnification and focus of lens back to its default settings.

## Adjusting the Lens Control (FDW Model)

Lens Control is supported only by motorized lens on the FDW model.

### ✓ To adjust the back focus

- From the camera menu, click **Configuration**.
- Under Advanced Configuration, click **Back Focus Control**.



- Under the **Zoom Control** area, move the slider to zoom in for a close-up view (Tele) or zoom out for for a view of wide angle (Wide). The number at the right corner indicates the current zoom magnification. Entering 3 provides the highest magnification.
- Under the **Focus Control** area, configure how to focus the lens.

For	Do
Auto Focus	a. Click <b>Start</b> to have the lens focus automatically and immediately.
Manual Focus	<ol style="list-style-type: none"> <li>From the <b>Focus Mode</b> list, select one of the following: <ul style="list-style-type: none"> <li><b>Normal:</b> Move the <b>Absolute</b> slider to manually adjust the back focus setting based on your zoom magnification of optional lens for a proper back focus. “Near” is for close-up view, while “Far” goes along with view of wide angle. The number at the right corner indicates the current back focus value.</li> <li><b>Advanced:</b> In the <b>Day Position</b> and <b>Night Position</b> sections define a specific value for the back focus settings on day mode and night mode</li> </ul> </li> </ol>



5. Under the **Advanced Focus Control** area, from the **Zoom Trigger** list, select **On** or **Off** to enable or disable automatic focus when the change from day to night mode or vice versa occurs.
6. (Optional) Click **Start** to restore the zoom magnification and focus of lens back to its default settings.

## Image

### Configuring Exposure Settings

This section mainly allows user to control the settings pertaining to exposure mode and day night modes.

📌 To configure exposure settings

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Image**.
3. Click the **Exposure** tab.

4. Configure the Exposure Settings.

#### Basic Settings

- a. From the **Exposure Mode** list, select one of the following:
  - **Auto**: before taking videos, the camera automatically determines the correct

## Basic Settings

exposure for pictures without user input settings for further exposure.

- **Flickerless:** This mode allows camera to override the shutter speed, which helps to avoid from the interference of fluorescent lights in some environments.
- **Shutter Priority:** It enables user to select a specific shutter speed for adjustment of aperture, ensuring a correct and proper exposure.
- **Manual:** A mode that allows user to manually control both gain value and shutter speed. It is recommended for an experienced administrator to adopt this mode.
- **True WDR:** Provides clear image even under backlight circumstance where intensity of illumination can vary excessively; namely both extreme bright and dark areas exist simultaneously in field of view. True WDR is a sensor-based technology that achieves proper exposure levels by capturing short and long exposures individually and combining them into a single frame to render a superior detail of image quality.

### Note

When True WDR is enabled, the maximum frame rate will be decreased to 30fps if it was selected above 30fps originally.

- From the **Digital WDR** list, select from **High/ Mid/ Low/ Off** to use a software algorithm to optimize image quality by adjusting the gamma value, facilitates better quality of details within both bright and dark areas, in a way that there are crystal clear details in both extreme areas.
- From the **Max Shutter Time** list, select a value from 1/60 to 1/7.5 to set the maximum shutter time for the “Auto” exposure mode only.
- From the **Min Shutter Time** list, select a value from 1/10000 to 1/120 to set the minimum shutter time for the “Auto” exposure mode only.
- From the **DC Iris Control** set the iris.

### Note

The options you see here depends on what is selected in **Lens Type**.

For	Do
DC Iris Control to automatically adjust its iris opening, for	Select from the following: <ul style="list-style-type: none"> <li>● <b>Auto:</b> Iris opening will alter itself in accordance with the changing light levels within the applied environment to present a better image quality.</li> </ul>

Basic Settings

For	Do
better adaptation to environments with constant changes in light levels.	<ul style="list-style-type: none"> <li>● <b>Full:</b> Iris opening will be kept within the maximum value regardless of light levels in environment.</li> </ul>
P Iris Control. More advanced than DC Iris, P Iris, with built-in stepper motor, assists camera to regulate the iris position precisely in light of volatile light conditions, thus optimizing result of crisp image with better depth of field.	<p>Select from the following:</p> <ul style="list-style-type: none"> <li>● <b>Auto:</b> Iris position will alter itself accurately in accordance with the fluctuant light intensities within the applied environment to bring about a superior image quality at its best.</li> <li>● <b>Manual: 1~5.</b> Iris position will be kept within the selected level. 1 stands for the fully open status, whereas 5 represents the minimum level for iris position.</li> </ul>

- f. From the **EV** list, select a value between -2 to 2. It is the exposure compensation that makes the scenes to be either darker or brighter. Positive number provides the brighter image, while negative number provides the darker image.

**Note**

This is unavailable when exposure mode is set to Manual.

- g. From the **BLC** list, select from **Off/ Upper/ Lower/ Central ( 1/3rd)/ Central ( 1/6th)/ Left/ Right** to set the brightness of a selected area to optimal image level. This function is necessary when an auto iris lens tends to close quickly due to an intense light coming from back of object in the area wished to view, resulting in an area that is too dark and difficult to see. In this case, users may set the area corresponding to the portion wished to see.

## Basic Settings

### Note

This is unavailable when exposure mode is set to Manual.

- h. From the **Frequency** list, select 50HZ or 60HZ to adjust the frequency to the power line frequency to avoid flickering.
- i. From the **Shutter Speed** list, select a value between 1/10000 to 1/7.5 to set the shutter speed.

### Note

This is available when exposure mode is set to Manual or Shutter Priority.

- j. From the **Gain** list, select a value from 0 to 36 to set the intensity of light that comes into the camera and vice versa.

### Note

This is available when exposure mode is set to Manual.

- k. From the **Enhanced WDR Level** list, select from **High/ Mid/ Low/ Off** : provides better quality of details within both bright and dark areas, thus further strengthening and reinforcing to the optimal image result based on perfect combination of both True WDR and Enhanced WDR. Selecting "High" provides the best enhancement of WDR level.

### Note

This is available when exposure mode is set to True WDR.

## Day Night Settings

- a. From the **Mode** list, select from one of the following:
  - **Auto**: camera switch between 2 modes automatically, based on different intensity of lights.
  - **Color**: camera is forced to stay in Color mode permanently.
  - **B/W**: camera is forced to stay in black and white mode permanently.
- b. From the **Time** list, select from one of the following to set the delay (buffered) time for switching between day and night modes:

### Note

This is unavailable when exposure mode is set to Manual.

### Day Night Settings

- **Fast:** camera instantly switch with nearly no delay time between day/night mode.
  - **Normal:** camera has doe not buffer time prior to switching between day/night modes.
  - **Slow:** camera has a longer delay buffered time prior to switching between day/night modes.
- c. Move the **Sensitivity** slider to set sensitivity of the day/night mode switching mechanism. Larger the value (High) means camera can auto switch from day to night or night to day mode on the basis of minor light intensity change. Smaller the value (Low) indicates camera is going to switch from day to night or night to day mode on the basis of major changes of surrounding light intensity.

#### Note

This is unavailable when exposure mode is set to Manual or WDR.

### Lens Type (BX Model)

- a. Select one of the following lens type corresponding to mounted lens to take advantages of the different iris controls:
- **None Iris:** When the mounted lens does not support either DC Iris or P Iris functionality. This option is the entry selection for common lens type without advanced iris control mode.
  - **DC Iris:** Once DC Iris is selected, the DC Iris Control above will appear for iris adjustment.
- P Iris:** Choose a compatible lens model from the list . The **P Iris Control** will appear for adjustment correspondingly.

#### Note

Full P Iris functionality can take effect only when supported lens are mounted.

### IR Control (FDW Model)

- a. From the **IR Mode** list, select one of the following:
- **Auto:** camera automatically switches on or off IR LED based on the light intensity.
  - **On:** IR LED is always on.
  - **Off:** IR LED is off.

### IR Control (FDW Model)

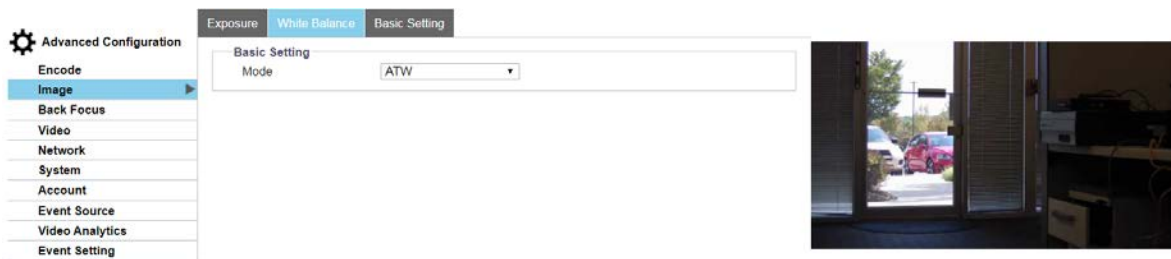
- b. From the **Smart IR** list, select one of the following to prevent close objects from overexposure under low-light environment.
  - **On:** Camera dynamically adjusts the shutter speed as well as the sensor gain to prevent overexposure. Additionally, digital WDR will be automatically activated to preserve the details on the dark area if necessary.
  - **Off:** Disable Smart IR.
- c. From the **Adaptive IR** list, select one of the following to correct uneven IR intensity in variable focal length.
  - **On:** Camera decides adaptive IR intensity automatically.
  - **Off:** Disable Adaptive IR and enable the **Broad** and **Narrow** sliders. Move the slider or enter a value from 10 to 100 to set the adaptive IR intensity for two ends.

## Configuring White Balance

This section allows user to set the white balance values to meet ambient conditions for best color rendition.

### ✓ To configure white balance

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Image**.
3. Click the **White Balance** tab.



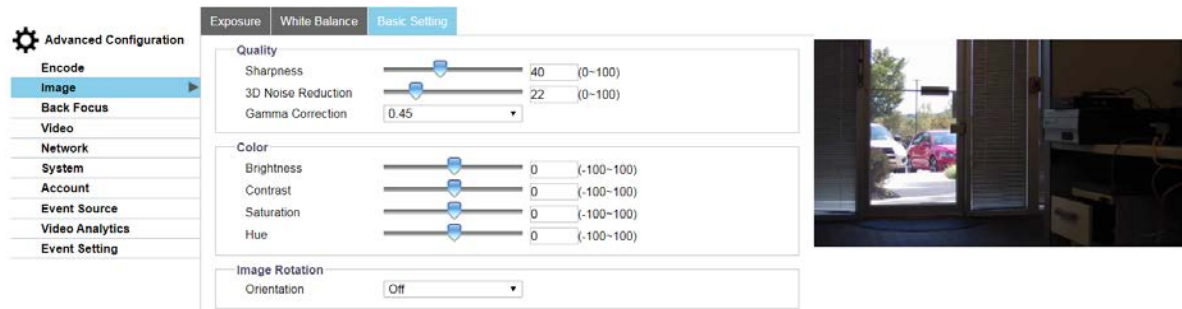
4. From the **Mode** list, select one of the following:
  - **Auto:** It continuously adjusts the camera color balance in accordance with any change in color temperature simultaneously.
  - **ATW:** “Auto Tracing White Balance” automatically controls color temperature ranging from 2500°K to 10000°K.

- **Manual** : Manually adjust the R Gain/B Gain: 0~511 / One Push.
  - Move the **R Gain** and **B Gain** sliders to adjust red color and blue color in the image.
  - Click **One Push** to make the camera rapidly adjust to the proper gain values depending on the ambient environment

## Configuring Image Basic Setting

### ☑ To configure image basic settings

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Image**.
3. Click the **Basic Setting** tab.



4. Under the **Quality** area:
  - a. Move the **Sharpness** slider from 0 to 100 to sharpen the edges and small feature of the viewing image.
  - b. Move the **3D Noise Reduction** slider from 0 to 100 to remove noise from a signal and can be set to decrease noise on the screen. A higher value provides higher noise reduction.
  - c. From the **Gamma Correction** list, select a value from 1 to 0.45 to render the image correctly on different monitors.
  - d. From the **Digital Defog** list, select **On** to detect foggy condition automatically, also provides higher contrast image.
5. Under the **Color** area:
  - a. Move the **Brightness** slider from 0 to 100 to increase or decrease highlights and shadows, making them darker or lighter.
  - b. Move the **Contrast** slider from 0 to 100 to increase or decrease the difference between the lightest and darkest parts of the image.

- c. Move the **Saturation** slider from 0 to 100 to increase or decrease the color intensity in the image.
  - d. Move the **Hue** slider from 0 to 100 to increase or decrease the hue intensity in the image.
6. Under the **Image Rotation** area:
    - Off: Disable video orientation function.
    - Flip: Vertically reflect the display of the video.
    - Mirror: Horizontally reflect the display of the video.
    - Both: Both vertically and horizontally reflect the display of the video.

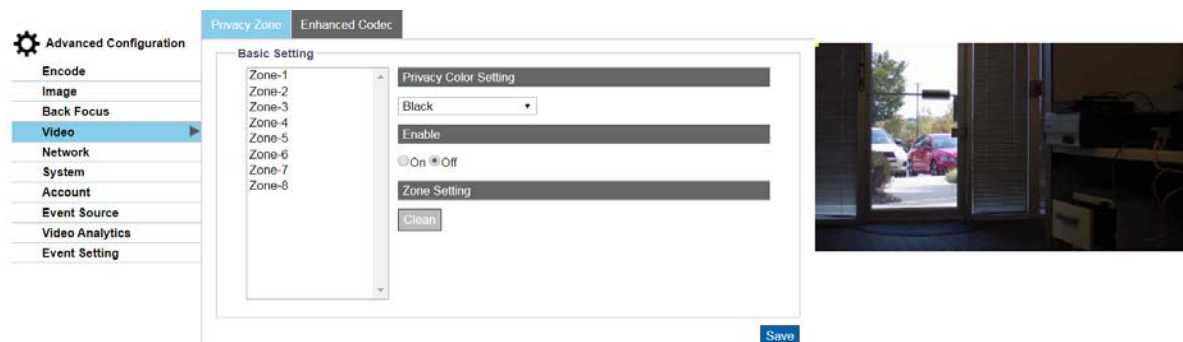
## Video

### Creating Privacy Zones

Privacy Zone enables user to black out a specific portion of the screen for privacy concern. It must apply on all streams, TV output, and live view and it should not affect the motion detection behavior. There are up to 8 sets of privacy zones for users to define. After setting up a privacy zone, the live view image will appear a frame, whose color, size and position can be customized by user's preference.

#### ✓ To create privacy zones

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video**.
3. Click the **Privacy Zone** tab.



4. From the tree, select a zone.
5. Under the **Privacy Color Setting** area, select a color (Black, Grey or White) for the mask.



6. Under **Enable** area, select **On**.
7. On the image, draw a polygon shape by pressing the left mouse button and dragging the cursor around the area to mask.
8. Click **Save**.

## Configuring the Enhanced Codec

Enhanced codec is a method to keep low bitrate while H.264 or H.265 is selected. The implementation of enhanced codec depends upon 2 key ideas.

1. **Dynamic ROI:** It is for the camera to dynamically adjust compression based on what it believes is relevant. For example, the camera would be able to detect objects and decide higher or lower compression levels they would be. The function is designed to reduce the bandwidth by decreasing the image quality on the static or irrelevant area within the whole scene.
2. **Dynamic GOP:** Adaptive GOP size. Comparing to the average-sampling of current standard fixed GOP structure, with dynamic GOP the encoder has great freedom in I-, P- and B-frame selection. The dynamic GOP structure keeps temporal importance information of frames in the encoded video, which helps in adaptation to bandwidth decrease and temporal-SNR quality tradeoff decision. It also helps in storing more information with restricted resource, results in code efficiency increasing and better user perception.

The Enhanced Codec technology features the both iZone and iStream technologies to not only economically exert leverage between different regions and compression levels, but also effectively reduce the average bit rate to level down the overall bandwidth exploitation as the following elaborate descriptions.

- iZone is a feature that utilizes the intelligent algorithm to place diverse compression levels upon different areas while retaining the target bitrate. By enabling this feature, user can designate a customized zone, which will be compressed less, to enhance the crystal image quality within the zone, while the undefined zone, due to less important, will be sacrificed for image quality by higher compression ratio.
- iStream helps save network bandwidth efficiently while maintaining a crystal image quality for critical image details based on the 2 cutting-edge features as follows:
  - **EcoZone:** Identify dynamic motions occurred within a scene and retain its details with clear quality, whereas the rest areas, e.g. static background, will be imposed on higher compression level, thus economically decreasing bandwidth on less important things and still keeping the dynamic motions details for future forensic purpose. The intensity for EcoZone can be defined by the “Level” dropdown menu.
  - **EcoFrame:** By enabling the proprietary EcoFrame function, the overall bitrate, i.e. bandwidth utilization, will be reduced even further. When less motion happens within

a scene, e.g. storeroom, I-frame number, which is needed when motions are in scene, will be cut down largely by EcoFrame activation. Based on divergent complexity of scenes and motions occurred, a large amount of bandwidth saving can be achieved to render a compact yet valuable performance on bandwidth utilization. Note that it is compulsory to enable both EcoZone & EcoFrame functions simultaneously by selecting the option “EcoZone + EcoFrame” since EcoFrame is per se an enhancing technology that is based on EcoZone to promote the overall efficiency by a large scale. The intensity for EcoZone + EcoFrame can be defined by the “Level” dropdown menu as well.

✓ To configure the Enhanced Codec

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video**.
3. Click the **Enhanced Codec** tab.



4. Configure the technology.

For	Do
iZone	<ol style="list-style-type: none"> <li>a. Select <b>iZone</b>.</li> <li>b. Enable one or both zones.</li> <li>c. Click and drag left button on the right-side preview image to outline a desired zone.</li> <li>d. From the <b>Level</b> list, select <b>Low</b>, <b>Mid</b>, or <b>High</b> to set a wanted level for each zone.</li> <li>e. Click <b>Save</b>.</li> </ol>
iStream	<ol style="list-style-type: none"> <li>a. Select <b>iStream</b>.</li> <li>b. From the <b>Level</b> list, select <b>Low</b>, <b>Mid</b>, or <b>High</b> to set a wanted level for each zone.</li> <li>c. From the <b>Mode</b> list, select <b>EcoZone</b>, <b>EcoFrame</b>, or <b>EcoZone +EcoFrame</b> to set a wanted level for each zone.</li> </ol>

For	Do
	<p data-bbox="581 281 651 310"><b>Note</b></p> <p data-bbox="581 321 1386 432">Due to the attribute of dynamic bitrate management, “Rate Control” options (CBR, CVBR, and VBR) under Encode page will NOT be available when “EcoZone” function is activated.</p> <p data-bbox="581 464 1344 575">Due to the dynamic frame &amp; bitrate adjustments, both “Rate Control” &amp; “GOP” options under Encode page will NOT be available when “EcoZone + EcoFrame” function is enabled.</p> <p data-bbox="516 615 695 644">d. Click <b>Save</b>.</p>

## Network

### Configuring the General Network Settings

This section is for user to set detailed settings related to wired network condition for the camera.

✔ To configure the general network settings

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **General** tab.

4. Under the **Basic Settings** area:

- a. In the **Device Name** box, type a descriptive name for the camera.
- b. In the **HTTP Port** box, type a value between 1025 and 65535. This protocol allows for TCP protocol quality without having to open specific ports for streaming. User inside a firewall can utilize this protocol to allow streaming data through. It is recommended to use the default port number 80; however, if it is required to change the port number, please contact your system administrator.
- c. From the **Enable LDAP** list, select **On** for accessing and maintaining distributed directory information services over an Internet Protocol network, the Lightweight Directory Access Protocol (LDAP), an open, vendor-neutral, industry standard application protocol, have a major role in both intranet and internet applications to facilitate information sharing between devices.
- d. From the **Bonjour** list, select **On** to make IP devices including IP cameras easily found by Apple software within local network on the basis of zero configuration.
- e. Click **View** to see your current network related settings.

5. Under the **IP Settings** area:

IPv4	
DHCP	a. From the <b>Mode</b> list, select <b>DHCP</b> .

IPv4	
	<p>b. From the <b>APIPA</b> list, select <b>On</b> to reserve a certain address block for link-local addressing, which is for assigning an IP address automatically for cameras when DHCP is not available within the connected internet environment.</p>
Static	<p>a. From the <b>Mode</b> list, select <b>Manual</b>.</p> <p>b. In the <b>IPv4 Address</b> box, type the IP address for the IP camera.</p> <p>c. In the <b>IPv4 Subnet mask</b> box, type the address specifying the subnet in which the IP address belongs. The default value is 255.255.255.0.</p> <p>d. In the <b>IPv4 Default Gateway</b> box, type the IP address of the gateway used to forward frames to destinations in a different subnet.</p> <p>e. In the <b>Primary DNS</b> box, type the IP address of the primary domain name server that translates hostnames into IP addresses.</p> <p>f. In the <b>Secondary DNS</b> box, type the IP address of the backup domain name server.</p> <p>g. In the <b>Primary WINS server</b> box, type the IP address of the primary WINS server that maintains the database of computer names and IP addresses..</p> <p>h. In the <b>Secondary WINS server</b> box, type the IP address of the backup WINS server.</p>
IPv6	
	<p>a. Select <b>Enable</b> to turn on IPv6.</p> <p>b. Select <b>On</b> to activate RA (Router Advertisement) corresponding to RS (Router Solicitation) for IPv6 address designation.</p> <p>c. Select <b>On</b> to automatically obtain an available dynamic IP address under IPv6 protocol from the DHCP server each time it connects to the LAN.</p> <p>d. In the <b>IPv6 Address</b> box, type an IP address under IPv6 protocol.</p> <p>e. In the <b>Subnet prefix length</b> box, set prefix length (1 to 128) for subnet.</p> <p>f. In the <b>IPv6 default router address</b> box, set a default router address under IPv6 protocol.</p> <p>g. In the <b>Subnet prefix length</b> box, set prefix length (1 to 128) for subnet.</p> <p>h. In the <b>IPv6 DNS</b> box, set a DNS (Domain Name Server) under IPv6 protocol.</p>

6. Under the **Wired Setting** area:
  - a. From the **Speed & Duplex** list, select the speed.
  - b. In the **Maximum TTL** box, set the limit of the data (1 to 255).
7. Under the **UPnP** area:
  - a. From the **Enable UPnP** list, select **On** to allow a computer on the LAN to detect the camera.
  - b. From the **Mode** list, select how the camera is identified on the LAN.
    - **IP and Device Name:** The device name and IP address will be shown synchronously.
    - **Device Name:** Only device name will be shown.
    - **User Input:** You can input a customized name for the camera.
8. From the **Enable SSL** list, select **On** to enable communication security mechanism over internet network.
9. Click **Save**.

## Configuring RTSP

RTSP is a standard protocol for connecting a client to establish and control streaming data over the web. If you want to allow third-party devices or software to access video/audio streams from the IP camera over the network, you must configure the RTSP ports. The major difference between Unicast and Multicast is the way how client and server communicate packets with each other. Specifically, unicast transmits packets under 1 to 1 device method and multicast, on the other hand, transmits via the way of 1 to multiple devices. Hence, unicast requires large network bandwidth and occupies more resources of server but is more stable because of its simple structure; by contrast, multicast needs less bandwidth with resources and is more practical for multiple devices broadcast on condition that all relevant peripheral devices like switch or router support the multicast protocol. Please adopt proper method based on your network applications for better efficiency. For each RTSP session, there are 3 kinds of real-time data that can be configured, including video, audio and meta data. When codec related information is changed, the RTSP server will be restarted.

### To configure RTSP

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **RTSP** tab.

The screenshot displays the RTSP configuration page. On the left, a sidebar lists various configuration categories, with 'Network' highlighted. The main content area is divided into tabs, with 'RTSP' selected. Under the 'RTSP' tab, there are three sections: 'Basic Setting', 'Stream1', 'Stream2', and 'Stream3'. Each section contains a form with several input fields and dropdown menus. The 'Basic Setting' section includes 'Authentication' (set to 'On'), 'Multicast Auto Connection' (set to 'Off'), and 'Port' (set to '554'). The 'Stream' sections each have a 'URL' field, a 'Metadata' dropdown (set to 'Off'), and a 'Multicast Address Setting' table. This table includes 'Address Type' (set to 'Auto'), 'Video Address', 'Audio Address', 'Meta Address', 'Multicast URL', 'Video Port', 'Audio Port', and 'Meta Port'. A 'Save' button is located at the bottom right of the configuration area.

4. In the **Login** and **Password** boxes, type a login ID and password to enable authentication to make the RTSP connection process more secure.
5. In the **Port** box , type the port number to use. By default, the port is set to 554.
6. From the **Authentication** list, select **On** to enable the authentication,
7. From the **Multicast Auto Connect** list, select **On** to automatically connect to multicast,
8. For each Stream configure the following:
  - a. In the **URL** box, type a descriptive access name. The access name is used to represent each RTSP Stream.
    - `rtsp://(camera IP address)/(URL stream 1)`
    - `rtsp://(camera IP address)/(URL stream 2)`
    - `rtsp://(camera IP address)/(URL stream 3)`
  - b. From the **Metadata** list, select **On** to enable data about data, which means the data information will be allocated systematically, allowing similar data together by certain criteria and also distinguishing dissimilar data organizationally to effectively transmitting date information.
  - c. From the **Address Type** list, select **Auto** or **Manual**.

If you select **Manual**, configure the IP address and port for the following:

**Video Address and Video Port**

**Audio Address and Audio Port****Meta Address and Meta Port**

- d. In the **Multicast URL** box, type a descriptive access name. Multicast URL can transmit data from one host to a single host or to all hosts, thus consuming less network bandwidth with more flexibility. However, it is required to make sure if the peripherals connected with the camera are all compatible with Multicast in advance. For multicast, user can change address, port and urlstream. The address for Multicast is roughly the same as the previous URL.
    - rtsp://(camera IP address)/(Multicast URL stream 1)
    - rtsp://(camera IP address)/(Multicast URL stream 2)
    - rtsp://(camera IP address)/(Multicast URL stream 3)
9. Click **Save**.

## Configuring SNMP

SNMP (Simple Network Management Protocol) is an Internet standard protocol used for monitoring and managing the status of devices connected to IP networks.

Three versions of SNMP have been developed, namely, SNMPv1, SNMPv2c and SNMPv3, with newest version featuring improvements in performance, flexibility and security.

When SNMP is “On”, upon request of SNMP server, network-attached devices expose their status to SNMP server which activates remote modifications if necessary.

### ✔ To configure SNMP

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **SNMP** tab.



The screenshot shows the 'Advanced Configuration' page for SNMP. The 'SNMP' tab is selected. The configuration is organized into four main sections:

- SNMP v1:** Includes an 'Enable' dropdown menu currently set to 'Off'.
- SNMP v2c:** Includes an 'Enable' dropdown menu set to 'Off', and three text input fields for 'Read Community String' (public), 'Write Community String' (private), and 'Trap Community String' (public).
- SNMP v3:** Includes an 'Enable' dropdown menu set to 'Off', an 'Authentication Mode' dropdown menu set to 'NONE', and a 'Privacy Mode' dropdown menu set to 'NONE'. To the right, there are three text input fields for 'User Name' (initial), 'Authentication Password', and 'Privacy Password'.
- Trap:** Includes three dropdown menus for 'Mode' (Off), 'Heartbeat' (Off), and 'Event' (Off). To the right, there are two text input fields for 'Target IP' and 'Heartbeat Interval' (30, with a range of 5-600).

At the bottom of the 'Trap' section, there is a 'Download MIB' section with a 'Download' button. A 'Save' button is located at the bottom right of the configuration area.

4. Under the **SNMP v1** area, from the **Enabled** list, select **On** to enable SNMP v1.
5. Under the **SNMP v2c** area, do the following:
  - a. From the **Enabled** list, select **On** to enable SNMP v2c.
  - b. In the **Read Community** box, type the name of the community to provide read access to a network element. The default value for this community string is **Public**.
  - c. In the **Write Community** box, type the name of the community to provide write access to a network element. The default value for this community string is **Private**.
  - d. In the **Trap Community** box, type the name of the community to provide trap access to a network element. The default value for this community string is **Private**.
6. Under the **SNMP v3** area, do the following:
  - a. From the **Enabled** list, select **On** to enable SNMP v3.
  - b. In the **User Name** box, type the name of the community to provide read-only access to a network element. The default value for this community string is **initial**.
  - c. From the **Authentication Mode** list, select the authentication algorithm for SNMP requests. You can select from the following:
    - **MD5:** The Message Digest Version 5 (MD5) hash function is used to determine that the message is from a valid source.
    - **SHA:** The Secure Hash Algorithm (SHA) has function is used to determine that the message is from a valid source.
  - d. In the **Authentication Password** box, type a password for the user.

**Note**

The password must be at least eight characters.

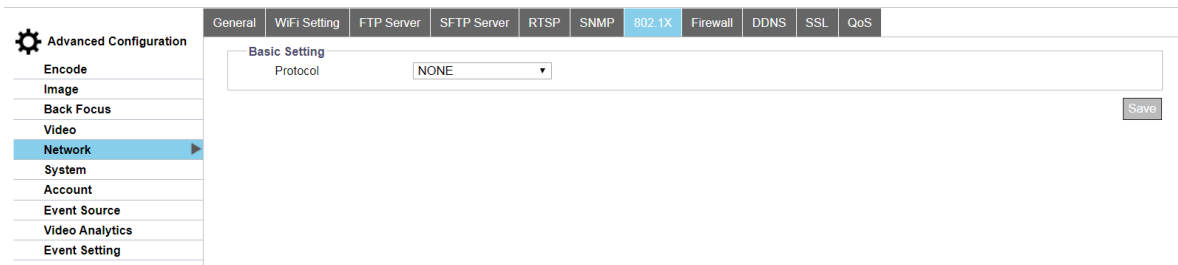
- e. From the **Privacy Mode** list, select the mode for SNMP requests.
  - f. In the **Privacy password** box, type a password for privacy.
7. Under the **Trap** area, do the following:
- a. From the **Mode** list, select the SNMP mode to enable with trap: **V1**, **V2C**, **V3**, or **Off**.
  - b. In the **Target IP** box, type the IP address of SNMP server.
  - c. From the **Heartbeat** list, select **On** to ensure a network free from delayed notifications, “Heartbeat” communications protocol sends notifications in a given interval.
  - d. In the **Heartbeat Interval** box, type a value in seconds (5 to 600) for Interval of Heartbeat.
  - e. From the **Event** list, select **On** to automatically record the log file of events occurred for review. This is specifically designed for event occurrence
8. Click **Download MIB** to get specifics of MIB (Management Information Base). MIBs describe the structure of the management data of a device subsystem; which uses a hierarchical namespace containing object identifiers (OID). Each OID identifies a variable that can be read or set via SNMP.
9. Click **Save**.

## Configuring 802.1X

802.1X is an IEEE Standard for Port-based Network Access Control and defines the encapsulation of the Extensible Authentication Protocol (EAP) over IEEE 802 which is known as EAP over LAN. Simply select a desired EAP protocol type from the dropdown menu and further input its required subfields to complete setup.

### ☑ To configure 802.1x

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **802.1x** tab.



4. Do one of the following:

For	Do
No protocol	From the <b>Protocol</b> list, select <b>None</b> .
<p>EAP-MD5</p> <p>It is the only IETF Standards Track based EAP method and offers the minimal security.</p>	<ol style="list-style-type: none"> <li>From the <b>Protocol</b> list, select <b>EAP-MD5</b>.</li> <li>In the <b>User Name</b> box, type the user name.</li> <li>In the <b>Password</b> box, type the password associated with the user name.</li> <li>Click <b>Save and Test</b>.</li> </ol>
EAP-TTLS	<ol style="list-style-type: none"> <li>From the <b>Protocol</b> list, select <b>EAP-TTLS</b>.</li> <li>From the <b>Inner Authentication</b> list, select an authentication type.</li> <li>In the <b>User Name</b> box, type the user name.</li> <li>In the <b>Password</b> box, type the password associated with the user name.</li> <li>In the <b>Anonymous ID</b> box, type and anonymous ID.</li> <li>Click <b>Choose File</b> and select the CA certificate.</li> <li>Click <b>Save and Test</b>.</li> </ol>
EAP-PEAP	<ol style="list-style-type: none"> <li>From the <b>Protocol</b> list, select <b>EAP-PEAP</b>.</li> <li>From the <b>Protocol</b> list, select <b>EAP-TTLS</b>.</li> <li>In the <b>User Name</b> box, type the user name.</li> <li>In the <b>Password</b> box, type the password associated with the user name.</li> <li>Click <b>Choose File</b> and select the CA certificate.</li> <li>Click <b>Save and Test</b>.</li> </ol>

5. Click **Save**.

## Configure Firewall

Under this menu, user can manually define several IP addresses to be allowed or denied to access camera.

### ▼ To configure firewall

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **Firewall** tab.



4. From the **Mode** list, select one of the following:
  - Allow: Select this option to make inputted IP addresses allowed to access IP camera.
  - Deny: Select this option to make inputted IP addresses denied to access IP camera.
  - Off: Select this option, none of actions will be made for inputted IP addresses.
5. For each of the ten inputs, select **Enabled** and type in the IP address to allow or deny.
6. Click **Save**.

## Configuring DDNS

Dynamic Domain Name Server (DDNS) is the system that can automatically upgrade DSN records without further manual editing in a real time manner, therefore resulting in web address directing faster and smoother.

### ▼ To configure DDNS Settings

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **DDNS** tab.



4. From the **Enable** list, select **On**.
5. From the **Type** list, select one of the following:
  - DynDNS: One of the DDNS providers offering service with fee collection.
  - No-IP: A DDNS provider offering free service. Please register yourself before enabling this type.
  - Two-DNS: A DDNS provider offering free service. Please register yourself before enabling this type.
  - FreeDNS: A DDNS provider offering free service. Please register yourself before enabling this type.
6. In the **Hostname** box, type a specific hostname for the DDNS.
7. In the **User Name** box, type a privileged username for accessing the DDNS.
8. In the **Password** box, type a secure password to associate with the username.
9. (Only for FreeDNS) Select **Hash** if you selected FreeDNS from the **Type** list.
10. Click **Save**.

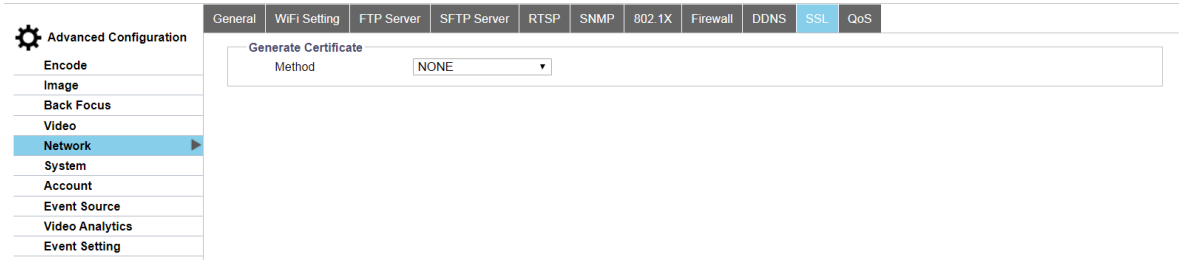
## Configuring SSL

Secure Sockets Layer (SSL), the standard security technology for establishing encryption, allows sensitive information such as login credentials to be transmitted securely.

**Self Signed:** Self-signed certificate is a private own key that has no connection with person or organization that perform authorized certificate signing procedure. For self-signed certificate, user can create CSR (Certificate Signing Request) by filling below information. Country, Province, City, Common Name, Organization, Organization Unit and Email. For an installed certificate user can view Common Name, Organization, Location, Country, Issuer, Start Date and End Date. Select it and input the required fields below to display information of a self-signed certificate.

✓ [To configure SSL](#)

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **SSL** tab.



4. Do one of the following:

For	Do
No protocol	From the <b>Method</b> list, select <b>None</b> .
Self Signed  Self-signed certificate is a private own key that has no connection with person or organization that perform authorized certificate signing procedure.	<ol style="list-style-type: none"> <li>a. From the <b>Method</b> list, select <b>Self Signed</b>.</li> <li>b. In the <b>Country Code</b> box, type the two-letter combination to denote the country where the certificate will be used. The letter combination must be according to the ISO 3166 standard. For more information on ISO 3166, visit <a href="http://www.iso.org/iso/country_codes.htm">http://www.iso.org/iso/country_codes.htm</a>.</li> <li>c. In the <b>Organization Name</b> box, type the organization name.</li> <li>d. In the <b>Province</b> box, type the state or province name.</li> <li>e. In the <b>Organization Unit Name</b> box, type the organization unit name.</li> <li>f. In the <b>City Name</b> box, type the city name or current location.</li> <li>g. In the <b>Common Name</b> box, type the IP address or hostname of the camera.</li> <li>h. In the <b>Email Address</b> box, type an email address of IP address or hostname of the camera.</li> <li>i. Click <b>Generate Certificate</b>.</li> </ol>
Request  Similar to Self-Signed, request will provide you with a download option of	<ol style="list-style-type: none"> <li>a. From the <b>Method</b> list, select <b>Request</b>.</li> <li>b. In the <b>Country Code</b> box, type the two-letter combination to denote the country where the certificate will be used. The letter combination must be according to the ISO 3166 standard. For more information on ISO 3166, visit <a href="http://www.iso.org/iso/country_codes.htm">http://www.iso.org/iso/country_codes.htm</a>.</li> </ol>

For	Do
<p>created certificate for future utilization.</p>	<p>c. In the <b>Organization Name</b> box, type the organization name.</p> <p>d. In the <b>Province</b> box, type the state or province name.</p> <p>e. In the <b>Organization Unit Name</b> box, type the organization unit name.</p> <p>f. In the <b>City Name</b> box, type the city name or current location.</p> <p>g. In the <b>Common Name</b> box, type the IP address or hostname of the camera.</p> <p>h. In the <b>Email Address</b> box, type an email address of IP address or hostname of the camera.</p> <p>i. Click <b>Generate Certificate</b> to provide a download of the certificate for future utilization.</p>

5. After downloading the certificate, from the **Method** list, select **Upload Certificate** .
6. Next to **Upload Certificate**, click **Upload** to upload it to the camera.
7. Next to CA Certificate, click **Upload** to browse and upload the other CA (Certificate Authority), which is issued by authorized person or organization to the camera.
8. Click **Save**.

## Configuring QoS

QoS (Quality of Service), refers, specifically, to both resource control and traffic prioritization mechanisms to provide differed priority to different applications or users in an attempt to promise the certain level of performance on data flow. It is especially efficient when transport of traffic is with additional requirements.

### ▼ To configure QoS

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Network**.
3. Click the **QoS** tab.



4. Select **Enabled** to enable the QoS function.
5. For **QoS Priority 1** and **2**, do the following:
  - a. In the **IPv4 Address** box, type the IP address.
  - b. In the **Netmask Bit** box, type a value from 0 to 32 in response to the IPv4 address assigned respectively.
6. Click **Save**.

## System

### Setting the Date and Time

You can set the date and time of the camera to automatically connect to a Network Time Protocol (NTP) server to synchronize the clock. Using a NTP server allows the camera to have an accurate and consistent date and time for all recordings. If the camera cannot connect to a NTP server, you can manually set the date and time.

#### ✓ To set the date and time

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **System**.
3. Click the **Date and Time** tab.

The screenshot shows the 'Advanced Configuration' menu on the left with 'System' selected. The main panel is titled 'Date & Time' and contains the following sections:

- Basic Setting**:
  - Current Server time**: 1970/01/30 16:57:54
  - Synchronization Mode**:
    - Manually setting Date and Time
      - Date: 2019/10/02 Time: 12:49:49
    - Synchronize with PC
      - Date: 2019/10/02 Time: 12:49:51
    - Synchronize with NTP Server
- NTP Setting**:
  - Enable**: Manual
  - Server Address**: time.stdtime.gov.tw
  - Synchronization Period**: 1 (1-24)
- Time Zone Setting**:
  - Time Zone**: GMT+0

A 'Save' button is located at the bottom right of the configuration panel.



4. Configure the date and time.

To	Do
Manually set the Date and Time	<ol style="list-style-type: none"> <li>Select <b>Sync with Manual</b>.</li> <li>Enter the date and time manually using the following formats for date [yyyy/mm/dd] and time [hh:mm:ss].</li> </ol>
Synchronize with a computer	<ol style="list-style-type: none"> <li>Select <b>Synchronize with PC</b>.</li> </ol>
Use an NTP Server	<ol style="list-style-type: none"> <li>Select <b>Synchronize with NTP Server</b>.</li> <li>Under the <b>NTP Setting</b> area, do the following:</li> <li>From the <b>Enable</b> list, select one of the following:                             <ul style="list-style-type: none"> <li>● <b>Manual</b>: Allows you to input the desired NTP server address in the <b>Server Address</b> box.</li> <li>● <b>From DHCP Server</b>: Obtains a NTP address assigned by DHCP Server.</li> </ul> </li> <li>Move the Synchronization Period slider to set time in hours to perform a synchronization.</li> </ol>

5. Click **Save**.

## Configuring Audio

Equipped with audio input/output ports, the camera is able to connect with external audio devices for audio input and output individually. See the settings page and descriptions below for more understanding.

### Note

The audio output performance is not be influenced by the codec combination.

The camera only supports one user to use audio out. Once the audio out is in use, others cannot use this function on live view.

The encoding of audio output is determined by the transmitter (NVR or ActiveX) rather than camera, the current supported formats are PCM and g.711u.

### ☑ To configure audio

- From the camera menu, click **Configuration**.
- Under Advanced Configuration, click **System**.

- Click the **Audio** tab.

The screenshot shows the 'Advanced Configuration' window with the 'Audio' tab selected. On the left is a navigation menu with options: Encode, Image, Back Focus, Video, Network, System (highlighted), Account, Event Source, and Event Setting. The main panel has tabs for Date & Time, Audio, Firmware, Initialization, OSD, Events, and RS485. Under the 'Audio In Setting' section, there are four dropdown menus: Source (Line In), Enable (Off), Encoding (G.711 μ-law), and Level (Mid). Below this is the 'Audio Out Setting' section with a Level dropdown menu (Mid). A 'Save' button is located at the bottom right of the configuration area.

- Under the **Audio In Setting** area:
  - From the **Source** list, select which audio source will be connected:
    - Mic In: via microphone in source.
    - Line In: via audio line in source.
  - From the **Enabled** list, select **On** to activate audio input/output functions when audio input/output devices are well plugged.
  - From the **Encoding** list, select the audio codec for audio input encoding
    - G.711 A-law
    - G.711 μ-law
  - From the **Level** list, select from High, Mid, or Low.
- Under the **Audio Out Setting** area, from the **Level** list, select from High, Mid, or Low.
- Click **Save**.

## Upgrading the Firmware

Information about camera firmware is explicitly written under this page. User can manually upgrade System Firmware if upgrade is available. All motions of camera will be stopped during the firmware upgrade. Please close any other screens before firmware upgrade. Never disconnect power or LAN cable during the upgrading process. It takes approximately 3 minutes for the unit to reboot after firmware upgrade process.

### Caution

If power is lost during the upgrade, manufacturer maintenance will be required.

### ✓ To upgrade the firmware

- From the camera menu, click **Configuration**.
- Under Advanced Configuration, click **System**.
- Click the **Firmware** tab.



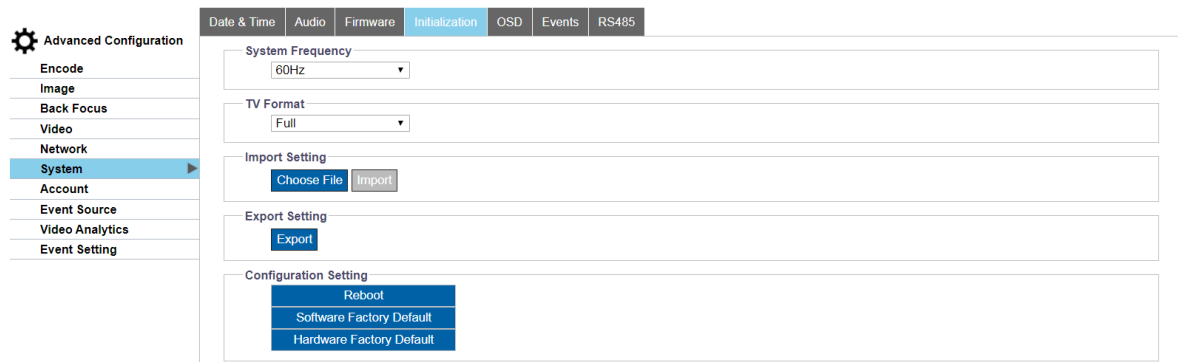
4. Click **Upload** to locate a corresponding firmware file.
5. Click **Upgrade** to begin the upgrade process.

## Initializing the Camera

When viewing live video on home page or streaming video to a video management system, you can choose to stream color or black/white. To help avoid image flickering associated with florescent lights, you can set the power line frequency to be consistent with the local utility setting. Depending on how the camera is mounted, you can set how the video image is displayed and transmitted to correct the image orientation.

### ▼ To initialize the camera

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **System**.
3. Click the **Initialize** tab.



4. From the **Camera Type** list, select **50Hz** or **60 Hz** to set the power line frequency.
5. From the **TV Format** list, select a TV aspect ratio from the following: **Full**, **4:3**, or **16:9**.
6. Click **Choose File** to locate a configuration file and then click **Import** to upload configuration settings to the camera.
7. Click **Export** to export the configuration settings to a local computer.
8. Under the **Configuration Settings** area, do one of the following:

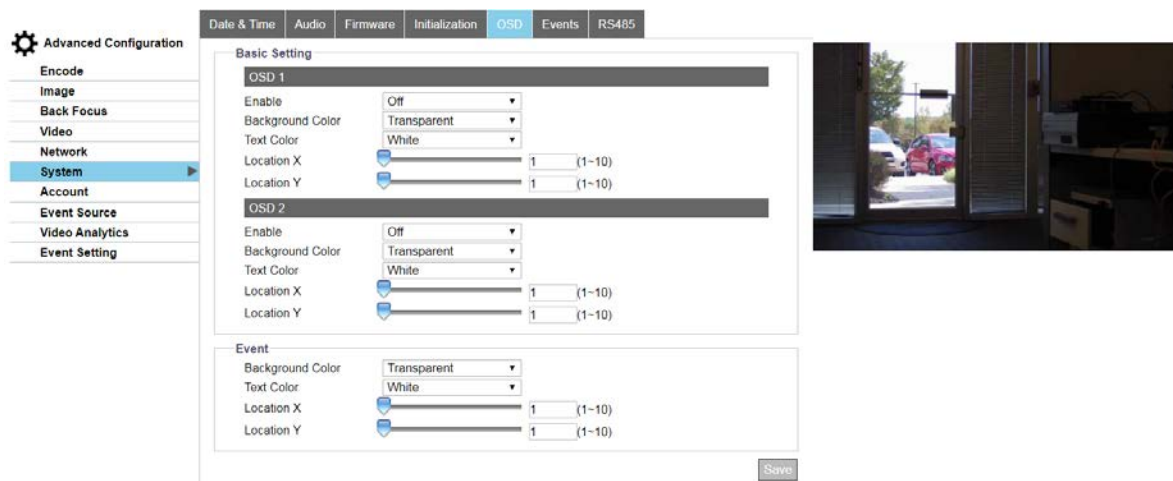
- Click **Reboot** to reboot the camera.
- Click **Software Factory Default** to reset all configuration settings back to factory defaults excluding network settings.
- Click **Hardware Factory Default** to reset all configuration settings back to factory defaults.

## Configuring the OSD

This section allows user to enable OSD (On Screen Display) settings. In addition, it extends the OSD function to accord with the occurrence of events. When an event is triggered, the OSD can be displayed on screen to highlight and inform you.

### ✓ To configure the OSD

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **System**.
3. Click the **OSD** tab.



4. Under the **Basic Setting** area, configure the two OSD.
  - a. From the **Enable** list, select **On**.
  - b. From the **Background Color** list, select between **Black** or **Transparent**.
  - c. From the **Text Color** list, select between **Black** or **White**.
  - d. Move the **Location** sliders to set the X and Y position of the OSD.
5. Under the **Event** area, configure the following.:

- a. From the **Background Color** list, select between **Black** or **Transparent**.
  - b. From the **Text Color** list, select between **Black** or **White**.
  - c. Move the **Location** sliders to set the X and Y position of the OSD.
6. Click **Save**.

## Viewing Events

As an intelligent apparatus, the IP camera is capable of automatically detecting scores of events such as motion, tamper, network loss, alarm, etc., and taking actions to inform the user about the occurrences. Consequently, the Event Search section assists administrator to have detailed yet systematic analysis on each individual event with its type, counts and time.

### 📌 To view events

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **System**.
3. Click the **Events** tab.

No.	Event Type	Start Time	End Time
1	motion	2017/06/07 03:41:58	2017/06/07 03:42:03
2	motion	2017/06/07 03:42:03	2017/06/07 03:42:04
3	tamper	2017/06/07 03:41:59	2017/06/07 03:42:01
4	tamper	2017/06/07 03:42:01	2017/06/07 03:42:03
5	tamper	2017/06/07 03:42:03	2017/06/07 03:42:05
6	schedule	2017/06/07 03:42:21	2017/06/07 03:42:25
7	schedule	2017/06/07 03:42:27	2017/06/07 03:42:32

4. Under the **Event Type** area, select the type of events to display.
5. Under the **Time** area, select one of the following:
  - **All the time:** Show all events.
  - **Manual:** In the **Start** and **End** time boxes, set the time frame to search.
6. Click **Search** to display the events. Click **Refresh** to get a most updated list of events that are enabled for detection.

**Note**

A list of counts of the entire types of events is displayed under Analysis on the lower right to give an overview of how frequent each type of the event took place.

## Configuring RS485 (BX Model)

When connecting the camera with external RS485-based device, e.g., multi-directional pan/tilt cradle head, user is required to define related parameters including “Baud Rate” and “Device Address”, both of which need to be compatible between the camera and the connected device, for operating correctly.

**Note**

RS485 function is only available on the V4750BX.

✔ To configure RS485

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **System**.
3. Click the **RS485** tab.



4. Move the **Device Address** slider to set the address.
5. From the **Baud Rate** list, select the baud rate to communicate with the external device.
6. Click **Save**.

## Account

### Adding Users

The Verint IP cameras have two types of user privileges: Administrator and guest. Users with Administrator privileges are allowed access to the Configuration page. Users with guest

privileges do not have access to the Configuration page and are limited to five users to view live video.

The default administrator username and password for the Verint IP cameras is **admin**. To prevent unauthorized access, it is highly recommended to change the default password to restrict access to the IP cameras and to create multiple users accounts with a defined set of privileges.

### Note

You can create up to 10 users.

#### ✓ To add users

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Accounts**.
3. Click the **Accounts Management** tab.

The screenshot shows the 'Accounts Management' interface. On the left is a navigation menu with 'Account' selected. The main area has two tabs: 'Account Management' and 'LDAP'. Below the tabs is the 'Account Setting' section, which contains a 'User List' table. The table has three columns: 'No.', 'Access Level', and 'User name'. It contains one row with '0', 'Admin', and 'admin'. Below the table are 'Add', 'Modify', and 'Delete' buttons. Below the table is a 'Security' section with a 'Monitor suspicious sign-in:' label and a dropdown menu set to 'On'. A 'Save' button is at the bottom right.

No.	Access Level	User name
0	Admin	admin
-	-	-

4. Click **Add**.
5. Select the **Access Level** (Admin, Operator or User) .
6. In the **User Name** box, type a name.
7. In the **Password** box, type a secure password.

### Note

The login Username and Password are supported within 16 characters with the valid alphanumeric value merely including '0' to '9', 'a' to 'z', 'A' to 'Z', '.', '-', '+', '\_', and '@'.

8. Click **Save**.

## Configuring LDAP

For accessing and maintaining distributed directory information services over an Internet Protocol network, the Lightweight Directory Access Protocol (LDAP), an open, vendor-neutral, industry standard application protocol, have a major role in both intranet and internet applications to facilitate information sharing between devices.

▼ To configure LDAPs

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Accounts**.
3. Click the **LDAP** tab.

The screenshot shows the 'LDAP' configuration page under 'Account Management'. On the left is a navigation menu with 'Account' selected. The main area has three sections:

- Basic Setting:** Server, Port (389), Base DN (dc=ipcamera,dc=com), Bind DN Template (uid=%u,dc=users,dc=ipcamera,dc=com), Search Template (cn=%u).
- Group Mappings:** Admins (cn=admin,dc=groups,dc=ipcamera,dc=com), Operators (cn=operator,dc=groups,dc=ipcamera,dc=com), Users (cn=user,dc=groups,dc=ipcamera,dc=com).
- Authentication:** User Name, Password, Enable TLS (Off), and buttons for Delete, Choose File, Submit, and Save.

4. Under the **Basic Setting** area, configure the following:
  - a. In the **Server** box, type the LDAP server name.
  - b. In the **Port** box, type the port number from 1025 to 65535. The default value is 389.

**Note**

The strings in Base DN (Distinguish Name), Bind DN Template (sublevel of Base DN) and Search Template fields are updated by the LDAP server to be accessed. Refer to the fields here for later/further configuration.

5. Under the **Group Mappings** area, the strings within Admins, Operators and Users fields are updated by the LDAP server to be accessed. Refer to the fields here for later/further configuration.
6. Under the **Authentication** area, configure the following:
  - a. In the **User Name** box, type the designated username for authentication to access LDAP.
  - b. In the **Password** box, type the password corresponding to the username for authentication.
7. Click **Save**.



# Event Source

## Configuring an Alarm Event Source

Connecting an alarm input device with the camera can largely extend alert functions. For example, when an infrared detector connected with the camera detects motion based on heat emission, an alarm input message will be sent to the camera. On the other hand, by connecting with an alarm output device such as siren, the camera will send signal to notify siren and thus make it activated when receiving an alarm signal either from alarm input device or other detection settings. This page is designed to establish related actions when the camera receives alarm input signal.

### ✓ To configure an alarm event source

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Event Source**.
3. Click the **Alarm 1** tab.

The screenshot shows the 'Advanced Configuration' menu on the left with 'Event Source' selected. The main interface has tabs for 'Alarm', 'Audio', 'Motion', 'Network', 'Schedule', 'Tamper', and 'mSD healthiness'. The 'Alarm' tab is active, showing 'Basic Setting' for 'Alarm 1'. The 'Enable' checkbox is checked, and the 'Type' is set to 'NO'. Under 'Handlers', there are sections for 'Alarm Out', 'Audio', 'Snapshot', and 'Recording'. 'Alarm Out' has two entries, '1' and '2', with '1' having 'Enable' checked and 'Sound' set to '1'. 'Audio' has 'Enable' checked and 'Off' selected. 'Snapshot' has 'Store to Edge' and 'Store to FTP' checked. 'Recording' has 'Edge Record' checked. Below this is the 'Email' section with 'Enable' checked, a 'Subject' field, and a 'Message' text area. The 'OSD' section has 'Enable' checked and a 'Text' field. The 'HTTP Generic Event' section has 'Enable' checked and 'Method' set to '1'. Below the basic settings is the 'Arming Schedule Setting' section, which includes an 'Edit' button and a calendar grid for days 0-24. The calendar shows green bars for all days from Monday to Sunday. A 'Save' button is located at the bottom right of the interface.

4. From the **Enabled** list, select **On** to enable the alarm input function.
5. From the **Type** list, select one of the following:
  - **NO** (Normally Opened): An alarm will be triggered when the external contact closes.
  - **NC** (Normally Closed): An alarm will be triggered when the external contact opens.
6. Under the **Handlers** area, do the following:

For	Do
Alarm Out	<ol style="list-style-type: none"> <li>Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p><b>Note</b> You must set up the sound file beforehand. For more information, refer to <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<ol style="list-style-type: none"> <li>Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></li> </ol>

- Under the **Arming Schedule Setting** area, set up a schedule for recording video when alarm input signal occurs.

Arming Schedule Setting

<u>Edit</u>	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Monday																									
Tuesday																									
Wednesday																									
Thursday																									
Friday																									
Saturday																									
Sunday																									

- Click **Edit**.

	Start Time	End Time	Action
<b>Monday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Tuesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Wednesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Thursday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Friday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Saturday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Sunday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>

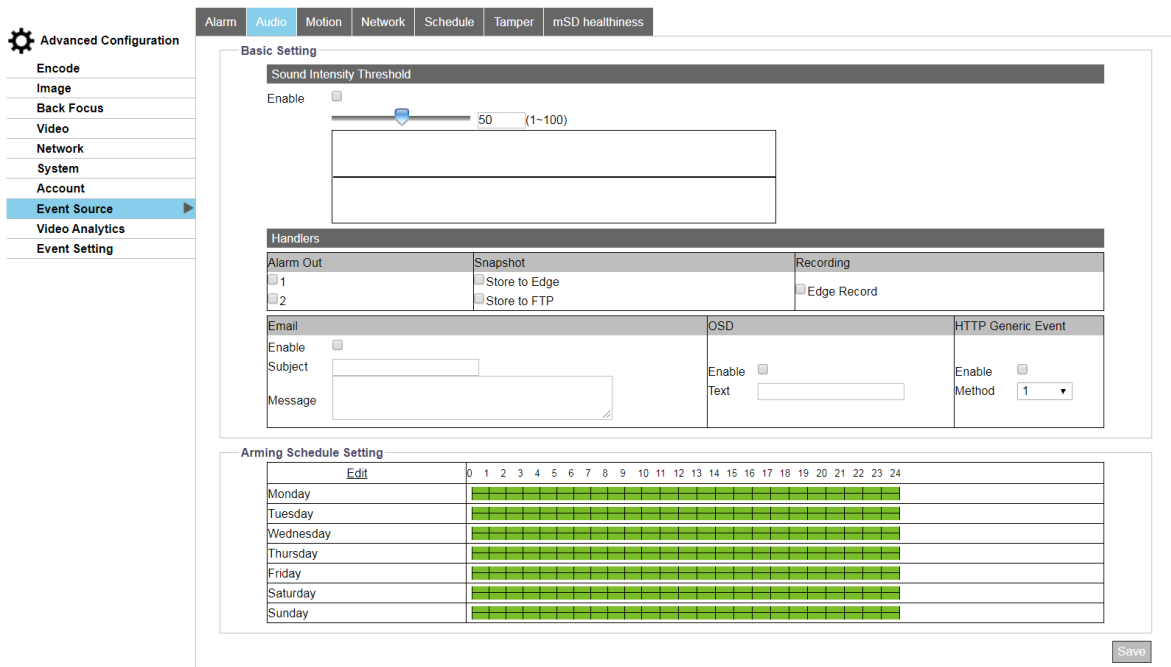
9. For each day of the week, set the **Start** and **End** time for the three sets of time range.
10. Next to each time range, select the check box to enable the defined time range.
11. Click **Apply**.
12. Click **Save**.

# Configuring an Audio Event Source

By connecting with an audio input device, e.g., microphone, the camera can receive an audio input signal from the microphone, and react with the certain responses which are preset under this section.

✓ To configure an alarm event source

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Event Source**.
3. Click the **Alarm 1** tab.



4. From the **Enabled** list, select **On** to enable the audio input function.
5. Move the **Sound Intensity Threshold** slider to define an exact sound intensity threshold to trigger the following actions when the camera receives audio signal from the connected input device. Select 100 for the highest sound intensity threshold.
6. Under the **Handlers** area, do the following:

For	Do
Alarm Out	a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.

For	Do
Snapshot	<p>a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</p> <p>b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</p> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</p> <p>b. In the <b>Subject</b> box, type a descriptive subject title for the email.</p> <p>c. In the <b>Message</b> box, type a descriptive email message.</p>
OSD	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</p> <p>b. In the <b>Text</b> box, type the text to displays when an event occurs.</p>
HTTP Generic Event	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</p> <p>b. From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></p>

7. Under the **Arming Schedule Setting** area, set up a schedule for recording video when alarm input signal occurs.

Arming Schedule Setting

Edit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Monday	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Tuesday	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wednesday	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Thursday	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Friday	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Saturday	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sunday	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

8. Click **Edit**.

	Start Time	End Time	Action
<b>Monday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Tuesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Wednesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Thursday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Friday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Saturday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Sunday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>

9. For each day of the week, set the **Start** and **End** time for the three sets of time range.
10. Next to each time range, select the check box to enable the defined time range.
11. Click **Apply**.
12. Click **Save**.

# Configuring a Motion Event Source

This function is designed to establish related actions when the camera detects motion issues. A maximum of 4 sets of motion detection areas can be customized by users.

✓ To configure a motion event source

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Event Source**.
3. Click the **Motion** tab.

The screenshot displays the 'Advanced Configuration' menu on the left, with 'Event Source' selected. The 'Motion' tab is active in the top navigation bar. The main configuration area is divided into two sections:

**Motion Zone Area Setting**

**Zone1**

Enable

Object Size  (1-100)

Sensitivity **High**

**Handlers**

Alarm Out	Audio	Snapshot	Recording
<input checked="" type="checkbox"/> 1	Audio Out <input type="checkbox"/>	<input type="checkbox"/> Store to Edge	<input checked="" type="checkbox"/> Edge Record
<input checked="" type="checkbox"/> 2	Audio Sound <b>1</b>	<input type="checkbox"/> Store to FTP	

**Email**

Enable

Subject

Message

**OSD**

Enable

Text

**HTTP Generic Event**

Enable

Method **1**

**Zone2**

**Zone3**

**Zone4**

**Arming Schedule Setting**

Edit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Monday	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Tuesday	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Wednesday	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Thursday	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Friday	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Saturday	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sunday	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

**Save**

A preview image on the right shows a camera view of a street scene with a red car and a blue car, with a red motion box overlaid on the red car.

4. Move the **Object Size** slider to set the object size.
5. From the **Sensitivity** list, select one of the following:
  - a. **High**: camera is triggered with slight motion or light change within the live view
  - b. **Mid**:
  - c. **Low**: camera is triggered only when major change in motion or light occurs
6. For each Zone, do the following:
  - a. From the **Enabled** list, select **On**.
  - b. On the preview image, draw a motion box and then select the checkbox and click **Save**.
  - c. Under the **Handlers** area, do the following:



For	Do
Alarm Out	<ol style="list-style-type: none"> <li>Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p><b>Note</b> You must set up the sound file beforehand. For more information, refer to <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<ol style="list-style-type: none"> <li>Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></li> </ol>

- d. Under the **Arming Schedule Setting** area, set up a schedule for recording video when alarm input signal occurs.

Arming Schedule Setting

<u>Edit</u>	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Monday	[Green bar]																								
Tuesday	[Green bar]																								
Wednesday	[Green bar]																								
Thursday	[Green bar]																								
Friday	[Green bar]																								
Saturday	[Green bar]																								
Sunday	[Green bar]																								

- e. Click **Edit**.

	Start Time	End Time	Action
<b>Monday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Tuesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Wednesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Thursday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Friday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Saturday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Sunday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>

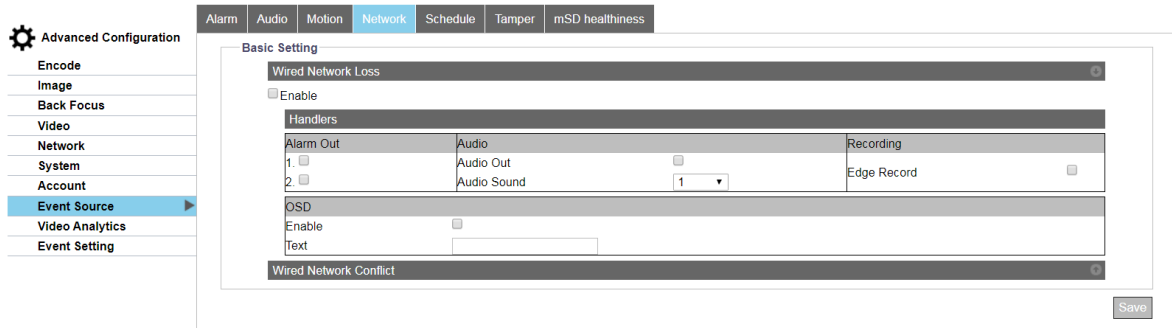
- f. For each day of the week, set the **Start** and **End** time for the three sets of time range.
  - g. Next to each time range, select the check box to enable the defined time range.
  - h. Click **Apply**.
7. Click **Save**.

## Configuring a Network Event Source

This function is designed to configure related actions when the camera is subject to network conflict or network lost events.

☑ To configure a network event source

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Event Source**.
3. Click the **Network** tab.



4. Under the **Wired Network Loss** area, do the following:
  - a. Select **Enabled** to enable the detection of network lost. When the camera loses internet access, the network lost event will be detected and recorded.
  - b. Under the **Handlers** area, do the following:

For	Do
Alarm Out	<ol style="list-style-type: none"> <li>a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>b. From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p style="margin-left: 20px;"><b>Note</b> You must set up the sound file beforehand. For more information, refer to "<a href="#">Configuring Sound</a>" (page 121).</p>
Snapshot	<ol style="list-style-type: none"> <li>a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol>

For	Do
	<p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to "Configuring FTP" (page 117).</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>

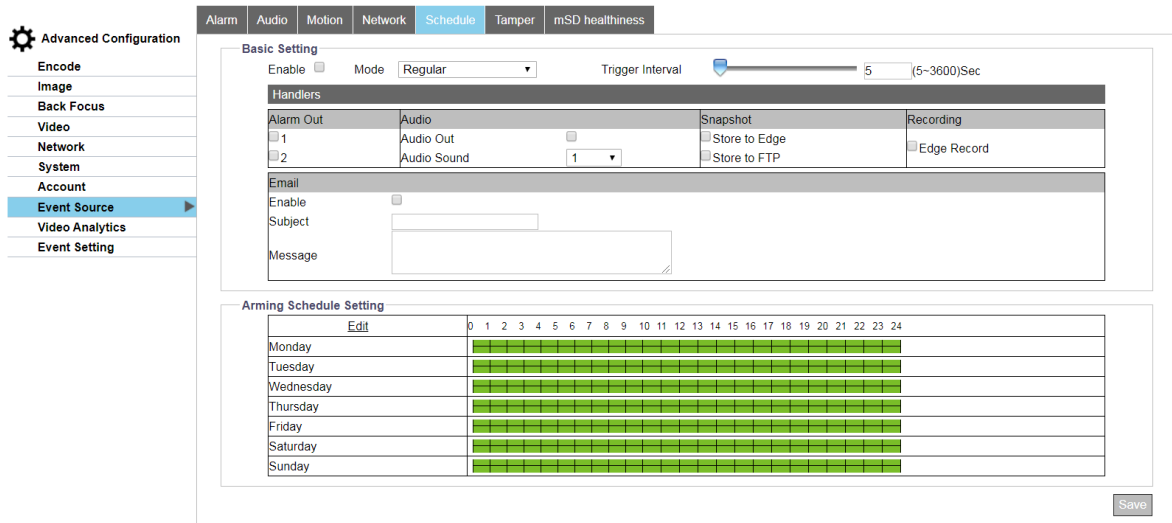
- Under the **Wired Network Conflict** area, Select **Enabled** to enable the detection of network conflict. When there is another IP address conflicts with the camera, the network conflict event will be detected and recorded.
- Click **Save**.

## Configuring a Schedule Event Source

This function is designed to establish related actions for recording schedule, independently of any event.

▼ **To configure a schedule event source**

- From the camera menu, click **Configuration**.
- Under Advanced Configuration, click **Event Source**.
- Click the **Schedule** tab.



4. From the **Enabled** list, select **On** to enable the alarm input function.
5. From the **Mode** list, select from the following:
  - Regular: The recording schedule will progress regularly based on the trigger interval settings.
  - Persistent: The recording schedule will progress persistently.
6. Trigger Interval : 5 ~ 3600 (sec)
7. Under the **Handlers** area, do the following:

For	Do
Alarm Out	a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.
Audio	a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs. b. From the <b>Sound</b> list, select a value from 1 to 10. <div style="border-left: 2px solid #0070C0; padding-left: 10px; margin-top: 10px;"> <p><b>Note</b>                              You must set up the sound file beforehand. For more information, refer to "<a href="#">Configuring Sound</a>" (page 121).</p> </div>
Snapshot	a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs. b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.

For	Do
	<p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></li> </ol>

- Under the **Arming Schedule Setting** area, set up a schedule for recording video when alarm input signal occurs.

Arming Schedule Setting

<a href="#">Edit</a>	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Monday																									
Tuesday																									
Wednesday																									
Thursday																									
Friday																									
Saturday																									
Sunday																									

- Click **Edit**.

	Start Time	End Time	Action
<b>Monday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Tuesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Wednesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Thursday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Friday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Saturday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Sunday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>

10. For each day of the week, set the **Start** and **End** time for the three sets of time range.
11. Next to each time range, select the check box to enable the defined time range.
12. Click **Apply**.
13. Click **Save**.

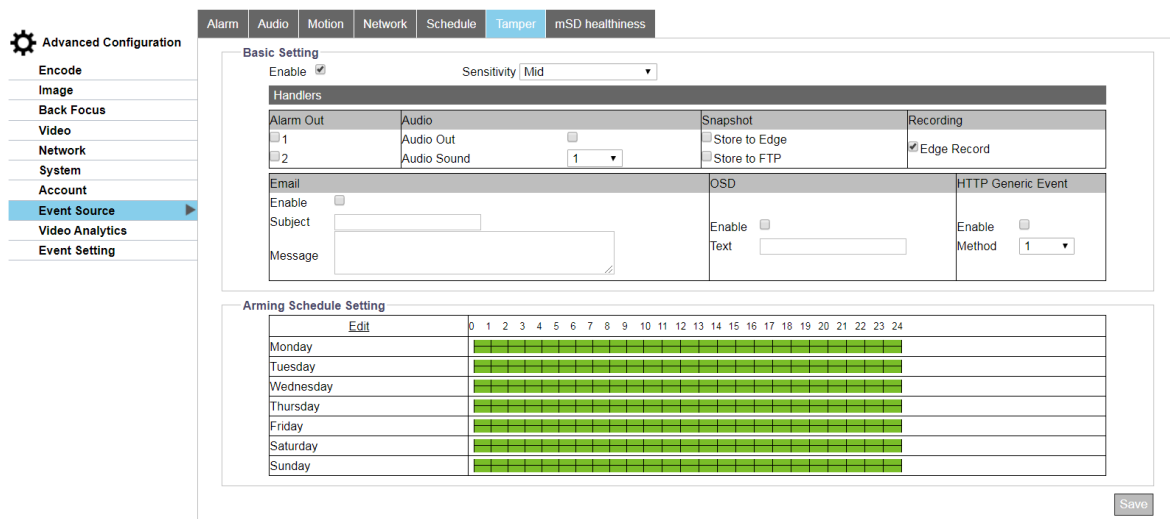


# Configuring a Tampering Event Source

This function is designed to establish related actions when the camera is subject to tamper events.

✔ To configure a tampering event source

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Event Source**.
3. Click the **Tamper** tab.



4. From the **Enabled** list, select **On** to enable tamper detection.
5. From the **Sensitivity** list, set the sensitivity for tamper detection. High means that camera tends to be triggered with slight tamper issue, while Low means that camera is triggered with only major tamper issue.
6. Under the **Handlers** area, do the following:

For	Do
Alarm Out	a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.
Audio	a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs. b. From the <b>Sound</b> list, select a value from 1 to 10.

For	Do
	<p><b>Note</b> You must set up the sound file beforehand. For more information, refer to <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<ol style="list-style-type: none"> <li>Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></li> </ol>

- Under the **Arming Schedule Setting** area, set up a schedule for recording video when alarm input signal occurs.

## Configuring a Tampering Event Source

Arming Schedule Setting

Edit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Monday																									
Tuesday																									
Wednesday																									
Thursday																									
Friday																									
Saturday																									
Sunday																									

8. Click **Edit**.

	Start Time	End Time	Action
<b>Monday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Tuesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Wednesday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Thursday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Friday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Saturday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
<b>Sunday</b>			
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>
	00:00 <input type="text"/>	23:59 <input type="text"/>	<input checked="" type="checkbox"/>

9. For each day of the week, set the **Start** and **End** time for the three sets of time range.

10. Next to each time range, select the check box to enable the defined time range.
11. Click **Apply**.
12. Click **Save**.

## Configuring a mSD Health Event Source

This function is designed to establish related actions when the inserted micro SD card is suffering from unexpected failed events or running out of sufficient storage space.

### ✓ To configure a mSD health event source

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Event Source**.
3. Click the **mSD Healthiness** tab.

4. From the **Enabled** list, select **On** to enable the detection of insufficient space of the inserted micro SD card.
5. Move the **Warning Size** slider to define a space threshold for trigger.
6. Under the **Handlers** area, do the following:

For	Do
Alarm Out	a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.
Audio	<ol style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>b. From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol>

For	Do
	<p><b>Note</b> You must set up the sound file beforehand. For more information, see <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<p>a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</p> <p>b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</p> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, see <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</p> <p>b. In the <b>Subject</b> box, type a descriptive subject title for the email.</p> <p>c. In the <b>Message</b> box, type a descriptive email message.</p>
OSD	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</p> <p>b. In the <b>Text</b> box, type the text to displays when an event occurs.</p>
HTTP Generic Event	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</p> <p>b. From the <b>Method</b> list, select a value from 1 to 10. For more information, see <a href="#">"Configuring HTTP Generic Event" (page 122)</a>.</p>

7. Under the **Mount failure** area, select the check box to enable the detection of failure of the inserted micro SD card. When any failure issue occurs on SD card, the selected handlers will be activated.
8. Click **Save**.

# Video Analytics

## Configuring the Video Analytics – General Properties

This page contains general settings shared by all Video Analytics (VA) functions. That is, prior to set up each VA function, it is fundamental to define the settings here well, before advancing to other function settings.

### Note

It is recommended to define a fitting size range in accord with desired objects to be detected. By doing so, the accuracy of VA functions will be escalated by a large scale.

### ✓ To configure the video analytics general properties

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **General** tab.



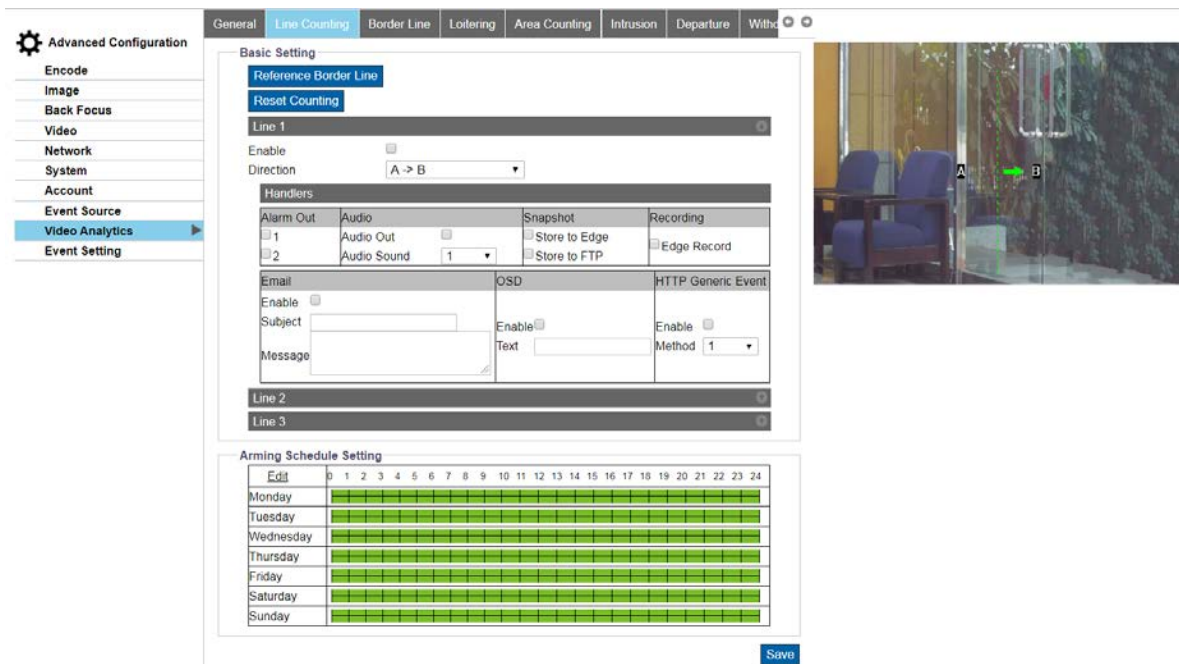
4. From the **Sensitivity** list, select a sensitivity level to define a clear threshold for triggering all VA functions. High represents VA functions will be triggered easily by slight events, while Low, on the other hand, stands for triggering occurs only when major events happen.
5. To set the **Max Object Size**, on the preview image, draw a maximum object size and then click **Save**. Any object larger than the maximum size defined here will neither be detected, nor triggered.
6. To set the **Min Object Size**, on the preview image, draw a minimum object size and then click **Save**. Any object smaller than the minimum size defined here will neither be detected, nor triggered.
7. Click **Save**.

# Configuring the Video Analytics – Line Counting

This function is designed to count the moving objects that passed through the designated line defined by users. The ideal applications for this function, for instance, can be an entrance of a shopping mall or exit of a department store. Also, it can be applied to count the traffic flow of an intersection.

📌 To configure the video analytics line counting

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **Line Counting** tab.



4. Click **Reference Border Line** to apply the identical line deployment settings referred from Border Line function.
5. Click **Reset Counting** to erase accumulated counting records.
6. For each line:
  - a. Select **Enable**.
  - b. From the **Direction** list, select one of the following to define the exact direction to be counted:

- A -> B
- B -> A

c. On the preview image, click to draw a line.

#### Note

You can draw up to three lines.

7. Click **Save**.
8. To verify if line counting is working, switch to the Live View page and select **Line Counting** from the **VA** list. When there's a moving object traveling through the designated line, the number coming along with the arrow and line will increase. Any moving object within the live view will be framed by a blue rectangle for clear identification.

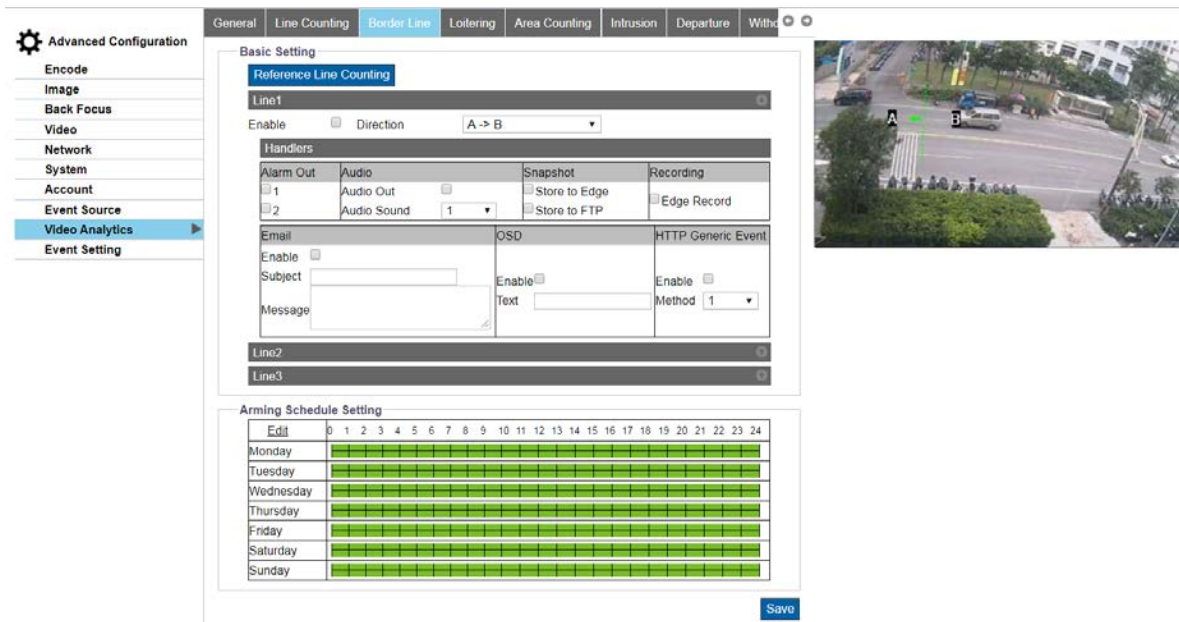
## Configuring the Video Analytics – Border Line

This function is designed to establish borderlines to guard certain alerted zones within the camera coverage. For example, administrator can assign multiple lines bordering the area where a critical coffer is located to efficiently monitor any suspect person crossing the borderlines deployed.

#### ✓ To configure the video analytics border line

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **Border Line** tab.





4. Click **Reference Border Line** to apply the identical line deployment settings referred from Border Line function, an easy way to prompt setup and implement.
5. For each line:
  - a. Click **Enable**.
  - b. From the **Direction** list, select one of the following to define the exact direction to be counted:
    - A -> B
    - B -> A
  - c. On the preview image, click to draw a line.

### Note

You can draw up to three lines.

6. Click **Save**.
7. To verify if line counting is working, switch to the Live View page and select **Border Line** from the **VA** list. When there's a moving object traveling through the designated line, the number coming along with the arrow and line will increase. Any moving object within the live view will be framed by a blue rectangle for clear identification.

## Configuring the Video Analytics – Loitering

This function is designed to intelligently keep an eye on suspect objects that enter and linger for a certain period within the alerted area defined by administrator. It is practical to monitor key zone without paying extra human resources to keep vigil in front of monitor 24/7.

✓ To configure the video analytics loitering

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **Loitering** tab.

The screenshot displays the configuration interface for the Loitering video analytics feature. The interface is divided into several sections:

- Basic Setting:** Includes an 'Enable' checkbox and a 'Trigger Interval' slider set to 30 (range 5-300).
- Handlers:** A table with columns for Alarm Out, Audio, Snapshot, and Recording. It lists two handlers with their respective settings.
- Email:** Includes an 'Enable' checkbox, a 'Subject' field, and a 'Message' field.
- OSD:** Includes an 'Enable' checkbox and a 'Text' field.
- HTTP Generic Event:** Includes an 'Enable' checkbox and a 'Method' dropdown menu.
- Arming Schedule Setting:** A table with columns for days of the week (Monday to Sunday) and hours (0-24). The grid shows that the feature is armed (indicated by green) for all days and hours.

4. Select **Enable**.
5. Move the **Trigger Interval** slider, to set the threshold period to trigger loitering alarm by any suspect object that enter and linger the zone over the value.
6. On the preview image, draw a polygon shape covering the key zone for loitering detection.
7. Under the **Handlers** area, do the following:

For	Do
Alarm Out	a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.
Audio	a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.

For	Do
	<p>b. From the <b>Sound</b> list, select a value from 1 to 10.</p> <p><b>Note</b> You must set up the sound file beforehand. For more information, refer to <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<p>a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</p> <p>b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</p> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</p> <p>b. In the <b>Subject</b> box, type a descriptive subject title for the email.</p> <p>c. In the <b>Message</b> box, type a descriptive email message.</p>
OSD	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</p> <p>b. In the <b>Text</b> box, type the text to displays when an event occurs.</p>
HTTP Generic Event	<p>a. From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</p> <p>b. From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></p>

8. Click **Save**.
9. To verify if loitering is working, switch to the Live View page and select **Loitering** from the **VA** list. When there's a moving object traveling into and lingering within the designated zone over a certain period of time defined by administrator as the above image, the rectangular frame enclosing the suspect object is highlighted with red color for distinctive

identification. Besides, any moving object within the live view will be framed by a blue rectangle for clear recognition.

## Configuring the Video Analytics – Area Counting

For some scenarios, e.g., parking lot, administrator may need to compile statistics of objects that get into or move off the location. By implementing the Area Counting function, administrator can grasp a well-knit statistics gathered by intelligent surveillance camera with ease.

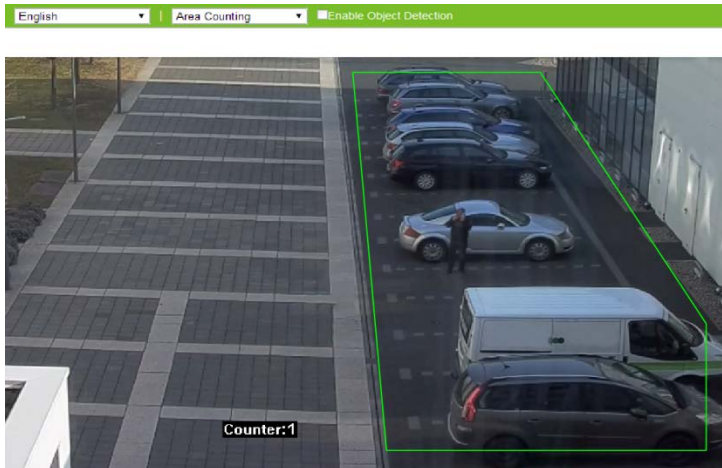
### ✓ To configure the video analytics area counting

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **Area Counting** tab.

The screenshot displays the configuration interface for the Area Counting function. The 'Basic Setting' section includes an 'Enable' checkbox, 'Location X' and 'Location Y' sliders (both set to 1), and three buttons: 'Reference Departure Area', 'Reference Intrusion Area', and 'Reset Counting'. The 'Handlers' section contains a table for Alarm Out, Audio, Snapshot, and Recording. The 'Email' section has fields for Subject and Message. The 'OSD' section has an 'Enable' checkbox and a 'Text' field. The 'HTTP Generic Event' section has an 'Enable' checkbox and a 'Method' dropdown. The 'Arming Schedule Setting' table shows a 24-hour grid for each day of the week, with all cells highlighted in green. A 'Counter' button is located at the bottom right of the configuration panel. To the right of the configuration panel is a live video feed showing a parking lot with a green rectangular area counting zone around several cars.

4. Select **Enable**.
5. Move the **Location X** and **Location Y** sliders to define the exact location for the OSD counter, which records number accumulated by both exit and entry of the defined zone.
6. Click **Reference Departure Area** to apply the identical line deployment settings referred from Departure Area function.
7. Click **Reference Intrusion Area** to apply the identical line deployment settings referred from Intrusion Area function.
8. Click **Reset Counting** to erase accumulated counting records.

9. On the preview image, click to draw a shape (octagon at the maximum) covering the desired zone for area counting and define a location for OSD counter.



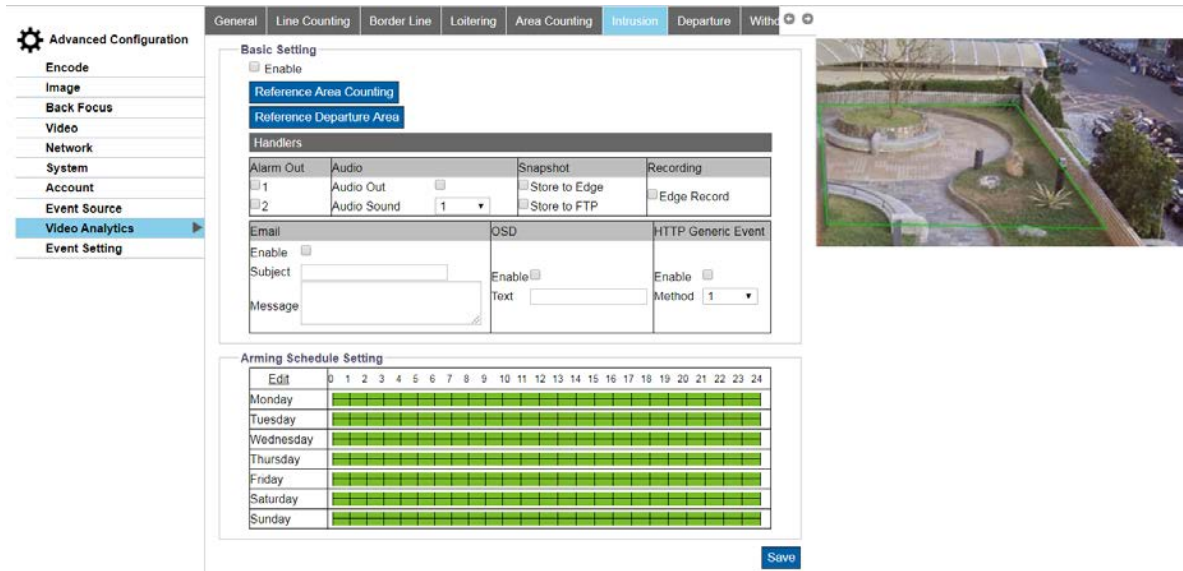
10. Click **Save**.
11. To verify if line counting is working, switch to the Live View page and select **Area Counting** from the **VA** list. When there's a moving object entering into or moving off the designated area defined by administrator, the OSD counter will show the digit that represents the accumulated number from objects entering and leaving the designated area. Besides, any moving object within the live view will be framed by a blue rectangle for clear recognition.

## Configuring the Video Analytics – Intrusion

Different from Border Line in partial ways, Intrusion is a function where administrator can assign an irregular shape (octagonal form at the maximum) to fence off any suspicious object from entering. In certain scenarios, administrator can effortlessly have a well command of critical zone and receive prompt warning once any object trespasses the defined critical zone in a real-time manner.

### 📌 To configure the video analytics intrusion

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **Intrusion** tab.

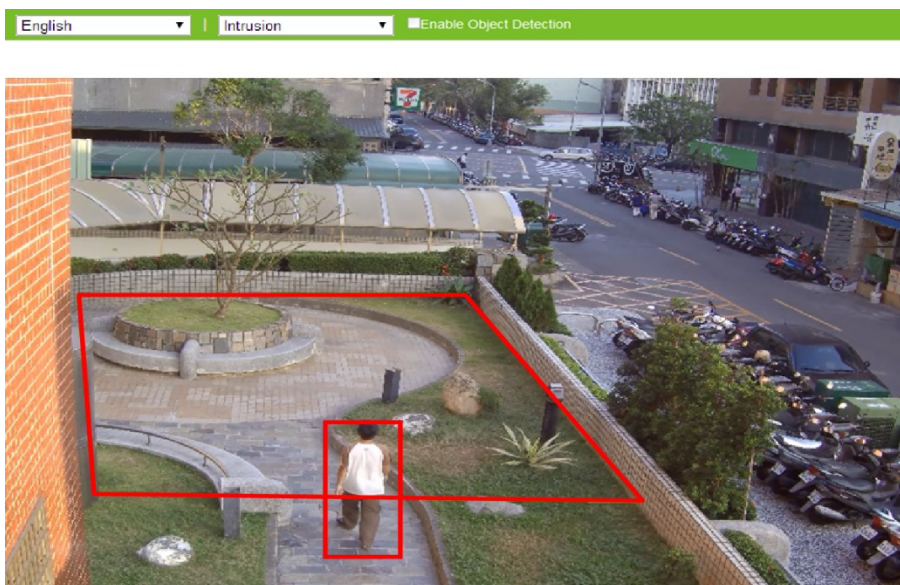


4. Select **Enable**.
5. Click **Reference Area Counting** to apply the identical line deployment settings referred from Border Line function.
6. Click **Reference Departure Area** to apply the identical line deployment settings referred from Departure Area function.
7. Under the **Handlers** area, do the following:

For	Do
Alarm Out	<ol style="list-style-type: none"> <li>a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>b. From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p style="margin-left: 40px;"><b>Note</b> You must set up the sound file beforehand. For more information, refer to "<a href="#">Configuring Sound</a>" (page 121).</p>
Snapshot	<ol style="list-style-type: none"> <li>a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol>

For	Do
	<p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to "<a href="#">Configuring FTP</a>" (page 117).</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to "<a href="#">Configuring HTTP Generic Event</a>" (page 122)</li> </ol>

8. On the preview image, draw a polygon shape covering the key zone for intrusion detection.



9. Click **Save**.

- To verify if line counting is working, switch to the Live View page and select **Intrusion** from the **VA** list. When there's a moving object traveling through the designated line, the number coming along with the arrow and line will increase. Any moving object within the live view will be framed by a blue rectangle for clear identification.

## Configuring the Video Analytics – Departure

As opposed to Intrusion function, Departure is implemented to have supervision on moving objects that overstep the predefined area. In certain scenarios, e.g., child care center, administrator is in great need of control on children within limited space. Departure, therefore, is the very answer, via intelligent monitor, to the application.

### ✓ To configure the video analytics departure

- From the camera menu, click **Configuration**.
- Under Advanced Configuration, click **Video Analytics**.
- Click the **Departure** tab.

The screenshot displays the configuration interface for the Video Analytics Departure function. The interface includes a sidebar with 'Advanced Configuration' and 'Video Analytics' selected. The main panel has tabs for 'General', 'Line Counting', 'Border Line', 'Loitering', 'Area Counting', 'Intrusion', and 'Departure'. The 'Departure' tab is active, showing 'Basic Setting' with an 'Enable' checkbox, 'Reference Area Counting', and 'Reference Intrusion Area' buttons. Below are 'Handlers' for Alarm Out, Audio, Snapshot, and Recording. There are also sections for Email, OSD, and HTTP Generic Event settings. At the bottom is an 'Arming Schedule Setting' table with a grid for days of the week and hours of the day.

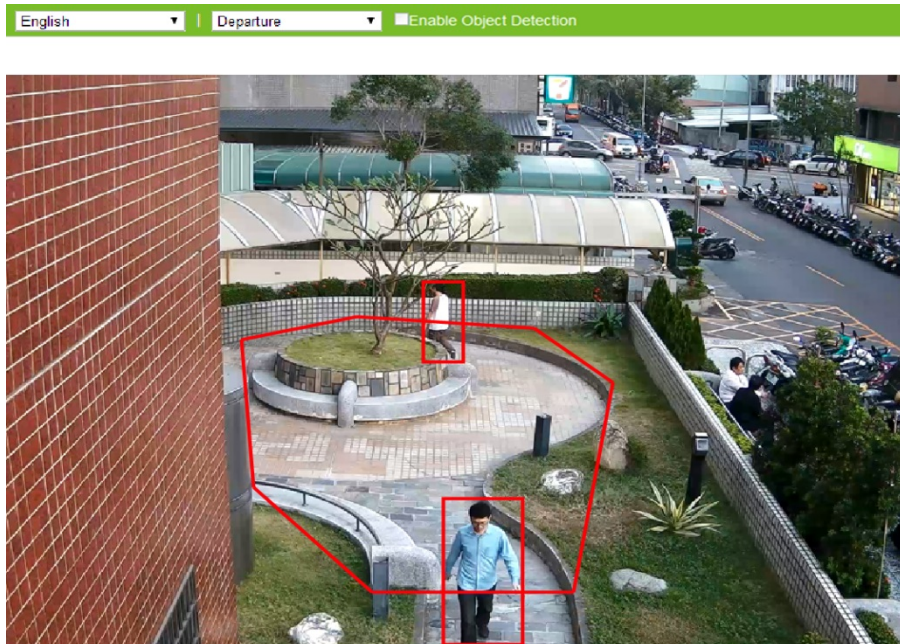
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Monday																									
Tuesday																									
Wednesday																									
Thursday																									
Friday																									
Saturday																									
Sunday																									

- Select **Enable**.
- Click **Reference Area Counting** to apply the identical line deployment settings referred from Border Line function.
- Click **Reference Departure Area** to apply the identical line deployment settings referred from Departure Area function.
- Under the **Handlers** area, do the following:



For	Do
Alarm Out	<ol style="list-style-type: none"> <li>Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p><b>Note</b> You must set up the sound file beforehand. For more information, refer to <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<ol style="list-style-type: none"> <li>Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></li> </ol>

- On the preview image, draw a polygon shape covering the key zone for departure detection.



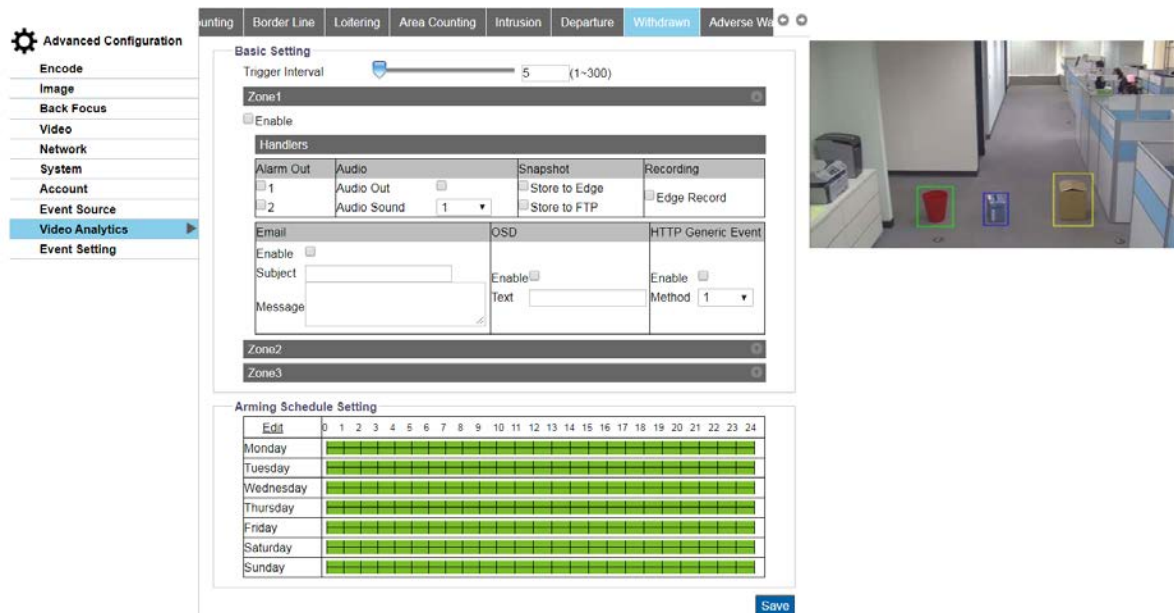
- Click **Save**.
- To verify if line counting is working, switch to the Live View page and select **Departure** from the **VA** list. When there's a moving object overstepping the boundary of the designated critical zone defined by administrator as the above image, both the rectangular frame enclosing the moving object and the defined zone are highlighted with red color for distinctive identification.

## Configuring the Video Analytics – Withdrawn

For owner of jewelry store, the most vital thing is to secure each one of the jewelry, gem as well as gold ornament in an extremely safe manner. Withdrawn detection is thereby developed to meet the objectives which will guarantee valuable items that are marked with withdrawn settings are properly monitored and safeguarded.

### ✔ To configure the video analytics withdrawn

- From the camera menu, click **Configuration**.
- Under Advanced Configuration, click **Video Analytics**.
- Click the **Withdrawn** tab.

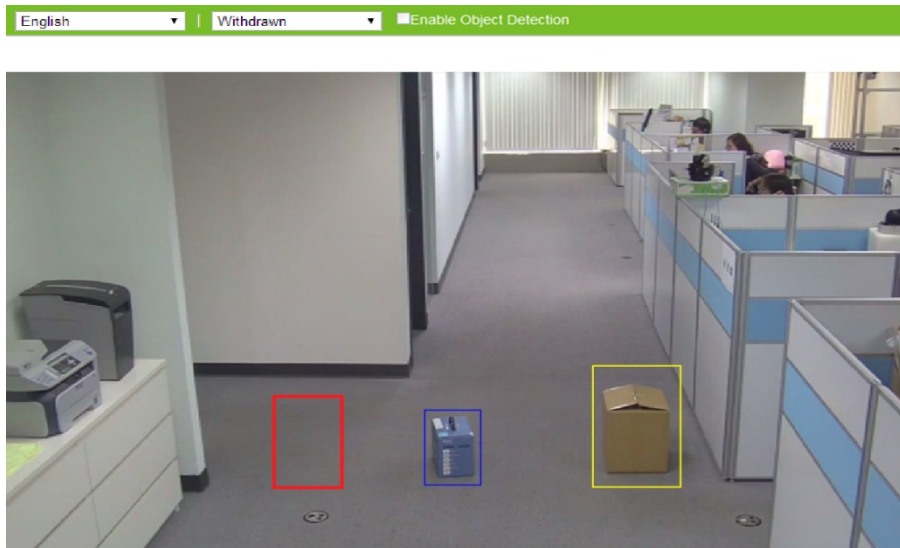


4. Move the **Trigger Interval** slider, to set the exact threshold of time period to trigger withdrawn detection.
5. For each zone:
  - a. Click **Enable**.
  - b. Under the **Handlers** area, do the following:

For	Do
Alarm Out	<ol style="list-style-type: none"> <li>a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>b. From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p><b>Note</b> You must set up the sound file beforehand. For more information, refer to "<a href="#">Configuring Sound</a>" (page 121).</p>
Snapshot	<ol style="list-style-type: none"> <li>a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol>

For	Do
	<p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></li> </ol>

- On the preview image, click to draw a rectangular zone covering the critical item for withdrawn detection.



### Note

Up to three zones can be configured with different colors.

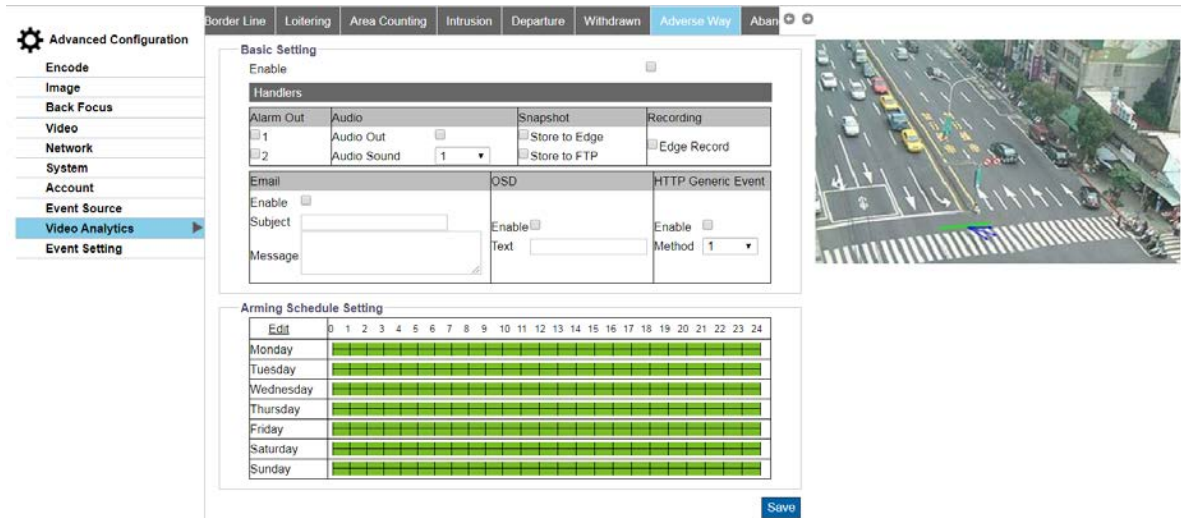
6. Click **Save**.
7. To verify if line counting is working, switch to the Live View page and select **Withdrawn** from the **VA** list. When any of the items marked by colorful zones is taken away unconsciously as the above image, the zone will be highlighted with red color to indicate the original item was stolen away. Besides, any moving object within the live view will be framed by a blue rectangle for clear recognition.

## Configuring the Video Analytics – Adverse Way

Among intricate traffic thoroughfares in different cities, it is not uncommon to see some one-way streets arrangement. For transportation bureau accountable for public traffic flows, the Adverse Way function is able to help control some vehicles that may violate regulations for one-way street in a particularly intelligent manner.

### 📌 To configure the video analytics adverse way

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **Adverse Way** tab.

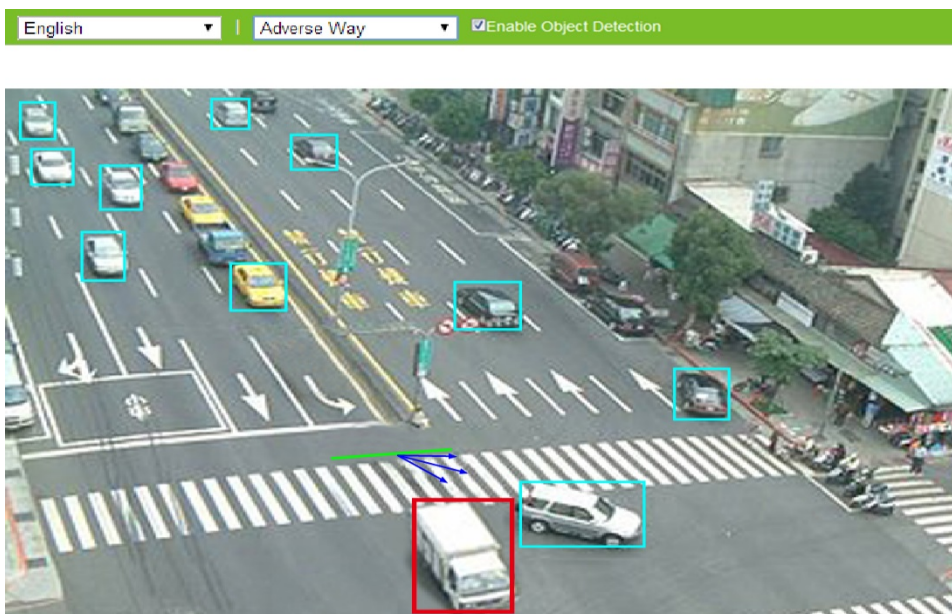


4. Select **Enable**.
5. Under the **Handlers** area, do the following:

For	Do
Alarm Out	<ol style="list-style-type: none"> <li>a. Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>b. From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p><b>Note</b> You must set up the sound file beforehand. For more information, refer to <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<ol style="list-style-type: none"> <li>a. Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>b. Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD

For	Do
	card when an event occurs.
Email	<ul style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>b. In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>c. In the <b>Message</b> box, type a descriptive email message.</li> </ul>
OSD	<ul style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>b. In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ul>
HTTP Generic Event	<ul style="list-style-type: none"> <li>a. From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>b. From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to "<a href="#">Configuring HTTP Generic Event</a>" (page 122)</li> </ul>

6. On the preview image, click to draw a green linear on the targeted area The blue included angle, in the proximity of the green linear, appears to indicate the permitted range for vehicles passing. By contrast, the areas out of the boundary of included angle are the sensitive zones to trigger adverse way detection once any vehicle enters. The blue included angle can be enlarged up to 180° and shrunk to the lowest 15° for flexible applications. Also, direction of included angle can be adjusted by simply press and hold to move the middle arrow.



7. Click **Save**.
8. To verify if line counting is working, switch to the Live View page and select **Adverse Way** from the **VA** list. When there's a moving vehicle crossing the green line but toward a direction away from the permitted range, i.e., blue included angle, the rectangular frame enclosing the detected vehicle, as the above image, is highlighted by red color for distinctive identification. Besides, any moving object within the live view will be framed by a blue rectangle for clear recognition.

## Configuring the Video Analytics – Abandon

Terrorist attack has prevailed around the world and claimed thousands of lives so far. As an intelligent surveillance camera, the wisely detected function “Abandon” is therefore specifically designed for preventing terror-like events in a precautionous manner. Any object deposited intentionally within some critical places, e.g., entrance of building or subway station hall, by deliberate person can be intelligently detected and determined as a suspicious abandoned object.

✔ To configure the video analytics adverse way

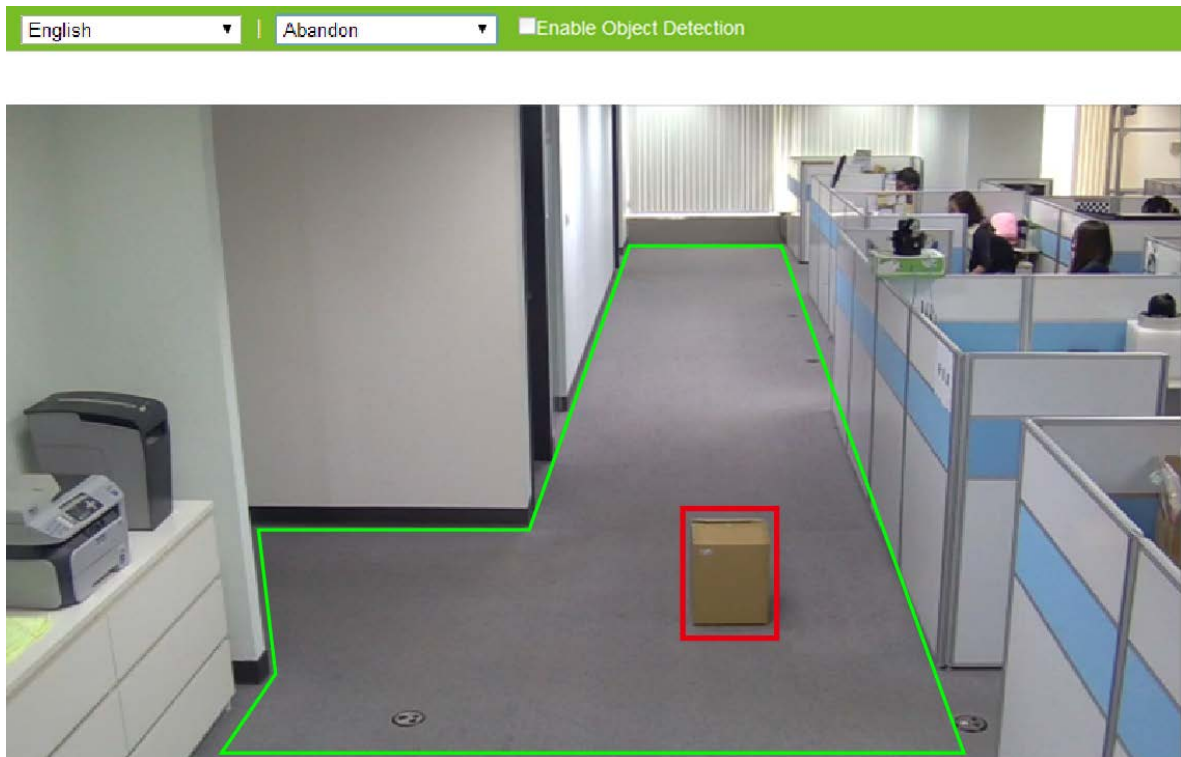
1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Video Analytics**.
3. Click the **Abandon** tab.

4. Select **Enable**.
5. Move the **Trigger Interval** slider to set a value for the threshold period to trigger abandon alarm by any suspect object that was left within the zone over the value.
6. Under the **Handlers** area, do the following:



For	Do
Alarm Out	<ol style="list-style-type: none"> <li>Select <b>Alarm Out</b> to enable the alarm output function when an event occurs.</li> </ol>
Audio	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the audio output function when an event occurs.</li> <li>From the <b>Sound</b> list, select a value from 1 to 10.</li> </ol> <p><b>Note</b> You must set up the sound file beforehand. For more information, refer to <a href="#">"Configuring Sound" (page 121)</a>.</p>
Snapshot	<ol style="list-style-type: none"> <li>Select <b>Store to Edge</b> to save snapshot to the inserted SD card when an event occurs.</li> <li>Select <b>Store to FTP</b> to save snapshot to the FTP remote device when an event occurs.</li> </ol> <p><b>Note</b> Under Handler, the camera act as FTP client, while the remote device act as FTP server. For more information, refer to <a href="#">"Configuring FTP" (page 117)</a>.</p>
Recording	Select <b>Edge Record</b> to save the recorded video to the inserted SD card when an event occurs.
Email	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable an email to be sent to a predefined user when an event occurs.</li> <li>In the <b>Subject</b> box, type a descriptive subject title for the email.</li> <li>In the <b>Message</b> box, type a descriptive email message.</li> </ol>
OSD	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the OSD function when an event occurs.</li> <li>In the <b>Text</b> box, type the text to displays when an event occurs.</li> </ol>
HTTP Generic Event	<ol style="list-style-type: none"> <li>From the <b>Enabled</b> list, select <b>On</b> to enable the function when an event occurs.</li> <li>From the <b>Method</b> list, select a value from 1 to 10. For more information, refer to <a href="#">"Configuring HTTP Generic Event" (page 122)</a></li> </ol>

- On the preview image, click to draw a rectangular zone covering the critical item for abandon detection.



- Click **Save**.
- To verify if line counting is working, switch to the Live View page and select **Abandon** from the **VA** list. When there's a suspect object left within the designated zone over a certain period of time defined by administrator as the above image, the rectangular frame enclosing the suspect object is highlighted with red color for distinctive identification. Besides, any moving object within the live view will be framed by a blue rectangle for clear recognition.

## Event Settings

### Configuring Alarm Out

This section is designed to set up detailed settings for alarm output(s) when events occur. Make sure you have enabled alarm output in each event section to activate this function.

✔ [To configure alarm out](#)

- From the camera menu, click **Configuration**.
- Under Advanced Configuration, click **Events Settings**.

- Click the **Alarm Out** tab.

The screenshot shows the 'Advanced Configuration' page with the 'Alarm Out' tab selected. The 'Alarm Out 1' configuration area includes the following fields:

- Enable:** A dropdown menu set to 'Off'.
- Method:** A dropdown menu set to 'Pulse'.
- Type:** A dropdown menu set to 'NO'.
- On Time:** A text input field containing '0.1' with a range '(0.1-200 Sec)'.
- Off Time:** A text input field containing '0.1' with a range '(0.1-200 Sec)'.
- Count:** A text input field containing '1' with a range '(1-infinite Frame)'.

A 'Save' button is located at the bottom right of the configuration area.

- From the **Enabled** list, select **On** to enable the alarm out function.
- Select the output function.

To	Do
define a period of duration	<ol style="list-style-type: none"> <li>From the <b>Method</b> list, select <b>Normal</b>.</li> <li>From the <b>Post Duration</b> list, select the period of duration (Infinite/ 5/ 10/ 15/ 30 (sec) for alarm output under only Normal method. Infinite means unlimited and continuous triggering for alarm output.</li> </ol>
define the duration and interval time for alarm output and set counts for alarm output and set the counts for alarm.	<ol style="list-style-type: none"> <li>From the <b>Method</b> list, select <b>Pulse</b>.</li> <li>In the <b>On Time</b> box, type the duration for alarm output.</li> <li>In the <b>Off Time</b> box, type the interval for each alarm output.</li> <li>In the <b>Count</b> box, define how many counts will be performed for alarm output.</li> </ol>

- From the **Type** list, select from the following:
  - **NO** (Normally Opened): An alarm will be triggered when the external contact closes.
  - **NC** (Normally Closed): An alarm will be triggered when the external contact opens.
- Click **Save**.

## Configuring Email

This section is designed to set up detailed settings for email notification when events occur. Make sure you have enabled email sending in each event section to activate this function.

- 📌 To configure email

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.
3. Click the **Email** tab.

The screenshot displays the 'Advanced Configuration' interface. On the left, a sidebar lists various settings, with 'Event Setting' highlighted. The main area is divided into several sections:

- Basic Setting:** Includes a dropdown for 'Authentication' (set to 'No\_Auth'), and input fields for 'Server Address', 'Port', 'User Name', and 'Password'.
- Sender Settings:** Includes an input field for 'Sender Email Address' and a dropdown for 'Attach Image' (set to 'Off').
- Email Address List:** A table with columns 'No.', 'Enable', and 'Email Address'. It contains 10 rows, each with a checkbox in the 'Enable' column and an empty input field in the 'Email Address' column.

A 'Save' button is located at the bottom right of the main panel.

4. Under the **Basic Settings** area, do the following:
  - a. From the **Authentication** list, select one of the following:
    - **No\_Auth:** No restriction
    - **SMTP\_Plain:** PLAIN is the name of a registered SASL authentication mechanism which serves as a parameter to the AUTH command. The PLAIN authentication mechanism is described in RFC 2595. Plain is the least secure of all the SASL authentication mechanisms since the password is sent unencrypted across the network.
    - **Login:** The Login mechanism is supported by Microsoft's Outlook Express and by some other clients.
    - **TLS\_TTLS:** TLS is usually implemented on top of any of the Transport Layer protocols encapsulating the application-specific protocols such as HTTP, FTP, SMTP, NNTP and XMPP. The TLS protocol allows client-server applications to communicate across a network in a way designed to prevent eavesdropping and tampering. TLS can also be used to tunnel an entire network stack to create a VPN as is the case with OpenVPN.
  - b. In the **Server Address** box, type the server address for email notification.
  - c. In the **Port** box, type 25 as the default or change to dedicated number.
  - d. In the **User Name** box, type the username with privilege to access the server.
  - e. In the **Password** box, type the password associated with the username.

5. From the **Email Address** list, select a number and select **On** to allow email to be sent to the user.
6. In the text box, type the email address for each user.
7. Under the **Sender Settings** area, do the following:
  - a. In the **Sender Email Address** box, type the email address of the sender.
  - b. From the **Attach Image** list, select **On** to enable attaching the detected image of events to the sending email.
8. Under the **Email Address List** area, select **Enable** and in the **Email Address** box, type the email address to who events will be sent.

### Note

You can define up to 10 email addresses.

9. Click **Save**.

## Configuring FTP

This section is designed to set up detailed settings for FTP image storing when events occur. Make sure you have enabled FTP function in each event section to activate this function.

### ✓ To configure FTP

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.
3. Click the **FTP** tab.



The screenshot shows the 'Advanced Configuration' menu on the left with 'Event Setting' selected. The main area displays the 'FTP' tab with a 'Basic Setting' section containing the following fields:

Field	Value
Server Address	
Port	(21, 1025-65535)
User Name	
Password	
Mode	Active

A 'Save' button is located at the bottom right of the configuration area.

4. In the **Server Address** box , type the FTP server address.
5. In the **Port** box , type the FTP port number to use. By default, the FTP port is set to 21.
6. In the **User Name** box, type the username with privilege to access the server.
7. In the **Password** box, type the password associated with the username.
8. From the **Mode** list, select connection mode to use:

- **Active:** The camera will keep reconnecting with the designated FTP site when selecting “Active”, which occupies more network bandwidth but with instant response to FTP.
- **Passive:** By selecting this option, the camera will only connect with the designated FTP site when necessary, which largely help save the network bandwidth.

9. Click **Save**.

## Configuring NAS

This section is designed to set up recording images to a Network attached storage (NAS) when events occur. Make sure you have enabled Store to NAS in each event section to activate this function.

### ✓ To configure NAS

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.
3. Click the **NAS** tab.

No.	Capacity	Free Space	Online/Offline
1.	0(GB)	0%	✘
2.	0(GB)	0%	✘

4. From the **Overwrite** list, select **On** or **Off** to overwrite images.
5. For each option, do the following:
  - a. Select **Action**.
  - b. From the **Mount Method** list, select **CIFS** or **NFS**.
  - c. In the **User Name** box, type the user name to access the NAS.
  - d. In the **Password** box, type the password to access the NAS.
  - e. In the **Server Address** box, type the IP address of the NAS.
  - f. In the **Store Path** box, type the location where to save the images.
6. Click **Save**.

# Configuring the Record Settings

This section is designed to set up detailed settings for video recording. Make sure you have enabled recording function in each event section to activate this function.

📌 To configure record settings

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.
3. Click the **Record Settings** tab.



4. From the **Record Type** list, select one of the following:
  - One Shot: camera records video with designated duration and file size.
  - Continuous: camera keeps recording video continuously.
5. From the **Record Status** list, select one of the following:
  - **One Shot**: camera records video with designated duration and file size.
  - **Continuous**: camera keeps recording video continuously.
6. In the **Clip Duration** box , set the length limit for recording file.
7. In the **Clip Size** box , set the file size for recording file.
8. Click **Save**.

# Configuring the SD Card

This section is designed to set up detailed settings for Edge Recording when events occur. Make sure you have enabled Edge Record function in each event section to activate this function.

📌 To configure the SD card

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.

3. Click the **SD Card** tab.

The screenshot displays the SD Card configuration page. On the left, a sidebar lists various configuration categories, with 'Event Setting' currently selected. The top navigation bar includes tabs for different settings: Alarm Out, Email, FTP, NAS, Record Setting, SD Card (highlighted), Snapshot, Sound, and HTTP Generic Event. The main content area is divided into two sections. The upper section, 'Basic Setting', contains several dropdown menus: 'Overwrite' is set to 'Off' (with a note '(Reserve 20MB)'), 'Status' shows 'SD card not inserted', and 'Encrypted Mode' is set to 'Off'. A 'Format' button is located below these settings. The lower section, 'Download SD File', features a calendar for November 2020 with the 18th highlighted. Below the calendar are icons for 'Date of data', 'Today', and 'Select Date', along with a search bar. To the right of the calendar is a table with columns for 'Folder name', 'File name', and 'File size'. The table is currently empty. At the bottom of the table area, there is a 'Rows per page' dropdown set to '10' and a 'Download' button.

4. From the **Overwrite** list, select **On** to overwrite recorded video when the SD card is near capacity. Basically, the recording program will erase the earliest file and store another new one file when the remaining capacity of mounted SD card is below 20MB.
5. Click **Format** to formatting the mounted SD card.
6. In the **Clip Size** box , set the file size for recording file.
7. Click **Save**.

## Configuring Snapshot

This section is designed to set up detailed settings for snapshot capture when events occur. Make sure you have enabled Snapshot function in each event section to activate this function.

### ✓ To configure snapshot

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.
3. Click the **Snapshot** tab.





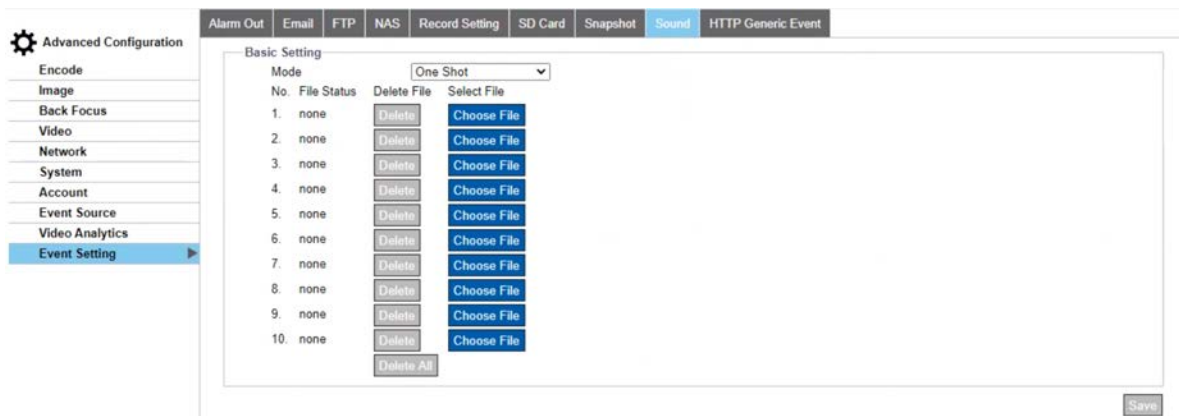
4. In the **Pre Event Capture Count** box , set the number of frames (1 to 10) to be captured prior to an event.
5. In the **Event Capture Interval** box , set the time interval ranging from 1 to 10 seconds between each snapshot capture.
6. In the **Post Event Capture Count** box , set the number of frames to be captured after an event occurred.
7. Click **Save**.

## Configuring Sound

This section is designed to set up detailed settings for audio output sounds when events occur. Make sure you have enabled Audio Out function in each event section to activate this function.

### ✓ To configure sound

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.
3. Click the **Sound** tab.



4. From the **Mode** list, select one of the following:

- One Shot: The sound of audio out will be played for only 1 time.
  - Infinite: As opposed to One Shot, “Infinite” keeps the sound playing infinitely.
5. Click **Upload** to browser and select a sound file.  
The File Status displays the current status of each sound file.  
Click **Delete** to remove the sound file from the list.
  6. Click **Save**.

## Configuring HTTP Generic Event

HTTP Generic Event can help user to send messages and commands directly to Network Video Recorder (NVR) which supports CGI commands function. User can customize the messages and commands as needed.

### ✓ To configure sound

1. From the camera menu, click **Configuration**.
2. Under Advanced Configuration, click **Events Settings**.
3. Click the **Sound** tab.

The screenshot displays the 'HTTP Generic Event' configuration page. On the left, the 'Advanced Configuration' menu is open, with 'Event Setting' highlighted. The main configuration area is titled 'Basic Setting' and includes a 'Method' list with items 1 through 7. To the right of the list are input fields for 'Title', 'URL', 'Option' (a dropdown menu currently showing 'Get'), 'User Name', 'Password', 'Active Message', and 'Inactive Message'. A 'Save' button is positioned at the bottom right of the configuration area.

4. From the **Method** list, select the type of method for the trigger event.
5. In the **Title** box, type the title of messages.
6. In the **URL** box, type the web address of the DVR. Please follow the user manual of NVR for the detail of web address.
7. From the **Option** list, select of the following mode of notification transmission:
  - **Get:** The Get method is a simple and fast method to transmit messages but it is less secure than Post.
  - **Post:** The Post method is more complex way to transmit messages but it is also a little safer than Get.
8. In the **User Name** box, type the username for authentication to access the DVR.

9. In the **Password** box, type the password corresponding to the user name for authentication to access the DVR..
10. In the **Active Message** box, type the active message the camera will send to the DVR when the trigger event occurs.
11. In the **Inactive Message** box, type the inactive message the camera will send to the DVR when the trigger event occurs.
12. Click **Save**.



# Technical Specifications

The Verint IP camera technical specifications lists the detailed description of the V4750BX and FDW models.

V4750BX-DN Specifications .....	125
V4750FDW-DN Specifications .....	127

# V4750BX-DN Specifications

Camera Features	
Image Sensor	1/2.8"
Lens Type	CS/I-CS mount (Lens not included)
Auto back focus	Yes
Iris Control	DC-IRIS, P-IRIS Support
Minimum Illumination	Color: 0.26 lux f/1.3 @ 33ms BW: 0.15 lux f/1.3 @ 33ms *Note: This information is only for reference. The minimum illumination values will change depending on the lens used.
Images	
Exposure Mode	Auto, Shutter-Priority, Manual, Flickerless, True WDR
Shutter Speed	Manual: 1~1/10,000s (default NTSC=1/30s, PAL=1/25s) Shutter-Priority: 1/120~1/10,000s
WDR	True WDR
Image Rotation	Off, flip
Privacy Zone	8 zones
Image Settings	Gain Control, WB, BLC, HLC, Defog, EV, Gamma Correction, 3DNR, Sharpness, Brightness, Contrast, Hue, Saturationw
Video	
Video Compression	H.265/HEVC Main Profile H.264 Main/High/Baseline Profile
Maximum Frame Rate	3 simultaneous streams, 2592x1944 @ 30fps
System Frequency	60Hz/50Hz
Enhanced Codec	Smart Compression: iZone, iStream, Dynamic 3DNR
Bitrate Control	CVBR (H.264/H.265)
Audio	
Compression	G.711 (a-law , u-law)

Format	
<b>Intelligent Solution</b>	
Intelligent Video Analysis	Motion, Tampering, Intrusion, Loitering, Line Counting, Borderline, Abandoned, Departure, Area Counting, Withdrawn, Adverse Way
Event Source	Schedule, Network loss detection
Event Handling	Schedule recording (*JPG/MP4), E-mail notification (*JPG), FTP recording (*JPG), SD Card recording (*JPG/MP4), OSD indication
<b>Network</b>	
User Web Access	Up to 10 clients
Protocols	ARP, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMP, IPv4/6, LDAP, NTP, RTSP/RTCP/RTP, QoS, SMTP, SNMP v1/2c/3, TCP, TLS/TTLs, UDP, UPnP, 802.1X, Bonjour, SNMP v1/2c/3, DDNS, PPPoE
Internet Security	IEEE 802.1X, HTTPS, Digest Authentication, IP Filtering, Advanced Security
<b>General</b>	
On Board Storage	1 x micro SDHC/SDXC slot (card not included), Recording & Playback
I/O Interface	1x Audio Input 1x Audio Output 1x Alarm Input 1x Alarm Output 1x Reset 1x Default Button 1x RJ45 IEEE 802.3, 10/100 Base-T/TX
Web Browser	Internet Explorer 11, Mozilla Firefox, Chrome, Safari, Microsoft Edge
Memory	1GB RAM
ONVIF Compliant	Profile S/G/Q/T
Unit Configuration	Date/time sync (manual, NTP, PC, DST support), System info (FW/HW version, product name, serial number, MAC address),

	Camera SW reboot, UI SW factory default, UI HW factory default
<b>Mechanical</b>	
Casing Material	Box Body: Aluminum / Box Base: Aluminum
Dimension	73x104x62mm
<b>Electrical</b>	
Power Source	DC12V, AC24V, PoE
Power-Over-Ethernet	IEEE 802.3af, Class 3
Power Consumption	13.5W (Max)
<b>Environmental</b>	
Operating Temp.	- 10°C ~ 55°C
Cold Start Temp.	- 20°C
Storage Temp.	40°C ~ 60°C
Storage Humidity	90%, non-condensing
<b>Certification</b>	
Certification	UL/LVD/CE/FCC
Industry Compliance	NDAA Compliant

## V4750FDW-DN Specifications

<b>Camera Features</b>	
Image Sensor	1/2.8"
Lens Type	f2.7~13.5mm, F1.4~2.8, Motorized
Optical Zoom	5X
Field of View	Lens spec :105°(H), 75°(V)
Iris Control	DC Iris (Auto)
Minimum Illumination	Color: 0.02 lux F1.4 B/W: 0 Lux IR on

IR Distance	40m
Adaptive IR	On, Off
Smart IR	On, Off
D/N Control	Mechanical D/N
<b>Images</b>	
Exposure Mode	Auto, shutter-priority, manual, flickerless, true WDR
Shutter Speed	1/2s~1/10000s
WDR	True WDR, 120dB
Image Rotation	Off, Flip, Mirror, Both
Privacy Zone	8 zones
Image Settings	Gain, WB, BLC, HLC, EV, Defog, Gamma Correction, 3DNR, Corridor Mode, Sharpness, Brightness, Contrast, Hue, Saturation
<b>Video</b>	
Video Compression	H.265/HEVC Main Profile H.264 Main/High/Baseline Profile
Maximum Frame Rate	2592x1944@ 30fps (H.264/H.265) Single: 5MP@30fps Dual: 5MP@ 30fps + 1600x1200@30fps Triple: 5MP@ 30fps +1600x1200@30fps + 640x480@30fps
<b>Audio</b>	
Compression Format	G.711 (a-law , u-law)
<b>Intelligent Solution</b>	
Intelligent Video Analysis	Motion, Tampering, Intrusion, Loitering, Line Counting, Borderline, Abandoned, Departure, Area Counting, Withdrawn, Adverse Way, Defocus
Event Source	Schedule, Alarm, Audio, Network, Motion, Tampering, SD Card Health
Event Handling	Alarm Out, E-mail Notification (*.JPG), OSD Indication, Sound Playback, Snapshot to SD Card (*.JPG), Snapshot to FTP (*.JPG), SD



	Card Recording (MP4), HTTP Generic Event
<b>Network</b>	
User Web Access	Up to 10 clients
Protocols	ARP, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMP, IPv4/6, LDAP, NTP, RTSP/RTCP/RTP, QoS, SMTP, SNMP v1/2c/3, TCP, TLS/TTLS, UDP, UPnP, 802.1X, Bonjour, SNMP v1/2c/3, DDNS, PPPoE
Internet Security	IEEE 802.1X, HTTPS, Digest Authentication, IP Filtering, Advanced Security
<b>General</b>	
On Board Storage	1 x micro SDHC/SDXC slot (card not included), Recording & Playback
I/O Interface	1x Audio Input / 1x Audio Output 1x Alarm Input / 1x Alarm Output 1x Reset Button 1x Default Button 1x DC12V/AC24V Terminal Block 1x RJ45 IEEE 802.3, 10/100 Base-T/TX 1x 2pin Terminal Block Monitor Out
Web Browser	Internet Explorer 11, Mozilla Firefox, Chrome, Safari, Microsoft edge
Memory	256MB RAM, 128MB Flash
ONVIF Compliant	Profile S/G/Q/T
Unit Configuration	Web Update, OSD Setting, Date & Time Setting, Multi-language, Account Management, Profile Management
<b>Mechanical</b>	
Casing Material	Dome Housing - Aluminum Alloy Dome Bubble - Polycarbonate
Weather Resistance	IP67
Vandal Resistance	IK10
Dimension	Ø135mmx125mm

Electrical	
Power Source	DC12V, AC24V, PoE
Power-Over-Ethernet	IEEE 802.3af, Class 3
Power Consumption	13.5W (Max)
Environmental	
Operating Temp.	- 40°C ~ 60°C
Cold Start Temp.	- 40°C
Storage Temp.	-40°C ~ 65°C
Storage Humidity	90%, non-condensing
Certification	
Certification	CE/LVD/FCC/UL
Industry Compliance	NDAA Compliant



**Verint. Powering Actionable Intelligence®**

Verint® is a global leader in Actionable Intelligence® solutions with a focus on customer engagement optimization, security intelligence, and fraud, risk and compliance. Today, more than 10,000 organizations in 180 countries—including over 80 percent of the Fortune 100—count on Verint solutions to make more informed, effective, and timely decisions.



**VERINT.**