OMNIEYE SECURITY

a brand of Spark

Omnieye PTZ Camera
User Manual

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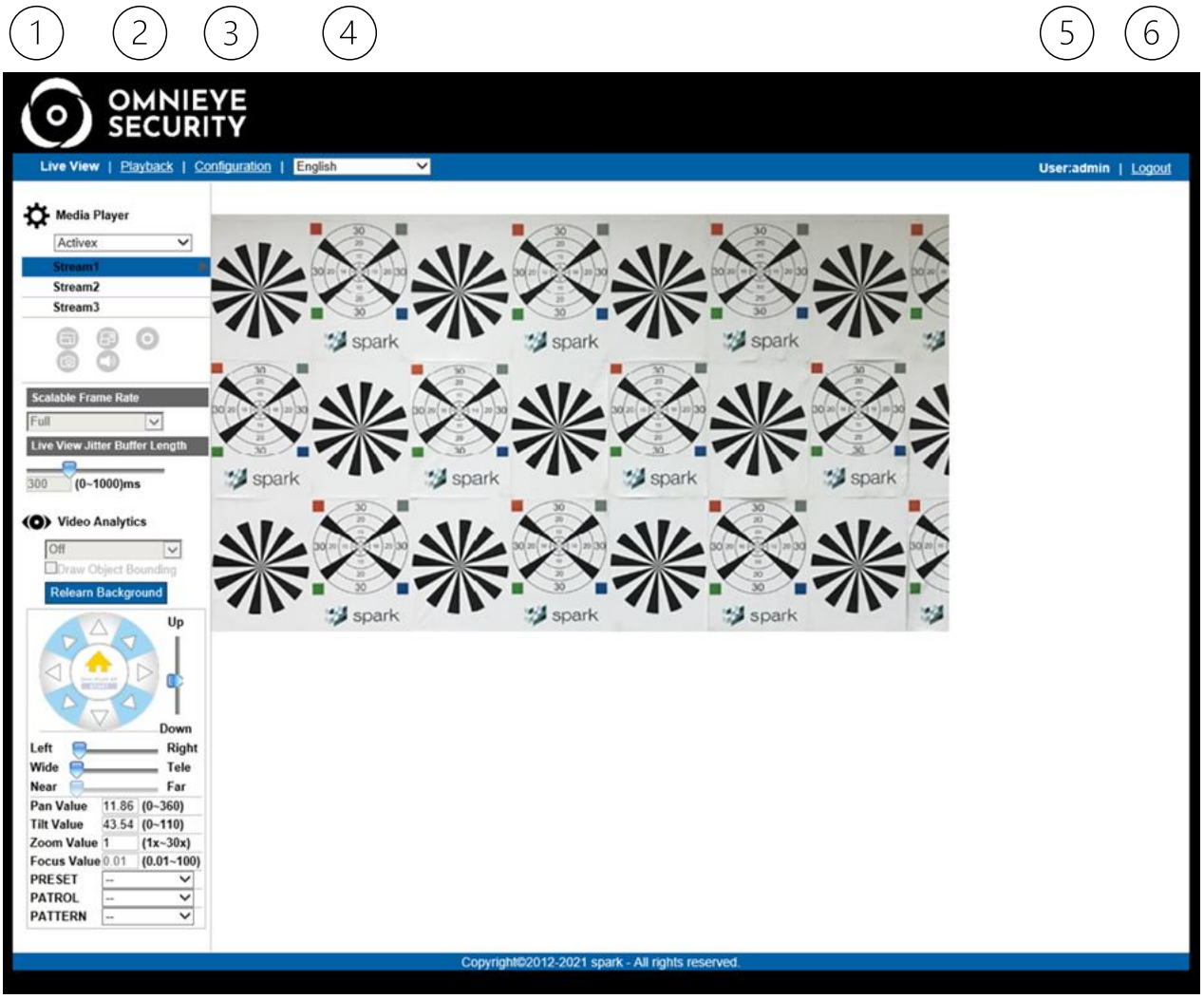
1. CONNECTION

1.1 Connecting from computer

First make sure the camera and computer are on the same subnet. Then, start a browser and enter the default IP address 192.168.1.219. A login window as shown below will pop up.

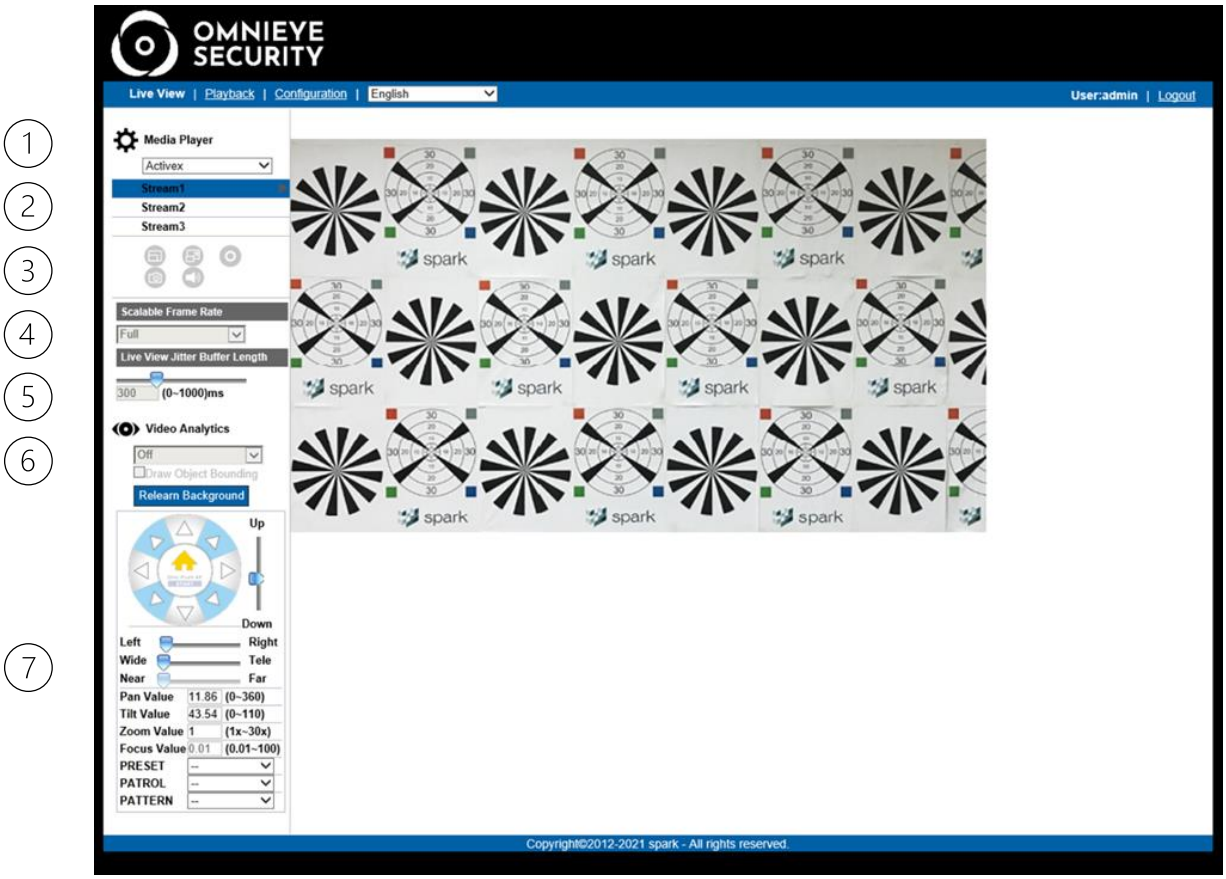
Insert username and password to access camera. Default username is admin. There is no default password for security reasons. Insert a new password for admin. The password must be at least 8 characters and must contain at least 1 uppercase letter, 1 special character and 1 alphanumeric character.

2. HOME PAGE



1	Live view	Click to access camera live view. Live view is also the default landing page when logging in to the camera web interface.
2	Playback	Click to access camera playback.
3	Configuration	Click to access camera configuration.
4	Language	Click the dropdown menu to select interface language.
5	User level	Displays the current user level accessing the camera.
6	Logout	Click to logout.

3. LIVE VIEW



1	Media player	- ActiveX: provides full functionality, better image quality and lower bandwidth consumption in Live View page. Only available for Internet Explorer. - JPEG / H.264: provides lower frame rate display but offers broader browser compatibility, including Chrome, Opera, etc.
2	Streams	Up to 3 streams available. Note: this feature is only available in ActiveX mode.
3	Icons	Snapshot: click to take a snapshot. Full screen: click for full screen display. Press ESC to go back. Manual recording: click to start manual recording. A red dot icon will appear on the upper-right corner to indicate live image is being recorded. Zoom control: click the icon, then move the mouse over the live view image and scroll to perform digital zoom in/out. Audio: click the icon to enable/disable audio output functions. Note: JPEG mode only supports snapshot. Use ActiveX mode to enjoy full feature.
4	Scalable frame rate	Allows user to dynamically adjust frame rate on browser for smooth video display. - Full: displays full frame rate according to settings under Encode page. - 1/2: displayed frame rate will be reduced to one half. - 1/4: displayed frame rate will be reduced to one quarter. Note: Use ActiveX mode and turn on SVC-T before using this function.

<table>
<tr><td>5</td><td>Live view jitter buffer length</td><td>Live View Jitter Buffer Length decides when to transmit media packets for Live View display based on packets it has collected, packets it is still waiting for, and the timing required to playback the media.

Dragging the adjustable bar of “Live View Jitter Buffer Length” to higher value lessen the negative effect, namely choppy live video display, caused by transmission delay arising from network congestion. However higher values also increase overall transmission latency.

Note: this feature is only available in ActiveX mode.</td></tr>
<tr><td>6</td><td>Video analytics</td><td>Select a video analytics function from the dropdown menu. Make sure the selected function is enabled on the video analytics page.

Check the Draw Object Bounding box to enable the camera to frame the detected object when motion detection is activated.

Click Relearn Background to save new background to compare when motion is detected.</td></tr>
<tr><td>7</td><td>PTZ control</td><td>Quick access to Pan, Tilt, Zoom, Focus control, Preset, Patrol and Pattern actions. To adjust camera view, users can:
- click once on the PTZ control panel for the camera to move in the selected direction or click and hold for continuous movement.
- Drag the bars to the desired position
- Insert exact value on the box.

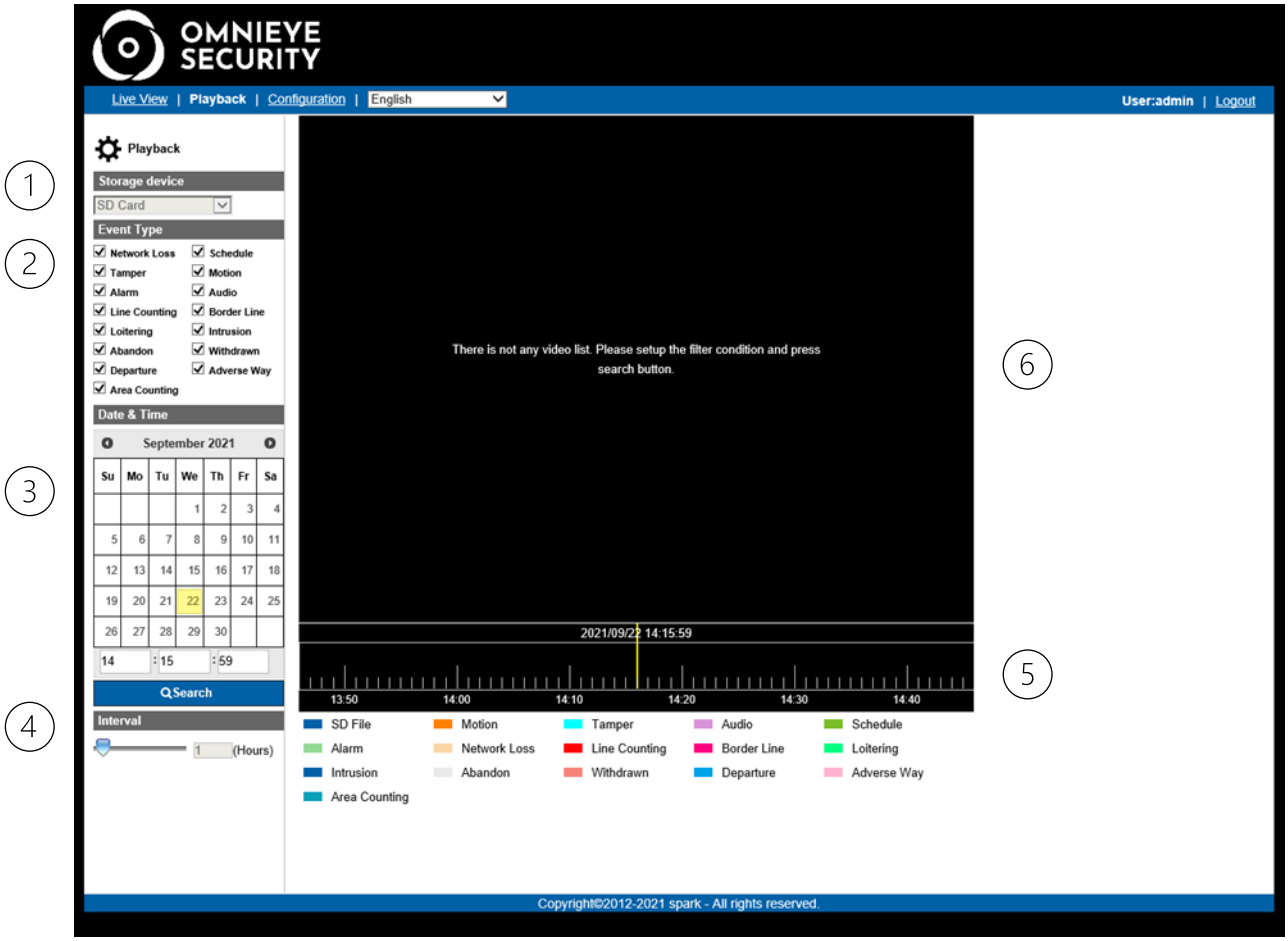
To go to home view, click on the center part of the Pan/Tilt control.

To change center position, use “click on center” function by double clicking on the desired center view for camera to readjust position. Note: this feature is only available in live view with ActiveX mode.

<table><tr><th>Item</th><th>Option/ Range</th></tr><tr><td>Up – Down / Tilt value</td><td>0 ~ 110</td></tr><tr><td>Left – Right / Pan value</td><td>0 ~ 360</td></tr><tr><td>Wide – Tele / Zoom value</td><td>1x ~ 30x (up to 300x based on Digital Zoom Limit)</td></tr><tr><td>Far – Near / Focus value</td><td>0.01 ~ 100</td></tr><tr><td>Preset</td><td>1 ~ 128</td></tr><tr><td>Patrol</td><td>1 ~ 4</td></tr><tr><td>Pattern</td><td>1 ~ 4</td></tr></table></td></tr>
</table>

4. PLAYBACK

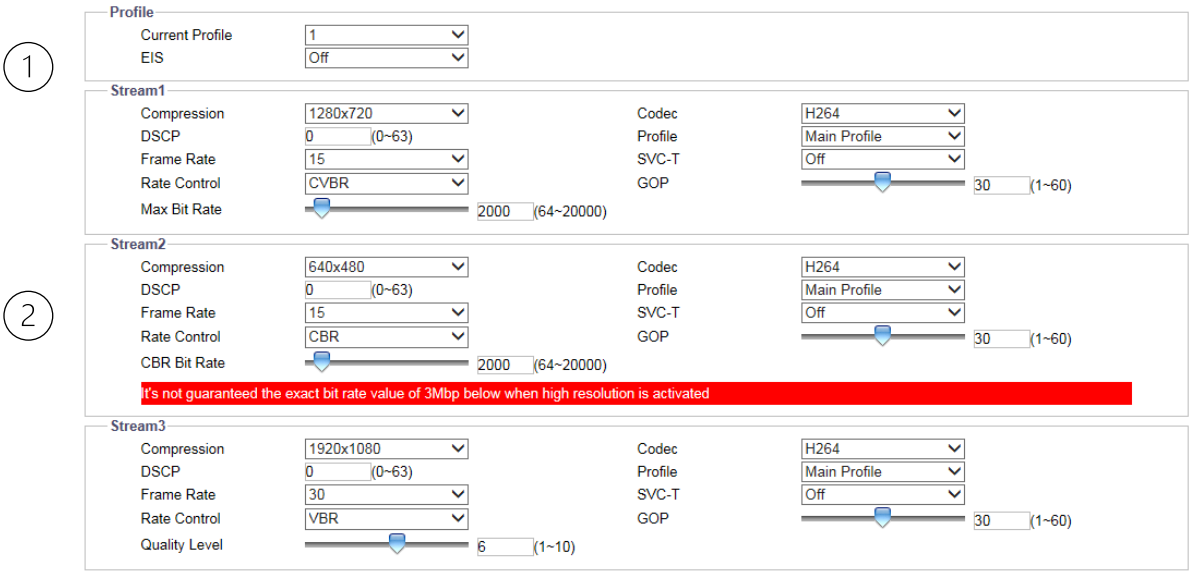
After logging in to the camera, click on Playback to access videos stored on the MicroSD card. Make sure the browser supports the video and audio format. It is recommended to use Chrome or Safari.



1	Storage device	Supports MicroSD card from the camera.
2	Event type	Select the type of event that triggered the video recording you are searching for. Available options include motion, tamper, audio, schedule, alarm, network loss, line counting, border line, loitering, intrusion, abandon, withdrawn, departure, adverse way, area counting.
3	Date & Time	Select the date and time of the video recording you are searching for. Click the search button to start searching videos according to the above configurations.
4	Interval	Define the interval of timeline area in terms of hours.
5	Timeline	Available recordings on the selected time frame and event type will be shown on the timeline.
6	Display	Click on the colored bar on the timeline area and recorded video will automatically start playing on the display.

5. CONFIGURATION

5.1 Encode

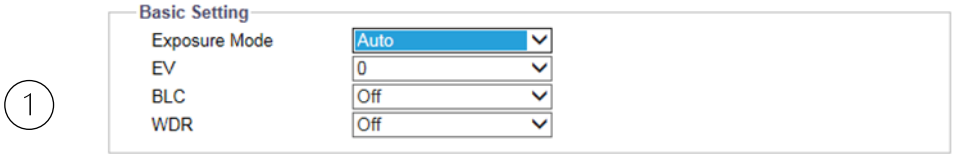


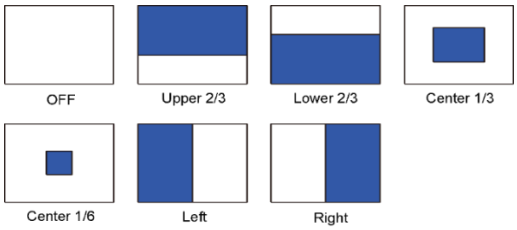
1	Profile	Select the profile to configure. EIS: enable to compensate image from blurring when movement is detected.
2	Stream	Configure each stream depending on the network environment and application. **Compression**: select a resolution. Available options depend on camera model. **DSCP**: define DSCP value for bandwidth management. Bigger value means higher priority. **Frame rate**: define the frequency at which images are captured per second. **Rate control**: select encoding method. For CBR/CVBR, use default bitrate for better balance between quality and bandwidth. For VBR, choose quality level based on your needs. **Codec**: select codec. Available options include MJPEG, H.264, H.265. **Profile**: available options depend on selected codec. H.264 supports Main profile and High profile. H.265 only supports Main profile. **SVC-T**: enable this feature to effectively adjust video quality depending on client device. **GOP**: select the value length of group of pictures. Smaller value provides better quality but more bandwidth.

5.2 Image

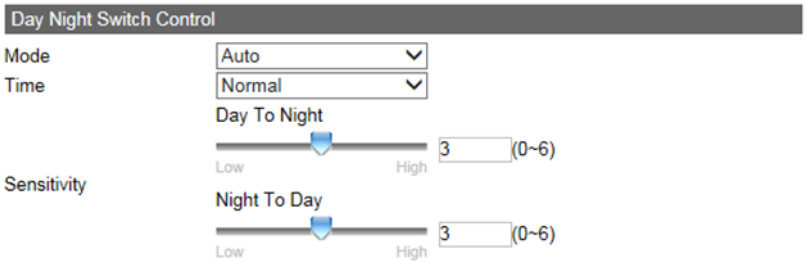
5.2.1 Exposure

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



1	Basic setting	**Exposure mode**: select the exposure mode according to your needs. - Auto: automatically determines the correct exposure. - Flickerless: overrides the shutter speed to avoid interference of fluorescent lights. - Shutter priority: allows user to select specific shutter speed. - Iris priority: allows user to set aperture value. - Manual: manually control gain value and shutter speed. **EV**: define the exposure compensation. EV is not available in manual exposure mode. **BLC**: select the area for backlight compensation. Only available when auto exposure mode is selected. Below is a reference of the area size of the available options:  **WDR**: enable for camera to optimize image quality when extreme bright and dark areas exist simultaneously. Note: when enabled, max frame rate will decrease to 30fps.

2

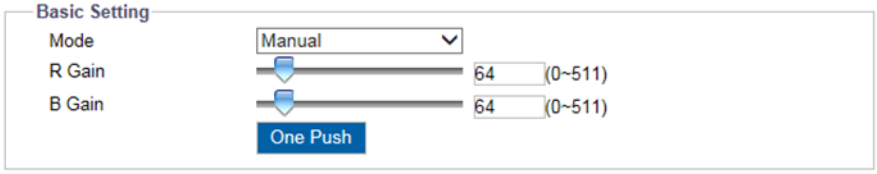


2	Day night switch control	**Mode**: select day night mode. Auto mode is not available on manual exposure mode. - Auto: camera automatically switch modes depending on the lighting conditions - Color or B/W: camera maintains mode. Only available in manual exposure mode. **Time**: set buffer time for switching. Not available on manual exposure mode. **Sensitivity**: define sensitivity for switching. Not available on manual exposure mode.

5.2.2 White Balance

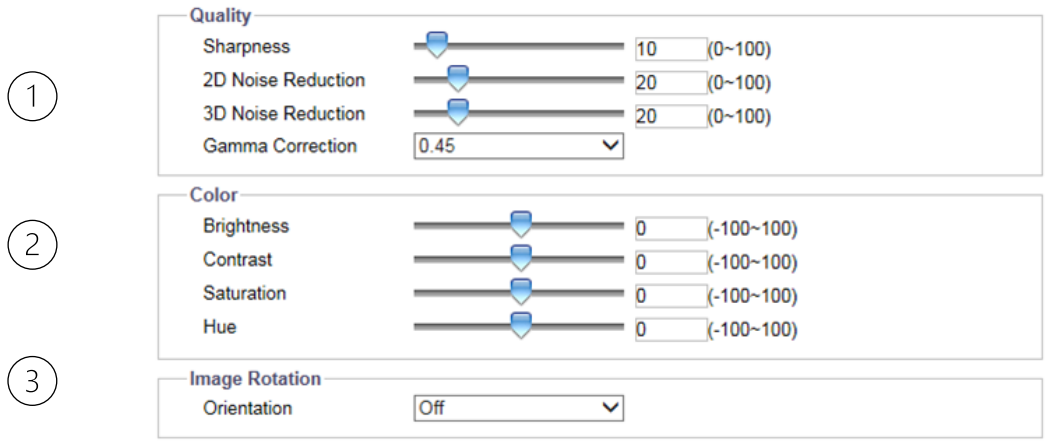
This section allows user to set the white balance values to meet ambient conditions for best color rendition.

1



1	Basic setting	**Mode**: select white balance mode. - Auto: adjusts color balance in accordance with any change in color temperature. - ATW: automatically controls color temperature ranging from 2500°K to 10000°K. - Manual: manually adjust red and blue color on the image. Click one push for camera to adjust proper gain values depending on current environment conditions.

5.2.3 Basic Setting

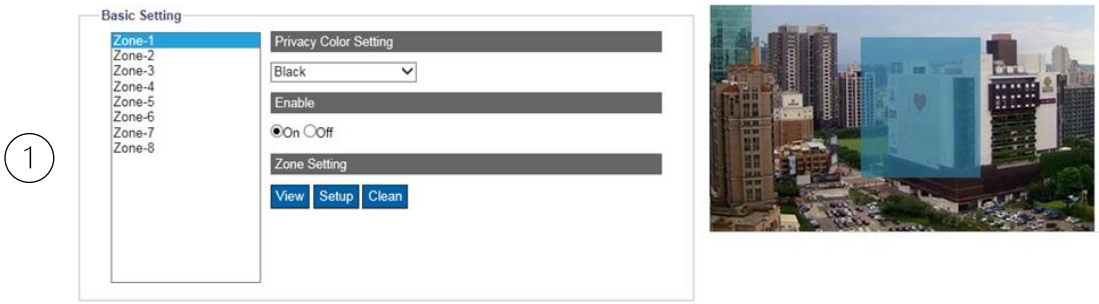


1	Quality	**Sharpness**: adjust image sharpness. Higher value provides sharper images. **2D noise reduction**: spatial noise reduction. Suitable for scenes containing motion. **3D noise reduction**: temporal noise reduction. Effective but may create motion blur. **Gamma correction**: set gamma correction for accurate image display on different screen.
2	Color	**Brightness**: adjust image brightness. Higher value provides brighter images. **Contrast**: adjust image contrast. Higher value provides higher contrast images. **Saturation**: adjust image saturation. Lower value provides images in grayscale. **Hue**: adjust image hue. Higher value provides deeper hue effect.
3	Image rotation	Select image orientation.

5.3 Video

5.3.1 Privacy Zone

Privacy zone enables user to black out a specific portion of the image. Privacy zone will apply to all streams, TV output, and Live View and it does not affect motion detection.



1	Basic setting	**Privacy color setting**: select color for the privacy zone from the dropdown menu. **Enable**: select on/off to enable/disable the privacy zone. **Zone setting**: click setup after defining the view and the zone, then adjust dimensions and position of the blue transparent rectangle representing the privacy zone. Once finished, click save to apply settings and the blue rectangle will change to solid color.

5.3.2 Enhanced Codec

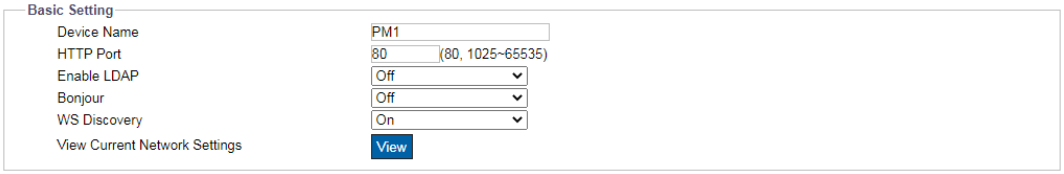
Enhanced Codec features iZone and iStream technologies to exert leverage between different regions and compression level, effectively optimizing bandwidth usage.

1	Basic setting	**iZone** allows users to designate an area for enhancing image quality. The undefined area will have higher compression to match target bitrate. To draw an area, left click on the image and drag to outline the desired zone. **iStream** EcoZone identifies dynamic motions and applies higher compression to the static background. Rate control settings not available in EcoZone mode. EcoFrame reduces iframe on minor motions scene. GOP settings not available in EcoZone+EcoFrame mode. Dynamic 3DNR automatically adjusts noise reduction level according to the environment conditions. When dynamic 3DNR is enabled, 3DNR under images will not be available.

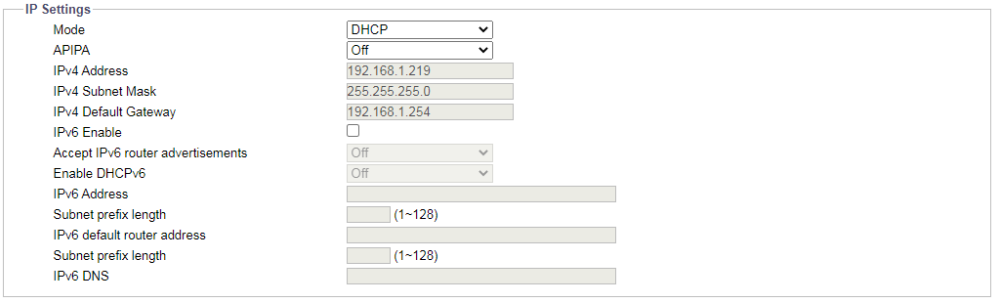
5.4 Network

5.4.1 General

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



1	Basic setting	**Device Name**: enter device name. **HTTP Port**: insert desired HTTP port. Default port number is 80. **Enable LDAP**: select on/off to enable/disable Lightweight Directory Access Protocol. **Bonjour**: select on/off to enable/disable Bonjour protocol. **WS Discovery**: select on/off to enable/disable web service discovery. **View Current Network Settings**: click view to see current network related settings.



2	IP settings	**Mode**: select mode according to your needs. Available options: manual, PPPoE, DHCP. **APIPA**: select on/off to enable/disable automatic private IP addressing. **IPv4 address**: insert IP address. **IPv4 subnet mask**: default is 255.255.255.0. **IPv4 Default Gateway/Primary DNS/Secondary DNS**: default is blank. Not mandatory field. **IPv6 enable**: check box to enable IPv6 protocol. **Accept IPv6 router advertisements**: select on to enable router advertisement. **Enable DHCPv6**: enable for camera to obtain IPv6 address from DHCP server. **IPv6 address**: insert IP address **Subnet prefix length**: set prefix length for subnet. **IPv6 default router address**: set a default router address under IPv6 protocol. **Subnet prefix length**: set prefix length for subnet. **IPv6 DNS**: set a Domain Name Server under IPv6 protocol.
3	Wired setting	**Speed & Duplex**: half duplex can only send or receive info at a time. Full duplex can receive and send info simultaneously. Auto allows camera to decide which mode to adopt.
4	UPnP	**Enable UPnP**: select on/off to enable/disable Universal Plug & Play. **Mode**: select identification mode.
5	SSL	**Enable SSL**: select on to enable HTTP and HTTPS. Select off to enable HTTP only. Select HTTPS only to enable HTTPS only. When HTTPS only is enabled, web port 80 will be disabled. Before enabling SSL, please install or generate SSL. **HTTPS Port**: define HTTPS port. It is recommended to use default port number 443.

5.4.2 FTP Server

This section allows user to enable camera as FTP server. To log into the FTP server, open a browser and enter ftp://<Login ID>:<Password>@<ip address>. Default is ftp://admin:1234@192.168.0.30. The maximum connection for FTP server is 30.

1	Basic setting	**Enable**: select on/off to enable/disable FTP server. **Port**: input a value or use default port 21 to activate the FTP server function.

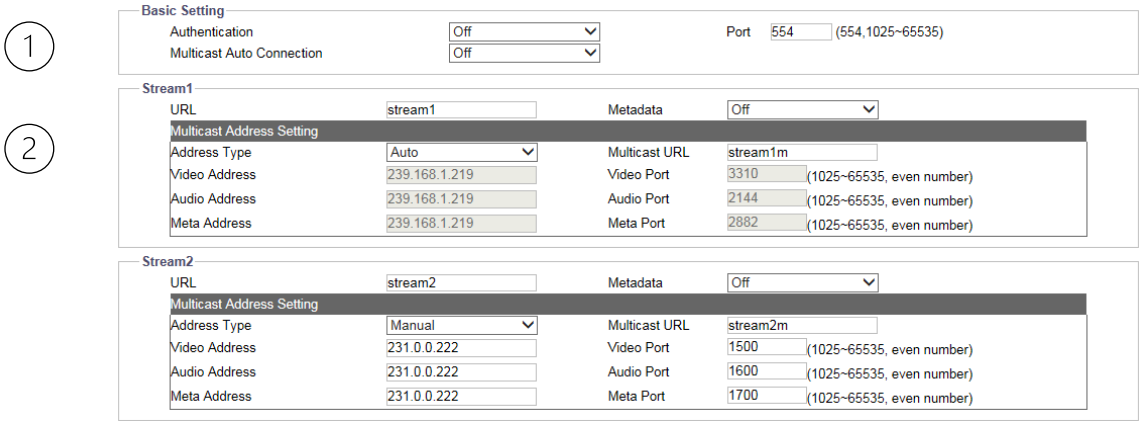
5.4.3 SFTP Server

To log into the SFTP server, open a browser and enter sftp://<Login ID>:<Password>@<ip address>. Default is sftp://admin:1234@192.168.0.30. The maximum connection for SFTP server is 30.

1	Basic setting	**Enable**: select on/off to enable/disable SFTP server. **Port**: input a value to activate the SFTP server function.

5.4.4 RTSP

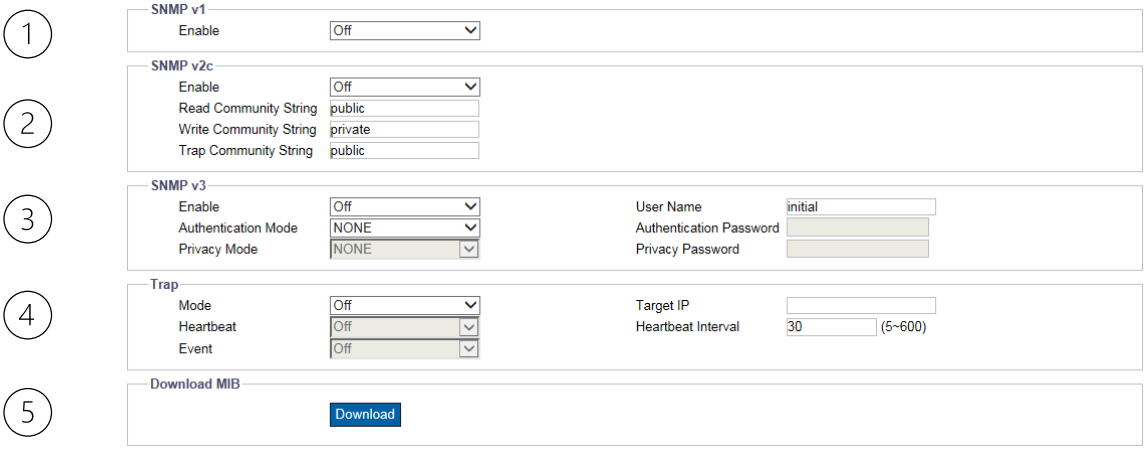
Configure RTSP to allow 3rd party devices to access the camera's stream. Note: when codec related information is changed, the RTSP server will be restarted.



1	Basic setting	**Authentication**: select on/off to enable/disable authentication on RTSP connection. **Multicast auto connection**: select on/off to enable automatic multicast mode. **Port**: insert port number or use default port number 554.
2	Stream	**URL**: insert name for unicast URL. To access from other device, enter the following address: rtsp://(camera IP address)/(URL name). For example: rtsp://192.168.1.219/URL stream1 **Metadata**: select on/off to enable/disable metadata. **Multicast URL**: insert name for multicast URL. To access from other device, enter the following address: rtsp://(camera IP address)/(Multicast URL stream 1). For example: rtsp://192.168.1.219/ Multicast URL stream 1 **Address type**: select auto to keep original camera settings or select manual to set different address and port for video, audio and meta. **Video, Audio and Meta Address/Port**: when selecting manual address type, users can define each address and port individually.

5.4.5 SNMP

SNMP is a protocol used for monitoring and managing the status of devices connected to the networks.



1	SNMP v1	Enable: select on/off to enable/disable SNMP v1.
2	SNMP v2c	Enable: select on/off to enable/disable SNMP v2c.
3	SNMP v3	Enable: select on/off to enable/disable SNMP v3.
4	Trap	**Mode**: select SNMP mode to be enabled with trap or select off to disable trap. **Target IP**: input the IP address of the SNMP server. **Heartbeat**: is a communication protocol that sends notifications in a given interval to ensure network free from delayed notifications. Select on/off to enable/disable heartbeat function. **Heartbeat interval**: define values in seconds for heartbeat interval. **Event**: select on/off to enable/disable event logs.
5	Download MIB	Click download to get specifics of MIB. MIBs describe the structure of the management data of a device subsystem; which uses a hierarchical namespace containing object identifiers (OID). Each OID identifies a variable that can be read or set via SNMP.

5.4.6 802.1X

802.1X defines the encapsulation of the EAP over LAN.

1	Basic setting	**Protocol**: select a desired EAP protocol from the dropdown menu and input required subfields to complete setup. Inner authentication mode can support CHAP, EAP-MSCHAPV2, MD5, MSCHAP, MSCHAPV2 and PAP.

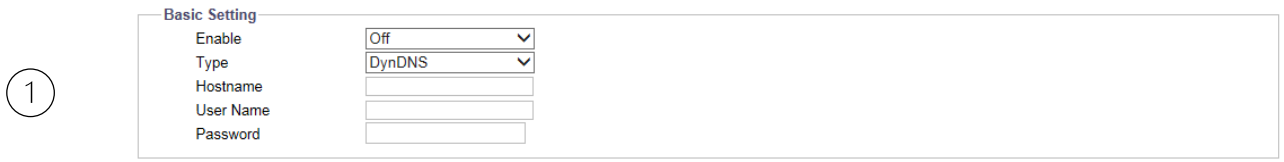
5.4.7 Firewall

This section allows users to manually define multiple IP addresses to be allowed or denied access to camera.

1	Basic setting	**Mode**: select allow/deny to allow/deny access to IP address or select off disable this feature. **IP Address**: after selecting mode, insert IP addresses to activate the filters.

5.4.8 DDNS

DDNS can automatically upgrade DSN records without further manual editing in a real time manner, therefore resulting in web address directing faster and smoother.



1	Basic setting	**Enable**: select on/off to enable/disable DDNS. **Type**: select type. DynDNS provides service with fee collection, while No-IP, Two-DNS and FreeDNS provide free services, but you must register first before enabling. **Hostname**: define hostname for DDNS. **User name / Password**: define credentials for accessing DDNS. **Hash**: mandatory field when selecting FreeDNS.

5.4.9 SSL

SSL allows sensitive information to be transmitted securely. SSL method available options include:

- None: no SSL method enabled.
- Self-signed: private own key that has no connection with person or organization that performs authorized certificate signing procedure. User can create CSR by filling required fields.
- Request: provides users with a download option of the created certificate for future use.
- Upload certificate: this option allows users to upload a previously created certificate.

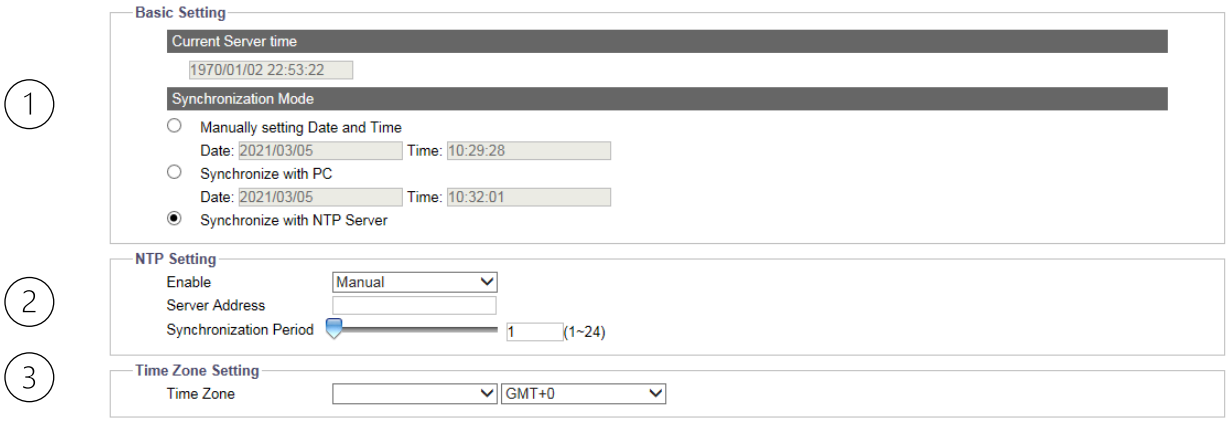
5.4.10 QoS

QoS allows resource control and traffic prioritization mechanisms to ensure performance on data flow.

1	Basic setting	**Enable**: select on/off to enable/disable QoS.
2	QoS priority	**IPv4 address**: input IPv4 address. **Netmask bit**: Define value in response to the IPv4 address assigned.

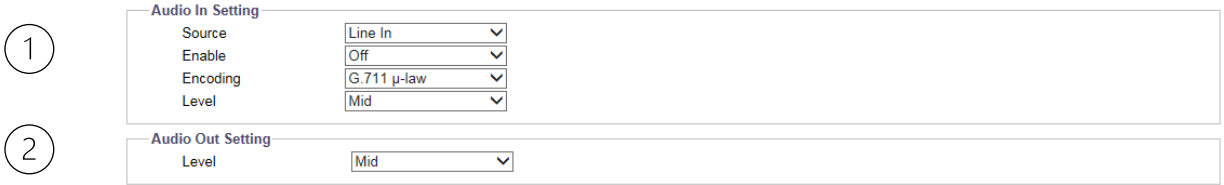
5.5 System

5.5.1 Date & Time



1	Basic setting	**Current server time**: displays the current date/time. **Synchronization mode**: select the synchronization mode for camera date and time. - Manually setting date and time: allows users to manually set date and time. - Synchronize with PC: automatic sync to connected pc date and time. - Synchronize with NTP server: automatic sync to assigned NTP server.
2	NTP setting	**Enable**: select enabled mode for NTP server. - Manual: allows user to input desired NTP server address. - From DHCP server: obtains NTP server address assigned by DCHP server. **Server address**: input NTP server address. **Synchronization period**: define synchronization period in terms of hour.
3	Time zone setting	**Time zone**: select a region then select the corresponding city.

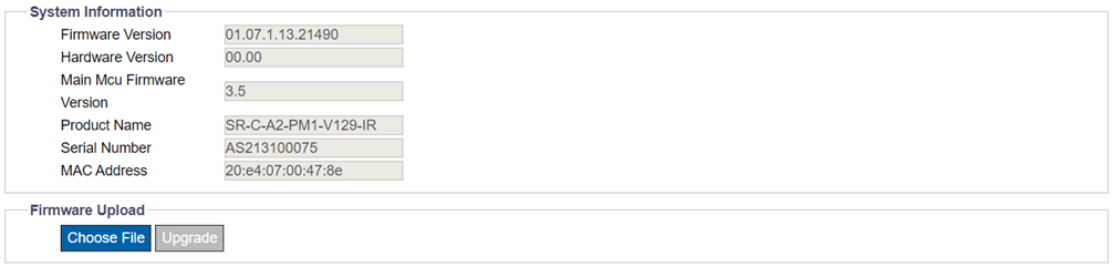
5.5.2 Audio



1	Audio in setting	**Source**: select audio in source. **Enable**: select on/off to enable/disable audio. **Encoding**: select audio encoding. **Level**: select audio level.
2	Audio out setting	**Level**: select audio level. Note: - Audio out only supports one user at a time. - The encoding of the audio out is determined by the transmitter (NVR, ActiveX, etc.).

5.5.3 Firmware

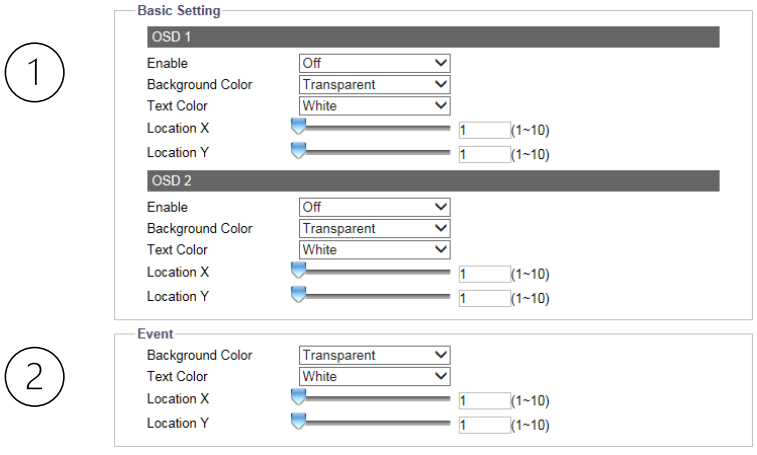
This section allows users to view system information and upgrade firmware. Camera will stop all functions during firmware upgrade and reboot itself after process is finished. When upgrading firmware, do not disconnect power or LAN cable or it will result in upgrade failure, requiring manufacturer maintenance.



5.5.4 Initialization

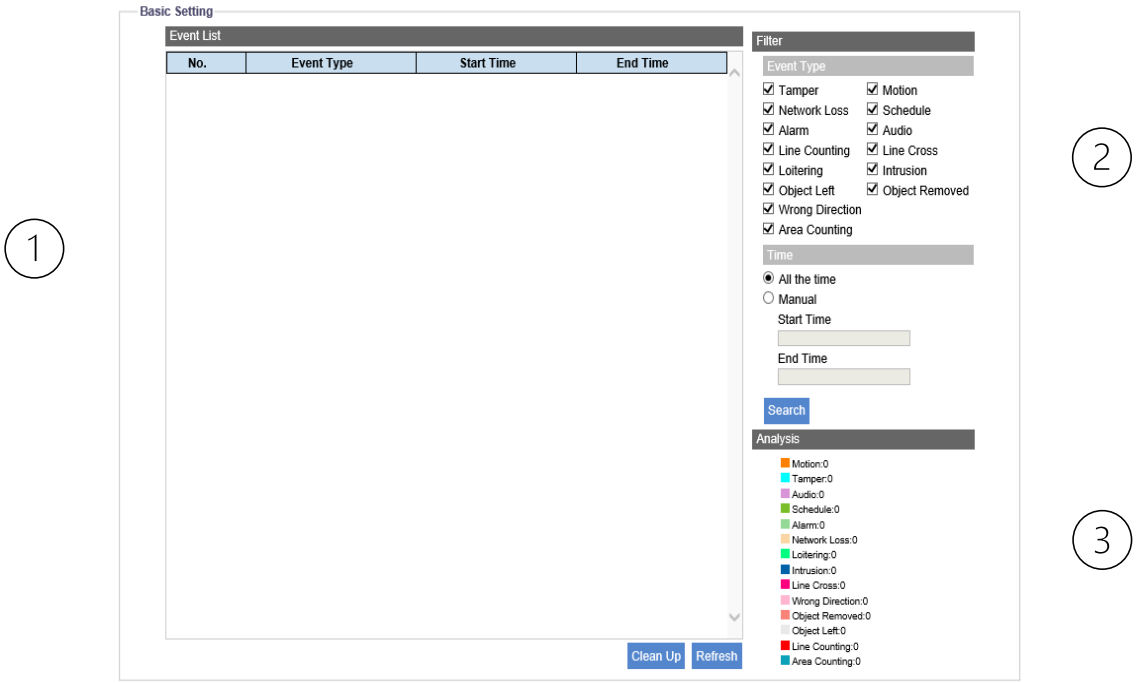
1	Camera type	Select proper power frequency to avoid flickering by fluorescent light.
2	TV format	Allows users to select the appropriate aspect ratio to fit monitor.
3	Import setting	Allows users to import previously exported camera configuration.
4	Export setting	Allows users to download camera configuration for future use.
5	Configuration setting	**Reboot**: click to reboot camera **Software factory default**: reset all to factory default except network settings. **Hardware factory default**: reset all configuration to factory default.

5.5.5 OSD



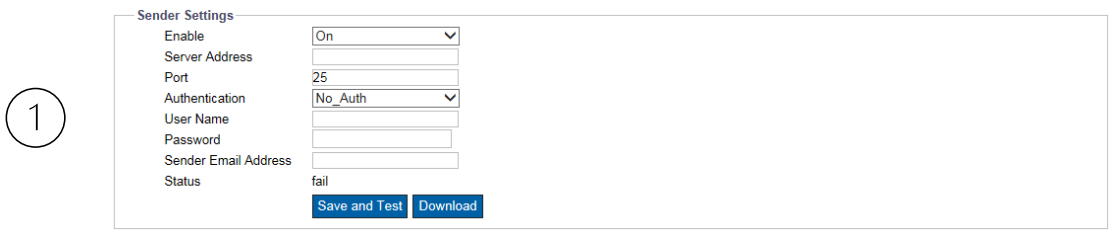
1	Basic setting	Users can setup up to 2 OSD settings concurrently. - Enable: select on/off to enable/disable OSD. - Background color: select OSD background color. - Text color: select OSD text color. - Location X/Y: define location within the x and y axis.
2	Event	Users can configure OSD triggered by event. - Background color: select OSD background color. - Text color: select OSD text color. - Location X/Y: define location within the x and y axis.

5.5.6 Events



1	Event list	Displays all events from search criteria. Click refresh to update list. Click clean up to clear.
2	Filter	Select filters then click search to look for specific events. **Event type**: select the event type you would like to search. **Time**: select manual to manually input time frame or select all the time to search all.
3	Analysis	Overview of how frequent each event has been triggered.

5.5.7 Web Log



1	Sender settings	**Enable**: select on/off to enable/disable this function. **Server address**: input a designated server address that can access camera web log. **Port**: define port number or set default 25. **Authentication**: select an authentication type. **User name / Password**: input credentials. **Sender email address**: define the sender email address. **Status**: displays connection status between camera and server. **Save and test**: click to check if server connection has been successfully established. **Download**: click to create a system log that can be used for troubleshooting.

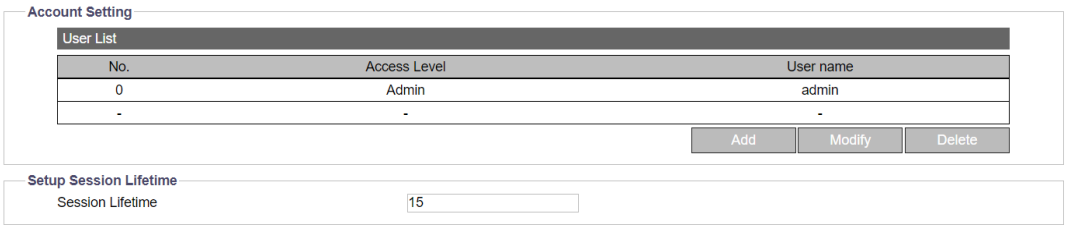
5.6 Account

5.6.1 Account Management

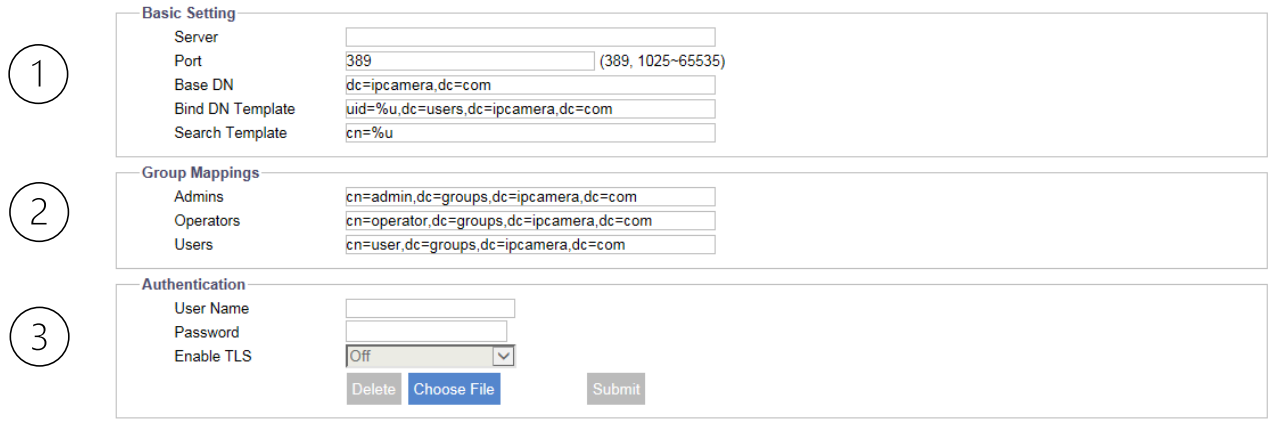
This section allows admin to manage up to 10 user accounts. Each user will be assigned an access level.

- Admin: have access to all camera configurations. Default user name admin cannot be deleted.
- Operator: can only access camera live view, storage, and remote lens control functions.
- User: can only access camera live view functions.

Note: username cannot be repeated. Password must be 4-16 characters long with valid alphanumeric value.



5.6.2 LDAP



1	Basic setting	**Server**: input server. **Port**: input port number. Default port number is 389. **Base DN/ Bind DN Template/ Search Template**: these strings are updated by the LDAP server to be accessed. Refer to these fields for future configurations.

2	Group mappings	**Admins / Operators / Users**: these strings are updated by the LDAP server to be accessed. Refer to these fields for future configurations.
3	Authentication	**User name / Password**: Enter designated credentials for authentication. **Enable TLS**: select on/off to enable/disable LDAP over TLS after uploading certificate. To enable TLS, users must upload a CA file first. To delete CA file, click delete. Note: (1) Before enabling TLS, please install or generate SSL certificate first. (2)-Before actually start using LDAP, user must enable LDAP.

5.7 Event Source

The table below gives an overview of event source configurations and dependencies.

Type	Event specific	Handler	Arming schedule	Not supported features
Alarm	NO/NC	V	V	
Audio	Sound Intensity	V	V	Audio alarm
Motion	Object size, sensitivity	V	V	
Network	Wired Network Loss/ Wired Network Conflict	V	-	Snapshot, e-mail alarm, HTTP Generic Event
Schedule	Regular/Persist trigger event action (without event source as premise)	V	V	OSD alarm, HTTP Generic Event
Tamper	Sensitivity	V	V	
mSD Healthiness	Free space/Mount Failure	V	-	Snapshot, recording

5.7.1 Handlers

Alarm output: when enabled, alarm output will activate when event occurs.

Audio: when enabled, audio output will activate when event occurs. There are 10 sound types are available for audio output. Be sure to set up the sound file beforehand.

Snapshot: when enabled, users can choose to store event snapshot to edge (SD card) or remote FTP server. Note that under Handler, the camera act as FTP client and remote device as FTP server. FTP server path must be configured in advance.

Recording: when enabled, camera can save recorded video to the SD card when event occurs.

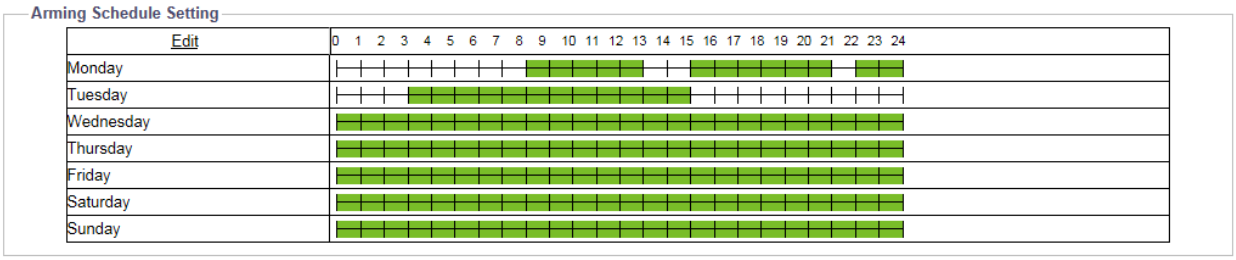
Email: when enabled, an email will be sent to a predefined user when event occurs. Users can configure email subject and message content.

OSD: when enabled, OSD will display on screen when event occurs. Users can configure OSD text.

HTTP generic event: when enabled, HTTP generic event function will activate when event occurs. There are 10 method types available to choose for message notification.

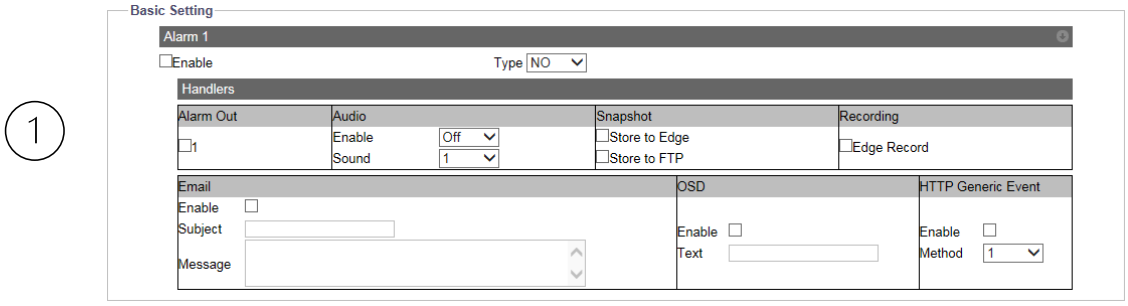
5.7.2 Arming Schedule Setting

This section allows user to set up a schedule for recording video when alarm input signal occurs. The table displays 7days of the week in a 24hrs format, highlighting the recording schedule. To configure, click edit. Users can configure up to 3 individual time range per day by defining start and end time.



5.7.3 Alarm

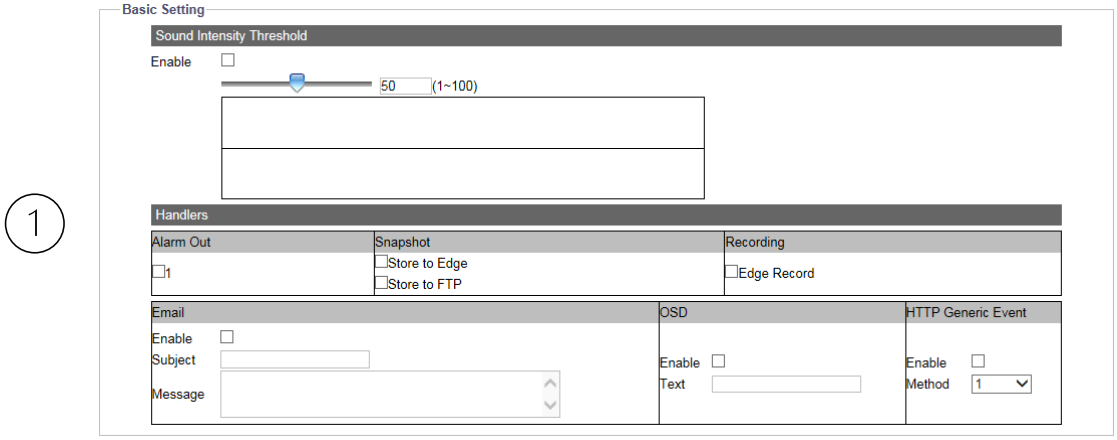
This page is designed to establish related actions when the camera receives alarm input signal.



1	Basic setting	**Enable**: check the box to enable the alarm input function. **Type**: select condition type. - NO (Normally Opened): An alarm will be triggered when the external contact closes. - NC (Normally Closed): An alarm will be triggered when the external contact opens.

5.7.4 Audio

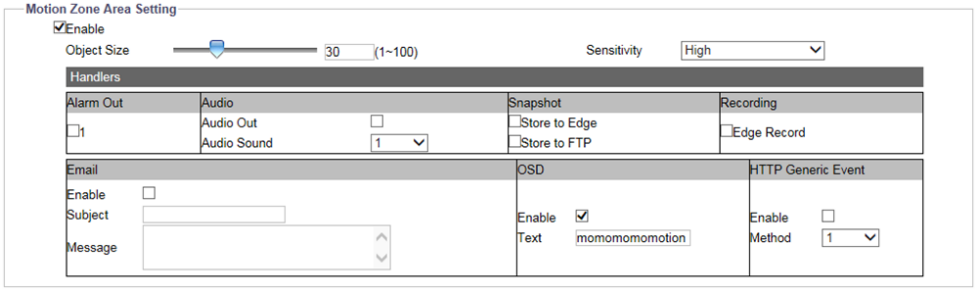
This page is designed to establish related actions when the camera receives audio input signal.



1	Basic setting	**Enable**: check the box to enable the audio input function. **Sound intensity threshold**: define intensity threshold to trigger the actions when camera receives audio signal from the connected input device.

5.7.5 Motion

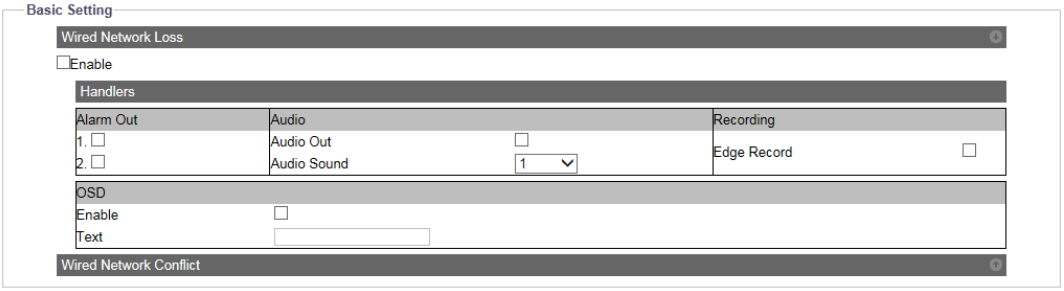
This page is designed to establish related actions when the camera detects motion.



1	Basic setting	**Enable**: draw the motion detection area on the image then enable and click save. **Object Size**: define object size for triggering motion detection. **Sensitivity**: define motion detection sensitivity.

5.7.6 Network

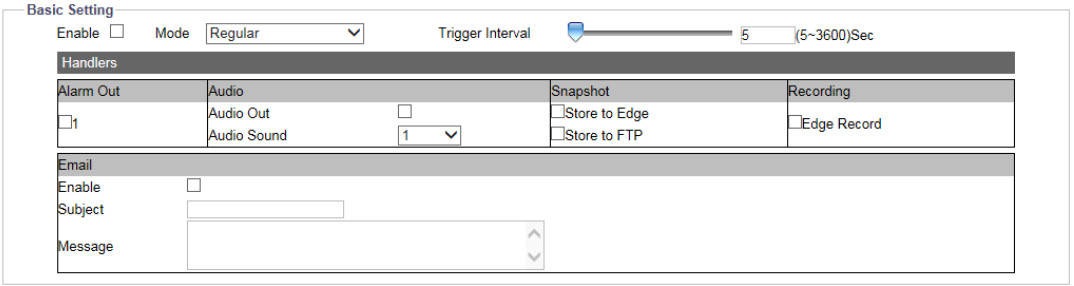
This page is designed to configure related actions when the camera is subject to network related issues.



1	Basic setting	**Wired network loss**: check the box to enable the detection of network lost. **Wired network conflict**: check the box to enable the detection of IP address conflict.

5.7.7 Schedule

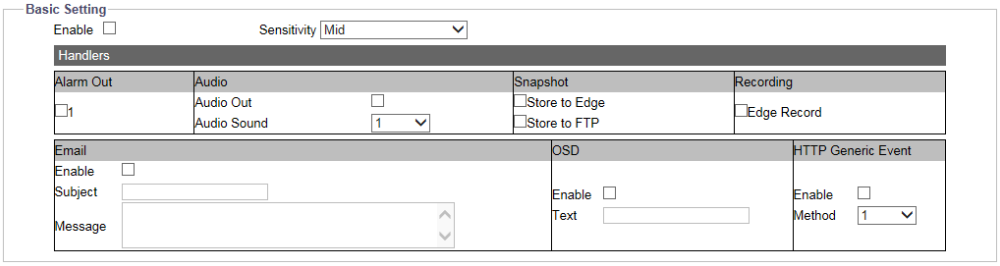
This page is designed to configure related actions for recording schedule, independently of any event.



1	Basic setting	**Enable**: check the box to enable recording schedule function. **Mode**: Under regular mode, the camera will record only when event is triggered within the scheduled time frame, while persistent mode will always record within the schedule time. **Trigger interval**: define the event trigger interval in terms of seconds.

5.7.8 Tamper

This page is designed to configure related actions when the camera is subject to tamper events.

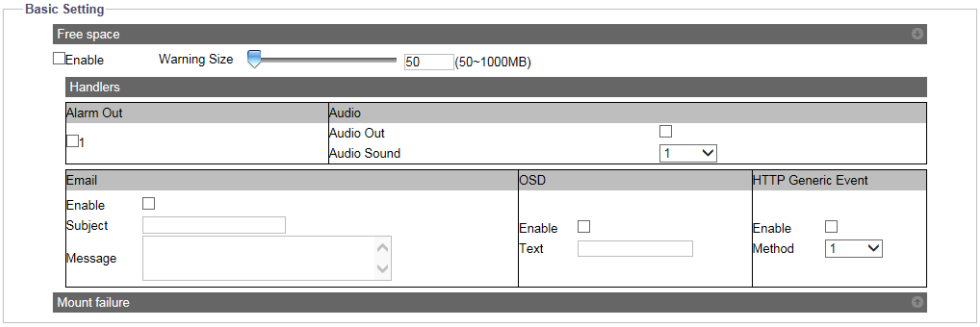


1

1	Basic setting	**Enable**: check the box to enable tamper detection. **Sensitivity**: define tamper sensitivity.

5.7.9 MSD Healthiness

This page is designed to configure related actions regarding MicroSD issues.



1

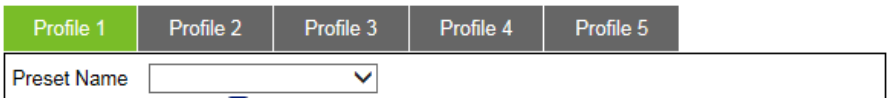
1	Basic setting	**Free space**: enable to detect of insufficient space on card. Define the threshold for trigger. **Mount failure**: enable to detect of failure of the inserted microSD card.

5.8 Video Analytics

Video Analytics configurations consist of VA specific, Profile, Handler and Arming Schedule. Table below give the overview of event source configuration and dependency.

Type	VA Specific	Handler	Arming Schedule	Remark
General	Motion sensitivity and object size.	-	-	Profile 1-5
Line Counting	Set line 1~3 and direction.	V	V	Profile 1-5
Border Line	Set line 1~3 and direction.	V	V	Profile 1-5
Loitering	Set area and trigger interval.	V	V	Profile 1-5
Area Counting	Set area.	V	V	Profile 1-5
Intrusion	Set area.	V	V	Profile 1-5
Departure	Set area.	V	V	Profile 1-5
Withdraw	Set object and trigger interval.	V	V	Profile 1-5
Adverse Way	Set line and angle.	V	V	Profile 1-5
Abandon	Set area and trigger interval.	V		Profile 1-5

Profile: users are recommended to define different settings under each profile of specific video analytics to flexibly bring about better analytics for varied environments and applications. There are 5 profiles available. The detailed configurations for each video analytics are described in the following subsections.

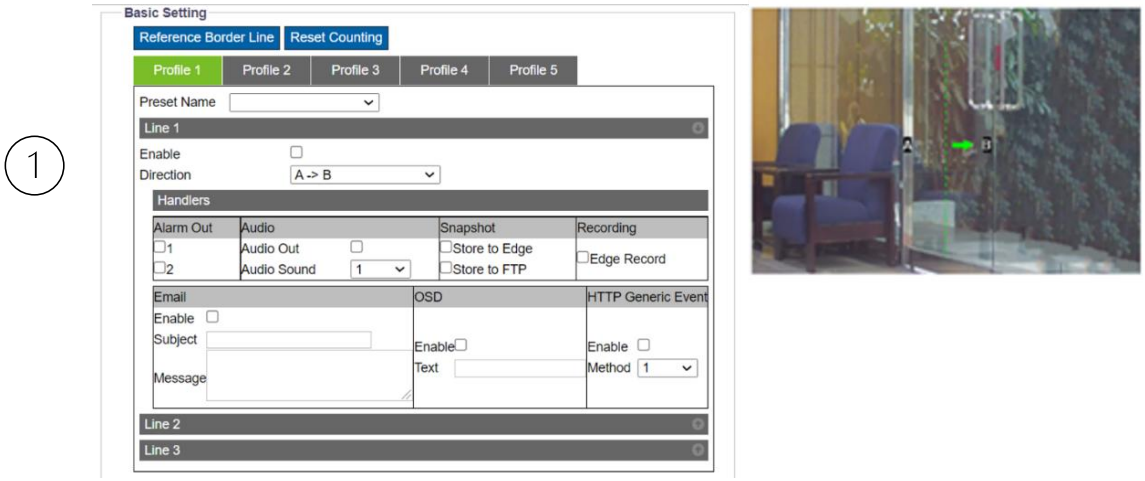


5.8.1 General

1	Basic setting	**Sensitivity**: choose sensitivity threshold for triggering all video analytics functions.
2	Size setting	**Max object size**: draw the maximum object size on preview image then click save. Any object larger than the maximum size defined will not be triggered. **Min object size**: draw the minimum object size on the preview image then click save. Any object smaller than the minimum size defined will not be triggered.

5.8.2 Line Counting

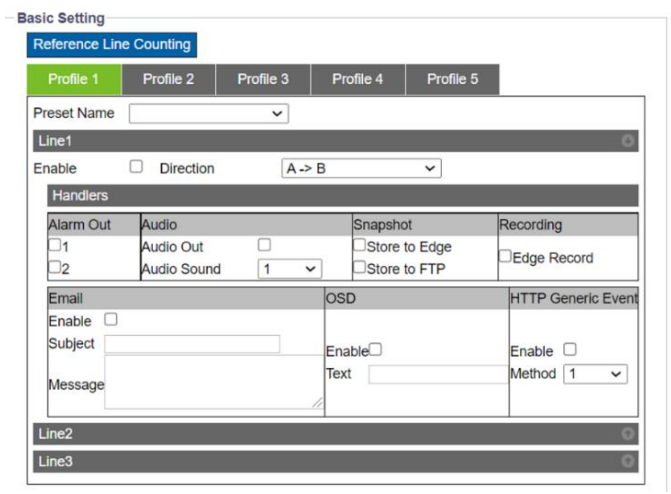
This page is designed to count the moving objects that passed through the designated line.



1	Basic setting	**Reference border line cross**: click to apply same configurations as border line settings. **Reset counting**: click reset the accumulated counting records. **Line**: enable and set up each line individually. Users can configure up to 3 lines concurrently. **Method**: press and hold on the image to draw a line on the desired area, then click save.

5.8.3 Border Line

This page is designed to establish borderlines to guard certain alerted zones within the camera coverage.

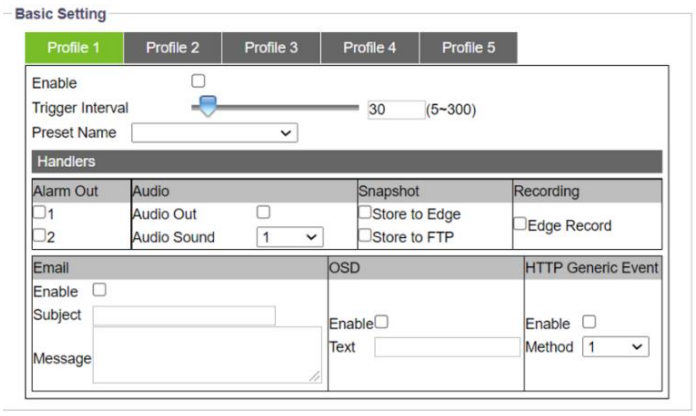


1

1	Basic setting	**Reference line counting**: click to apply same configurations as line counting settings. **Line**: enable and set up each line individually. Users can configure up to 3 lines concurrently. **Method**: press and hold on the preview to draw a line on the desired area, then click save.

5.8.4 Loitering

This page is designed to detect suspicious objects that enter and lingers within the predefined area.

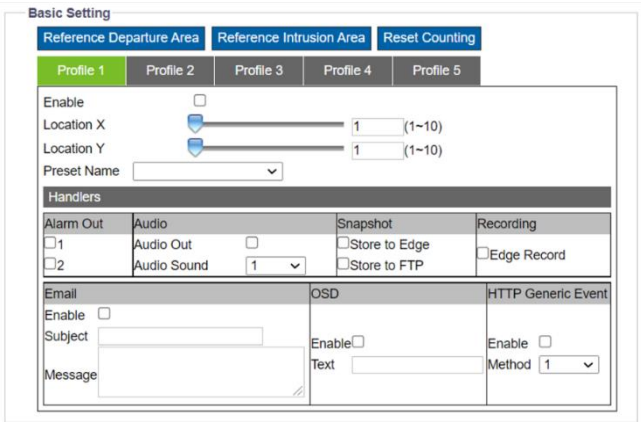


1

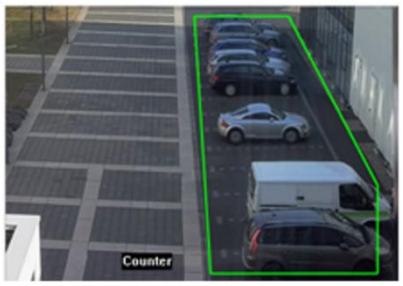
1	Basic setting	**Trigger interval**: define a value for the threshold period to trigger loitering alarm. **Method**: draw a shape covering the key zone for detection then click save.

5.8.5 Area Counting

This page is designed to compile statistics of objects getting into or out of a designated area.



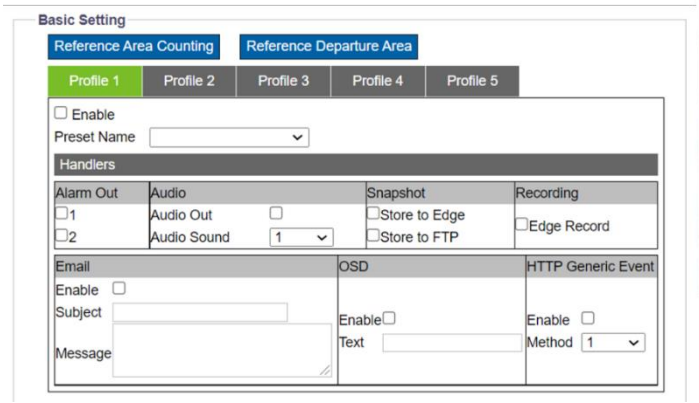
1



1	Basic setting	**Reference departure area**: click to apply same configurations as departure area settings. **Reference intrusion area**: click to apply same configurations as intrusion area settings. **Reset counting**: click reset the accumulated counting records. **Location X / Location Y**: define the location for the OSD counter. **Method**: draw a shape covering the desired area and define OSD location, then click save.

5.8.6 Intrusion

This page allows users to assign an irregular shape to fence off any suspicious object from entering.

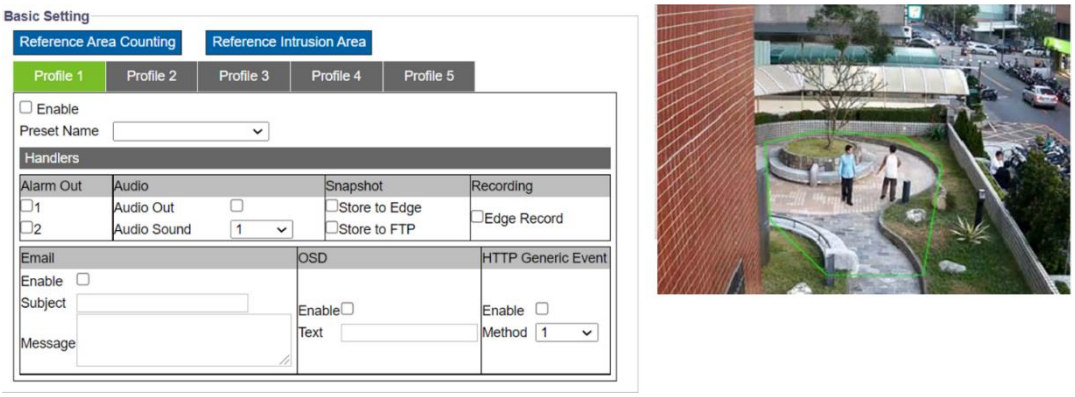


1

1	Basic setting	**Reference area counting**: click to apply same configurations as area counting settings. **Reference departure area**: click to apply same configurations as departure area settings. **Method**: draw a shape covering the desired zone for intrusion detection, then click save.

5.8.7 Departure

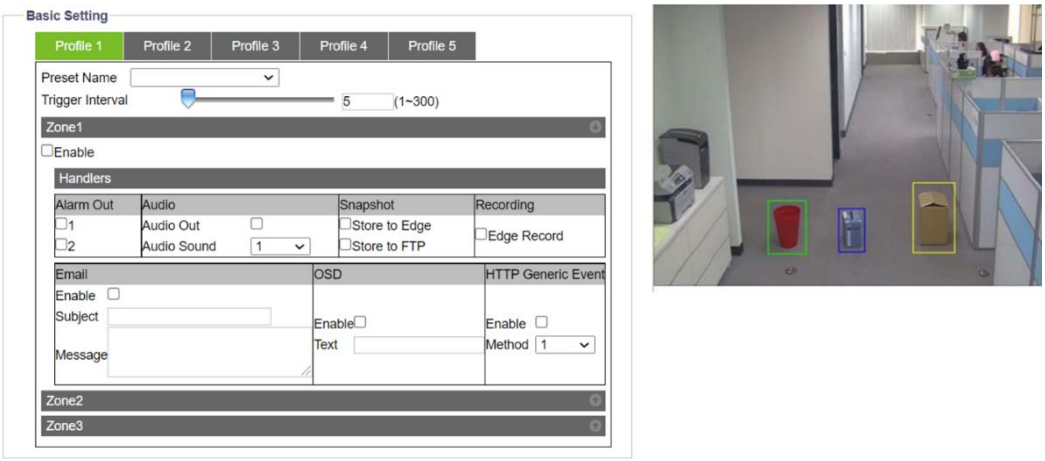
This page allows users to configure departure detection to a designated area.



1	Basic setting	**Reference area counting**: click to apply same configurations as area counting settings. **Reference intrusion area**: click to apply same configurations as intrusion area settings. **Method**: draw a shape covering the desired zone for departure detection then click save.

5.8.8 Withdrawn

This page allows users to assign an area of withdrawn detection, protecting valuables from being removed.



1	Basic setting	**Trigger interval**: Define threshold of time period to trigger withdrawn detection. **Zone**: Check the box to enable each zone setting. Users can configure up to 3 zones. **Method**: draw a shape covering the desired area for withdrawn detection, then click save.

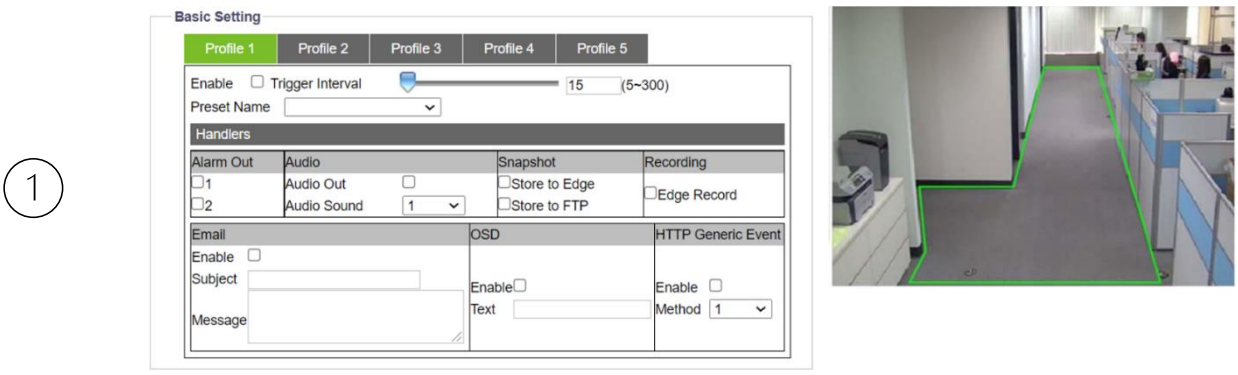
5.8.9 Adverse Way

This page allows users to configure adverse way detection.

1	Basic setting	**Method**: press and hold the mouse on the image to draw a line on the targeted area. A blue angle will appear to configure the permitted range (15°-180°). Any object passing through, not following the configured angle, will trigger adverse way detection.

5.8.10 Abandon

This page allows users to assign an area for detecting abandoned objects.

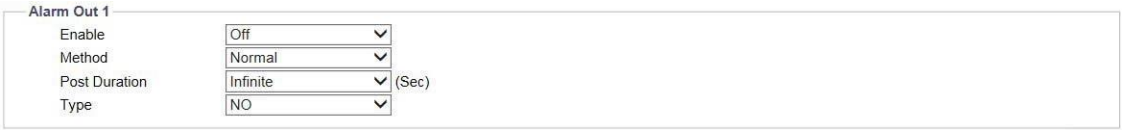


1	Basic setting	**Trigger interval**: Define threshold of time period to trigger abandon detection. **Method**: draw a shape covering the desired area for abandon detection, then click save.

5.9 Event Setting

5.9.1 General

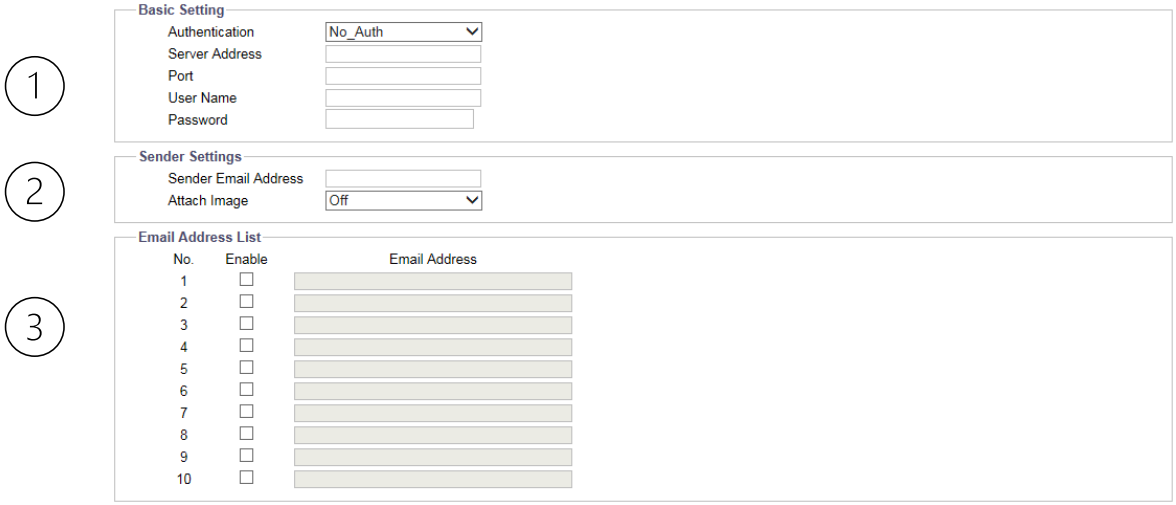
This page allows users to set up alarm output(s) when event occurs. Make sure you have enabled alarm output in each event section to activate this function.



1	Alarm out 1	**Enable**: select on/off to enable/disable alarm out. **Method**: select method for alarm output. - Normal: the standard method, which allows users to define a period of duration. - Pulse: allows users to define duration, interval time and counts for alarm output. **Type**: select which type to be adopted for triggering alarm output. - NO (Normally Opened): an alarm will be triggered when the external contact closes. - NC (Normally Closed): an alarm will be triggered when the external contact opens.

5.9.2 Email

This page allows users to set up email notification when event occurs. Make sure you have enabled email sending in each event section to activate this function.



1	Basic setting	**Authentication**: select an authentication type. **Server address**: input a designated server address for email notification. **Port**: set default port number 25 or change to dedicated number. **User Name / Password**: input credentials with privilege to access the server.
2	Sender setting	**Sender email address**: define the sender email address. **Attach image**: select on/off to enable/disable attaching the event image on the email.
3	Email address list	**Enable**: check the box to send email to the selected address. **Email address**: input an email address to which events notifications will be sent.

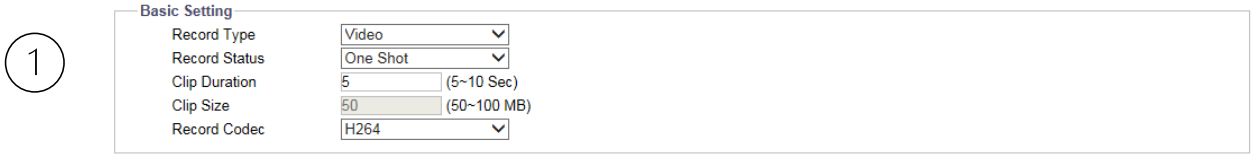
5.9.3 FTP

This page allows users to set up FTP image storing when event occurs. Make sure you have enabled FTP function in each event section to activate this function.

1	Basic setting	**Server address**: input FTP server address. **Port**: set default port 21 or change to dedicated number. **Username / Password**: input credentials with privilege to access the server. **Mode**: select connection mode to be use. - Active: camera stays connected to designated FTP site, providing instant response. - Passive: camera connects to designated FTP site when necessary, reducing bandwidth.

5.9.4 Record Setting

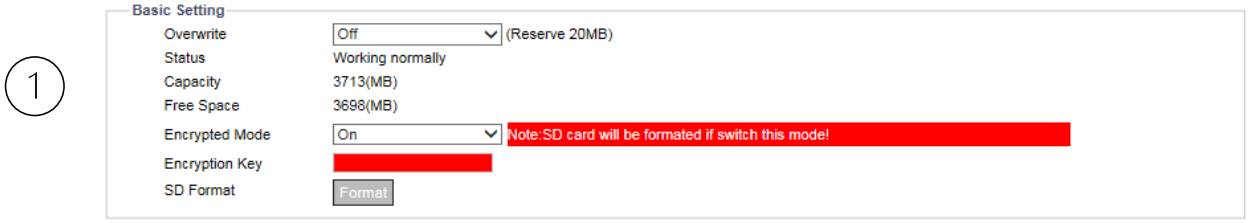
This page allows users to configure recording. Make sure you have enabled recording in each event section to activate this function.



1	Basic setting	**Record type**: select video to record video only or select audio and video to record both. **Record status**: define recording method. Select one shot for camera to record video with designated duration and file size or select continuous for camera to record continuously. **Clip duration**: set the length limit for recording file. **Clip size**: define the file size for recording file. **Record codec**: choose type of video codec.

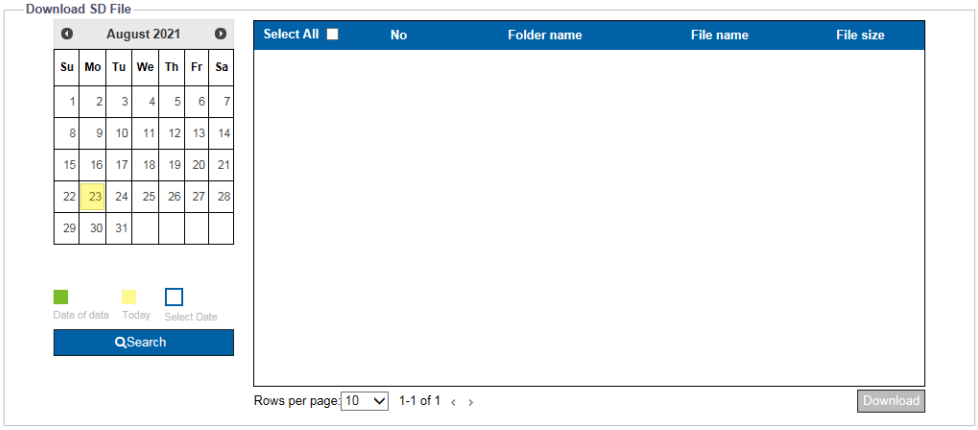
5.9.5 SD card

This page allows users to configure edge recording when event occurs. Make sure you have enabled edge recording in each event section to activate this function.



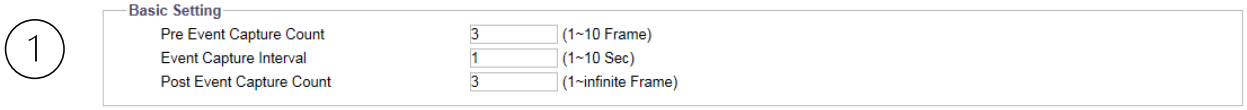
1	Basic setting	**Overwrite**: select on/off to enable/disable overwrite. When enabled and SD card capacity is below 20MB, old files will be overwritten to store new ones. **Status**: shows the status of SD Card. Possible status includes: (1) SD card not inserted, (2) working normally, (3) unsupported filesystem, please format the SD card to ext4. **Capacity**: shows the capacity of the inserted SD card. **Free space**: shows the available space of the inserted SD card. **Encrypted mode**: select on/ off to enable/disable encryption for the data on the SD card. **Encryption key**: available when encryption mode is enabled. Encryption key allows user to enter a password, which will be used for decrypting and access the video file. **SD format**: click to start formatting the mounted SD card.

To download recorded files on SD card, select date on calendar and click search. Available videos will be displayed on the right. Select the videos you want to download then click download.



5.9.6 Snapshot

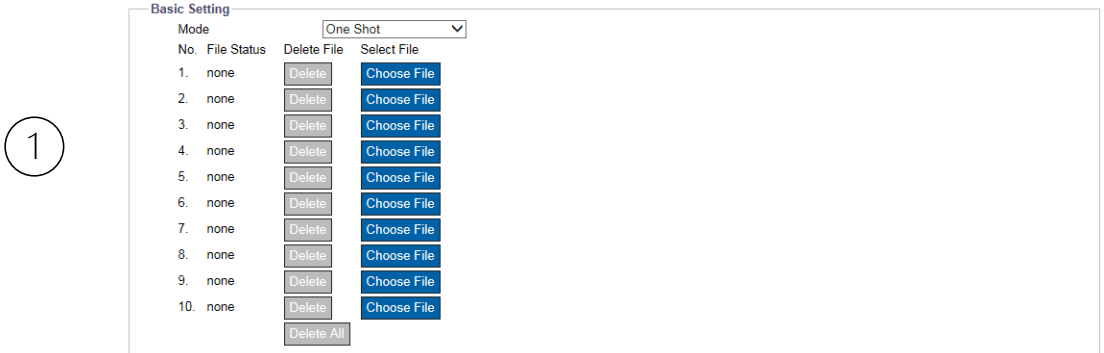
This page allows users configure snapshots when event occurs. Make sure you have enabled snapshot in each event section to activate this function.



1	Basic setting	**Pre event capture count**: set a number of frames to be captured prior to an event. **Event capture interval**: set a time interval ranging between each snapshot capture. **Post event capture count**: set a number of frames to be captured after an event occurs.

5.9.7 Sound

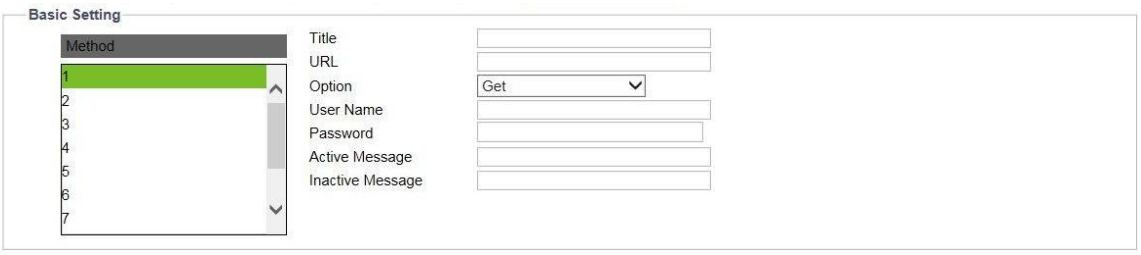
This page allows users configure audio output when event occurs. Make sure you have enabled audio out in each event section to activate this function.



1	Basic setting	**Mode**: select audio out mode. One shot plays audio once, infinite plays audio repeatedly. **File status**: displays current status of each sound file. **Select file**: click choose file to upload a sound file from your local computer. **Delete file/all**: click delete file/all to remove selected/all sound file.

5.9.8 HTTP Generic Event

This page allows users to configure messages and commands directly to Network Video Recorder (NVR) which supports CGI command function.

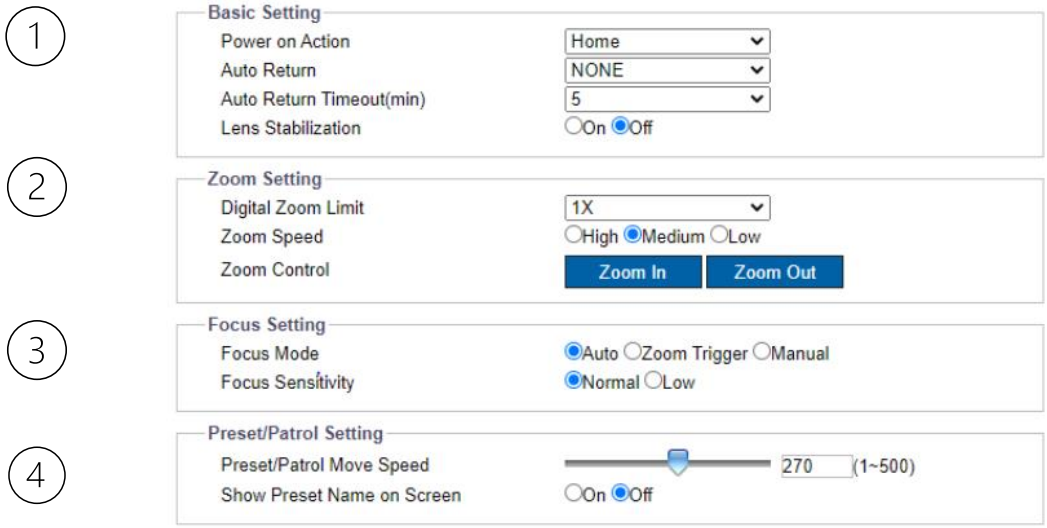


1	Basic setting	**Method**: select the type of method for the trigger event. **Title**: insert the title for the messages. **URL**: Input the NVR's URL. Please follow NVR's user manual. **Option**: select the mode of notification transmission as needed. - Get: simple and fast method to transmit messages but less secure than post. - Post: more complex way to transmit messages, but safer than get. **User Name / Password**: enter designated credentials for authentication to the NVR. **Active message**: camera will send an active message to NVR when the event occurs. **Inactive Message**: camera will send an inactive message to NVR when the event ends.

5.10 PTZ Settings

This section allows users to configure PTZ (pan/tilt/zoom/focus) and actions (scan/preset/patrol/pattern).

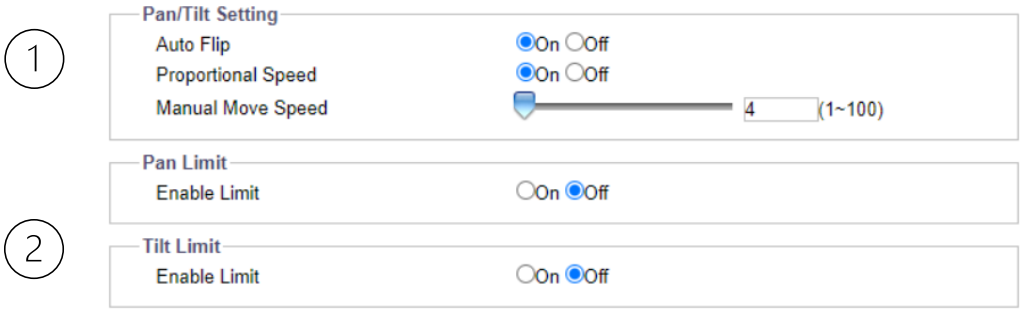
5.10.1 Basic



1	Basic setting	**Power on action:** define the action for camera execute when the system is powered on. - None: camera will have no action when powered on. - Home: camera will move to its home position.

		- Auto scan: camera will perform automatic scan. - Frame scan: camera will perform frame scanning. - Auto patrol 1 – 4: camera will perform patrol action based on selected patrol. - Pattern 1 – 4: camera will perform pattern action based on selected pattern. **Auto return:** define the action for camera execute when no PTZ action happens beyond the user defined timeout period. The options available are same as Power on Action. **Auto return timeout (min):** define the time for camera to activate auto return. **Lens stabilization:** when enabled, camera will minimize image blur caused by shakes.
2	Zoom setting	**Digital zoom limit:** allows user to apply digital zoom and enlarge view at 1x, 2x, 4x, and 8x. **Zoom speed**: define speed at which the camera changes zoom depth. High means faster. **Zoom control**: click the buttons for zooming in and out
3	Focus setting	**Focus mode:** define focus mode depending on the operation performed. - Auto: camera will execute auto focus when PTZ operations are performed. - Zoom trigger: camera will execute auto focus when zoom operations are performed. - Manual: allow user to manually set camera focus. **Focus sensitivity**: when normal is selected, camera will refocus when minor changes occur in view, while low sensitivity only refocus with major changes.
4	Preset / patrol setting	**Preset/patrol move speed:** define preset/patrol speed. Higher value means faster speed. **Show preset name on screen:** select on/off to enable/disable preset name on screen.

5.10.2 Pan/Tilt



1	Pan/Tilt setting	**Auto flip:** enable this feature for an uninterrupted view when tracking an object. **Proportional speed:** enable this feature to adjust pan/tilt speed in relation to zoom value. **Manual move speed:** define pan/tilt speed.
2	Pan/Tilt limit	**Enable limit**: select on/off to enable/disable pan/tilt limitation. **Left / Right limit**: define the degree of left/right limit. **Set current position to limit**: define limit position. **Go to limit**: click left/right to go to left/right limit position. **Clear limit**: click left/right to clear left/right limit position.

5.10.3 Scan

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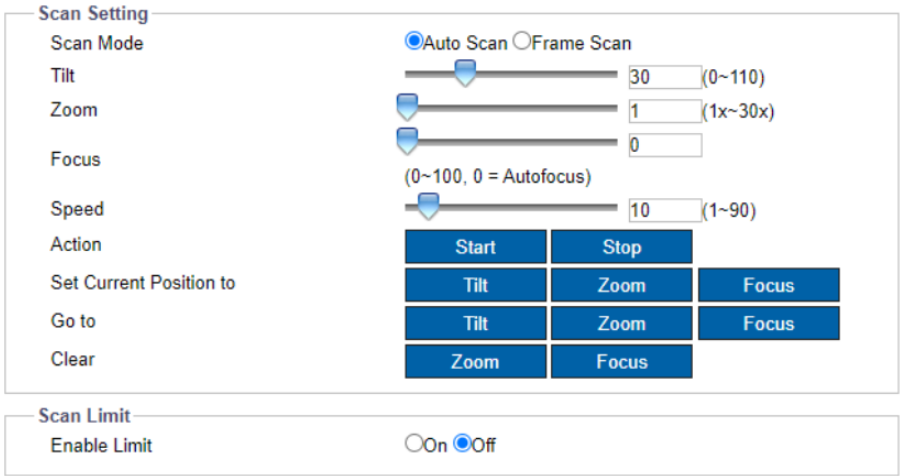
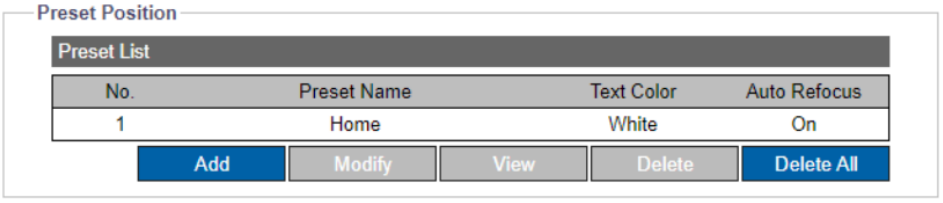


1	Scan setting	**Scan mode:** select scan mode depending on your needs. **Tilt / Zoom / Focus / Speed:** define the corresponding value as needed. **Action:** click start/stop to start/stop scan. **Set current position to**: define current position as tilt/zoom/focus position. **Go to**: click to go to tilt/zoom/focus position. **Clear** click to clear zoom/focus position.
2	Scan limit	**Enable limit**: select on/off to enable/disable scan limitation. **Left / Right limit**: define the degree of left/right limit. **Set current position to limit**: define limit position. **Go to limit**: click left/right to go to left/right limit position. **Clear limit**: click left/right to clear left/right limit position.

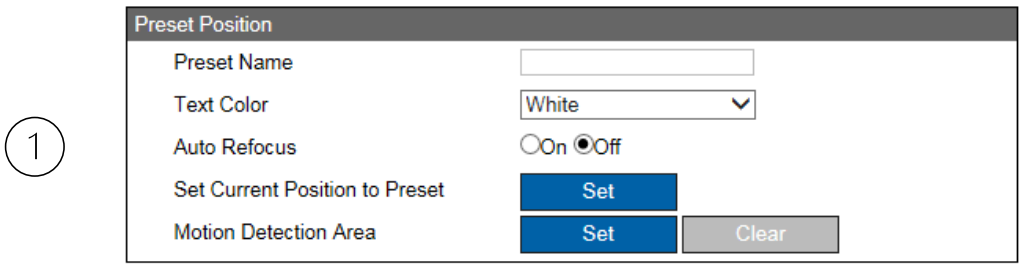
5.10.4 Preset

This section allows users to create up to 128 predefined camera views called preset.



1	Preset position	**Preset name**: displays name of the preset position. **Text color**: displays the text color of the preset name. **Auto refocus**: displays the status of auto refocus. **Add/Modify/View/Delete/Delete All**: click to perform corresponding action to selected preset position.

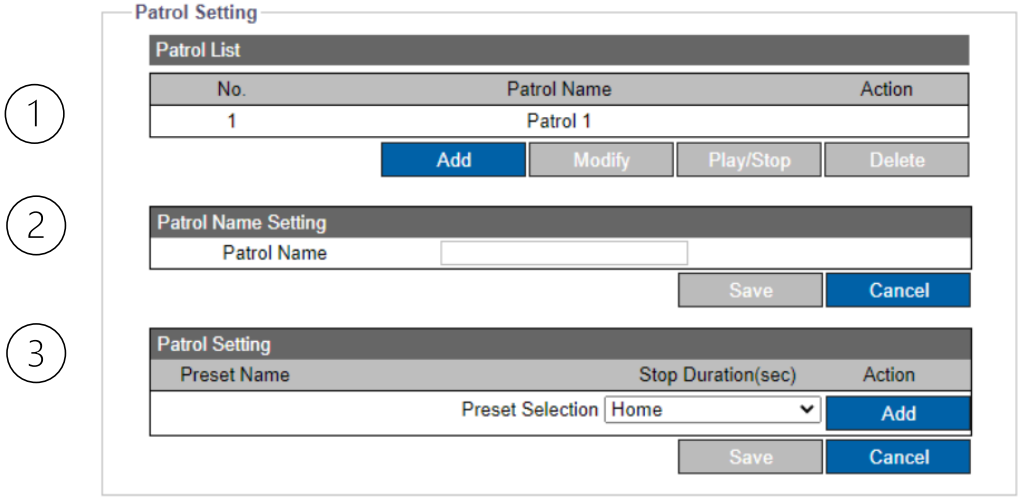
Add/edit new preset position



1	Preset position	**Preset name**: insert name of the preset position. **Text color**: select the text color of the preset name. **Auto refocus**: select the status of auto refocus. **Sett current position to preset**: click set to make current view as preset position. **Motion detection area**: click set to enable motion area, then define the motion detection area on the view and click save or click clear to redefine the area.

5.10.5 Patrol

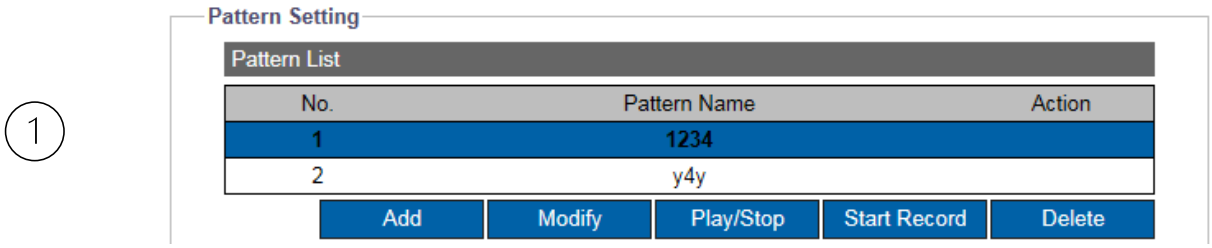
This section allows users to configure up to 4 patrols with a max. of 128 presets. Patrol is a sequence of presets with defined dwell time for the camera to cycle through.



1	Patrol list	**Add/Modify/Delete**: click to perform corresponding action to selected. **Play/Stop**: click to play/stop patrol action.
2	Patrol name setting	**Patrol name**: define the patrol name.
3	Patrol setting	**Preset selection**: select a preset from the drop-down list to add to the patrol. **Stop duration**: select dwell time for the preset position. **Action**: click add/delete to add/delete the selected preset to the patrol.

5.10.6 Pattern

This section allows users to create pattern action of up to 128 combinations of pan, tilt, zoom. By default, the focus and iris will be in auto status during pattern.



1	Pattern list	**Pattern list**: displays all recorded patterns. **Add**: click to add new pattern. **Modify**: click to modify selected pattern. **Play/Stop**: click to play/stop to selected pattern. **Start Record:** click to start recording the pattern actions and click stop to finish process.

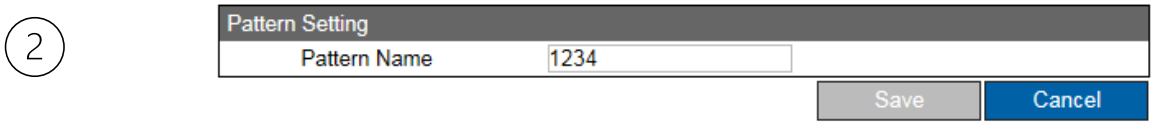


Figure: Pattern Setting

1	Pattern setting	**Pattern name**: insert pattern name.

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