VICON

Installation & Operation Manual

V2000-WIR-360
360 Multi-Sensor Camera Series
XX304-41-02

AI ANALYTICS INSIDE

Vicon Industries Inc. does not warrant that the functions contained in this equipment will meet your requirements or that the operation will be entirely error free or perform precisely as described in the documentation. This system has not been designed to be used in life-critical situations and must not be used for this purpose.

Document Number: 8009-8304-41-02 Product specifications subject to change without notice.
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PREFACE

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Safety Information

Before installing and using the device, note the following precautions:

- Read all instructions carefully.
- Follow all warnings and cautions in this manual.
- Do not place the unit on an unstable surface, cart, or stand.
- Do not use the camera in extreme temperature conditions. Please use the camera within -20°C to 50°C. Air vent is required at high temperature.
- Do not use or store the camera in humid environment. It may cause poor image quality.
- Do not use the camera in unstable lighting conditions. Inconsistent lighting or flickering may cause poor image.
- Never use the camera close to gas or oil leak. It may not operate properly.
- Do not disassemble the camera. There is no user serviceable part inside.
- Do not drop the camera or apply force on it. It may cause a malfunction.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- Never face the camera to strong light for long periods of time. It may damage the CMOS sensor.

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RoHS Compliance

Vicon RoHS Environmental Policy and Status Update

Vicon is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

RoHS restricts the use of Lead (Pb) < 0.1% or 1,000ppm, Mercury (Hg) < 0.1% or 1,000ppm, Cadmium (Cd) < 0.01% or 100ppm, Hexavalent Chromium (Cr6+) < 0.1% or 1,000ppm, Polybrominated biphenyls (PBB) < 0.1% or 1,000ppm, and Polybrominated diphenyl Ethers (PBDE) < 0.1% or 1,000ppm.

In order to meet the RoHS compliant directives, Vicon has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard Vicon development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which Vicon are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

How to recognize Vicon RoHS Products?

For existing products where there are non-RoHS and RoHS versions, the suffix "(LF)" will be added to the compliant product name.

All new product models launched after January 2013 will be RoHS compliant. They will use the usual Vicon naming convention.

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Installation Recommendations

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips screwdriver
- A flat-tipped screwdriver
- A grounding strap
- An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nose pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Technical Support and Assistance

1. For the most updated information of Vicon products, visit Vicon's website at www.vicon-security.com.

2. For technical issues that require contacting our technical support team or sales representative, please have the following information ready before calling:
   – Product name and serial number
   – Detailed information of the peripheral devices
   – Detailed information of the installed software (operating system, version, application software, etc.)
   – A complete description of the problem
   – The exact wordings of the error messages

Warning!

1. Handling the unit: carry the unit with both hands and handle it with care.

2. Maintenance: to keep the unit clean, use only approved cleaning products or clean with a dry cloth.

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Conventions Used in this Manual

Warning:
Information about certain situations, which if not observed, can cause personal injury. This will prevent injury to yourself when performing a task.

Caution:
Information to avoid damaging components or losing data.

Note:
Provides additional information to complete a task easily.

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Package Contents

The V2020-WIR-360 and V2032-WIR-360 packages contain the following accessories:

Name	Quantity
IP camera	1
Grommet kit	1
Quick installation guide	1
Mounting accessory pack	1

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Chapter 1: Product Introduction

Overview

The information in this manual covers the V2000-WIR-360 multi-sensor cameras.

Hardware Specifications

Camera

- Image sensor: 4pcs: 1/2.8" 4K CMOS progressive sensor
- Lens: 4 Motorized Lenses; 3.1~10mm
- FOV (H/V/D; tele-wide): 32°-96°/24°- 69°/40°-124°
- Maximum resolution (each channel): 2592 to 640x480
- Pan/Tilt: Remotely adjustable, Pan 360°, Tilt 90°
- IR distance: 131 ft (40M) powered by IEEE802.3bt
- Day and night: Supported
- WDR: 120dB (True WDR)
- Minimum illumination (@30IRE; BW IR Off): 0.03 lux; BW: 0.01 lux
- Electronic shutter speed: Auto/Manual 1/7~1/20000
- Gain control: Auto/Manual
- Backlight compensation: Yes
- White balance mode: Auto/Manual
- Image settings:
  - Brightness, Contrast, Saturation, Sharpness, Mirror, Flip
- Local storage: Support (stream 2, 640*480), 2x SD card
- Analytics: VMD (5 zones), tampering, intrusion detection, line counting/cross, area counting, Museum Search
- Min. Object Distance: 3.28 ft (1 meter)

Video and Audio

- Video compression: H.265/H.264/M-JPEG
- Video streaming: Triple streaming
- Frame rate: Up to 30fps at 20MP
- Audio compression: G.711 8KHz/8 bits (A-Law/U-Law)
- Audio streaming: Two way audio

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Network

- Interface: 10/100/1000Mbps Ethernet, RJ45
- Supported protocols: TCP/IP, UDP, ICMP, IPv4, IPv6, SNMP v2c/v3, QoS, HTTP, HTTPS, LDAP (client), SSL, SMTP, FTP, RTSP, UPnP, DNS, NTP, RTP, RTCP, DynDNS, Zero Configure
- ONVIF: Profile S/G/T/Q
- Users: Live viewing/Administrator for up to 10 clients
- Browsers: Google Chrome, Mozilla, Firefox

Event Management

- Event trigger: Motion detection 5x5 areas (enabled by default for entire scene), Tampering detection
- Notifications: Send message via e-mail or FTP

Power

- AC: 24V DC, 24V AC
- PoE: IEEE 802.3bt PoE Class 5 (auto-detect depends on the power switch you use)

General

- Power consumption: Max. 40 W
- Connectors:
  - Audio Line in*1, Line out*1
  - Digital input*1, Digital output*1;
  - DC/AC power input
  - RJ45
- Weight: 5.2 LB (2.36 KG)
- Dimension: H: 5.6 in. (142.3 mm) x Ø: 9.7 in. (247.5 mm)
- Operating Temp.: -40°F ~ 131°F (-40°C ~ 55°C) (IR OFF)
- Storage Temp.: -40°F ~ 140°F (-40°C ~ 60°C)
- Humidity: 90% RH (no condensation)
- Certification: CE/FCC
- Vandal Resistant: IK10
- Weatherproof: IP66
- Application: SDK available for application development

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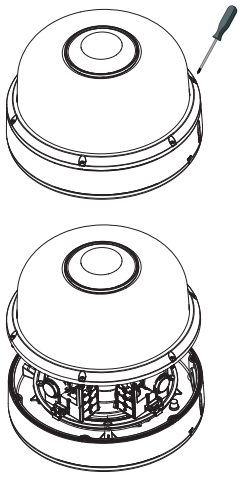
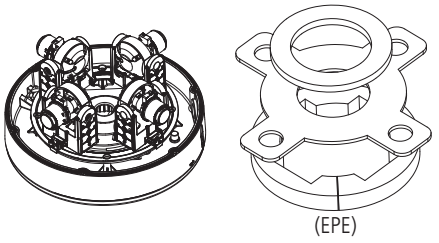
Removing the Protective EPE Foam and Preparing the Network Cables

1. Loosen the 6 captive screws on the dome bubble using the torx tool supplied and open it.



1. Remove and discard the protective EPE from lens modules.



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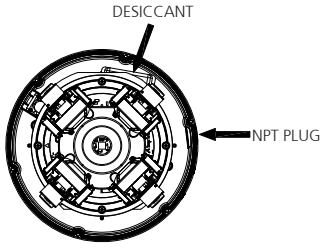
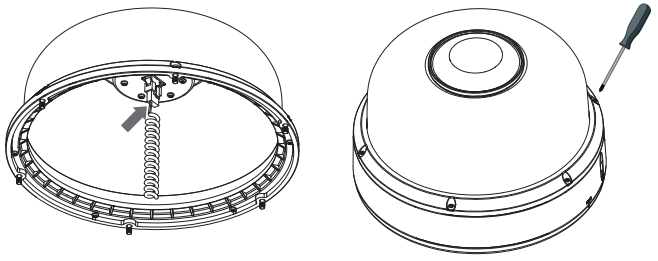
3. Add the desiccant in the recommended position, as shown below.



4. Plug the coil cord from the top cover into the main board for IR illuminator connection. Tighten 6 captive screws on the top cover.



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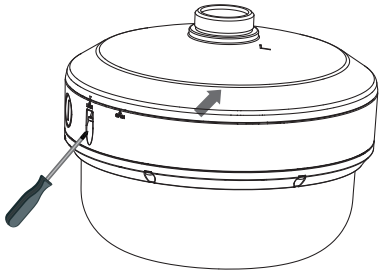
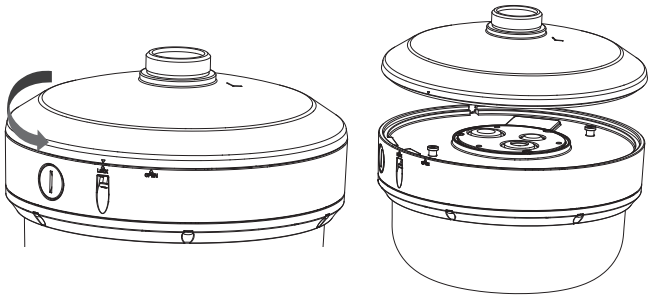
Hardware Installation (Wall/Pendant Mount)

5. Loosen the captive screw on the side of the bottom cover.



6. Rotate the cap to align ▽ from LOCK to OPEN to remove the cap.



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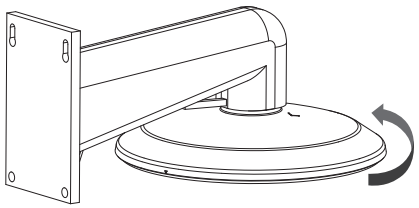
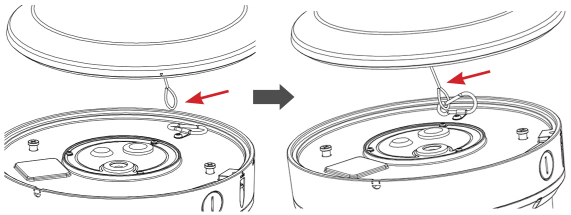
7. Rotate the cap to secure on the wall mount bracket.



8. Attach the safety harness on the camera mounting plate to the hook on the camera bottom.



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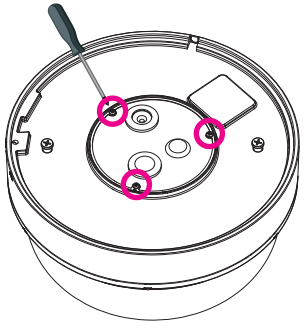
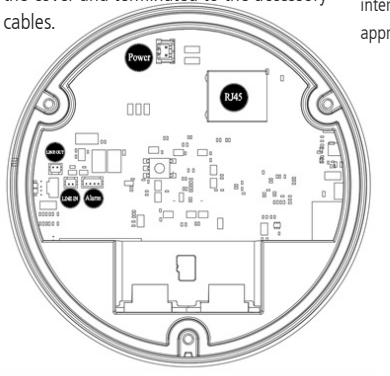
9. Loosen the 3 captive screws on the bottom plate and open it.

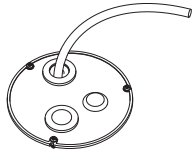


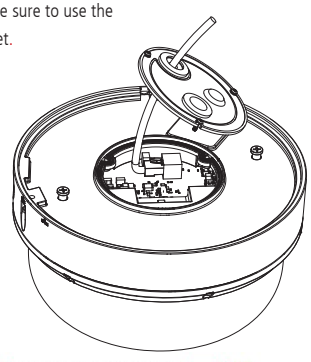
10. Feed the unterminated CAT5 cable through the hole in the solid grommet and terminate the cable with the appropriate connector. If using terminated CAT5 cable, use RJ-45 cap provided to help push the connector through the grommet with hole.

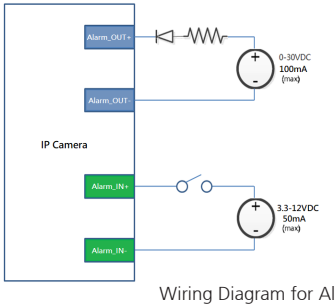
Note: If using the I/O cables, use the I/O cable assembly provided and plug them into the appropriate connector on the PCB. Cables will be run through the grommet on the cover and terminated to the accessory cables.

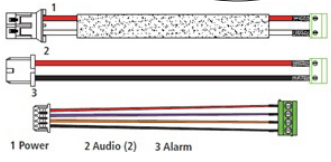


Note: To maintain watertight intergity/warranty, be sure to use the appropriate grommet.









DI (Alarm In)	Trigger (Low)	0-0 ~ 4 V
	Trigger (High)	3.3 ~12 V
DO (Alarm Out)	V in (max)	30 V
	I out (max)	100 mA

Wiring Diagram for Alarm Inputs/Outputs

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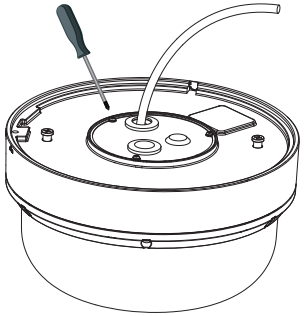
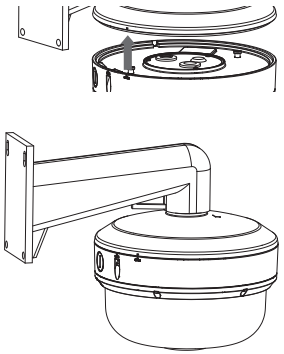
11. Tighten the 3 captive screws on the camera to secure it.



12. Assemble camera with cap first. The ▽ should be aligned with OPEN (☐).



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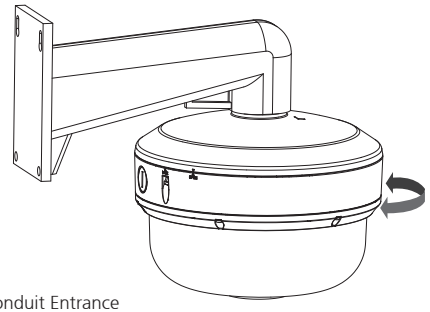
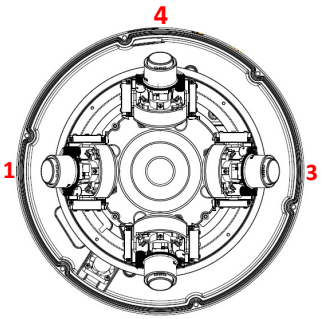
13. Rotate the camera from OPEN to LOCK in order to fix the camera.
    The ▽mark should be aligned with the LOCK (☐) mark.

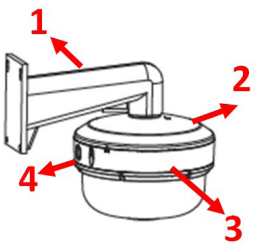


Conduit Entrance

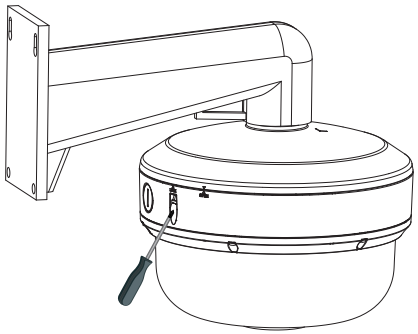


Vicon Logo

Note default head position of camera for 360º view.



14. Tighten the captive screw on the lateral side of the bottom cover to secure the camera.



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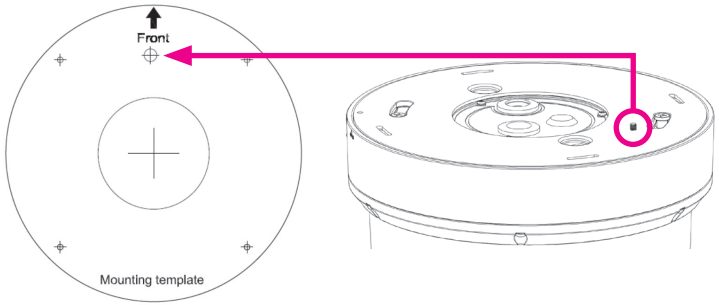
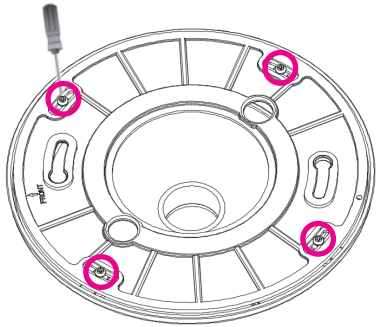
Ceiling Installation

1. Secure the positioning label (mounting template) on to the ceiling. Drill a hole on the ⊕ mark to allow the screw on the camera to pass through the drilled hole.



2. Remove the 4 screws on the plate to remove plate from the mounting cap.



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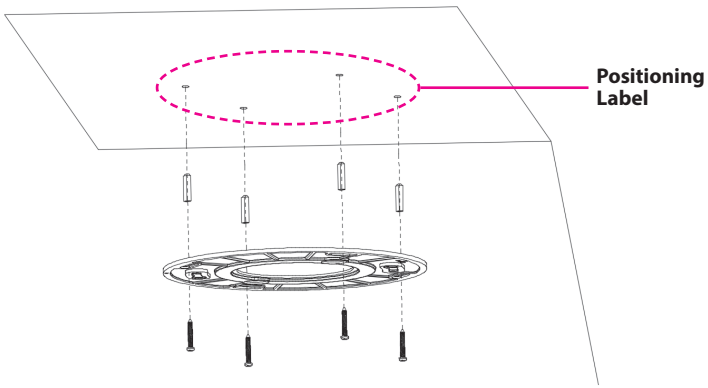
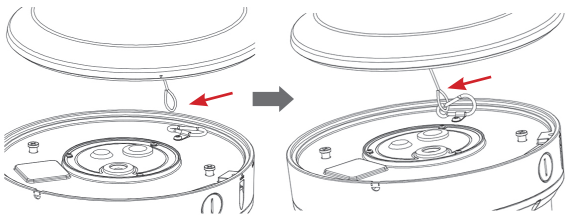
3. Use the supplied expansion bolts (anchors) and screws to secure plate onto the ceiling.



4. Attach the safety harness on the camera mounting plate to the hook on the camera bottom.



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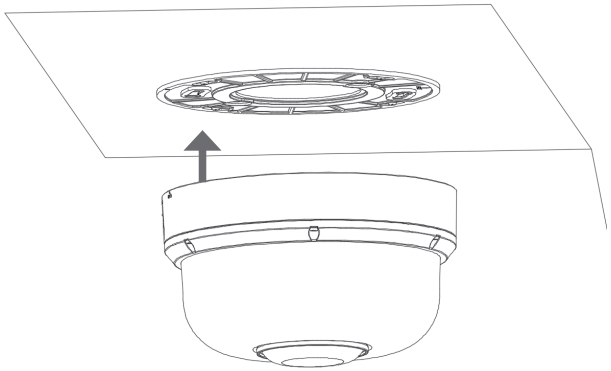
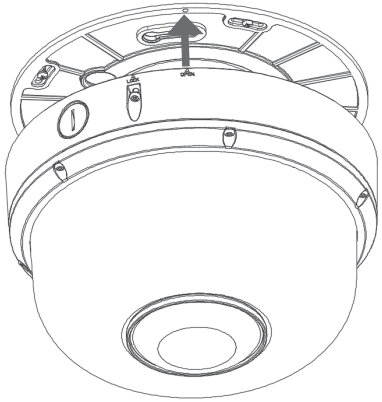
5. Secure the camera to the plate, aligning the screws on the camera with the slots in the plate. Note that the OPEN ☐ should be aligned with the screw hole on the plate (there is only 1 screw hole on the plate).





7. Refer to Step 10 in Wall/Pendant installation for details on preparing the cable.

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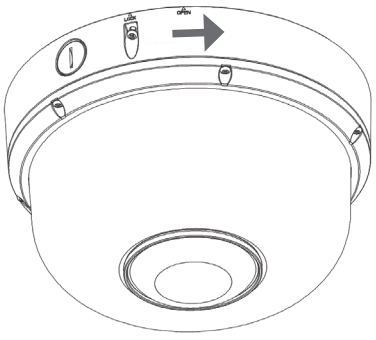
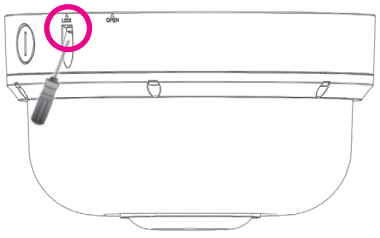
8. Twist the camera counterclockwise until it is secure and can't move. Then tighten the screw to secure camera on ceiling.





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Chapter 2: Camera Configuration

Accessing the Camera's Configuration Menu (Graphical User Interface)

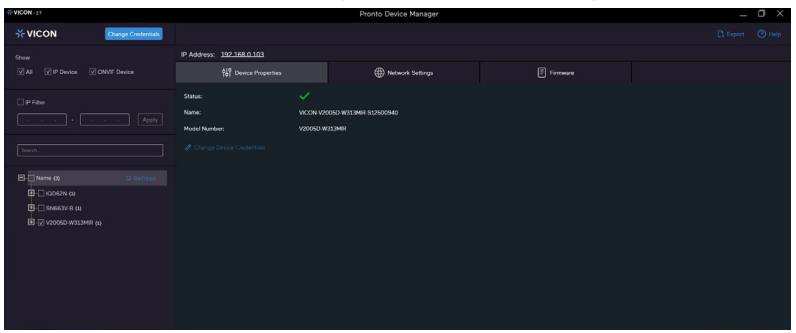
The camera can be accessed directly from its web page or using Vicon's PRONTO Device Manager, which can be found on Vicon's website.

Since this is a network-based camera, an IP address must be assigned. By default, the camera is set to obtain an IP address via DHCP; be sure to enable DHCP in "Network Settings." If DHCP is not available, the camera will use APIPA (link-local address); IPv4 link-local addresses are assigned from address block 169.254.0.0/16 (169.254.0.0 through 169.254.255.255).

PRONTO Device Manager

PRONTO is Vicon's device manager (Discovery tool) that can be used to discover all Vicon cameras on a system. The complete User Manual can be found on Vicon's website.

- Upon startup of the PRONTO Device Manager, the tool's auto-discovery function generates a list of the discovered cameras on the network in a resource list.
- There are a variety of filtering options, including filter by All Devices/IP Device/ONVIF Device; IP range or text.
- There are tabs for Device Properties, Network Settings and Firmware.



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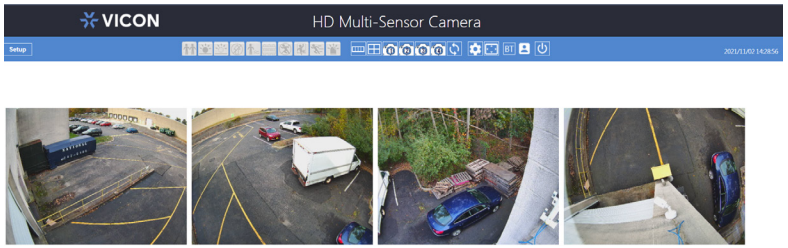
Web Browser

1. Locate and open one of the web browsers (such as Chrome, Firefox, Microsoft Edge, etc.) shortcut on the desktop.
2. In the address bar, type IP address of the camera and then press the **Enter** button.
3. You will be prompted with a pop-up window asking for login information, type in "**ADMIN**" (default login name) and "**1234**" (default password).
4. Once logged in, you will see the main screen.



Note: The recommended browsers to use are Safari, Firefox, Microsoft Edge and Chrome. However, Chrome only supports the viewing of the web **Setup** Setup menu; **Live View** Live View of the video stream is not supported.

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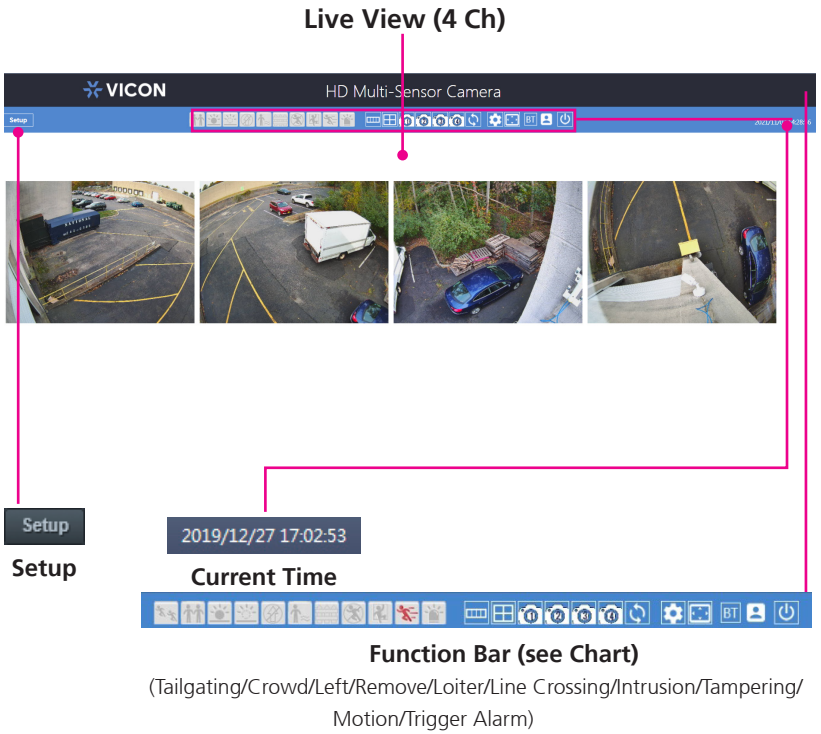
Main Screen Overview

The main screen will be shown after successfully logging into the IP camera. The main screen allows users to view the live video of the 4 channels in the camera and provides options and status icons for configuring and monitoring the camera.



Item	Description
Setup	Enters the setup menu for configuring the IP camera.
2019/12/27 17:02:53	Displays the current date and time.
	Gray: Event detection is disabled or no triggered event is detected. Red: When a line crossing alarm event is triggered, the icon will flash red constantly as a warning.
	Gray: Event detection is disabled or no triggered event is detected. Red: When an intrusion alarm event is triggered, the icon will flash red constantly as a warning.
	Gray: Event detection is disabled or no triggered event is detected. Red: When a tampering alarm event is triggered, the icon will flash red constantly as a warning.
	Gray: Event detection is disabled or no triggered event is detected. Red: When a motion detection event is triggered, the icon will flash red constantly as a warning.
	Gray: Event detection is disabled or no triggered event is detected. Red: When an alarm detection event is triggered, the icon will flash red constantly as a warning.
	Click to take a snapshot of View 1/View 2/View 3/View 4.
	Refreshes the page.
	Switches to full-screen view.
	Options to change the display language.
	Displays the current login account. Move the mouse close to the icon to see which user is currently logged in. "Admins" indicates administrator account and "User" indicates user account.
	Logs out from the current login session.
	Layout options (1x4, 2x2).
BT	Power Mode (BT)

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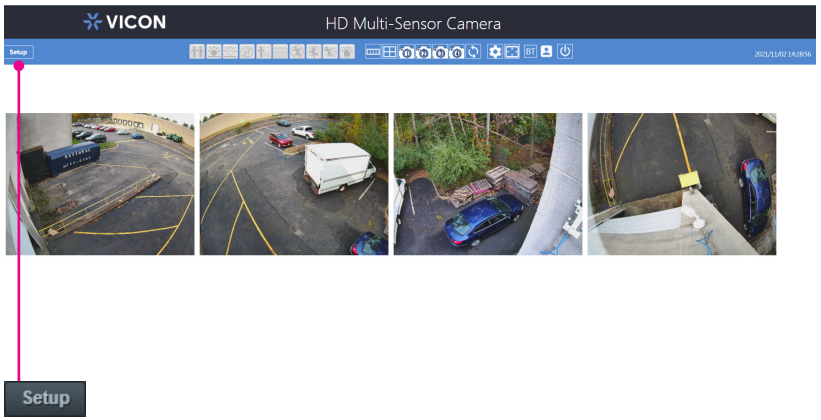
Configuring the Camera's Setting

1. To configure the camera's setting, click on the **Setup** button on the main screen to enter the configuration menu.



Setup

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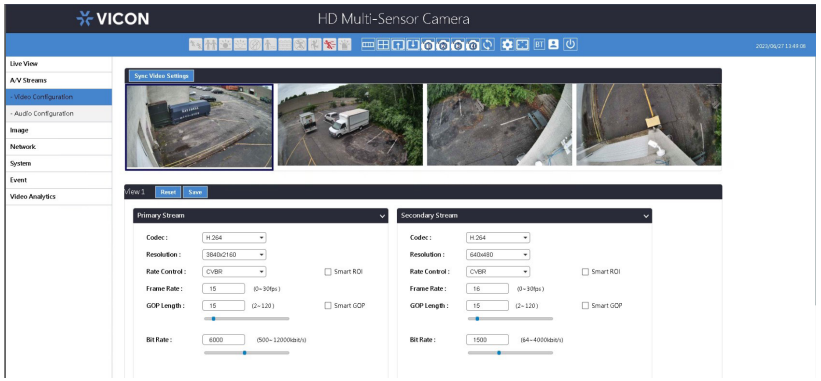
Browsing Through the Configuration Menu

The layout of the configuration menu is divided into two sections. All the camera settings are located on the left hand side of the interface; clicking on each of them will open their corresponding sub-menu on the right.



The following are the camera settings available on the left hand side:

- A/V Streams
  - Video Configuration
  - Audio Configuration
- Image
  - Exposure
  - Basic Settings
  - PTZ
  - ROI
  - Privacy Zone
  - OSD
- Network
  - Basic
  - FTP
  - SSL
  - 802.1x
  - SNMP
  - Firewall
  - LDAP
  - DDNS
  - RTSP
- System
  - Date/Time
  - Maintenance
  - User Management
- Event
  - Alarm Handler
  - Motion Detection
  - Tampering Alarm
  - FTP Upload
  - SMTP Notification
  - Network Storage
  - Relay Handler
  - SD Record
- Video Analytics
  - Global Settings
  - Line Crossing
  - Loitering
  - Crowding
  - Intrusion
  - Tailgating
  - Removed
  - Left
  - Overview
  - Event List

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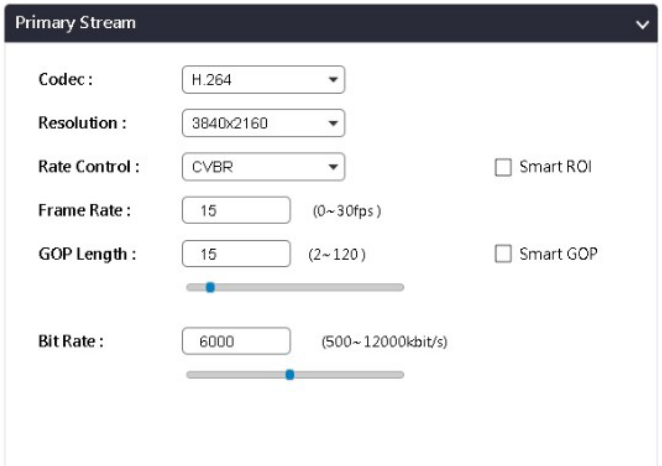
Video - Video Configuration



Primary Stream 1

Codec

Configures the format of the video stream, the options are **H.265** and **H.264**.

Resolution

Configures the resolution of the video stream. The available options are camera dependent: **20MP:** 2592x1944, 2560x1440, 2304x1296, 2048x1536, 1920x1080, 1600x1200, 1296x972, 1280x960, 1280x720, 800x600 and 640x480**; 32 MP:** 3840x2160, 2860x2160, 2592x1944, 2560x1440, 2304x1296, 2048x1536, 1920x1080, 1280x960, 1280x720, 800x600 and 640x480.

Rate Control

Configures the Rate Control mode as **CBR** (constant bit rate) or **CVBR** (constrained variable bit rate) for the stream. Selecting **CVBR** will show the setting options for **Smart ROI** and **Smart GOP**.

Smart ROI

Enables or disables Smart ROI feature. Enabling it will increase the bit rate of moving objects and make them clearer. Bit rate of images around the moving objects will not be modified.

Frame Rate

Adjusts the frame rate of the video stream; the range is 1~30FPS. The stream will be off if **0** is selected.

GOP Length

Configures the GOP length of the stream; the range is 2~120. Users can enter the value or adjust it through the slider bar.

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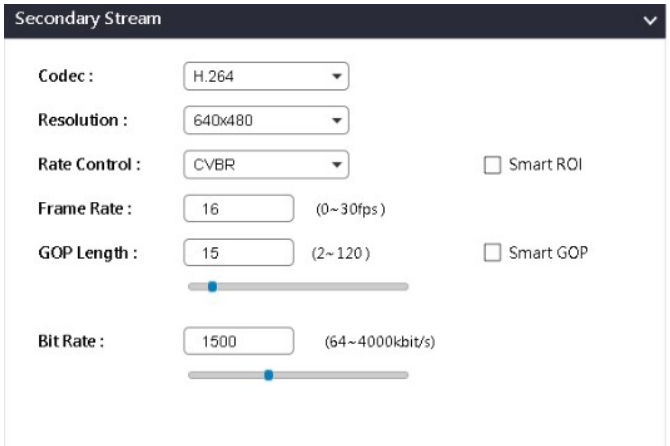
Video Configuration Cont.



Smart GOP
Enables or disables Smart GOP feature. Enabling it will allow GOP to automatically increase when no moving objects are detected to save bandwidth. When moving objects are detected, GOP will automatically decrease.

Bit Rate
Configures the bit rate; the range is 500~12000kbit/s. Users can enter the value or adjust it through the slider bar.

Secondary Stream

Codec
Configures the format of the video stream, the options are **H.265** and **H.264**.

Resolution
Configures the resolution of the video stream. The available options are **1920x1080**, **1600x1200**, **1296x972**, **1280x960**, **1280x720**, **800x600** and **640x480**.

Rate Control
Configures the Rate Control mode as **CBR** (constant bit rate) or **CVBR** (constrained variable bit rate) for the stream.

Frame Rate
Adjusts the frame rate of the video stream; the range is 0~30FPS. The stream will be off if **0** is selected.

GOP Length
Configures the GOP length of the stream; the range is 2~120. Users can enter the value or adjust it through the slider bar.

Bit Rate
Configures the bit rate, the range is 64~4000kbit/s. User can enter the value or adjust it through the slider bar.

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Video Configuration Cont.

Third Stream

Resolution

Configures the resolution of the video stream. The available option is **640x480**.

Quality

Configures the video quality of the stream. The options are **High**, **Medium** and **Low**.

Frame Rate

Adjusts the frame rate of the video stream; the range is 0~30FPS. The stream will be off if **0** is selected.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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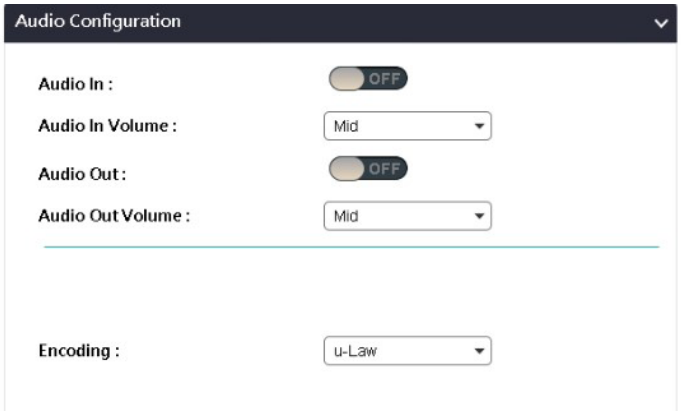
A/V Streams - Audio Configuration



Audio Settings

Audio In
Enables or disables audio-in on the camera. The available options are **ON** and **OFF**.

Audio In Volume
Volume adjustment for audio-in of the camera. The available options are **High**, **Mid** and **Low**.

Audio Out
Enables or disables audio-out on the camera. The available options are **ON** and **OFF**.

Audio Out Volume
Volume adjustment for audio-out of the camera. The available options are **High**, **Mid** and **Low**.

Encoding
Configures the audio companding algorithm. The available options are **u-law** and **a-law**.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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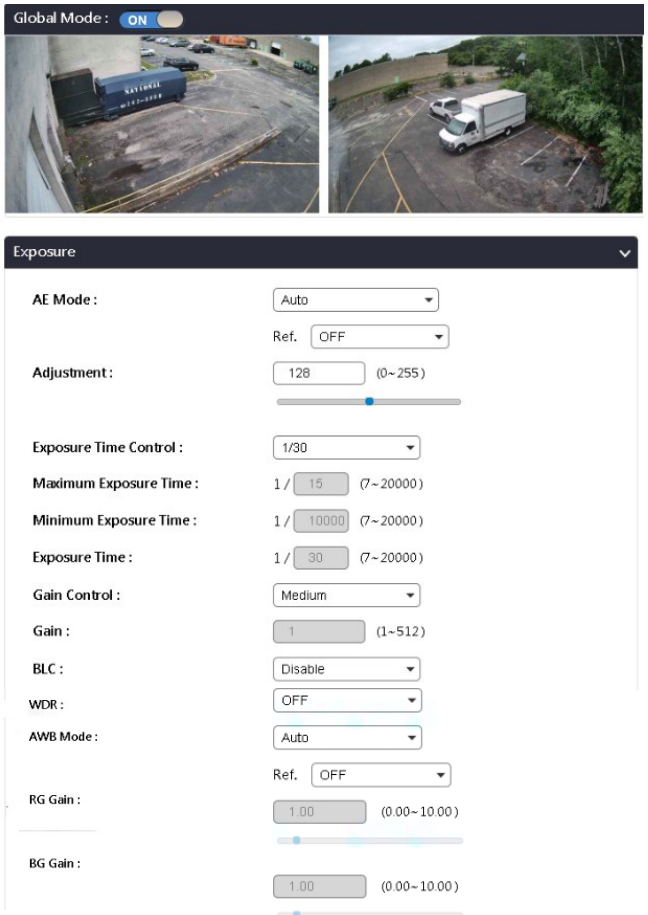
Image - Exposure



Global Mode

The available options are **ON** and **OFF**.

Enable Global Mode (ON)

Set up the parameters for 4 image channels together. After enabling **Global ON**, also select "**Sync Brightness**" from the **AE Mode**. Then the parameters of all the 4 image channels will be the same and can be adjusted together. Press **Save** to keep the configurations.

Disable Global Mode (OFF)

Set up the parameters for each image channel independently. Each image channel can be adjusted individually. After setting up the parameters, press **Save** to keep the configurations.

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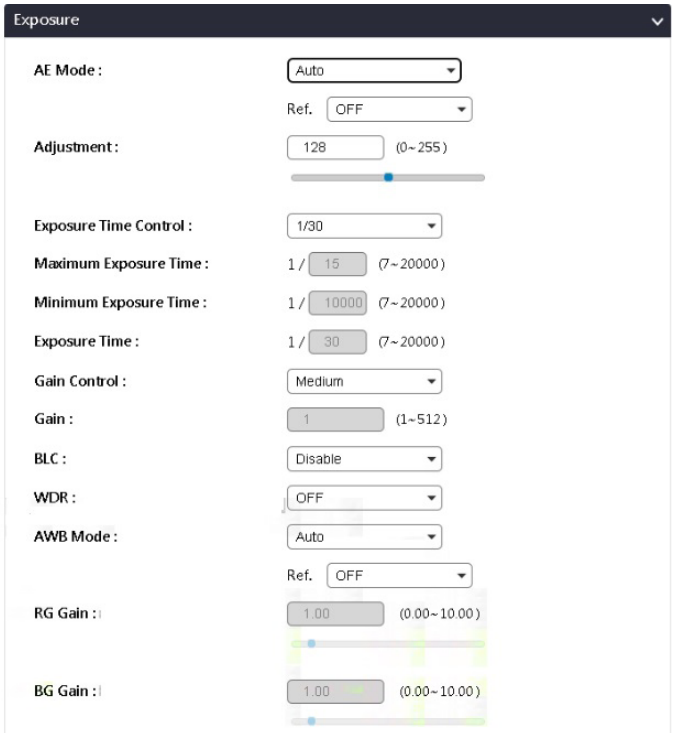
Exposure Cont.



AE Mode

When **Global Mode** is set to **ON**, the available options for AE mode are **Sync Brightness**, **Sync Brightness 50Hz**, **Sync Brightness 60Hz**, **Auto**, **50Hz**, **60Hz** and **Lock**.

When **Global Mode** is set to **OFF**, the the available options for AE mode are **Auto**, **50Hz**, **60Hz** and **Lock**.

If **Lock** is selected, then Exposure Time Control, Gain Control and BLC cannot be edited. Only Exposure Time can be edited (the range is 1/7~1/20000).

Adjustment

Adjusts the exposure from 0~255. Users can enter the value or adjust it through the slider bar.

Exposure Time Control

Select **User Define** to enter the values of Maximum Exposure Time (the range is 1/7~1/20000) and Minimum Exposure Time (the range is 1/7~1/20000) manually.

Exposure Time

The range is 1/7~1/20000. It can only be edited when **Lock** is selected as the AE Mode.

Gain Control

The available options are **OFF**, **Low**, **Medium**, **High** and **User Define**.

Select **User Define** to enter the value of Maximum Gain (the range is 1~512) manually.

Gain

The range is 1~512. It can only be edited when **Lock** is selected as the AE Mode.

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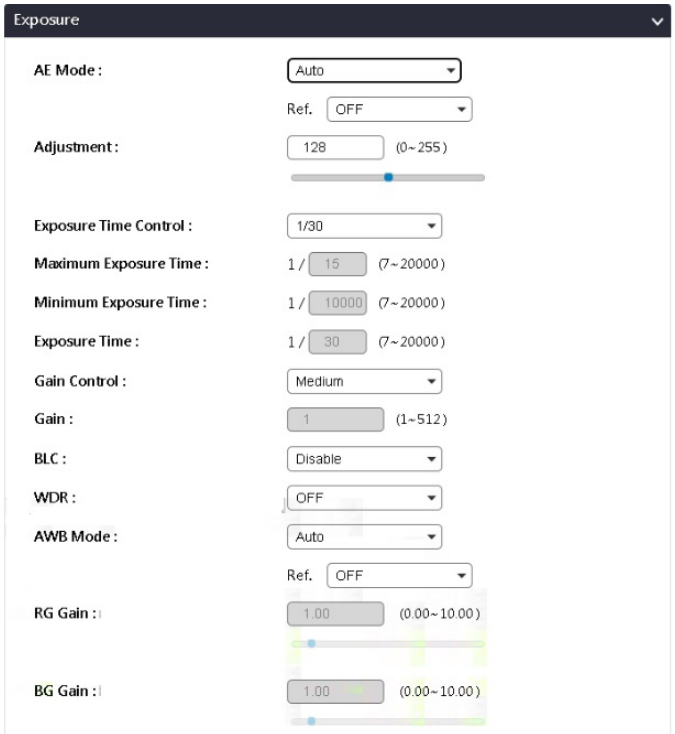
Exposure Cont.



BLC

Enables or disables backlight compensation function; enable this option if an image in the camera is too dark.

WDR

Enable this function if the camera is exposed to bright backlight, glare or high contrast lighting. The available options are **OFF**, **Low**, **Medium** and **High**.

AWB Mode (Auto White Balance Mode)

White balance allows the camera to produce more accurate colors under different lighting conditions. The default setting is **Auto**, **Ref. OFF** means each channel individually and automatically adjusts the white balance to suit the current lighting condition. The other available options are **1**, **2**, **3** and **4**. White balance can also be set manually through RG Gain or BG Gain; the range is 0.00-10.00.

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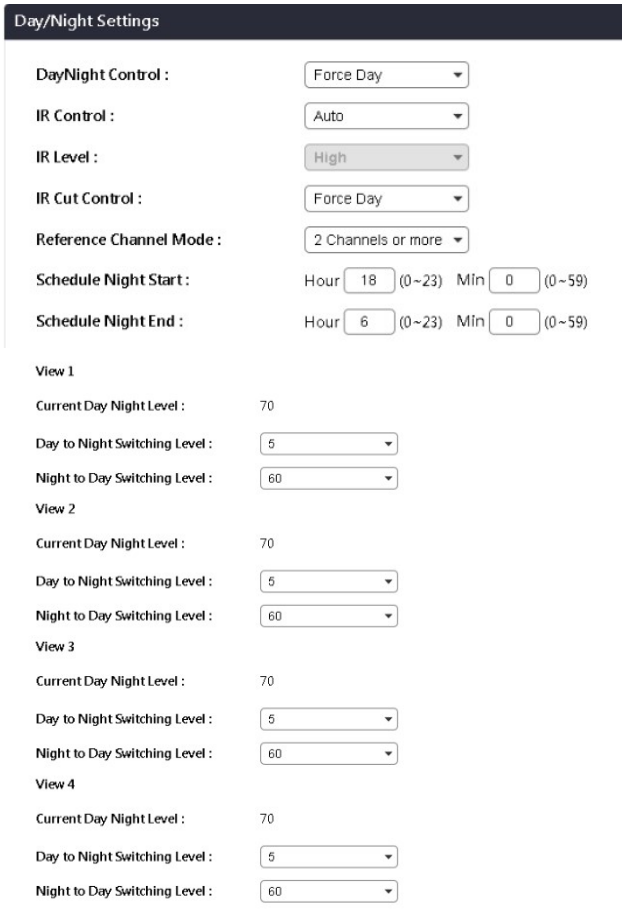
Exposure Cont.



Day/Night Settings

DayNight Control
Select the Day and Night control mode. The available options are **Auto**, **Force Day** and **Force Night**.

IR Control
Select the IR Control mode to use. The available options are **Auto**, **OFF** and **ON**.

IR Level
When IR Control is set to **ON**, the available options are **Low**, **Medium** and **High**.

IR Cut Control
Select the IR Cut Control mode to use. The available options are **Auto**, **Force Day** and **Force Night**.

DayNight Switching Level
Select the desired level to sense and switch between day and night mode; the range is 1~10.

Reference Channel
OFF means each channel individually and automatically adjusts the DayNight setting. The other available options are **1**, **2**, **3** and **4**.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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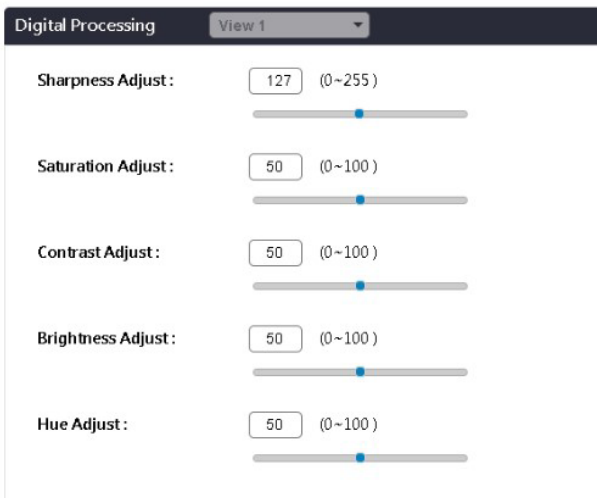
Image - Basic Settings



Flip

Flip left-to-right & Flip top-to-bottom

Flips the image horizontally (flip left-to-right) or vertically (flip top-to-bottom). They can be selected at the simultaneously.

Digital Processing

Sharpness Adjust

Configures the sharpness of the image; the range is 0 ~ 255, with 0 being the lowest sharpness. Enter the values or adjust the bar to increase or decrease the values. The default value is 127.

Saturation Adjust

Configures the color saturation of the image; the range is 0 ~ 100, with 0 being the lowest saturation. Enter the values or adjust the bar to increase or decrease the values. The default value is 50.

Contrast Adjust

Configures the contrast of the image; the range is 0 ~ 100, with 0 being the lowest contrast. Enter the values or adjust the bar to increase or decrease the values. The default value is 50.

Brightness Adjust

Configures the brightness of the image; the range is 0 ~ 100, with 0 being the lowest brightness. Enter the values or adjust the bar to increase or decrease the values. The default value is 50.

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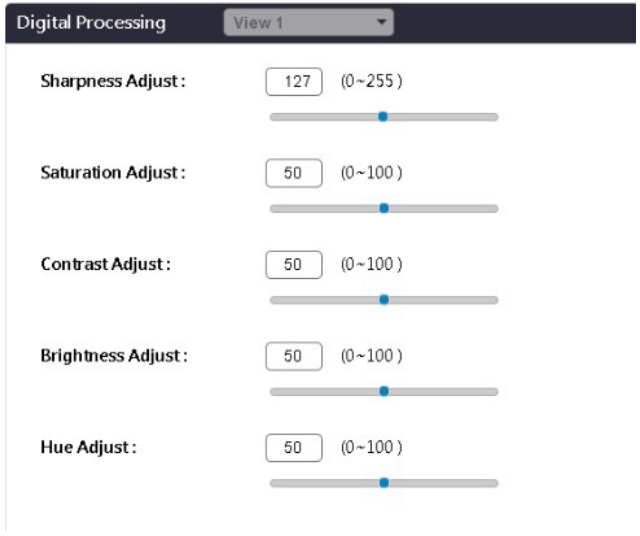
Basic Settings Cont.



Hue Adjust

Configures the overall hue of the image; the range is 0 ~ 100. Increasing the value will adjust the image hue towards red. Decreasing the value will adjust the image hue towards blue. The default value is 50.

Restore Settings to Defaults

Discards all the settings applied to the image and resets to the default settings.

Restore All Image Settings

Discards all the settings applied to the image and reverts to the previous settings.

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Image - PTZ

PTZ

Allows users to adjust the Focus/Pan/Tilt/Zoom positions for each individual module or for all four modules. The available options are **View1**, **View2**, **View3**, **View4** and **All**. After adjusting zoom, either full or short range focus is selected.

Full Range/Short Range: Short Range is applied when the camera focus appears to be a little blurry; the focusing time is shorter. Full Range function is applied when camera doesn't focus on a clear image and is focusing for the full focal length; the focusing time is longer.

Preset

The available options for the preset buttons are **180 Wide, 180 Tele**, **270 Wide, 270 Corner**, **360**, **Re-Calibration**, **User Preset 1** and **User Preset 2**.

User Specified Presets: Users can set up custom preset configurations. The available options are **Create Preset 1**, **Save Preset 1**, **Create Preset 2** and **Save Preset 2**.

Note that this is not a traditional PTZ. In order to create a precise preset position, the must first select Create Preset. The modules will go back to the Home position. (Home is for calibration purposes only. This will index all the camera modules to module 4 into a position where they are all directly adjacent to each other.) Then move each module to adjust tilt and zoom to achieve desired field of view for the preset. Then select Save Preset.

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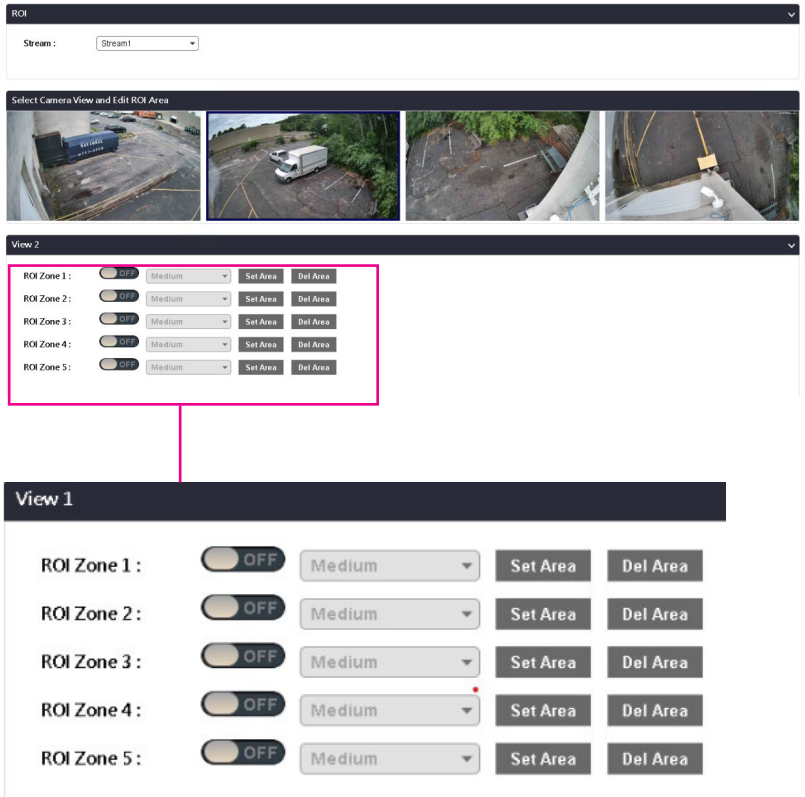
Image - ROI



Configurations

ROI is used to select which areas will be monitored and recorded with higher image quality while using lower image quality for other non-ROI zones to save bandwidth and storage. The instructions below illustrate how to setup ROI.

1. Select Stream 1 or Stream 2 to set the ROI on. Each channel can be edited individually.
2. There are 5 ROI zones that can be configured (zone 1 ~ zone 5). Switch to **ON** to enable ROI function. The default is **OFF**.
3. Set the image quality of the ROI in the **Level** drop-down menu; the options are **Low**, **Medium** or **High**.
4. Select the area to set the ROI by holding down the mouse button and drag to make a rectangular square; release the button once the desired area is covered.
5. Press the **Set Area** button for the setting to take effect. The ROI area will then be seen on the video stream.
6. Press the **Del Area** button or select **OFF** to delete the ROI area.

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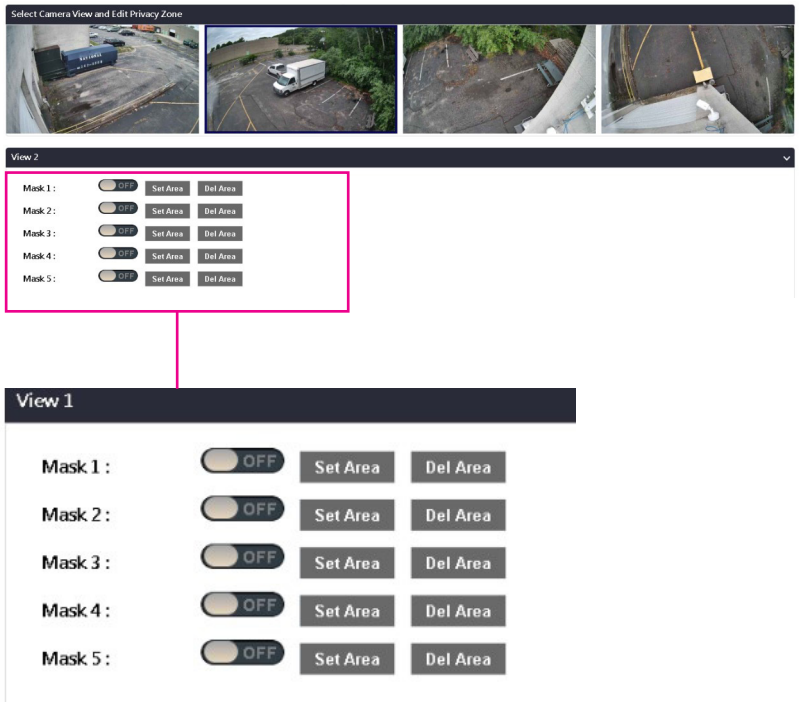
Image - Privacy Zone



Configurations

Configures which area of the video stream will be masked for privacy. There are 5 privacy zones that can be configured.

1. Select **ON** to enable **Privacy Zone** function. The default is **OFF**. Each channel can be edited individually.
2. Select the area to set the privacy zone by holding down the mouse button and drag to make a rectangular square; release the button once the desired area is covered.
3. Press the **Set Area** button for the setting to take effect. The masked area will be filled with black and the label **Mask** will be seen on the video stream.
4. Press the **Del Area** button or select **OFF** to delete the privacy zone.

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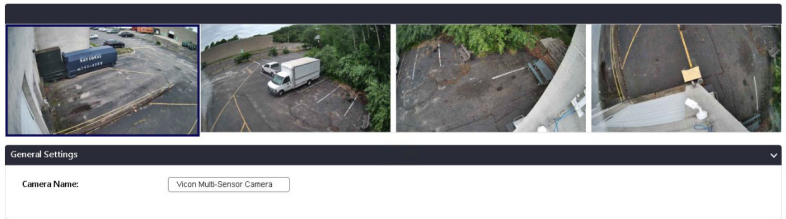
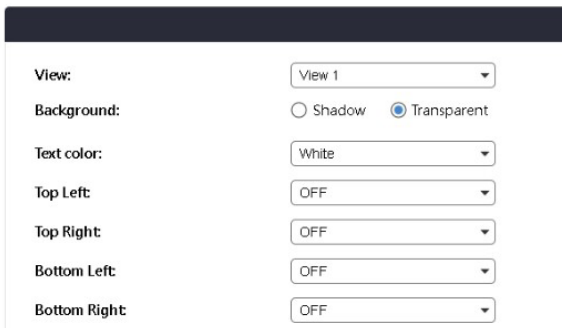
Image - OSD





General Settings

Camera Name
Specifies a name for the device. The maximum length is 32 characters.

Background
Configures the background color of the text overlay; the options are **Translucent** (light gray) or **Transparent**.

Text Color
Configures the text color as **Black**, **White**, **Green** or **Yellow**.

Top Left/Top Right/Bottom Left/Bottom Right
There are 4 content positions (Top Left, Top Right, Bottom Left and Bottom Right) to display the camera name, current date/time and text overlay.

Content

OFF: The default setting is OFF.
Date/Time: Displays the current date/time.
Camera Name: Displays the device name.
Camera Name + Date/Time: Displays the device name and date/time.
Custom Text: A customized text can be specified here.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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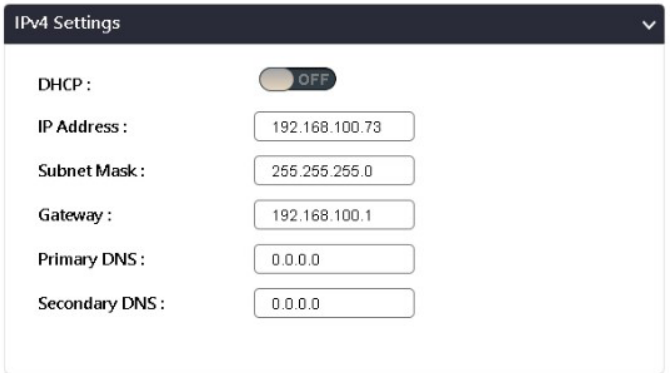
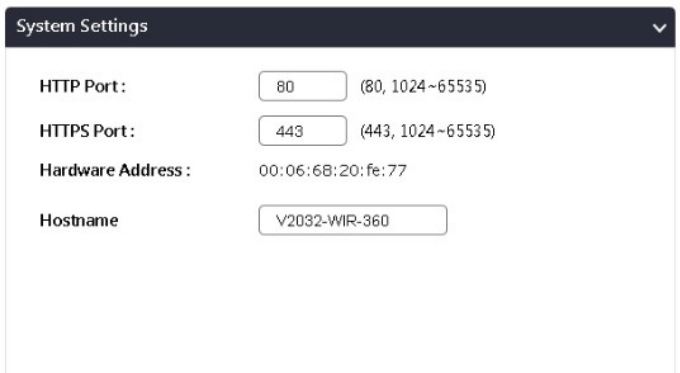
Network - Basic





IPv4 Settings

DHCP

Enables or disables DHCP; use this feature if the camera is connected to a network with DHCP server.

To manually configure an IP address, disable DHCP and input the IP address, subnet mask, default gateway, primary and secondary DNS server address.

System Settings

HTTP Port

Configures the HTTP port number of the web configuration menu.

HTTPS Port

Configures the HTTPS port number of the web configuration menu.

Hardware Address

Unique MAC address for each camera device.

Hostname

Enter a unique for the camera device.

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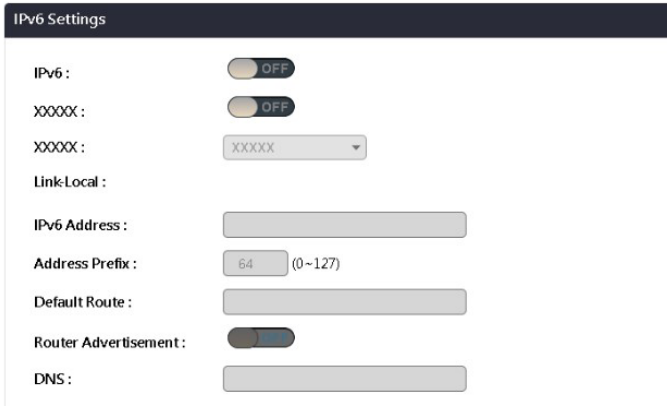
Network - Basic



IPv6 Settings

Enables or disables IPv6 function.

To manually input an IP address, enable IPv6 and input the address prefix, default route, enable/disable router advertisement and DNS server address.

Save

Save button to apply the configuration;, click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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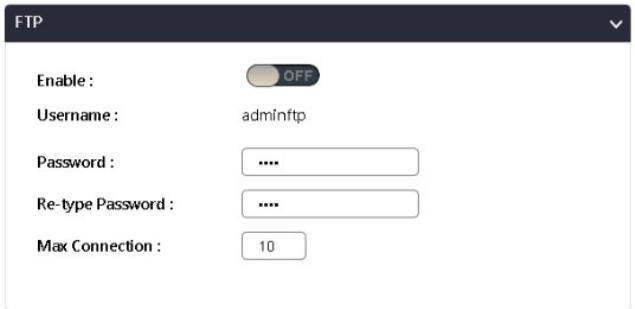
Network - FTP



Configurations

Enable

Enables or disables FTP access to this camera. This function is only available when an SD card is inserted. You can access files in the SD card attached to the IP camera.

Password

Specifies the FTP login password to access the IP camera.

Max Connection

Specifies the maximum number of FTP connections the IP camera can support.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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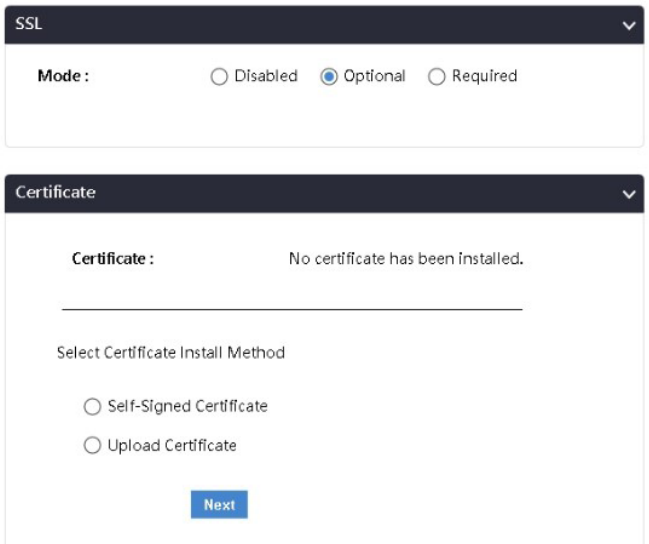
Network - SSL



SSL Configurations

Mode

Disabled: Support for http only.
Optional: Support for http & https.
Required: Support for https only.

Certificate

Certificate

Provides options to install a new CA certification.

Select Certificate Install Method

Selects the certificate installation method. The available options are **Self-Signed Certificate** and **Upload Certificate**. Press **Next** after selecting the installation method.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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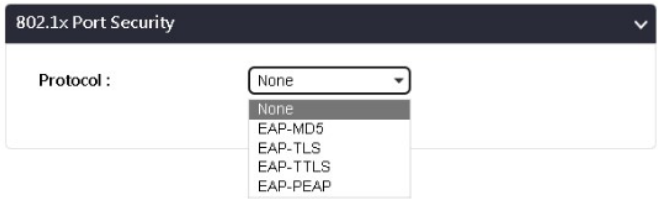
Network - 802.1x



802.1x Configurations

Protocol

The default is **None** to disable 802.1x function.
Select the protocols to enable 802.1x function. The available protocols are **EAP-MD5**, **EAP-TLS**, **EAP-TTLS** or **EAP-PEAP**.

After the protocol has been selected, manually configure the username, password and other required information.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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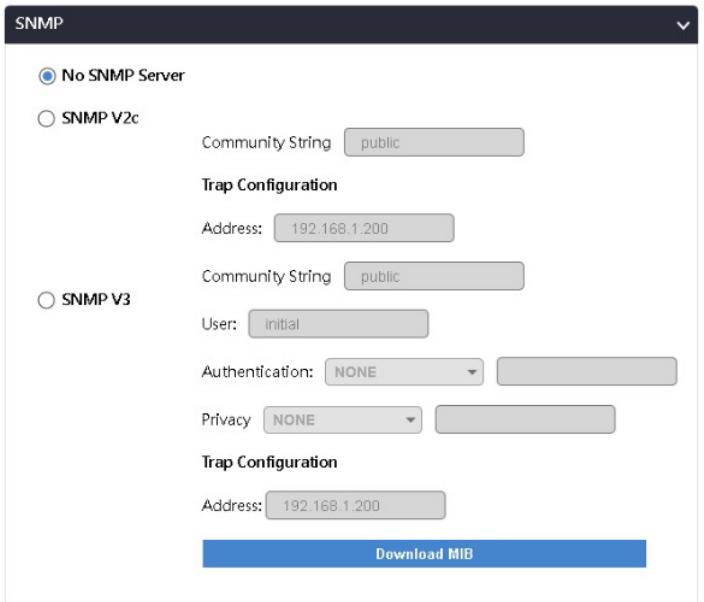
Network - SNMP



SNMP Configurations

No SNMP Server
Disables SNMP function.

SNMP V2c
Enables or disables SNMPv2c support.

Community String
Configures the community string.

Trap Configuration
Specifies the destination IP address to send SNMP trap messages.

SNMP V3
Enables or disables SNMPv3 support.

User
Configures the SNMPv3 username.

Authentication
Configures the Authentication mode. The options are **None**, **MD5** and **SHA**.

Privacy
Configures encryption for SNMPv3. The options are **DES** and **AES**.

Trap Configuration
Specifies the destination IP address to send SNMP trap messages.

Download MIB
Download MIB file for SNMP.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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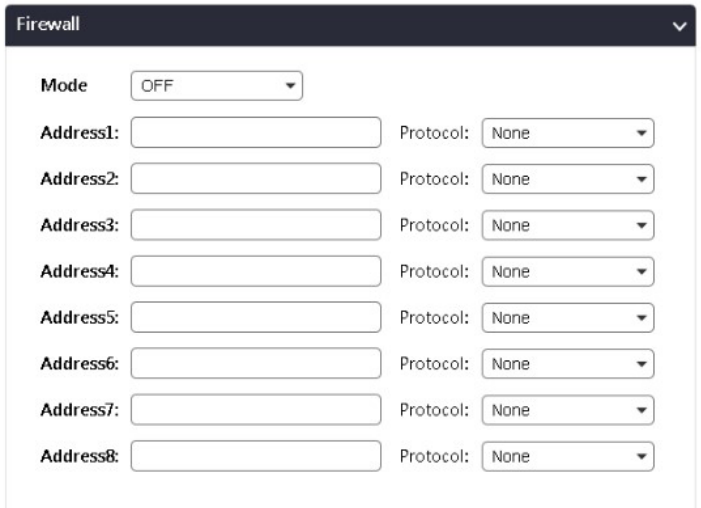
Network - Firewall



Firewall Configurations

Mode

Select **OFF** to disable the filtering of the specified IP address. Select **Allow** or **Deny** in the drop-down menu to specify the type of filtering rule applied to the IP address entered.

Address1 to Address8

The IP address and associated protocol (**TCP**, **UDP** or **None**) to filter can be entered here. A total of 8 IP addresses can be added to the list.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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Network - LDAP

LDAP Configurations

Enables or disables LDAP; use this feature if the camera is connected to a network with LDAP server.

After enabling LDAP, manually configure the LDAP server and other required information.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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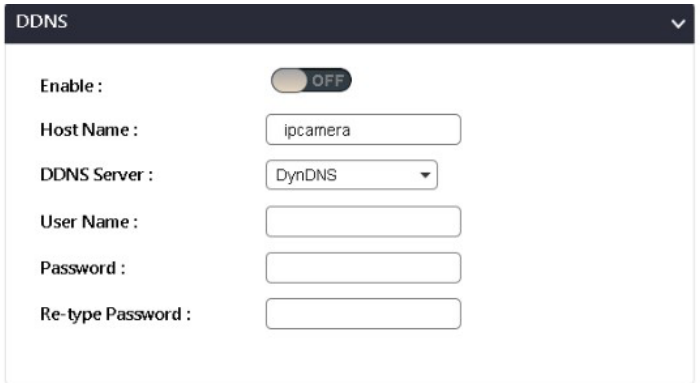
Network - DDNS



DDNS Configurations

Enable
Enables or disables DDNS service.

Hostname
Hostname of the DDNS account.

DDNS Server
Select the DDNS service provider from the drop-down menu; the available providers are **DynDNS**, **NO-IP**, and **Two-DNS**. The default option is **DynDNS**.

Username
Username of the DDNS account.

Password
Password of the DDNS account.

Re-type Password
Type the same password again for confirmation.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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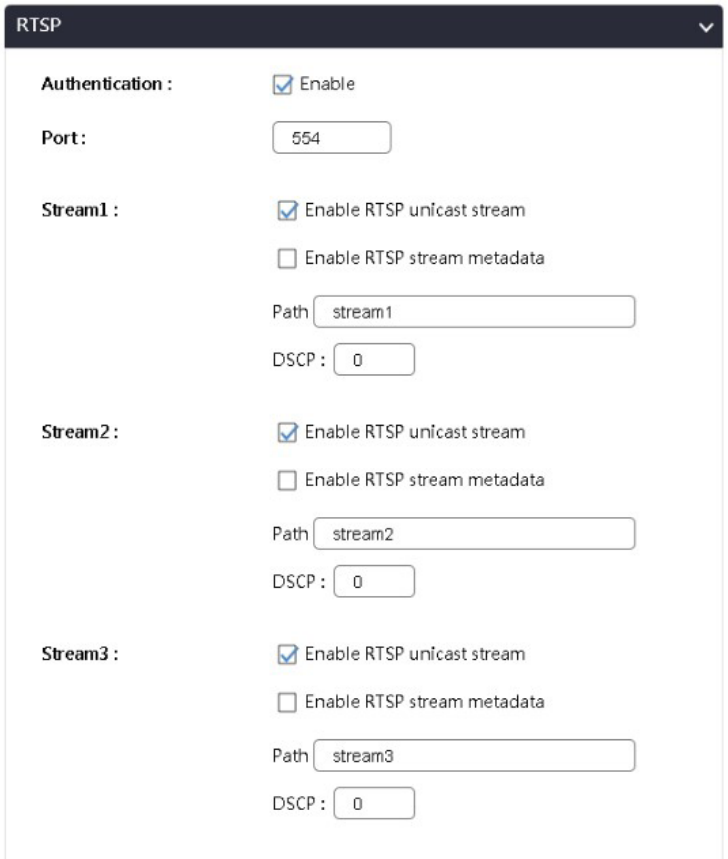
Network - RTSP



RTSP Configurations

Authentication

Enables or disables verification of the account and password.

Port

Configures the port number for stream 1 to stream 3. The range is 554/1025~65535.

Stream 1 to Stream 3

Enables or disables RTSP unicast for stream 1 to stream 3. The RTSP port number and pathname for each stream can be configured here.

Primary stream with audio

rtsp://ADMIN:1234@cameraIP/stream1_1
rtsp://ADMIN:1234@cameraIP/stream1_2
rtsp://ADMIN:1234@cameraIP/stream1_3
rtsp://ADMIN:1234@cameraIP/stream1_4

Secondary stream with audio

rtsp://ADMIN:1234@cameraIP/stream2_1
rtsp://ADMIN:1234@cameraIP/stream2_2
rtsp://ADMIN:1234@cameraIP/stream2_3
rtsp://ADMIN:1234@cameraIP/stream2_4

Primary stream without audio

rtsp://ADMIN:1234@cameraIP/stream1_1_noAudio
rtsp://ADMIN:1234@cameraIP/stream1_2_noAudio
rtsp://ADMIN:1234@cameraIP/stream1_3_noAudio
rtsp://ADMIN:1234@cameraIP/stream1_4_noAudio

Secondary stream without audio

rtsp://ADMIN:1234@cameraIP/stream2_1_noAudio
rtsp://ADMIN:1234@cameraIP/stream2_2_noAudio
rtsp://ADMIN:1234@cameraIP/stream2_3_noAudio
rtsp://ADMIN:1234@cameraIP/stream2_4_noAudio

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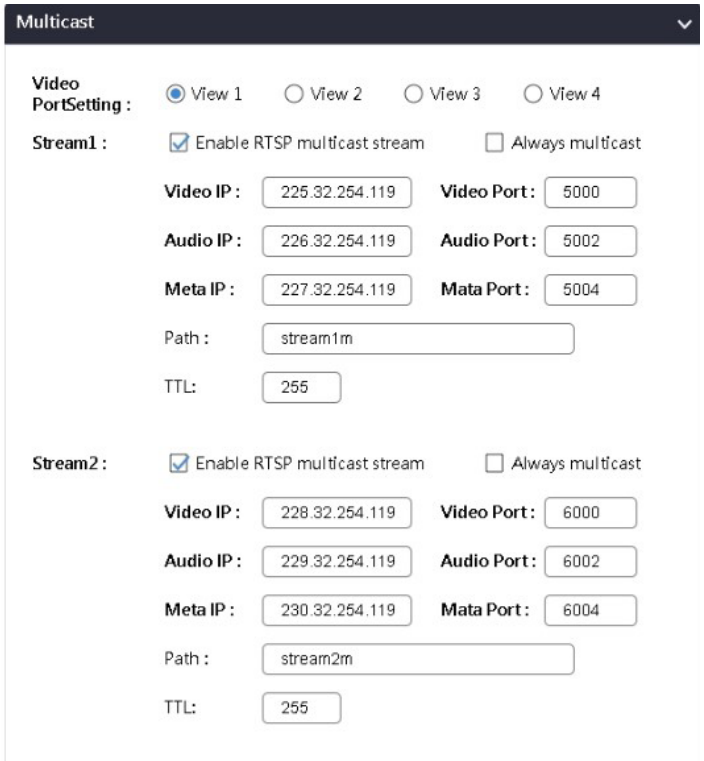
RTSP Cont.



Multicast (Stream 1 to Stream 3)

Enable RTSP Multicast
Enables or disables RTSP multicast streaming.

Always Multicast
Check this option to enable the video stream to start multicast streaming without using RTCP.

Video IP
Configures the multicast address to stream video.

Video Port
Configures the port number of the video stream.

Audio IP
Configures the multicast address to stream audio.

Audio Port
Configures the port number of the audio stream.

Meta IP
Configures the multicast address for the html meta.

Meta Port
Configures the port number of the html meta.

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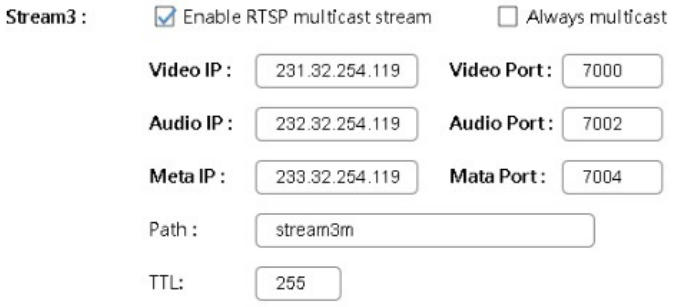
RTSP Cont.



Path
Configures the URL address of the video stream.

TTL
Configures the time-to-live threshold of the multicast datagram before it is discarded by the router.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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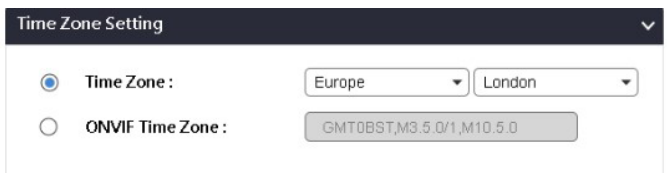
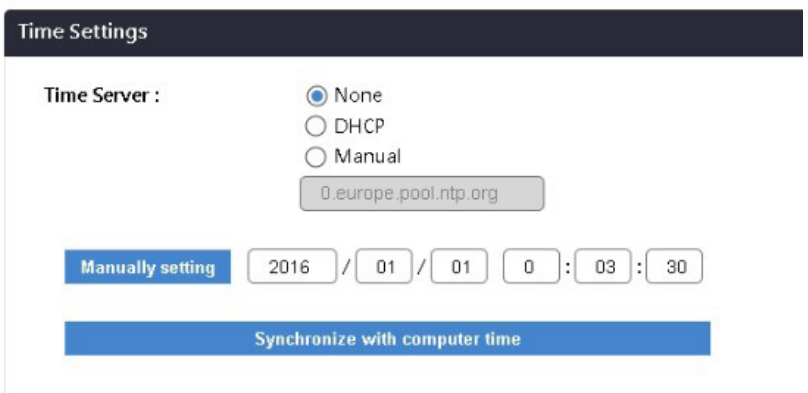
System - Date/Time





Date/Time Configurations

Display Format

Displays the current date and time. There are various formats to select from the drop-down menu.

Date & Time Format

Select the display format of the date and time. The available options are **24HR** and **12HR**.

Time Zone Setting

Time Zone

Select the time zone relevant to your location in the drop-down menu.

Time Setting

Time Server

None: Disables synchronization of the current date/time through the internet.
DHCP: If your DHCP server provides NTP server information, select this setting to enable NTP information retrieval.
Manual: Select this option to configure the NTP server address manually for date and time synchronization.

Manually setting

Manually define the date and time. The format is **yyyy/mm/dd** or **hh:mm:ss**.

Sync with computer time

Manually synchronize with the current computer date and time.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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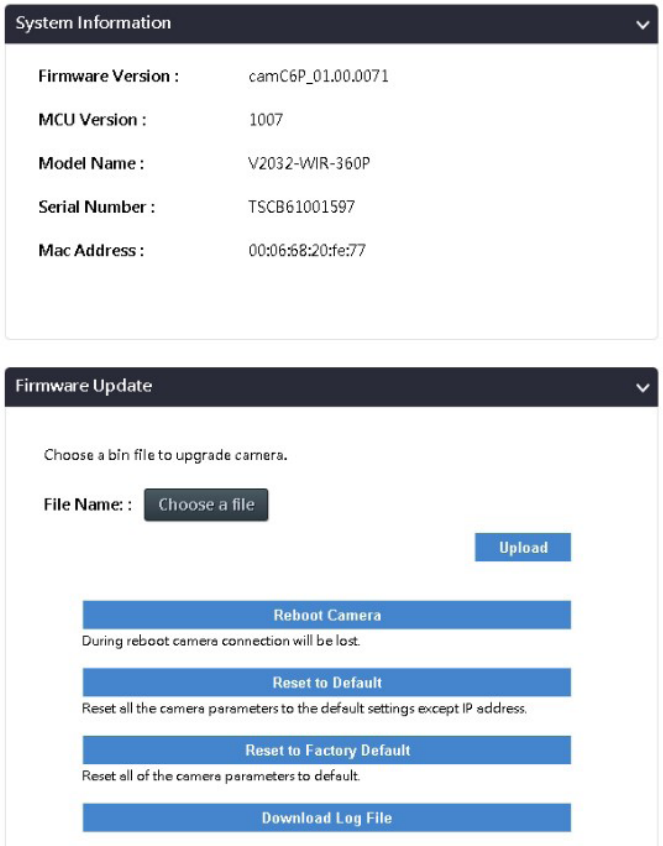
System - Maintenance



System Information

Firmware Version & Model Name

Displays the current firmware version and IP camera model number.

Serial Number & MAC Address

Displays the IP camera serial number and MAC address.

Firmware Update

To update the camera's firmware, click on the **Choose a file** button and locate the firmware image file; once the file is selected, press the **Upload** button to begin.

During update, please do not disconnect the network cable, reset or power off the IP camera, as you may damage the device.

Reboot Camera

Click this button to reboot the camera.

Reset to Default

Click this button to restore all the camera's setting back to factory default except IP address (keeps all the settings on the **Network Basic** setting page).

Reset to Factory Default

Click this button to restore all the camera's setting back to factory default, including IP address (default is DHCP).

Download Log File

Records all the status information of the camera in list format when the camera is connecting to the PC. Downloads the log file to the computer as a text file.

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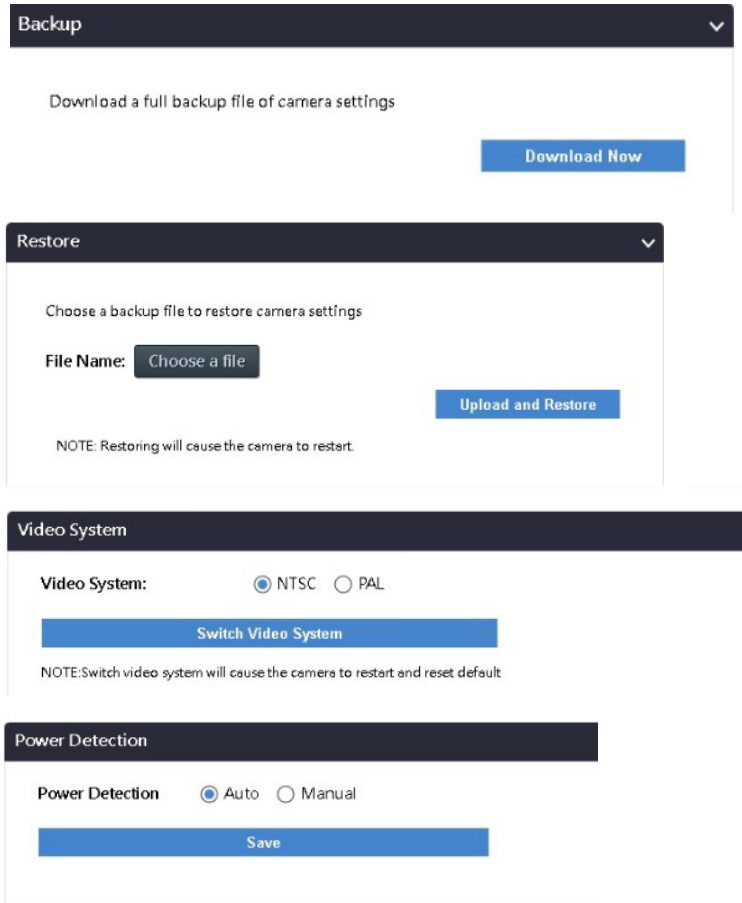
Maintenance Cont.



Backup

Download Now

Downloads the current camera settings to a backup file.

Restore

Update and Restore

Click on the **Choose a file** button and locate the backup file; once the file is selected, press the **Update and Restore** button to restore camera settings.

Video System

Switch Video System

Select the desired video system type.

Note: Switching the video system type will cause the camera to restart and reset to default.

Power Detection

Switch Power Detection Method

Select the desired power detection method, **Auto** or **Manual**.

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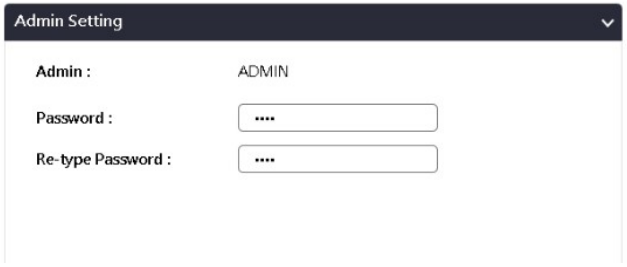
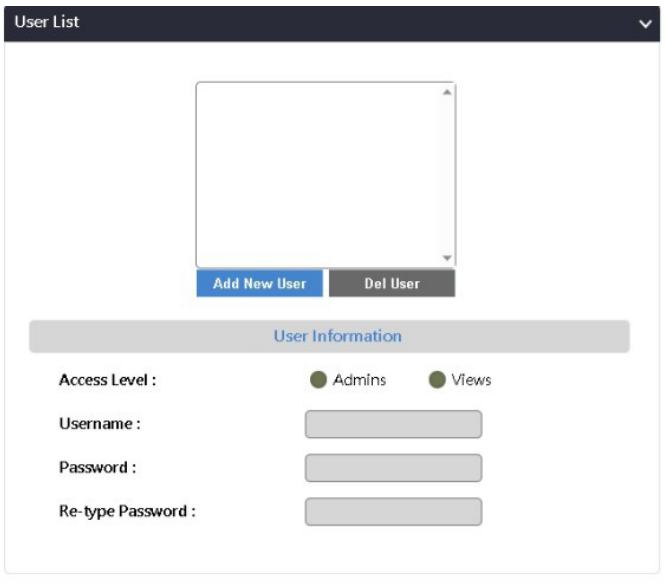
System - User Management





Admin Setting

Admin

The default username is **ADMIN**. Users cannot change it.

Password

Set up the password for administrator's authorization.

Re-type Password

Retype the same password to confirm.

User List

Displays user accounts available on the camera.

Press **Add New User** to add a new account and set up the authorization level of this user under **User Information**. Press **Cancel** to delete the new user if you do not want to continue the setup.

To delete an account, press the **Del User** button.

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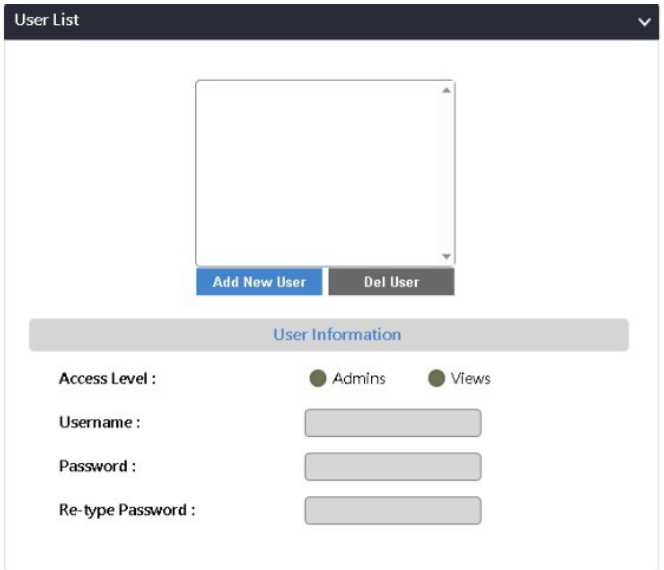
User Management Cont.



User Information

This section allows users to set up each new user's authorization level. A total of ten accounts can be created for **Admins/Views**.

Access Level

Admins: Has full control (read/write) over every configuration menu item.
Views: Only has access (read) to the live view of the camera (main screen).

User Name

Username must be at least 1 and up to 16 characters.

Password

Password must be at least 1 and up to 16 characters.

Re-type Password

Retype the same password to confirm.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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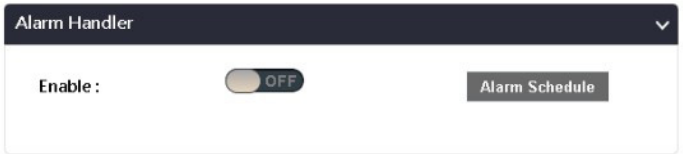
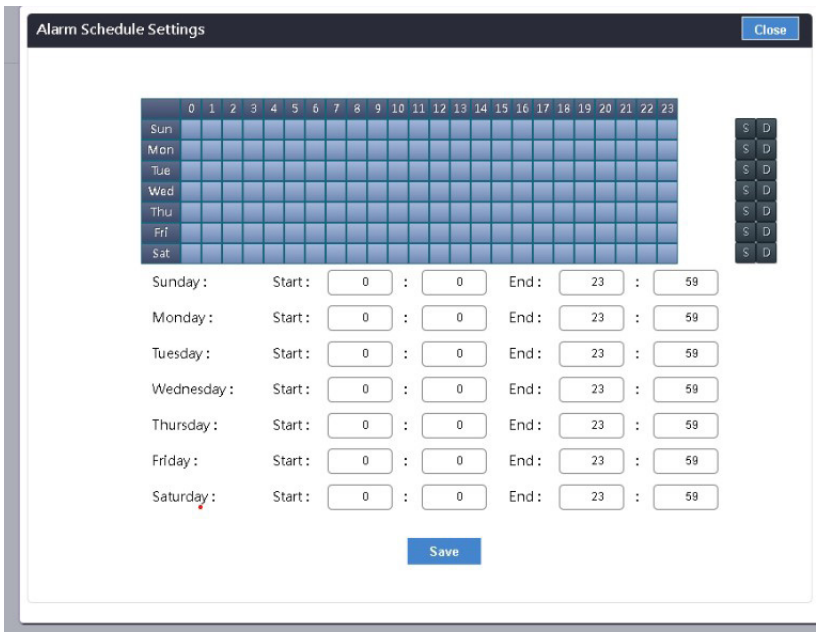
Event - Alarm Handler





Alarm Handler Configurations

Enable

Enables or disables the alarm schedule setup.

Alarm Schedule Settings

S

Press **S** for a particular weekday to set up a 24-hour schedule automatically.

D

Press **D** for a particular weekday to clear all the previous scheduled settings automatically.

Configure the scheduled time by holding down the mouse button and clicking the time block to enable the schedule settings on the selected time. A light blue color on the time block indicates that the alarm schedule is enabled, while a light gray color indicates that the alarm schedule is disabled.

Alternatively, you can manually enter numbers to configure the hours and minutes from start to end for all weekdays.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Close

Press to leave this schedule setting page.

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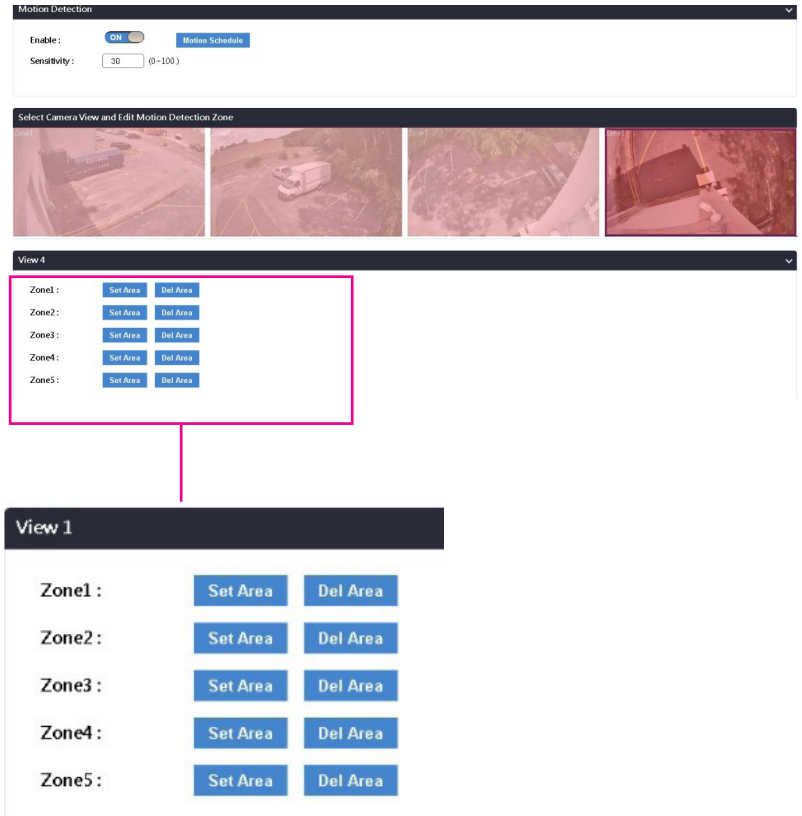
Event - Motion Detection



Motion Configurations

This section configures which area of the live video will be monitored for detecting motion.

Enable

Enables or disables motion detection function.

Note: Motion detection is enabled by default for the entire scene.

Sensitivity

Configures the sensitivity of motion detection, the range is 0 to 100.

Zone1 to Zone5 Setup

Configures the type of area layout to use for motion detection. You can configure up to 5 zones. The instructions below illustrate how to set up 5 zones. Each channel can be setup individually.

1. To create zone 1, on the live video screen, select the area to set the zone by holding down the mouse button and drag to make a rectangular square; release the button once the desired area is covered.
2. Press the **Set Area** button in zone 1 to set this area as motion zone 1.
3. Repeat the above steps to create motion areas for zones 2 to 5.

To delete an area, find the motion zone number you would like to remove, and press the **Del Area** button.

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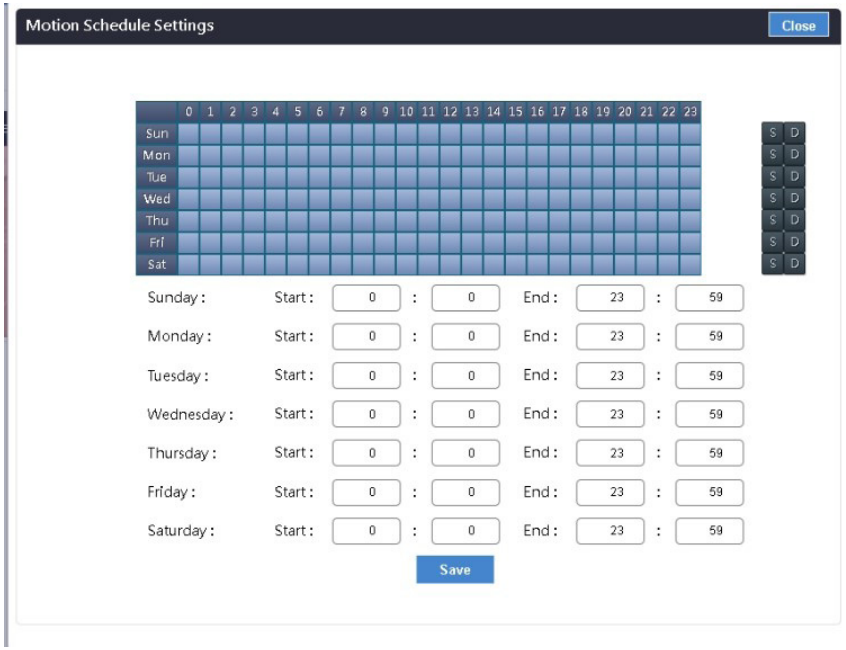
Motion Detection Cont.



Motion Schedule Settings

S

Press **S** for a particular weekday to set up a 24-hour schedule automatically.

D

Press **D** for a particular weekday to clear all the previous scheduled settings automatically.

Configure the scheduled time by holding down the mouse button and clicking the time block to enable the schedule settings on the selected time. A light blue color on the time block indicates that the alarm schedule is enabled, while a light gray color indicates that the alarm schedule is disabled.

Alternatively, you can manually enter numbers to configure the hours and minutes from start to end for all weekdays.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Close

Press to leave this schedule setting page.

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Museum Search

Museum Search Settings

Museum Search

Museum Search is on by default.

Mode

Select **Valerus** or **ViconNet**. If Valerus is selected, when this camera is used in the Valerus VMS, the advanced Museum Search will be functional by default, improving the ease and accuracy of doing museum searches. If ViconNet is selected, the feature is not supported in the VMS.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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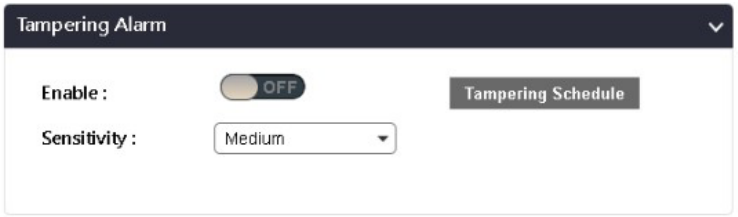
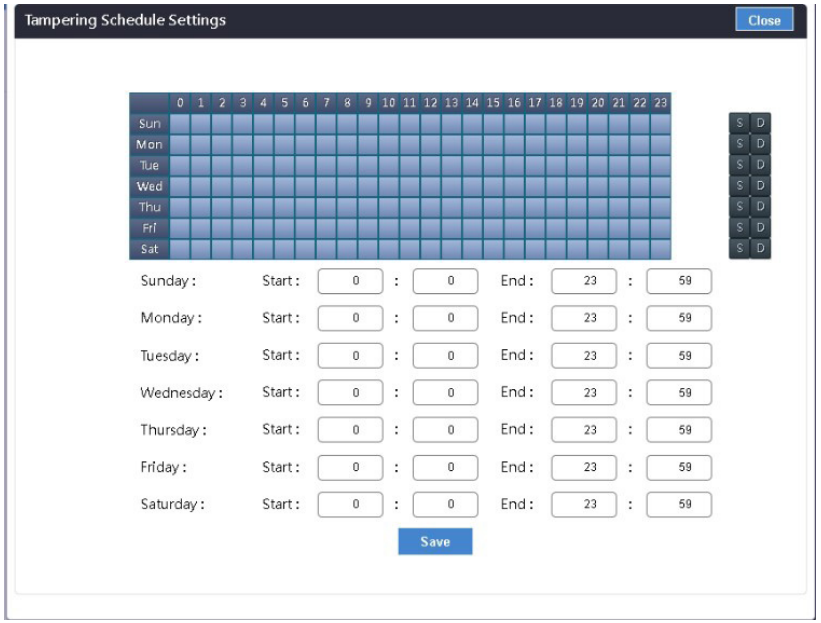
Event - Tampering Alarm





Tampering Alarm Configurations

Enable

Enables or disables the tampering alarm function.

Tampering Sensitivity

Configures the sensitivity level of tampering alarm; the options are **High**, **Medium** and **Low**.

Tampering Schedule Settings

S

Press **S** for a particular weekday to set up a 24-hour schedule automatically.

D

Press **D** for a particular weekday to clear all the previous scheduled settings automatically.

Configure the scheduled time by holding down the mouse button and clicking the time block to enable the schedule settings on the selected time. A light blue color on the time block indicates that the alarm schedule is enabled, while a light gray color indicates that the alarm schedule is disabled.

Alternatively, you can manually enter numbers to configure the hours and minutes from start to end for all weekdays.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Close

Press to leave this schedule setting page.

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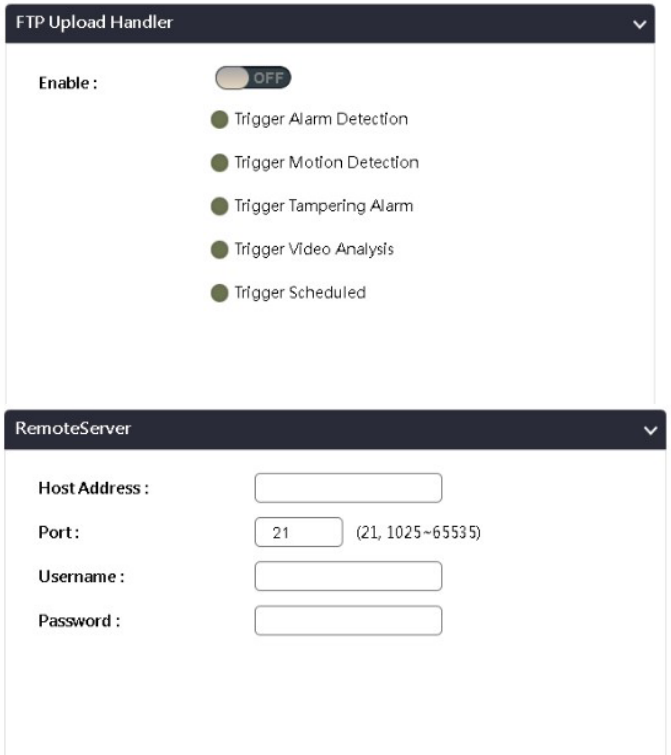
Event - FTP Upload



FTP Upload Handler Configurations

Configures which type of event trigger to enable and the FTP server address that the camera will connect to. The options are:

- Trigger Alarm Detection
- Trigger Motion Detection
- Trigger Tampering Alarm
- Trigger Video Analytics
- Trigger Scheduled

Remote Server

Host Address

Specifies the host name or IP address of the FTP server.

Port

Specifies the port number of the FTP server.

Username

Specifies the login username for the FTP server.

Password

Specifies the login password for the FTP server.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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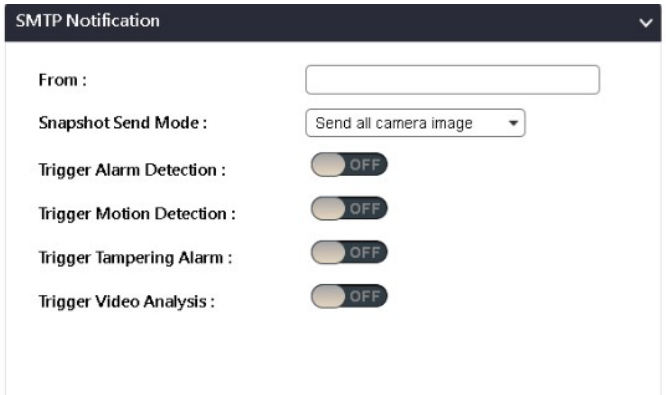
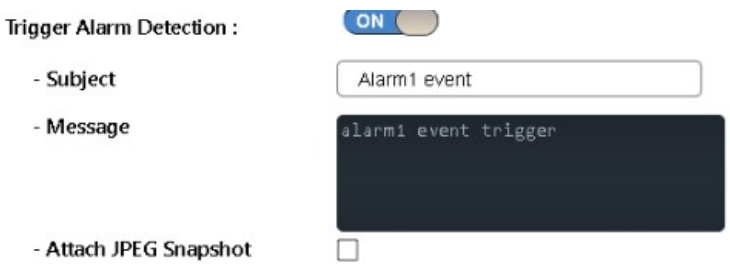
Event - SMTP Notification





SMTP Notification Handler Configurations

This section configures the SMTP mail server address that the camera will use for sending emails.

From

Specifies the email address of the sender.

Snapshot Send Mode

Select the type of image to send.

Trigger Event

Configures which type of event trigger to enable and the SMTP server address that the camera will connect to. The options are:

- Trigger Alarm Detection
- Trigger Motion Detection
- Trigger Tampering Alarm
- Trigger Video Analytics

Subject

Specifies the subject of the message.

Message

Specifies the message content.

Attach JPEG Snapshot

Enables or disables email delivery of trigger event snapshots.

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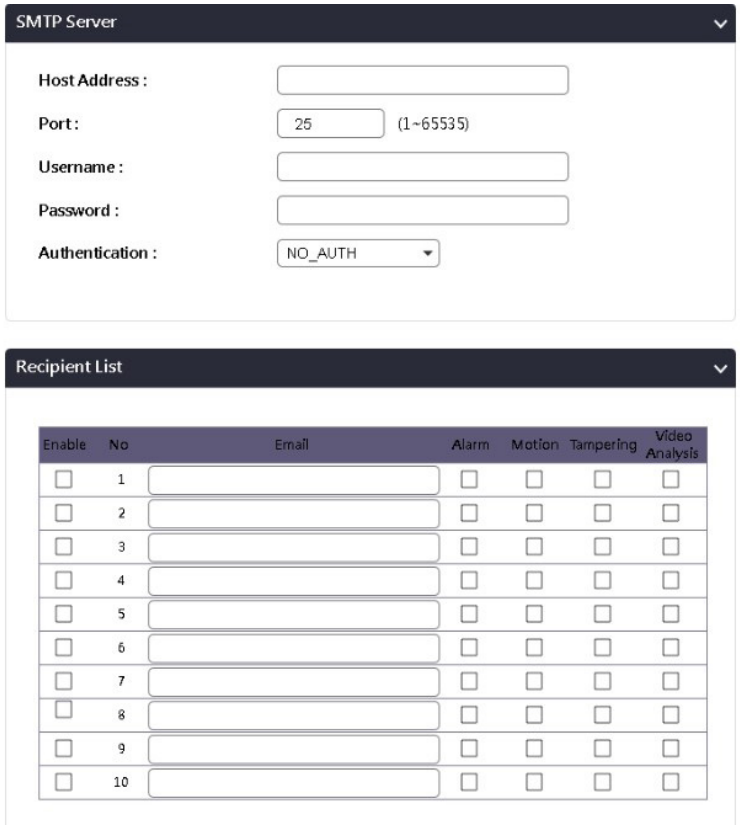
SMTP Notification Cont.



SMTP Server

Host Address
Specifies the host name or IP address of the SMTP mail server.

Port Number
Specifies the port number of the SMTP mail server.

Username
Specifies the login username for the SMTP mail server.

Password
Specifies the login password for the SMTP mail server.

Authentication Mode
Specifies the SMTP server authentication mode; the options are **NO_AUTH**, **SMTP_PLAIN**, **LOGIN** and **TLS_TLS**.

Recipient List

Specifies the email address to send the email to when an event is triggered by **Alarm**, **Motion**, **Tampering** or **Video Analytics**. A maximum of 10 email addresses can be configured.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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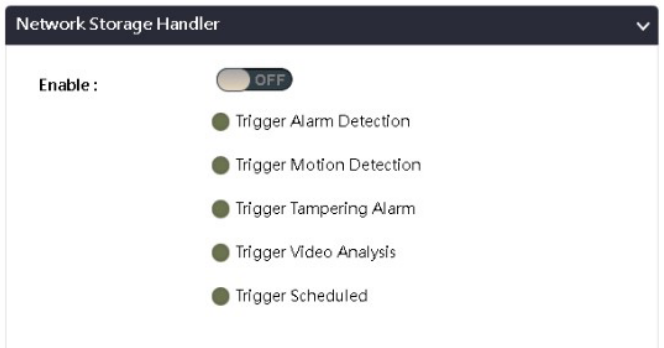
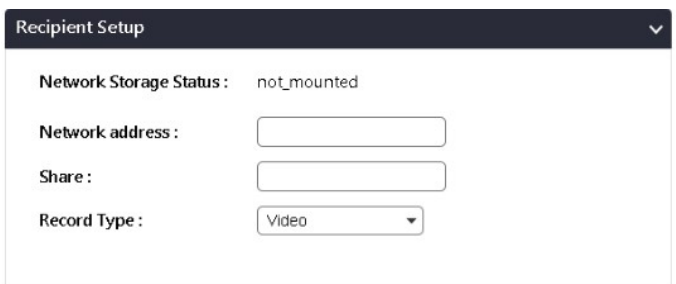
Event - Network Storage





Network Storage Configurations

Network Storage

This section configures the network storage server address that the camera will use when an event trigger is detected.

Trigger Event

Configures which type of event trigger to enable and the network storage server that the camera will connect to. The options are:

- Enable Trigger Alarm Detection
- Enable Trigger Motion Detection
- Enable Trigger Tampering Alarm
- Enable Trigger Video Analytics
- Enable Trigger Scheduled

Recipient Setup

Network Storage Status

Displays the current connection status with the network storage server. (**not_mounted** or **ok**)

Network Address

Specifies the IP address of the network storage server.

Share

Specifies the shared folder name on the network storage server.

Record Type

Specifies the event trigger action. The options are **Snapshot** and **Video**.

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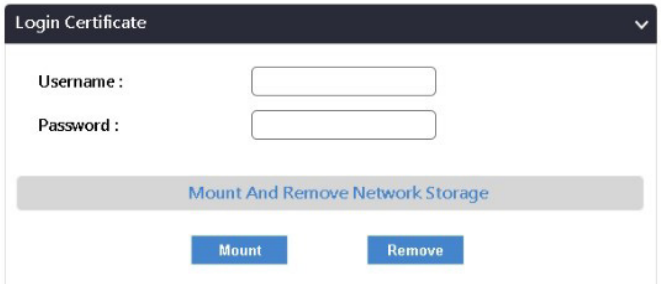
Network Storage Cont.



Login Certificate

Username and Password

Specifies the login username and password for the network storage server.

Mount and Remove Network Storage

Mount

Set up a network connection with the network storage server. All the video recordings or snapshots from event triggers will be uploaded to the network storage server. After the setting is complete, the **Network Storage Status** field will display **ok**.

Remove

Delete the previous setting or set up a new one. After the setting is removed, the **Network Storage Status** field will display **not_mounted**.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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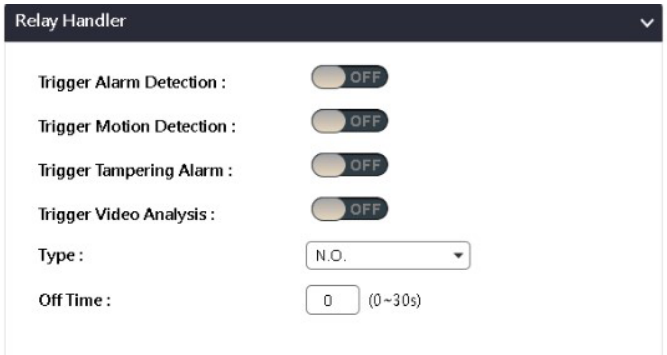
Event - Relay Handler



Relay Handler Configurations

This section configures the event trigger options for devices connected to the DI/DO of the camera.

Trigger Alarm Detection: When a signal is detected from **Alarm in**, the **Alarm out** will be triggered.

Trigger Motion Detection: When a motion detection event is detected, the **Alarm out** will be triggered.

Trigger Tampering Alarm: When a tampering event is detected, the **Alarm out** will be triggered.

Trigger Video Analytics: When a video analysis event is detected, the **Alarm out** will be triggered.

Types

The options are **N.O.** and **N.C**.

Off Time

Configure the seconds from 0 to 30 seconds.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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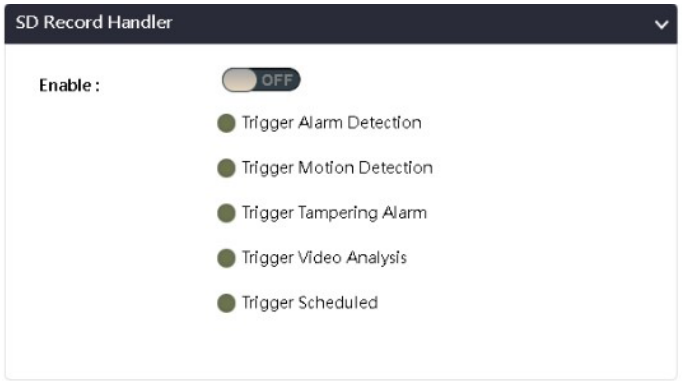
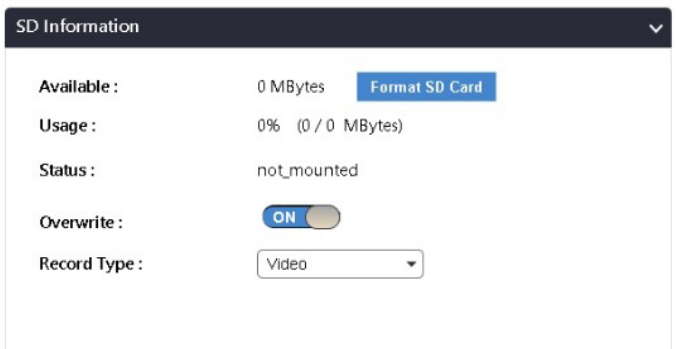
Event - SD Record





SD Record Handler Configurations

Configures which type of event trigger to enable the SD recording and scheduling function. The following options are available:

- Enable Trigger Alarm Detection
- Enable Trigger Motion Detection
- Enable Trigger Tampering Alarm
- Enable Trigger Video Analytics
- Enable Trigger Scheduled

SD Information

Available

If an SD card is installed, this section will display information on the availability of the SD card.

Usage

If an SD card is installed, this section will display the percentage of the total storage used.

Format SD Card

Formats the SD card; all data stored on the SD card will be erased if this option is used.

Status

Displays whether an SD card is installed or not. If an SD card is detected, **ok** will be displayed; if an SD card is not detected (or a faulty SD card is used), **not_mounted** will be displayed.

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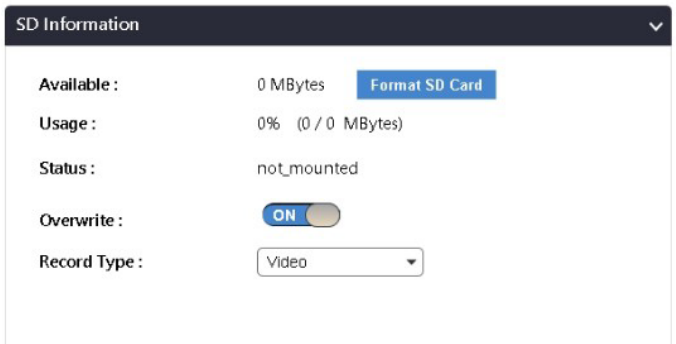
SD Record Cont.



Overwrite
Enables or disables SD card overwrite.

Record Type
Configures the recording method to record the stream onto the SD card. The options are **Video** or **Snapshot**.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset
Reset button to discard all the settings and revert to the previous settings.

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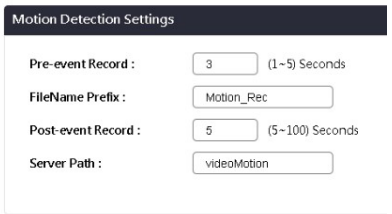
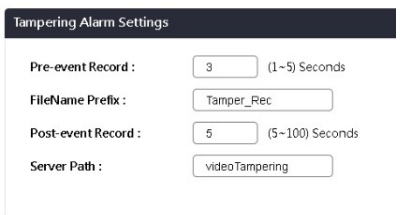
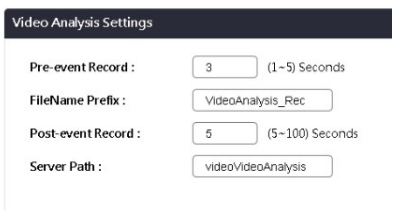
SD Record Cont.







Alarm/Motion/Tampering/Video Analysis Settings Record Type Selected: Snapshot

Pre-event Snapshots
Configures the number of pre-event snapshots to upload to SD card. The options are **0**, **1**, **3**, **5** and **10**.

Post-event Snapshots
Configures the number of post-event snapshots to upload to SD card. The options are **1**, **3**, **5**, **10**, **30** and **60**.

Pre-event Snapshot Interval
Configures the interval of pre-event snapshots. The options are **1**, **3**, **5** and **10**.

Post-event Snapshot Interval
Configures the interval of post-event snapshots. The options are **1**, **3**, **5** and **10**.

FileName Prefix
Configures a prefix to append to the filename. The default prefixes for Alarm, Motion, Tampering Detection and Video Analysis are **Alarm**, **Motion**, **Tampering** and **Video Analysis**, respectively.

The format of the filenames:

Alarm_yyyymmddhhmmss
Motion_yyyymmddhhmmss
Tampering_yyyymmddhhmmss
Video Analysis_yyyymmddhhmmss

Server Path
Configures a folder name on the SD card. The default folder names for Alarm, Motion, Tampering Detection and Video Analysis are **Alarm**, **Motion**, **Tampering** and **Video Analysis**, respectively.

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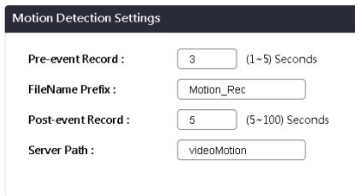
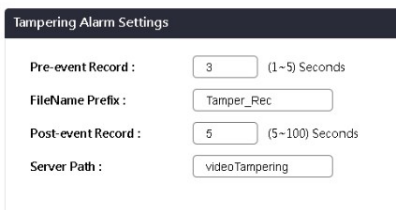
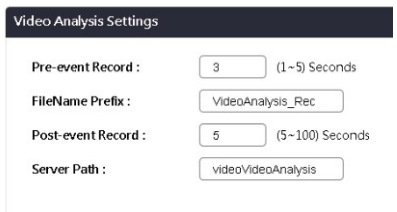
SD Record Cont.







Alarm/Motion/Tampering/Video Analysis Settings Record Type Selected: Video

Pre-event Record

Configures the length of the pre-event recording. The range is 1~5 seconds.

FileName Prefix

Configures a prefix to append to the filename. The default prefixes for Alarm, Motion, Tampering Detection and Video Analysis are **Alarm**, **Motion**, **Tampering** and **Video Analysis**, respectively.

The format of the filenames:

Alarm_yyyymmddhhmmss
Motion_yyyymmddhhmmss
Tampering_yyyymmddhhmmss
Video Analysis_yyyymmddhhmmss

Post-event Record

Configures the length of the post-event recording. The range is 5~100 seconds.

Server Path

Configures a folder name on the SD card. The default folder names for Alarm, Motion, Tampering Detection and Video Analysis are **Alarm**, **Motion**, **Tampering** and **Video Analysis**, respectively.

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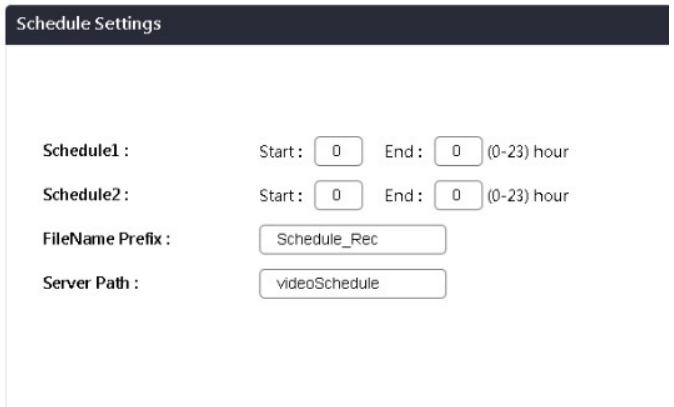
SD Record Cont.



Day / Time Inclusion Filter

	None	AllDay	Schedule1	Schedule2
Monday	◉	○	○	○
Tuesday	◉	○	○	○
Wednesday	◉	○	○	○
Thursday	◉	○	○	○
Friday	◉	○	○	○
Saturday	◉	○	○	○
Sunday	◉	○	○	○

Trigger Scheduled Settings

Schedule1 and Schedule 2

Configures the **Start** time and **End** time to trigger the scheduled record video or snapshot event. Two time slots (**Schedule1** and **Schedule2**) are available.

FileName Prefix

Configures a prefix to append to the filename.

Server Path

Configures a folder name on the SD card.

Day/Time Inclusion Filter

Select the day of the week to trigger the schedule. **Schedule1** and **Schedule2** previously configured or **AllDay** for whole day recording can be selected for each weekday.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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Video Analytics - Global Settings

Video Analytics technology processes digital video using a special AI algorithm to perform security related functions. Using these analytics provides a practical solution to reviewing hours of surveillance video to identify incidents that have been configured, increasing efficiency of security monitoring.

Global Settings

Select a **View**. When Global Settings are configured, these control all the analytics that are set for the selected view.

Tracking Sensitivity

Select the **Tracking Sensitivity**, **1-6**. This determines how often alarms will be alerted when something happens in the area; the smaller the number, the more alarms will be set off.

Motion Threshold

Select the **Motion Threshold**, **20-200**. This determines how often alarms will be alerted due to motion; the smaller the number, the more alarms will be set off.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

Reset button to discard all the settings and revert to the previous settings.

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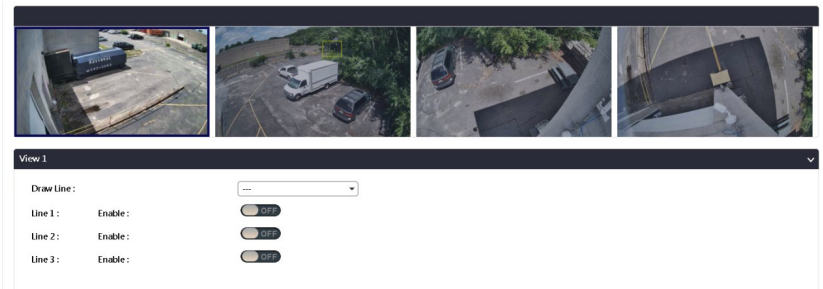
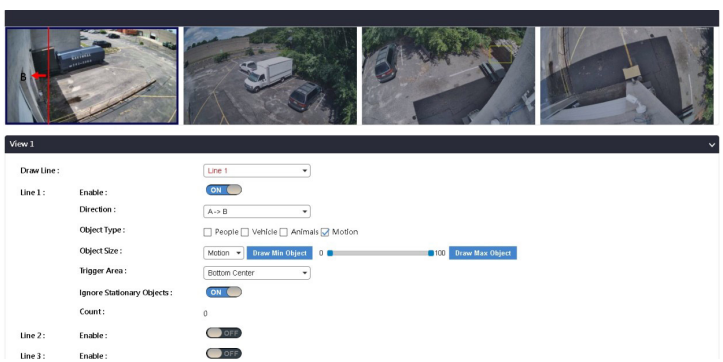
Video Analytics - Line Crossing





Line Crossing

Line Crossing is designed to establish borders to outline certain zones within the camera coverage.

View

Select a **View** to create the line. Up to 3 lines can be created for each view. the first line is red, the second blue and the third is green.

Draw Line and Enable

Select the **Line**, **1, 2, 3**, and **Enable**.

Direction

Select the **Direction** the object has to cross the line to trigger an alarm, **A to B**, **B to A** or in **both** directions.

Object

Select the **Object Type**, **People**, **Vehicle** or **Animal**; **Motion** is selected by default. Then determine the object minimum and maximum size (object size as a percentage of the image, 0-100%). This will determine the parameters for the size of the object that crosses the line. Click **Draw Min Object** or **Draw Max Object**; a box will display on the scene. Use the cursor or the slider to draw the desired size of the object.

Trigger Area

Set the **Trigger Area** (**Bottom Center/Right/Left**, **Top Center/Right/Left**, **Center**) to designate where the object triggers the alarm, noting exactly where an object crosses the line. See Note on trigger area below.

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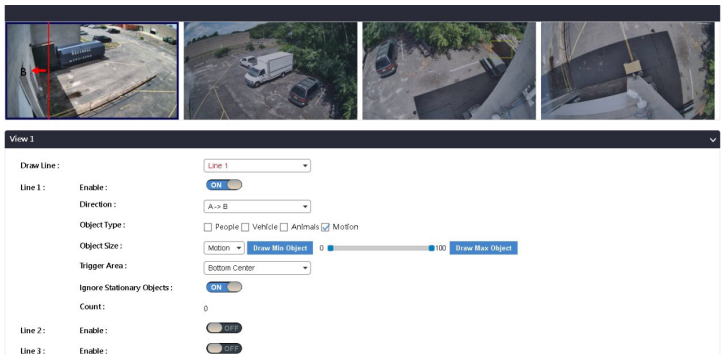
Line Crossing Cont.



Ignore Stationary Objects
Use the button to turn this on or off, for example to ignore a parked car even if a Vehicle is detected.

Count
This field will display the line counting, the number of times the line has been crossed based on the parameters set for line crossing. For example, if only Vehicle is selected, and a person crosses the line, that person will not be counted. It can be reset by pressing the Reset Count button.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect. After saving, when the event occurs, it will be highlighted on the Live screen and bounding boxes will display on Live and Playback video.

Reset
Reset button to discard all the settings and revert to the previous settings.

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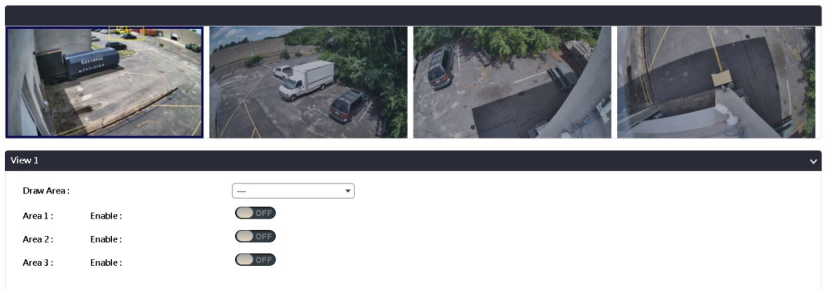
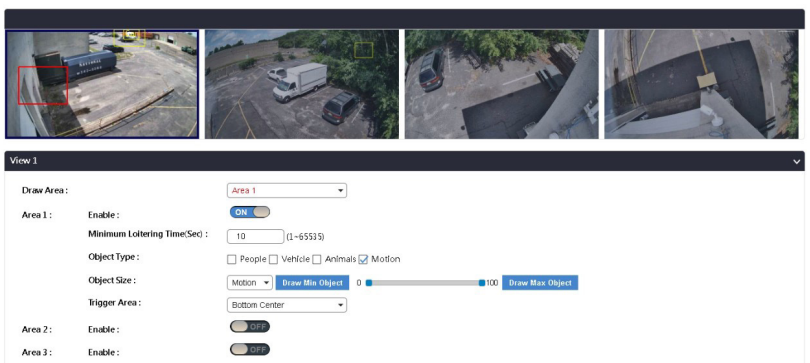
Video Analytics - Loitering





Loitering

Loitering is designed to watch for suspect people/objects that enter and linger within a defined area for a defined period of time.

View

Select a **View** to create the area. Up to 3 areas can be created for each view. the first area is red, the second blue and the third is green.

Draw Area and Enable

Select the **Area**, **1**, **2**, **3**, and Enable. Use the cursor to draw the area; right click to end defining the area.

Minimum Loitering Time

Enter the amount of time (seconds) an object has to remain in the area to be considered loitering.

Object

Select the **Object Type**, **People**, **Vehicle** or **Animal**; **Motion** is selected by default. Then determine the object minimum and maximum size (object size as a percentage of the image, 0-100%). This will determine the parameters for the size of the object that loiters in the area. Click **Draw Min Object** or **Draw Max Object**; a box will display on the scene. Use the cursor or the slider to draw the desired size of the object.

Trigger Area

Set the **Trigger Area** (**Bottom Center/Right/Left**, **Top Center/Right/Left**, **Center**) to designate where the object triggers the alarm, so if an object stays in the area for longer than the defined time, the exact point of entry is available. See Note on trigger area below.

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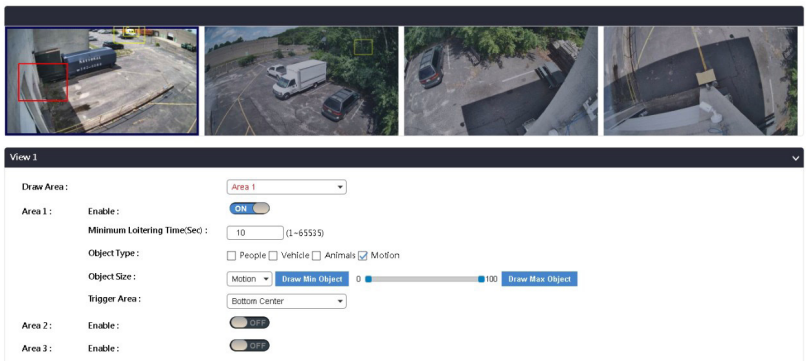
Loitering Cont.



Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect. After saving, when the event occurs, it will be highlighted on the Live screen and bounding boxes will display on Live and Playback video.

Reset

Reset button to discard all the settings and revert to the previous settings.

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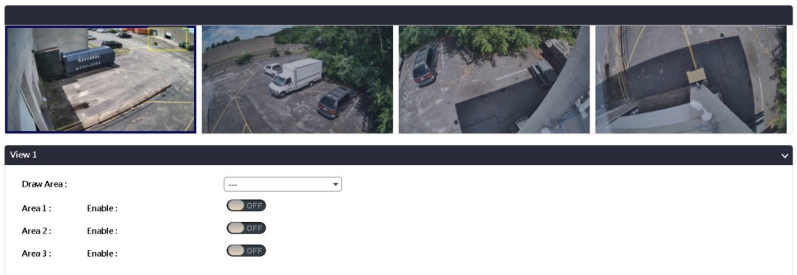
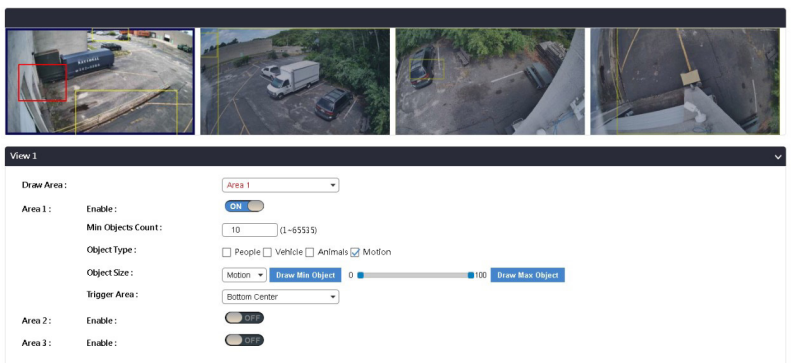
Video Analytics - Crowding





Crowding

Crowding is designed to to keep track of the number of people/objects in a designated area.

View

Select a **View** to create the area. Up to 3 areas can be created for each view. the first area is red, the second blue and the third is green.

Draw Area and Enable

Select the **Area**, **1**, **2**, **3**, and **Enable**. Use the cursor to draw the area; right click to end defining the area.

Minimum Object Count

Enter the number of objects to define how many objects are to be considered a crowd.

Object

Select the **Object Type**, **People**, **Vehicle** or **Animal**; **Motion** is selected by default. Then determine the object minimum and maximum size (object size as a percentage of the image, 0-100%). This will determine the parameters for the size of the objects that are in the area. Click **Draw Min Object** or **Draw Max Object**; a box will display on the scene. Use the cursor or the slider to draw the desired size of the object.

Trigger Area

Set the **Trigger Area** (**Bottom Center/Right/Left**, **Top Center/Right/Left**, **Center**) to designate where the object triggers the alarm, so if more than the defined number of objects allowed enters the area, the exact point of entry is available. See Note on trigger area below.

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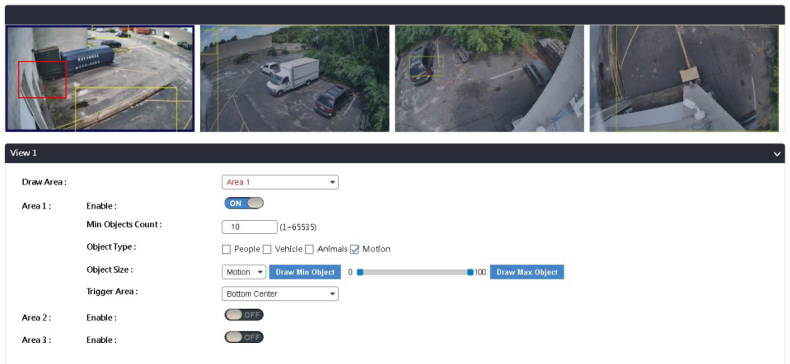
Crowding Cont.



Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect. After saving, when the event occurs, it will be highlighted on the Live screen and bounding boxes will display on Live and Playback video.

Reset

Reset button to discard all the settings and revert to the previous settings.

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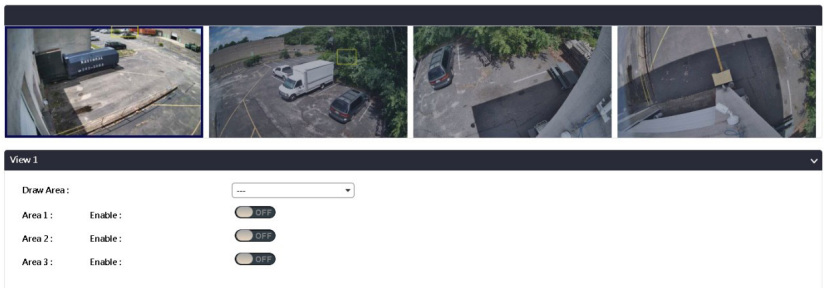
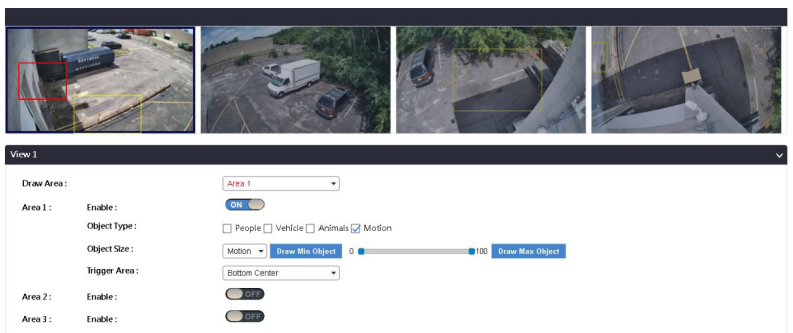
Video Analytics - Intrusion





Intrusion

Intrusion can define an area to watch for any suspicious or unauthorized person/object that enters the specified area. This way a critical area can be monitored for any trespassing.

View

Select a **View** to create the area. Up to 3 areas can be created for each view. the first area is red, the second blue and the third is green.

Draw Area and Enable

Select the **Area**, **1**, **2**, **3**, and **Enable**. Use the cursor to draw the area; right click to end defining the area.

Object

Select the **Object Type**, **People**, **Vehicle** or A**nimal**; **Motion** is selected by default. Then determine the object minimum and maximum size (object size as a percentage of the image, 0-100%). This will determine the parameters for the size of the objects that are in the area. Click **Draw Min Object** or **Draw Max Object**; a box will display on the scene. Use the cursor or the slider to draw the desired size of the object.

Trigger Area

Set the **Trigger Area** (**Bottom Center/Right/Left**, **Top Center/Right/Left**, **Center**) to designate where the object triggers the alarm, so the exact point of entry is available. See Note on trigger area below.

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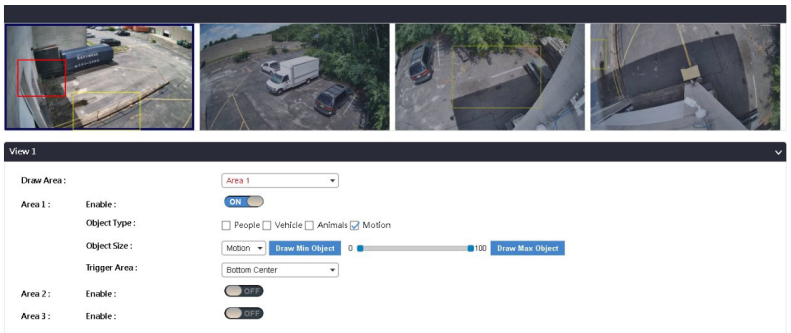
Intrusion Cont.



Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect. After saving, when the event occurs, it will be highlighted on the Live screen and bounding boxes will display on Live and Playback video.

Reset

Reset button to discard all the settings and revert to the previous settings.

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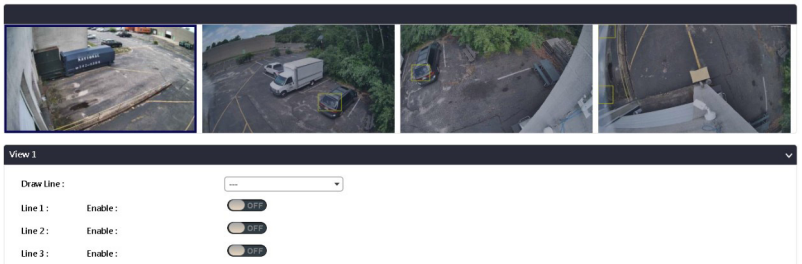
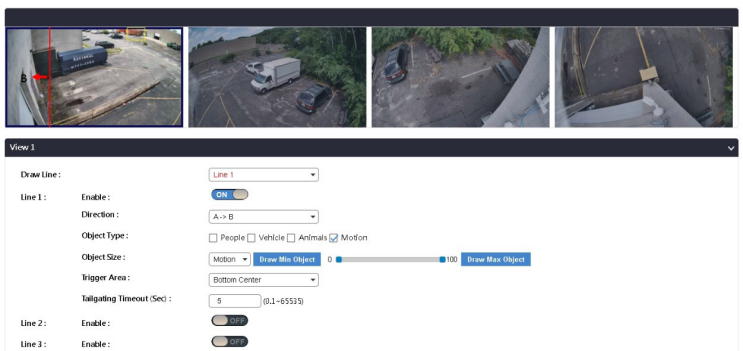
Video Analytics - Tailgating





Tailgating

Tailgating is designed to control access to a sensitive area and detect if more than one person/vehicle enters an area too close to the previous entry.

View

Select a **View** to create the line. Up to 3 lines can be created for each view. the first line is red, the second blue and the third is green.

Draw Line and Enable

Select the **Line**, **1**, **2**, **3**, and **Enable.**

Direction

Select the **Direction** the object has to cross the line too closely to the previous crossing to trigger an alarm, **A to B**, **B to A** or in **both** directions.

Object

Select the **Object Type**, **People**, **Vehicle** or **Animal**; **Motion** is selected by default. Then determine the object minimum and maximum size (object size as a percentage of the image, 0-100%). This will determine the parameters for the size of the object that crosses the line too closely. Click **Draw Min Object** or **Draw Max Object**; a box will display on the scene. Use the cursor or the slider to draw the desired size of the object.

Trigger Area

Set the **Trigger Area** (**Bottom Center/Right/Left**, **Top Center/Right/Left**, **Center**) to designate where the object triggers the alarm, noting exactly where an object crosses the line too closely. See Note on trigger area below.

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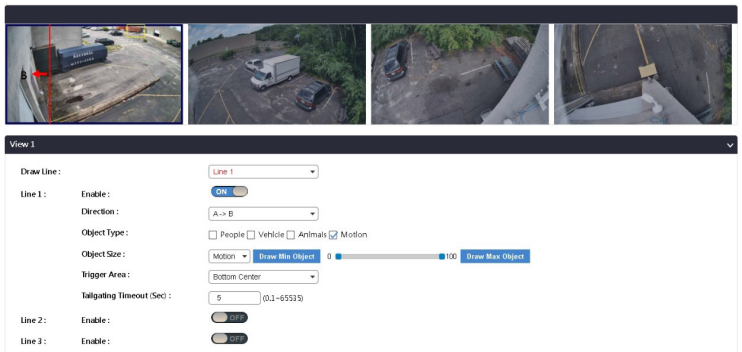
Tailgating Cont.



Tailgating Timeout
Define how much time (seconds) has to pass before another object can pass the line.

Save
Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect. After saving, when the event occurs, it will be highlighted on the Live screen and bounding boxes will display on Live and Playback video.

Reset
Reset button to discard all the settings and revert to the previous settings.

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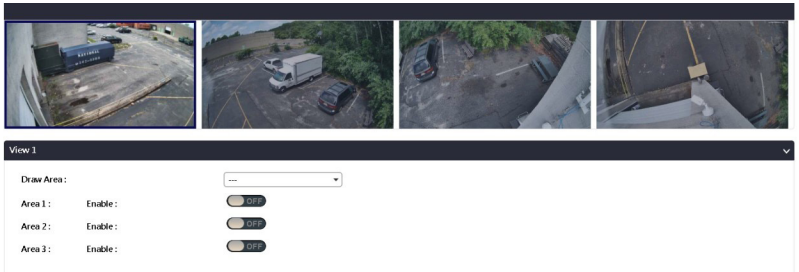
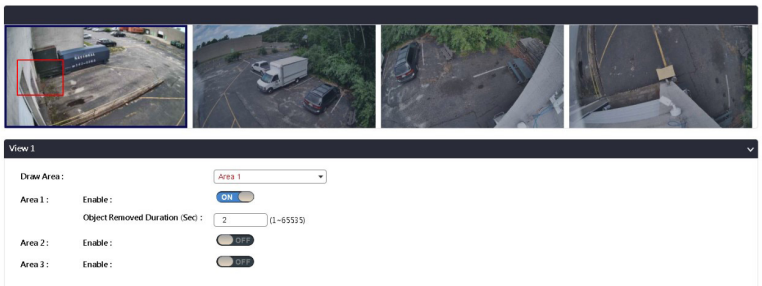
Video Analytics - Removed





Removed

Object Removed detection was developed to guarantee that valuable or important objects are safeguarded in their location.

View

Select a **View** to create the area. Up to 3 areas can be created for each view. the first area is red, the second blue and the third is green.

Draw Area and Enable

Select the **Area**, **1**, **2**, **3**, and **Enable**. Use the cursor to draw the area; right click to end defining the area.

Object Removed Duration

Enter a number to define how long a time (seconds) has to pass before the object is considered removed.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect. After saving, when the event occurs, it will be highlighted on the Live screen and bounding boxes will display on Live and Playback video.

Reset

Reset button to discard all the settings and revert to the previous settings.

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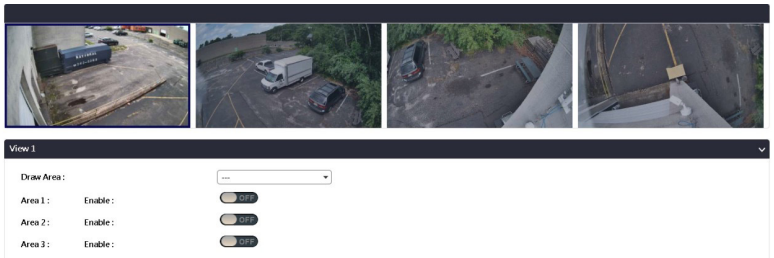
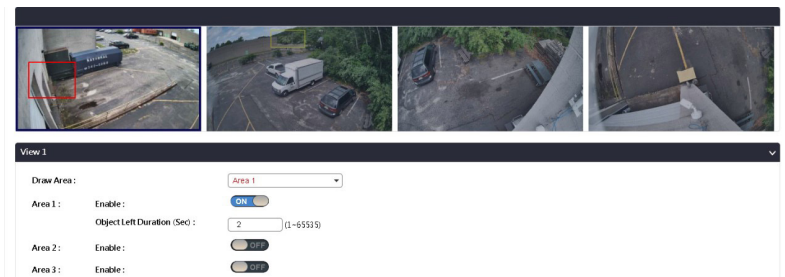
Video Analytics - Left





Left

Object Left detection is designed to prevent an object from being intentionally deposited in a critical place. If an object is left in a defined area, it can quickly be determined if it is suspicious.

View

Select a **View** to create the area. Up to 3 areas can be created for each view. the first area is red, the second blue and the third is green.

Draw Area and Enable

Select the **Area**, **1**, **2**, **3**, and **Enable**. Use the cursor to draw the area; right click to end defining the area.

Object Left Duration

Enter a number to define how long a time (seconds) the object has to remain in the area before the object is considered left.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect. After saving, when the event occurs, it will be highlighted on the Live screen and bounding boxes will display on Live and Playback video.

Reset

Reset button to discard all the settings and revert to the previous settings.

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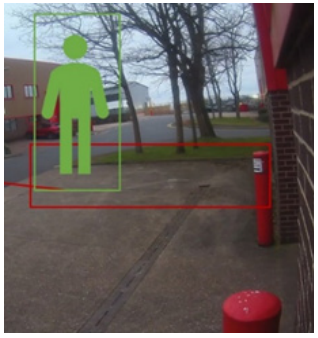
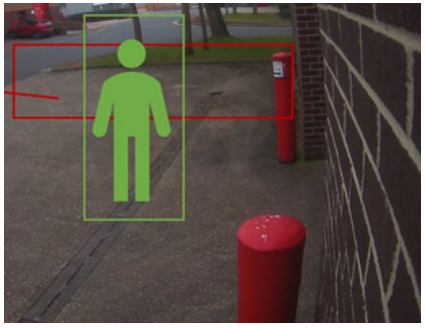


Entering from background. Feet enter area first; trigger area Bottom Center.



Entering from foreground. Head enters area first; trigger area Top Center.

Crossing from background. Feet cross line first; trigger area Bottom Center.

Trigger Area

Note on Trigger Area: Setting the trigger area adds another dimension to fine-tune how an event is triggered. Since objects are represented as a bounding box, this pinpoints exactly where in that box the trigger occurs.

By selecting the specific place in the bounding box (Bottom Center/Right/Left, Top Center/Right/Left, or Center Center) that the object triggers the alarm, each analytic event can be customized for different scenarios.

When defining an area for Intrusion, Loitering, Crowding or Object Left/Removed, it would matter whether the object is approaching the area from the foreground, when it would be more likely to trigger at the top of the box, or from the background, when it is more likely to trigger at the bottom of the box. For line cross and tailgating, it would usually be preferential to select a bottom area, where the feet of a person or front of a vehicle would cross the line first and eliminate some random momentary

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Video Analytics - Overview

	Camera 1	Camera 2	Camera 3	Camera 4
Line Crossing	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐
Loitering	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐
Crowding	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐
Intrusion	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐
Tailgating	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐
Removed	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐
Left	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐	1 ☐ 2 ☐ 3 ☐

Overview

The Overview chart presents a summary of all the video analytics that have been configured for each view of the camera. From here, the analytics can be enabled or disabled by checking or unchecking the box next to the line/ area 1-3 for each view.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

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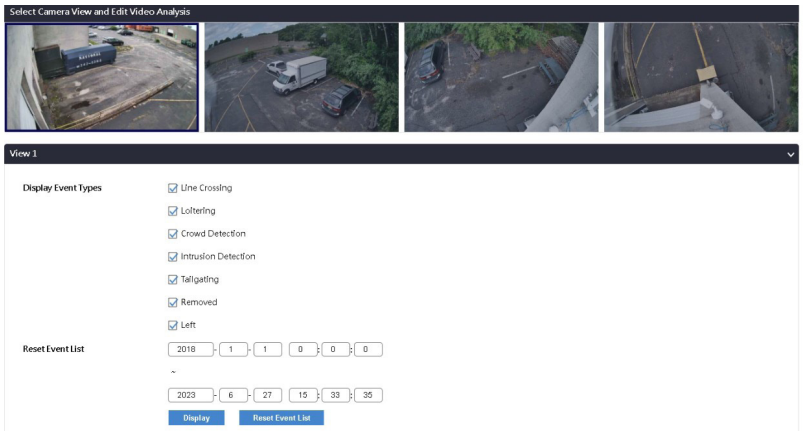
Video Analytics - Event List



Event List

A list of available Video Analytics Event types are listed. Check the Event Type(s) for which a report is needed. A range of dates and times are provided. Click **Display** to see a report on what events took place and when. If there are multiple pages in the report, entering a page number in the Jump field and clicking Submit will display that page; clicking the arrows on either side of the page number display allows scrolling through the pages. Check **Stop Refreshing Event List** to halt the list from being constantly updated; this allows the user to easily search the event without refreshing the list, since new events might cause the event page to jump to next page, making the search more difficult. Clicking **Reset Event List** will clear the current list and start over.

Save

Save button to apply the configurations; click on this button once and all the settings are confirmed for the new changes to take effect.

Reset

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