Mod.
1097

urmet

DS1097-024C

HVR H.265 WITH HDMI

Hybrid HVR 5M LITE/4K Series

HVR 5M-Lite series

4 Channels Ref. 1097/574
8 Channels Ref. 1097/578
16 Channels Ref. 1097/576

HVR 4K series

4 Channels Ref. 1097/624
8 Channels Ref. 1097/628
16 Channels Ref. 1097/626

USER MANUAL

ENGLISH

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1 GENERAL INFORMATION

This document describes how to install and use the Hybrid HVR H.265 URMET Series 5M Lite Ref. 1097/574 - Ref. 1097/578 - Ref. 1097/576 and Hybrid HVR 4K series - Ref. 1097/624 - Ref. 1097/628 - Ref. 1097/626.
Read this manual that contains information for correct, safe use carefully.
Keep this manual at hand so that you can refer to it when needed.

1.1 PRODUCT DESCRIPTION

The URMET S.p.A. This URMET S.p.A. product is a digital video recorder for recording images from multiple cameras on an internal hard disk.

1.1.1 GENERAL FEATURES

- HVR compatible with AHD, IP and analog cameras
- Possibility of switching between XVR mode (IP + Analog channels) and HVR mode (only analog channels)
- Customized Password and login with Pattern option
- Three available modes (simultaneous recording, playback and transmission on network)
- Compression video H. 265+/H.264+ with resolutions 4K, 5M, 5M Lite, 4M, 4M Lite, 3M, 1080P, 1080N, 720P, WD1.
- Windows graphic interface, integrated real-time operating system
- Recording with maximum resolution 8M no real-time in analog configuration and max. 8M real-time in IP configuration.
- Multiple alarm or single recording
- Recording in Double Stream (Main Stream + Sub Stream) supported and the possibility to use Playback even in remote Sub Stream.
- VGA/ HDMI and CVBS video output
- User-friendly menu
- Multiple operating modes (preview, recording, playback, backup, monitoring via network and via mobile phone)
- Triple Stream transmission in the network: Main Stream, Sub Stream and Mobile stream (for IP channels) with the possibility to regulate the Resolution, Bit Rate and Frame Rate values
- Remote control (via browser, via mobile and via Urmet UVS Pro Client Software)
- Remote control via Urmet iUVS mobile software for iOS and Android platforms
- DDNS function
- P2P function available for Urmet UVSPro Client and Mobile Urmet iUVS Pro
- RTSP support
- FTP support with the possibility to save event images/videos on FTP server
- Cloud function with the possibility to save event images/videos on Cloud server
- ADPCM audio compression
- Supports zoom in/out and loop function
- Motion/PIR/Alarm management
- Alarm notification through email
- Alarm Schedule: Schedule of notifications like Send FTP Server, Send Cloud server (max. two video for two channels at a time), Buzzer, Push Notification to iUVS Pro App and Alarm events.
- Programming and Image Capture on Hard Disk
- Smart Hard disk Detection: Monitoring of the Hard Disk status
- Automatic maintenance mode
- PTZ control via RS-485 and UTC controls for analog cameras
- Backup to USB 2.0 from front panel (USB flash drive, DVD Masterizer, external or hard disk and e-SATA)
- Recording and Back-up on e-SATA
- Group creation on HDD
- Restoring default password
- USB 2.0/3.0 port on back for back-up, updates and functioning with mouse
- Loading and saving HVR Hybrid configurations by means of USB flash drive
- Multilingual OSD
- Multi-Channel synchronous playback.
- Smart Search function on Playback (only for analogue channels): alarm event/motion search in the recordings
- Sub-Period Playback: see different periods of time of the channel selected on each call of the grid
- Instant Playback on LIVE: launch the playback of a channel in LIVE preview of the channel itself.
- Playback capture multichannel: perform Backup on two or more channels for a specific period of time
- Automatically recover Downloads in case of network blackout
- SPOT Monitor output on CVBS video output
- PTZ connection: Association of one or more preset points on an alarm or motion detection event on Speed Dome

Intelligent video analysis on all coaxial channels (PID / LCD / PD / SOUND DETECTION / VIDEO TAMPERING) and on IP channels according to camera model (Perimeter Intrusion Detection (PID), Line Crossing Detection (LCD), Stationary Object Detection (SOD), Pedestrian Detection (PD), Face Detection (FC), Cross Counting (CC), HM (Heat Map), CD (Crowd Detection), QD (Queue Detection), LPD (Lincense Plate Detection), RSD (Rare Sound Detection).

IMPORTANT NOTE:
Enabling the spot output disables intelligent analysis on analogue channels and vice versa.

The main features are summarized in the following table:

Function	Description
Live	Double video output with monitor, VGA virtual output port or HDMI Output; Support URMET UVS Client Software and MP live surveillance and also support zoom in/out, auto sequence and PIP display.
Record	Video compression standard: H.265; adjustable recording quality, resolution and frame rate; multiple recording modes: continuous, programmed, manual, on alarm (if available), motion detection and remote activation.
Recording storage	Supports high-capacity SATA hard disk and saves recording in real time on hard disk.
Playback	Support HVR single CH and multiple CH Search/Playback of recorded files.
Backup	Support HVR backup via USB flash drive, removable drive, Recorder and network.
Alarm Setting	Supports alarm management from hard disk, from input video signal and from external alarm inputs (on available models).
Operation via network	Supports remote monitoring by authorized users to guarantee system safety.
Operation with mouse	Supports use of mouse for quick menu navigation.
PTZ control	Supports PTZ camera operations through RS-485, COAXITRON and UTC

1.2 OPENING THE PACKAGE

Check that the packing and the contents are not visibly damaged. Contact the retailer immediately if parts are either missing or damaged. Do not attempt to use the device in this case. Send the product back in its original packing if it is damaged.

1.2.1 CONTENTS OF THE PACKAGE

- Hybrid HVR
- Power supply unit
  - INPUT ⇒ 100-240 Vac 50/60Hz 1.5 A max.
  - OUTPUT ⇒ 12Vdc 2A
- Shuko or Italian plug
- Quick Guide and Addendum
- Mini CD
- Mouse
- Cross LAN cable cat. 5

IMPORTANT NOTE
Accessories may be changed without prior notice.

1.3 WARNINGS

1.3.1 POWER

- Only use the power unit provided to power the device. Check mains rating before plugging the power unit in.
- Do not pull the cord to unplug the device.
- Switch the device off before unplugging power unit. This operation must not be performed when the HVR is recording, playing or from the configuration menu. Stop recordings and playback in progress before disconnecting power from the device to prevent damaging the hard disk beyond repair.

1.3.2 SAFETY PRECAUTIONS

- Keep the device away from rain and humidity to prevent risk of fire and electrocution. Do not introduce material (solid or liquid) inside. If this should accidentally occur, disconnect the device from the mains and have it inspected by qualified personnel.
- Never open the device. In all cases, contact a qualified personnel or authorized service centre for repairs.
- Keep the device away from children to prevent accidental damage.
- Do not touch the device with wet hands to prevent electrical shock or mechanical damage.
- Do not use the device if it should fall or the external casing is damaged. Risk of electrocution if the device is used in such conditions. Contact the retailer or authorized installer.

1.3.3 INSTALLATION PRECAUTIONS

- To prevent overheating the device, arrange it in a position allowing the flow of air through the slots in the casing. Ensure at least 5 cm of free space when installing inside a rack. For the same reason, do not install sources of heat, such as radiators or hot air ducts. Keep away from direct sunlight. Do not install in areas subject to excessive dust, mechanical vibrations or shocks.
- Do not arrange this device on an unstable surface, such as a tottering or slanted table. The device could fall causing injury or mechanical failures.
- The device could fall causing injury or mechanical failures. Do not direct a jet of water onto the device: risk of fire, electrocution or mechanical failure.
- Stop using the device if water or other material should penetrate inside: risk of fire and electrocution. Contact the retailer or authorized installer.
- Do not place heavy or heat-generating objects on top of the device: this could damage the casing and/or increase internal temperature causing faults.
- Do not cover the device with a cloth while it is running to prevent deforming the external casing and overheating the internal parts: risk of fire, electrocution and mechanical failure.
- Keep magnets and magnetized objects away from the device to prevent faults.
- Do not use the device in presence of smoke, vapour, humidity, dust or intense vibrations.
- Wait for a while before operating a device immediately after transporting it from a cold place to a warm place and vice versa. Wait on average for three hours: this will allow the device to adapt to the new ambient (temperature, humidity, etc.).

1.3.4 CLEANING THE DEVICE

- Rub delicately with a dry cloth to remove dust and dirt.
- Dip the cloth in neutral detergent if dirt cannot be eliminated with a dry cloth alone.
- Do not use volatile liquids (such as petrol, alcohol, solvents, etc.) or chemically treated clothes to clean the device to prevent deformation, deterioration or scratches to the paint finish.

1.3.5 HARD DISK

- The hard disk installed in this device is sensitive to shocks, differences in temperature and vibrations. Failure to respect these precautions can compromise correct operation of the device and cause loss of data stored on the hard disk.
- If repairs are required, it is advisable to backup all important data before taking the device to the service centre. URMET S.p.A. cannot be held liable for loss or damage following theft sustained by the user.

1.3.6 IMAGE RECORDING

- This device was designed to record images, not as a burglar alarm. Please note that URMET S.p.A. is not liable for loss of stored data consequent to loss or damage caused by incorrect observation installation, use, improper use or malfunctioning of the device.
- Test recording before using the device to make sure that is working correctly. Please note that Urmet S.p.A. is not liable for loss of stored data consequent to loss or damage caused by incorrect installation, use, improper use or malfunctioning of the device.
- This device contains precision electronic components. Protect the device from shocks to ensure correct recording of images.

1.3.7 PRIVACY AND COPYRIGHT

- The digital video recorder Hybrid 4K/5M Lite Series is a device for CCTV systems. Recording of images is subject to the laws in force in your country. Recording of images protected by copyright is forbidden.
- Product users shall be responsible for checking and respecting all local rules and regulations concerning monitoring and recording video signals. The manufacturer SHALL NOT BE LIABLE for use of this product not in compliance with the laws in force.

2 DESCRIPTION

2.1 FRONT PANEL

HVR stands for Digital Video Recorder Equipment (digital video recording device).

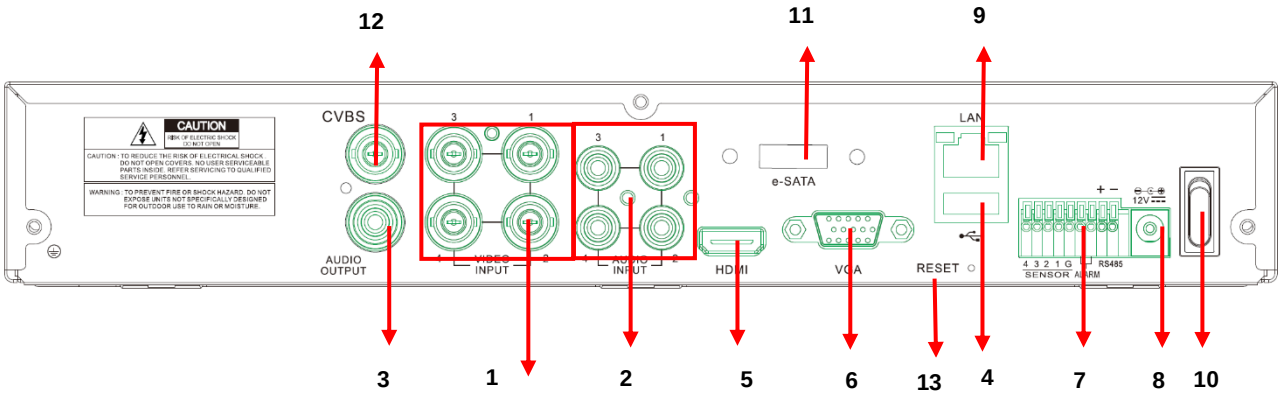
2.1.1 FRONT PANEL HVR REF. 1097/574-578-576 AND REF. 1097/624-628

2.1.2 FRONT PANEL HVR REF. 1097/626

Number	Writing or indicator	Symbol	Function and description
1	Power indicator	PWR	When the green LED is on it means that the NVR is powered correctly.
2	IR receiver	●	This receives the IR signal from the remote control.
3	Hard disk indicator	HDD	When the red LED is flashing it means that the user is reading or writing on the hard disk. If the red LED remains on continuously, it means that the hard disk is not working correctly, not formatted or does not contain recorded files.
4	USB	⇐	USB port

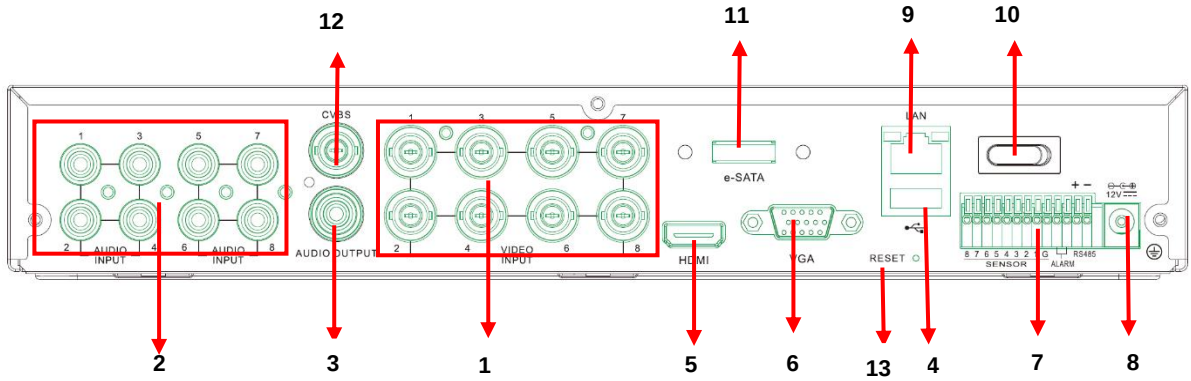
2.2 REAR PANEL

2.2.1 REAR PANEL HVR REF. 1097/574 AND REF. 1097/624

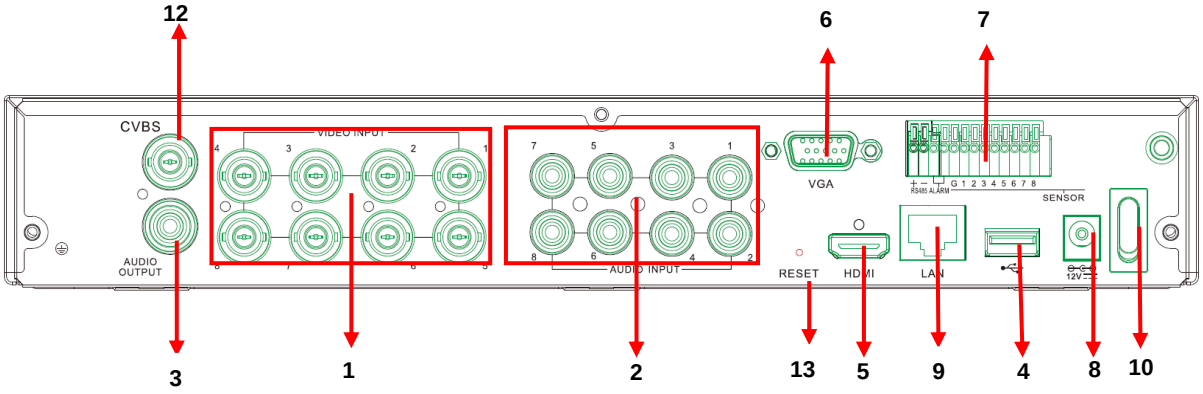


N.	Physical port	Connection method
1	Video inputs	CH1-CH4 per connectors for video inputs (BNC)
2	Audio inputs	4CH audio input (RCA)
3	Audio output	Audio output (RCA);
4	USB port	USB connector
5	HDMI port	Connector for HDMI monitor
6	VGA port	Connector for VGA monitor and PC monitor
7	PIN RS485/ Sensor Alarms	RS485/Sensor/Alarm interface (see pins)
8	Power	Power supply connector - DC12V 2A
9	Ethernet port	Connect LAN, Ethernet (RJ45)
10	Power on/off	Power on and off button
11	eSATA port	eSATA connector for external eSATA devices
12	CVBS connector	Connector for CVBS output also as Spot
13	Reset	Reset button (3 sec Password Reset - 10 sec Default Reset) *See note at the bottom of the manual in the technical specifications for more details on firmware versions.

2.2.2 REAR PANEL HVR REF. 1097/578

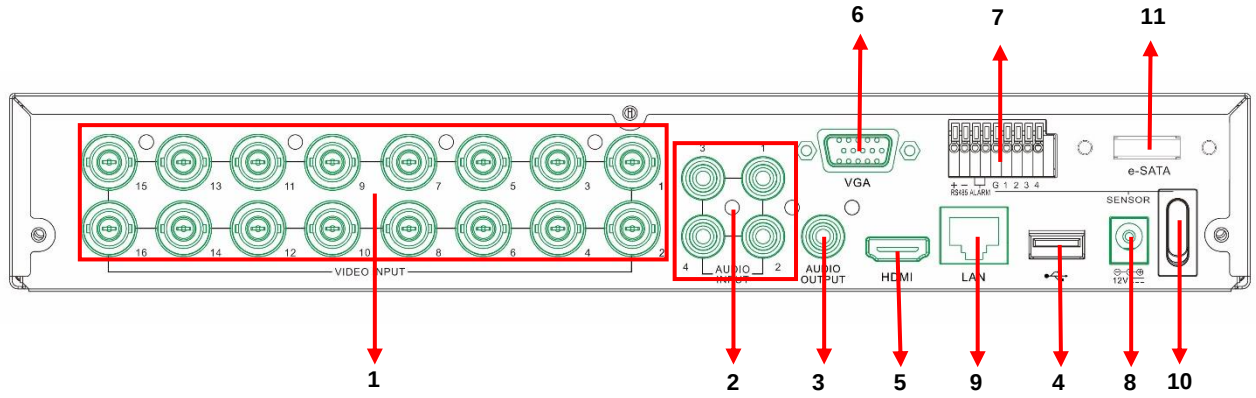


2.2.3 REAR PANEL HVR REF. 1097/628

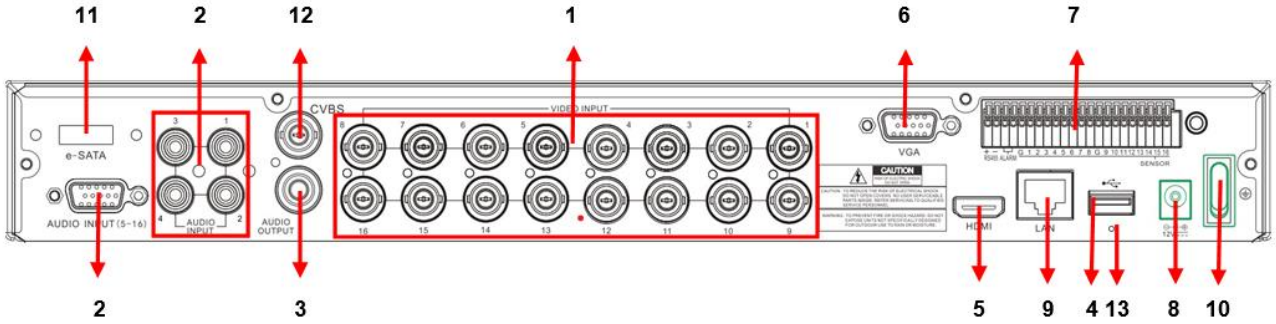


N.	Physical port	Connection method
1	Video inputs	CH1-CH8 per connectors for video inputs (BNC)
2	Audio inputs	8CH audio input CH1-CH8 (RCA)
3	Audio output	Audio output (RCA);
4	USB port	USB connector
5	HDMI port	Connector for HDMI monitor
6	VGA port	Connector for VGA monitor and PC monitor
7	PIN RS485/ Sensor Alarms	RS485/Sensor/Alarm interface (see pins)
8	Power	Power supply connector - DC12V 2A
9	Ethernet port	Connect LAN, Ethernet (RJ45)
10	Power on/off	Power on and off button
11	eSATA port	eSATA connector for external eSATA devices
12	CVBS connector	Connector for CVBS output also as Spot
13	Reset	Reset button (3 sec Password Reset - 10 sec Default Reset). *See note at the bottom of the manual in the technical specifications for more details on firmware versions.

2.2.4 REAR PANEL HVR REF. 1097/576

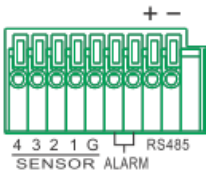


2.2.5 REAR PANEL HVR REF. 1097/626

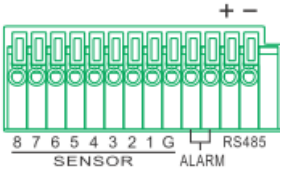


N.	Physical port	Connection method
1	Video inputs	CH1-CH16 per connectors for video inputs (BNC)
2	Audio inputs	4CH audio input CH1-CH4 (RCA) 16CH for 1097/626 CH5-CH16 (with RCA adapter included)
3	Audio output	Audio output (RCA);
4	USB port	USB connector
5	HDMI port	Connector for HDMI monitor
6	VGA port	Connector for VGA monitor and PC monitor
7	PIN RS485/ Sensor Alarms	RS485/Sensor/Alarm interface (see pins)
8	Power	Power supply connector - DC12V 2A
9	Ethernet port	Connect LAN, Ethernet (RJ45)
10	Power on/off	Power on and off button
11	eSATA port	eSATA connector for external eSATA devices
12	CVBS connector	Connector for CVBS output also as Spot
13	Reset	Reset button (3 sec Password Reset - 10 sec Default Reset). For 1097/626 only Reset Default with 10 sec. *See note at the bottom of the manual in the technical specifications for more details on firmware versions.

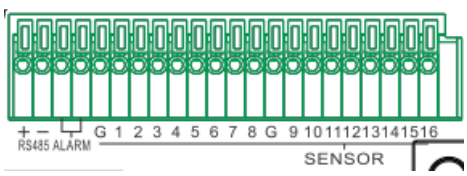
2.2.6 RS485/SENSORS/ALARMS PORT FUNCTIONS



Ref. 1097/564-566-624



Ref. 1097/568-628



Ref. 1097/626

Alarm input: Connect signal [-] of the sensor to pin G (GND) and the signal [+] to the input of channel 1...16 as an alarm device.
Alarm output: Connect to the two ports marked with “ALARM”
PTZ Port: Connect your camera to RS-485A(+) and RS485B(-) accordingly.

2.3 OPERATION WITH MOUSE

The mouse can be used to operate the system in addition to the remote control. The following table shows the possible actions that may differ according to the state and the current system screen.

ACTION	MODE	FUNCTION
Right-click	Live display	This activates the Main Menu (pop-up menu) on the lower part of the screen
	Main Menu or submenu	This closes the current menu and goes back to the previous page
Left-click	Logout	Click on any item of the pop-up menu in the low part of the screen to open a login window where to enter access credentials
	Login	Click on any item of the pop-up menu to directly access the required submenu
	Main Menu	Click to access the items of the various submenus; in [Detailed file] play a previously recorded file.
	Submenu	Change the check box state and the motion detection area.
		Click on the combo box to access the various menus.
		On the colour control bar and on the volume control bar click to adjust the respective values.
		Click on the combo box to access the menus.
		Click to select the values in the specific combo boxes. This activates the drop-down menu for support to enter Chinese characters, special symbols, numbers and letters to be used instead of [Enter-] or [Backspace]
Right-click		In live mode, right-click to view the pop-up menu.
		In the main menu or submenu mode, right-click to close the current menu.
Double click		In live or playback mode, to view the image in full-screen mode, repeat to go to the previous view.
Move the mouse		This selects the menu item
Drag the mouse		In motion detection mode, drag the mouse to select the motion detection area; in [Color set] mode, drag the mouse to adjust the colour and volume bar.

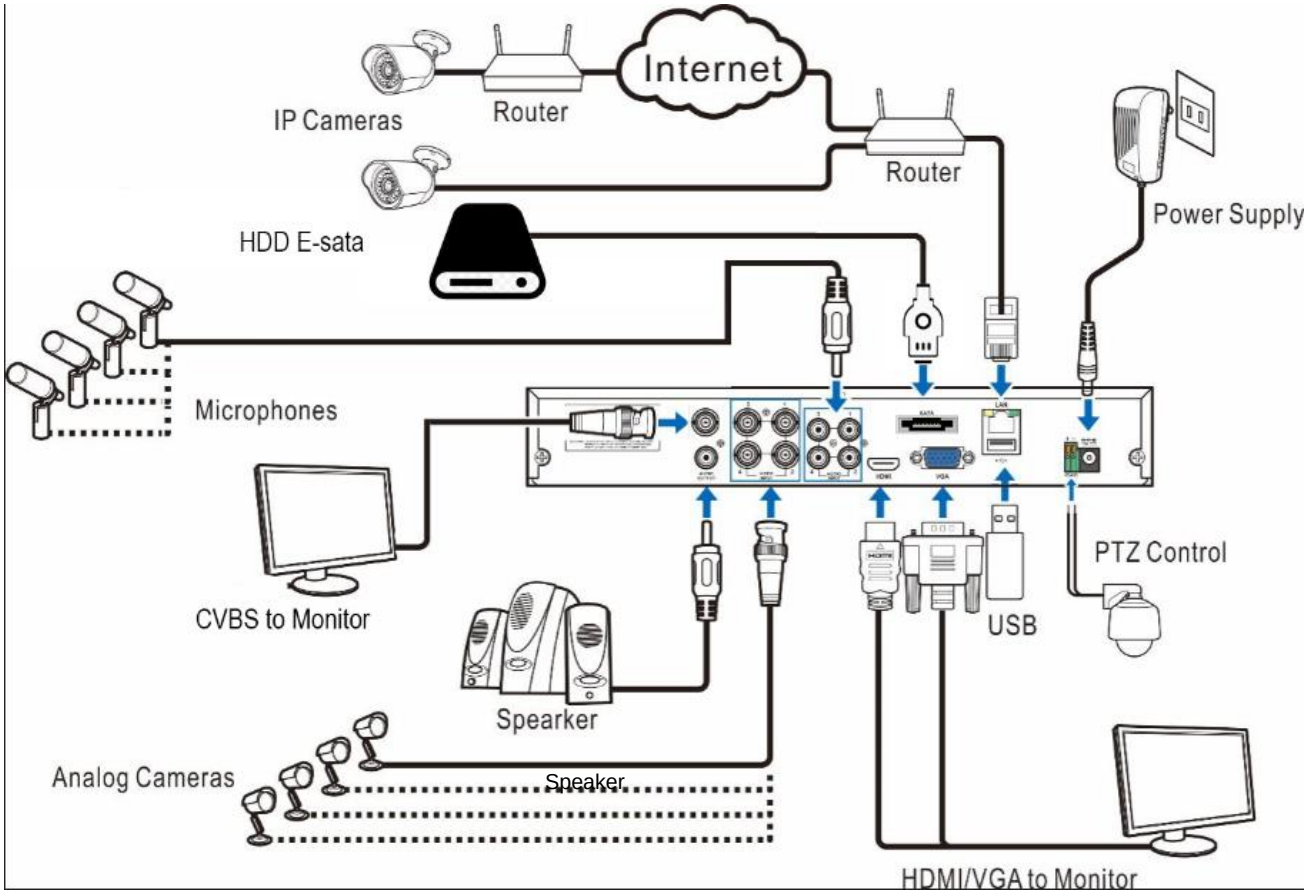
2.4 CAMERA AND MONITOR CONNECTION

Connect the camera cable to the video input of the HVR and the video output of the HVR to the monitor via the VGA/HDMI connector (see paragraph **2.2-**REAR PANEL. If the camera is a PTZ speed-dome, connect RS485 A & B to the corresponding HVR port.

2.5 POWER SUPPLY CONNECTION

Please only use the power adapter supplied with the HVR.
After power on, make sure that the video I/O connections are correct and that the audio device is connected with the RCA cable.

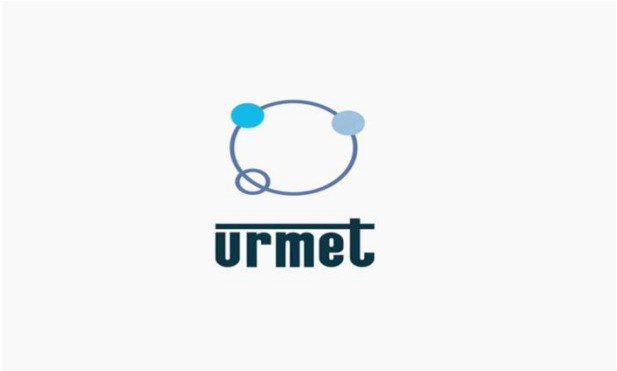
2.6 CONNECTION DIAGRAM



Note: Above diagram is for reference only. The practical connection may be different depending on the HVR you purchased.

3 OSD HVR MENU SETTINGS

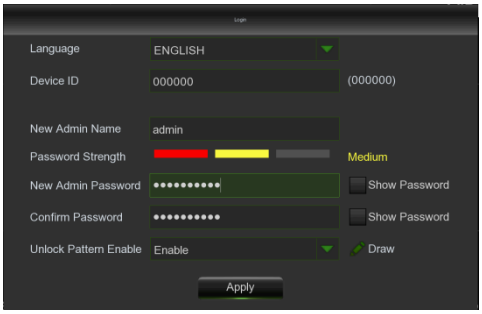
After having plugged in the HVR, the system will run the initialisation procedures during that the following image will appear:



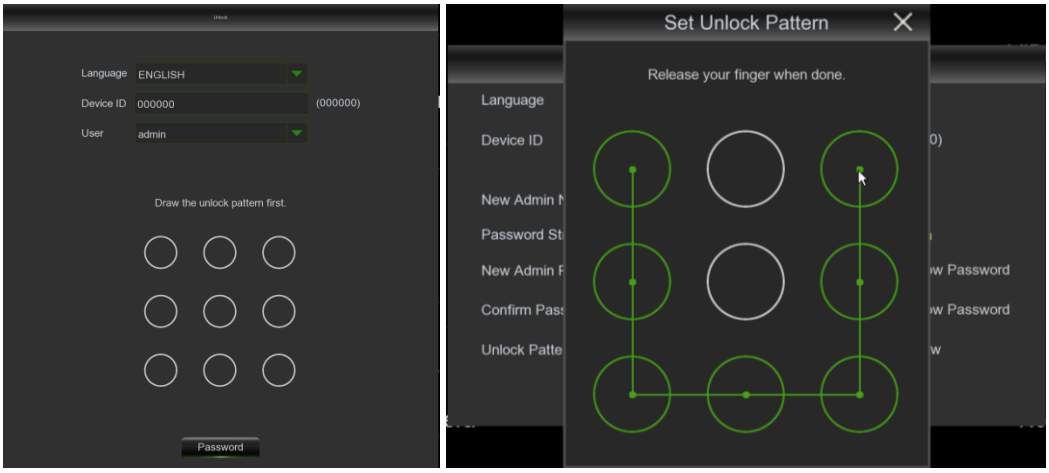
At the end of the boot-up, the HVR will switch to Live view.

3.1 FIRST HVR LOGIN

For the first time when you run the HVR, you must be required to set your password immediately to protect your privacy. Please be sure to record your username and password and save them in a secure place.



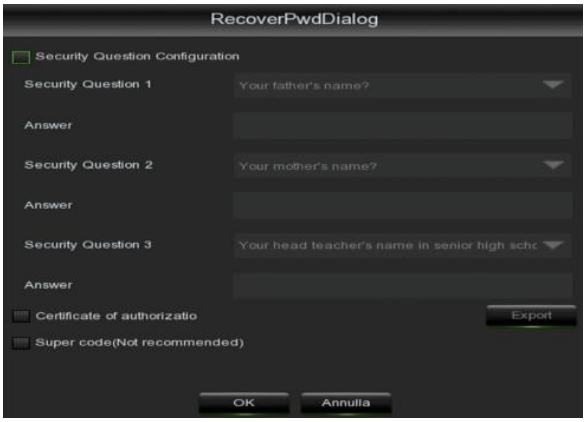
- **Language**: Select an OSD language
- **Device ID**: Input the device ID in the brackets. Default ID: 000000.
- **New Admin Name**: Enter the name of your administrator.
- **Password Strength**: This shows how safe the edited password is.
- **New Admin Password**: enter your password. To be accepted by the device, the password must meet specific criteria that determine its strength.
- **Confirm Password**: Enter your password again.
- **Pattern**: If you enable this function and store and confirm a drawn pattern, each time you will draw a Pattern to login into the HVR system.



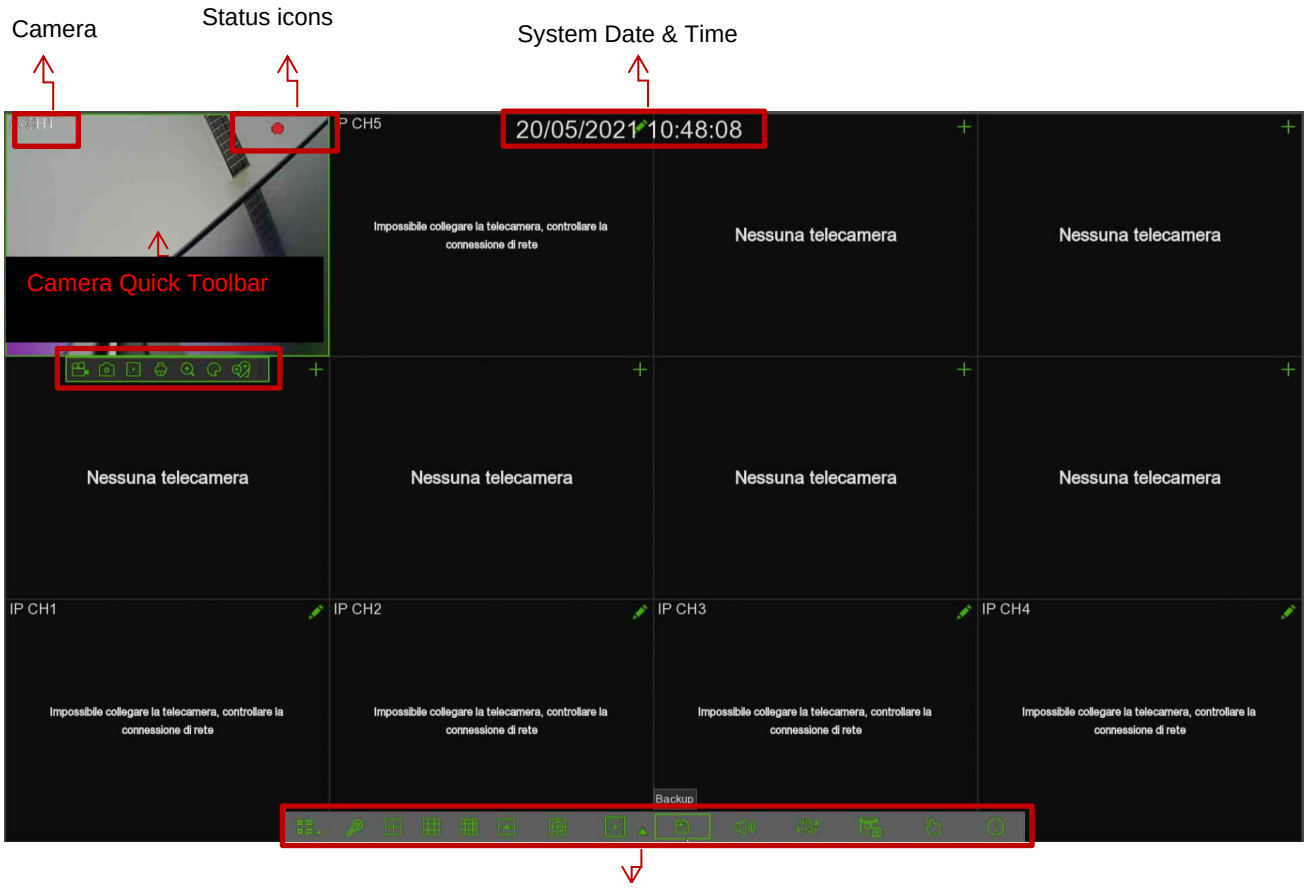
Click on **Apply** to confirm your settings and goes to the login interface. Enter your user name and password to Login the HVR system.

NOTE: In case you forget your password, you can reset it via the hole (RESET) on the back of the HVR. Pressing it should last 10 seconds after which there is an audible warning (3 beeps) and the device restarts.

It is also possible to set security questions for password recovery as shown in the screenshot below:



3.2 LIVE INTERFACE AND POP-UP MENU



Camera title
To display the camera title:
A-: This indicates that the camera connected is an AHD camera
T-: This indicates that the camera connected is a TVI camera
C-: This indicates that the camera connected is a CVI camera
IP: This indicates that the camera connected is an IP camera

Status icons

This indicates that the HVR is currently recording.

This icon appears when the camera has detected motion.

PIR This icon appears when the camera has detected PIR event.

This icon appears when the camera has detected intelligent video analysis.

The icon indicates that the external I/O alarm device is triggered.

This icon indicates that the hard disk (HDD) is in error to work

This icon indicates that the hard disk (HDD) is not present

This icon indicates the hard disk (HDD) is not formatted

This icon indicates the hard disk (HDD) is full.

This icon indicates the hard disk (HDD) is read-only.

VIDEO LOSS:

No Camera: The IP camera is disconnected.

Click to open **Quick Add** menu to add the IP camera.

Click to edit the current IP camera.

3.2.1 TASKBAR

Click to open the Main Menu.

Click to pop up the shutdown options pop-up box.

Click to select a different layout for live view.

Click to select more layouts for live view.

Click to start viewing channels in a sequence.

Quick playback. You can select to play the latest recording for all channels from the beginning of the day, or you can select the playback from the latest 5s, 10s, 30s, 1Min, 5Min.

Quick backup. Click to backup the video file.

Click to adjust audio volume.

Click to switch all IP channels between mainstream and substream (for live view resolution).

Click to switch among real-time, balanced, or smooth view. The view effect modes affect only the live view video quality by bitrate and frame rate but do not affect the recording quality.

To start or stop Manual Record and Manual Alarm.

To view system information, channel information, record info and network state.

3.2.2 CAMERA QUICK TOOLBAR

In live viewing, left-click on a connected camera to display the Camera Quick Toolbar.

AHD Camera Quick Toolbar

IP Camera Quick Toolbar

Click to manually record the channel immediately. If the manually recording is in process, the icon will be red. Click one more time to stop the manual record.

Click to save a snapshot of the current camera image. The Manual Capture option must be enabled to use this feature. For details on enabling Manual Capture, see the "**3.5.1 Capture**" section).

Click to play the latest 5 minutes recording of this channel.

Click to enter PTZ control panel.

Click to zoom into the channel. When the icon appears, press and hold the left button of your mouse to drag the area you want to zoom into.

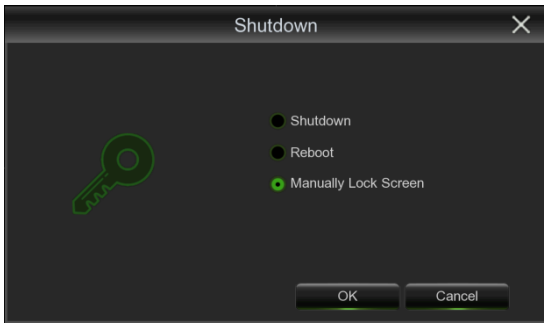
Click to adjust the image colour of the channel. You can adjust the HUE, BRIGHT, CONTRAST & SATURATION of the image.

(Only for IP channel) To switch the live view video stream between HD & SD. HD is the mainstream live view, SD is the substream live view.

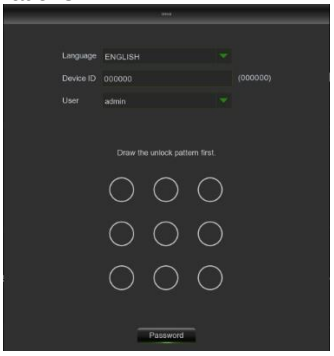
Add customized tag: see the respective section for more information.

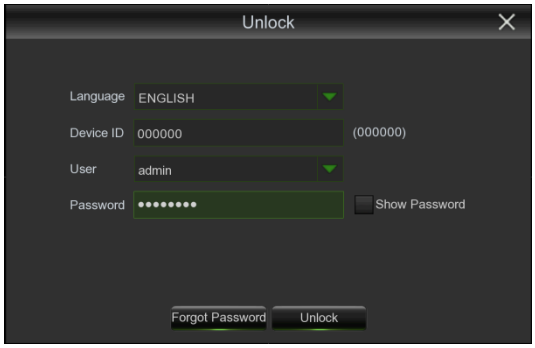
3.2.3 SHUTDOWN / REBOOT / LOCK SCREEN MENU

Click on the **Shutdown** button on the Taskbar and the check the further action you want to move. Click on **OK** button, the system will require the Admin password to authenticate.



If you select **Shutdown** option, the system will be turned off. If you select **Reboot** option, the system will be rebooted.
If you choose **Manually Lock Screen** option, the live viewing screen will be disappeared. You will need to login in the system again for further operations.





Afterwards, edit the Password to login to the system and press **Unlock** button for login again.

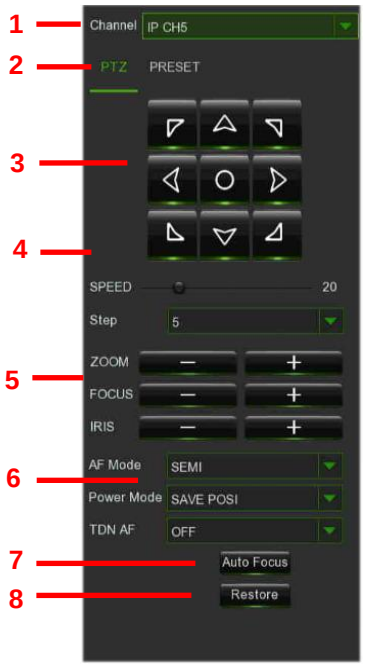
Note:

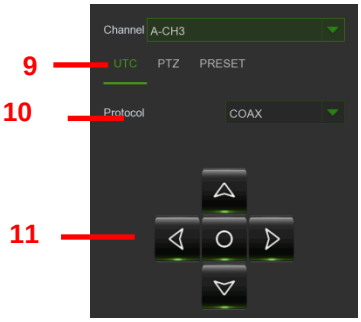
- The Administrator has full authority over Main Menu operations and the authority to limit common user's operation.

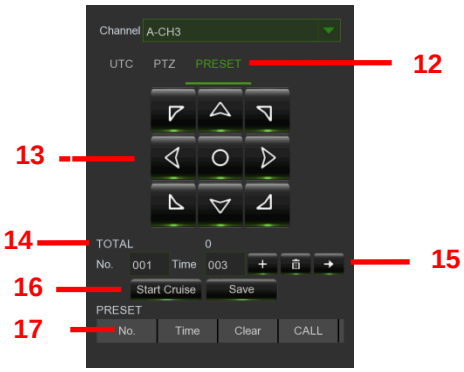
3.2.4 PTZ CONTROL/UTC CONTROL (CAMERA REMOTE CONTROL FOR ANALOG CHANNEL ONLY)

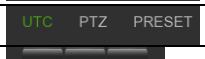
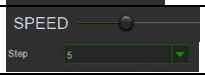
After finishing the PTZ setup, you can use the PTZ function to control your PTZ camera.

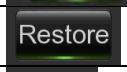
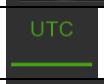
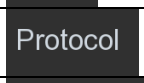
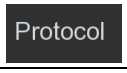
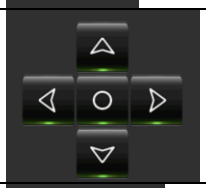
1. Left-click on a channel in the Live Viewing screen to open the Camera Quick Toolbar and select the PTZ control icon .
2. PTZ control panel will be displayed.







N.	Icon	Function	Description
1		Channel	Click to select the channel of the PTZ AHD/IP Camera.
2		Type	Select the PTZ/UTC/Preset Control Camera
3		Pointer Panel	A) Click on to start/stop the PTZ camera. B) Click up/down/left/right to set cruise of PTZ camera
4		Speed or Step	Adjust the PTZ speed
5	- ZOOM +	Zoom	Click to zoom in/out.
	- FOCUS +	Focus	Click to adjust the focus
	- IRIS +	Iris	Click to adjust the iris setting
6	AF Mode	Focus mode	**OFF**: no possibility of zooming or focusing **MANUAL**: possibility of manual focusing only **AUTO**: focus automatically when the image is out of focus **SEMI**: image focus only after zoom in or zoom out operation
	Power Mode	Restart behaviour	**OFF**: tele at switch-on **SAVE** : POSI: last position at switch-on **WIDE**: wide at switch-on

	TDN AF	Night/day switch focus and vice versa	**OFF**: No focus for night/day switch or vice versa **ON**: Night/day switch focus and vice versa
7		Focus	Autofocus if out of focus
8		Restore	Restore Auto-Focus IP Camera
9		UTC	Click UTC to setup page of UTC
10		Protocol	Click on  and select Protocol.
11		Pointer Panel	A) Click on to start/stop the UTC function. B) Click up/down/left/right arrow to move the cursor in UTC OSD menu.
12		PRESET	Click on to view the Preset configuration page.
13		Pointer Panel	A) Click on to start/stop the preset on the cursor. B) Click up/down/left/right to move and set preset points.
14	Total	Total	Display the total number of preset points
15	No./Time	No./Time	Number of preset point; Set the time how long the camera will stay in the preset point
15		Set	Enter the number of a specific preset point, click this button to move your PTZ camera to the preset point
15		Delete	Click to delete the selected preset point
15		Go to	Click to set a specific preset point on a PTZ camera. You can add up to 255 preset points for the HVR.
16		Start/Save	Click then click on to save the settings and preset points
17	Preset List	Preset List	Preset List

3.2.4.1 **UTC control**

The UTC function (Up the Coax) allows the data transmission on the same coax cable used for video signals transmission. No RS-485 serial connection is required for remote camera control. It is possible to open the OSD menu of the camera and control the menu using the PTZ control buttons.

According to different camera Iris [+] or [central enter] buttons open the On Screen Display menu. The arrows buttons can be used to select and to choose the different menu functions.

According to the type of camera, the OSD is displayed by the management of iris buttons or by pressing the central enter button, using the arrows buttons you navigate the menu.

The last choice of the menu can be used to save and exit from menu.

IMPORTANT NOTE:
The UTC or UTC-Z function can be used according to the AHD camera model. To see that camera model to associate with the UTC or UTC-Z function, see the specific documentation of the camera model available on the Urmet website.

3.2.5 **CRUISE SET**

Open Auto Cruise function on PTZ setting menu if you want to setup cruise function (system default: off) and set up Cruise channel, Cur point and total quantity and stop time, etc.
How to set pre-set point

- **Total:** set up pre-set point quantity
- **Cur Point:** indicates starting point cruised. System default point is 01. The model support up to 255 pre-set points.
- **Time:** sets the stop time at each point

- **CALL:** allow you to go to a specific preset point.
- **SET:** allow you to set a set of specific preset points of a PTZ camera.

Note:

Use 95 to enter the OSD menu of the Speedome. Run the SET95 control if CALL95 does not work. See the Speedome manual for the Speedome OSD.

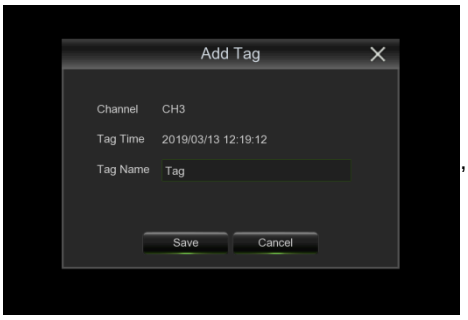
1. Select a camera you desire to set a preset point.
2. Adjust the camera in the desired direction.
3. Click on [Set] to set the point as a preset point.
4. Click on [Save] to save the preset point.
5. Follow the above step to add one more preset point.

- **Save:** Save all the preset points
- **Clear**: This can be used to delete one selected preset point.

Note: Up to 254 pre-sets per one camera can be stored. However, the actual preset quantity differs depending on PTZ performance.

3.2.6 TAG SETUP

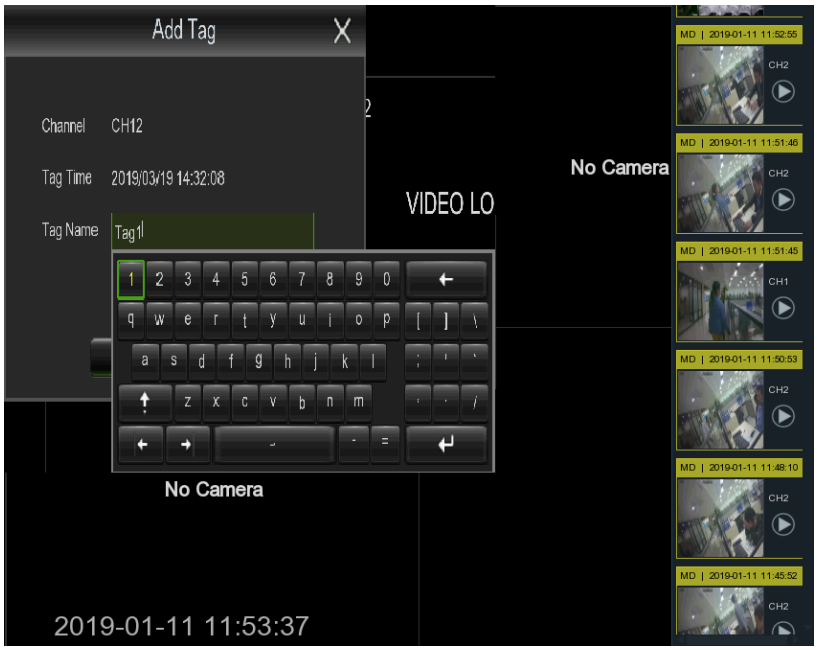
Move mouse to any a live channel, then right-click to view tools bar. The Add Customized Tag icon is .

Click on to view 

,

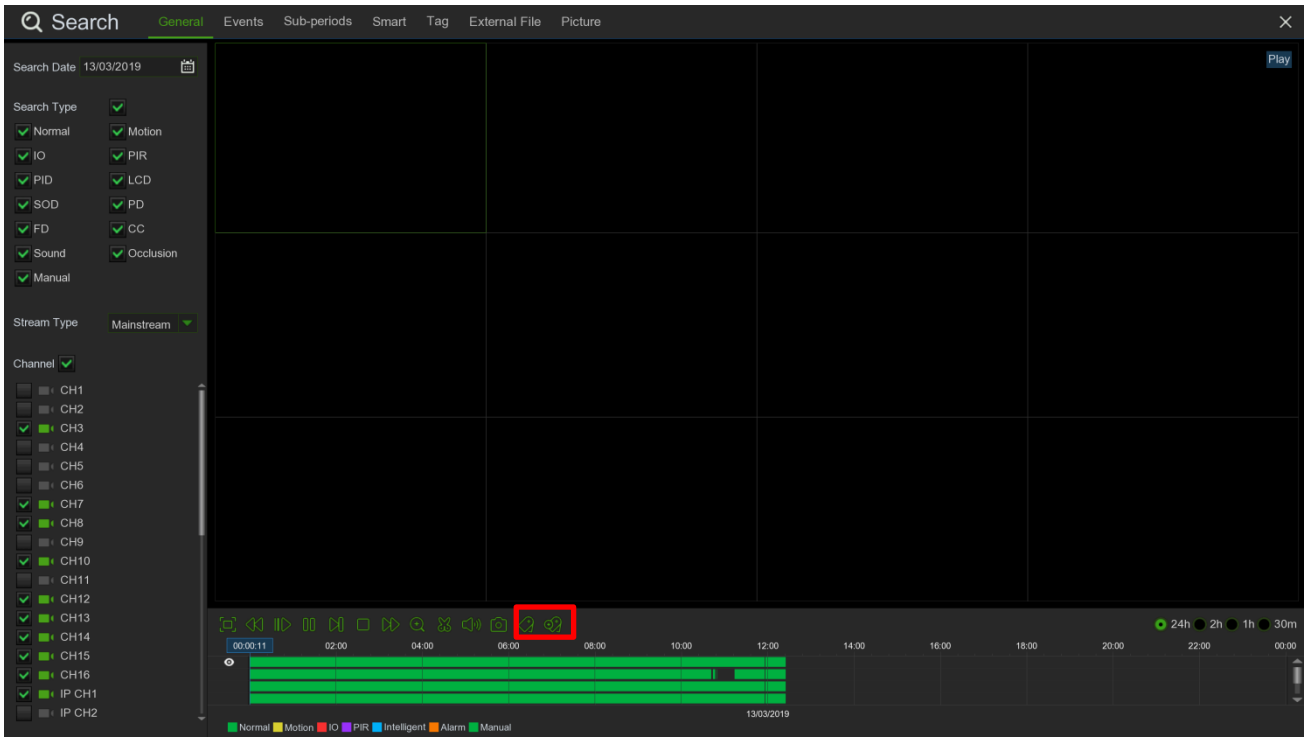
then click on

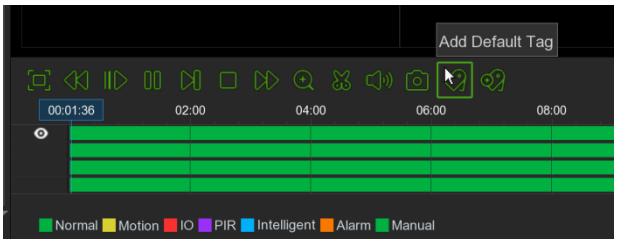
. Set the Tag once, the Tag can record one minute, this is the default setting. Tag name may be edited, for example:

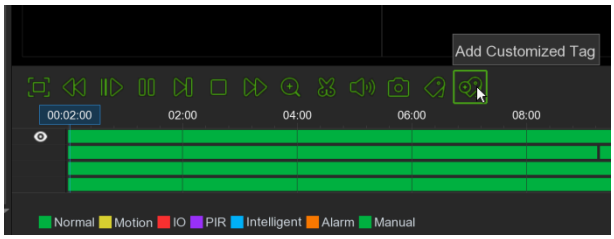


Warning:

- User can select [General], [Sub-periods] and [Smart] options on the [Search] page and set the Tag event record.



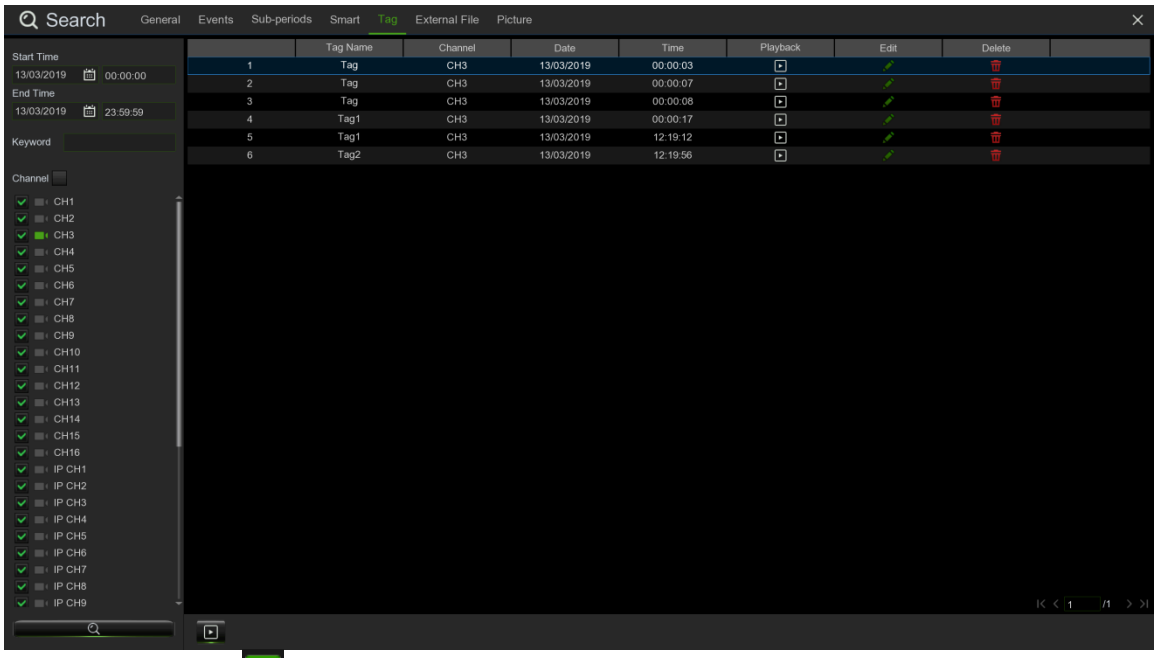




3.2.7 TO SEARCH FOR A TAG RECORD EVENT

Click on **Start Menu** → **Setup**→ **Search** → **Tag** on the Tag event search page, then set Start Time, End Time and Channel.

Click on Search to view the list of event tags.



- **Playback:** Click on to play the Tag recording event.
- **Edit:** Click on to modify the Tag name.
- **Delete:** Click on to delete the Tag recording event.

3.3 MAIN MENU

All the HVR functions can be accessed from the Main Menu. If you have not logged in (main menu locked mode), you will need to enter Username and Password [1] as shown in the following figure:
.

For System Login press **Unlock** button.
Pressing the **Pattern** button will allow access to the main menu via the unlocking pattern if it was set during the first access.

Note:

- The Administrator has full authority over Main Menu operations and the authority to limit common user's operation.

In <Live> mode you can access the Main Menu by left-clicking on the menu pop-up that appears in the lower part of the screen. As mentioned above, the Main Menu can be used to manage the device setup parameters, search for images recorded by the HVR, access advance settings, shut down and reboot the system and so on.

3.4 CHANNEL SETTINGS

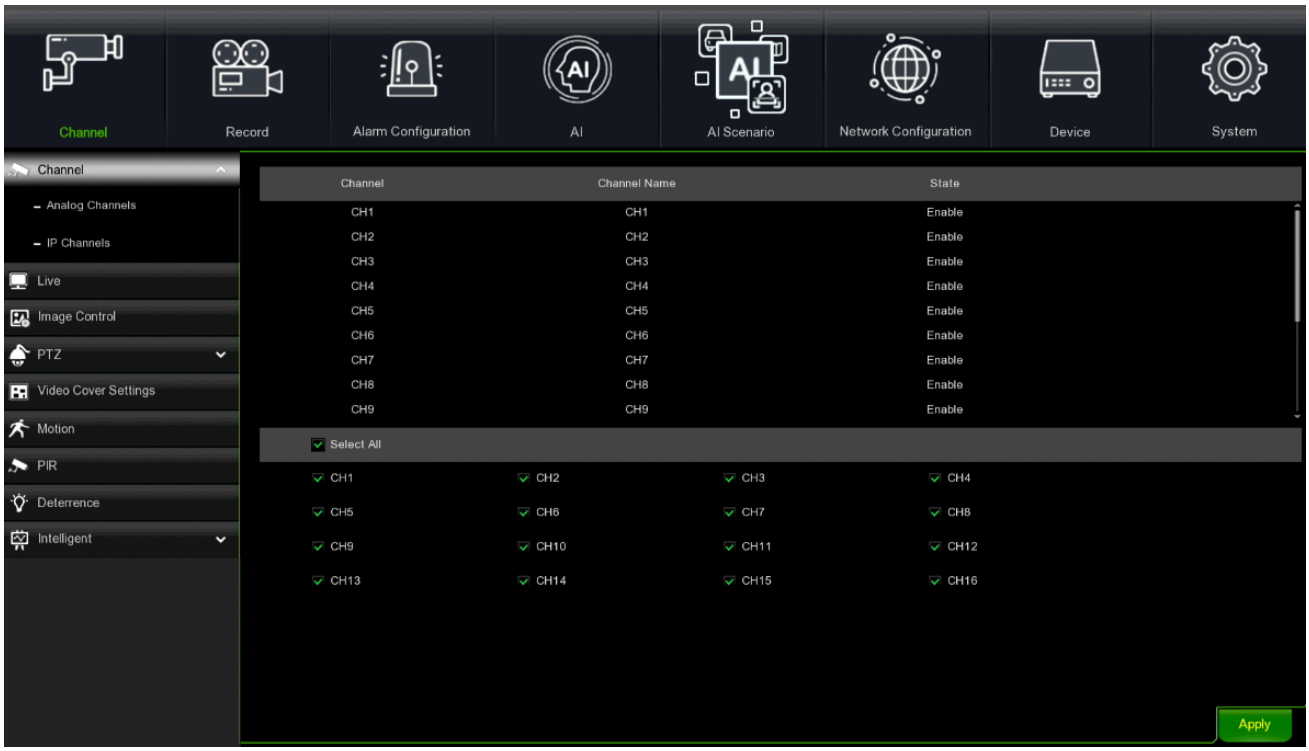
You can access the main parameters of the system in this section. As shown in the following figure, after clicking on "Parameter" in the top left, the following subsections will appear in the menu underneath in that to set the respective configuration parameters:

[1] When accessing the system for the first time, enter ***admin*** in the Username field; you will then be able to choose your Password.

- Channel
- Live
- Image Control
- PTZ
- Video Cover Settings
- Motion
- PIR
- Deterrence
- Intelligent

3.4.1 **CHANNEL**

The first subsection in the Channel section concerns screen configuration, i.e. all the settings referred to the HVR camera image display. They will be described in detail in the following paragraphs.



3.4.1.1 Analog Channels

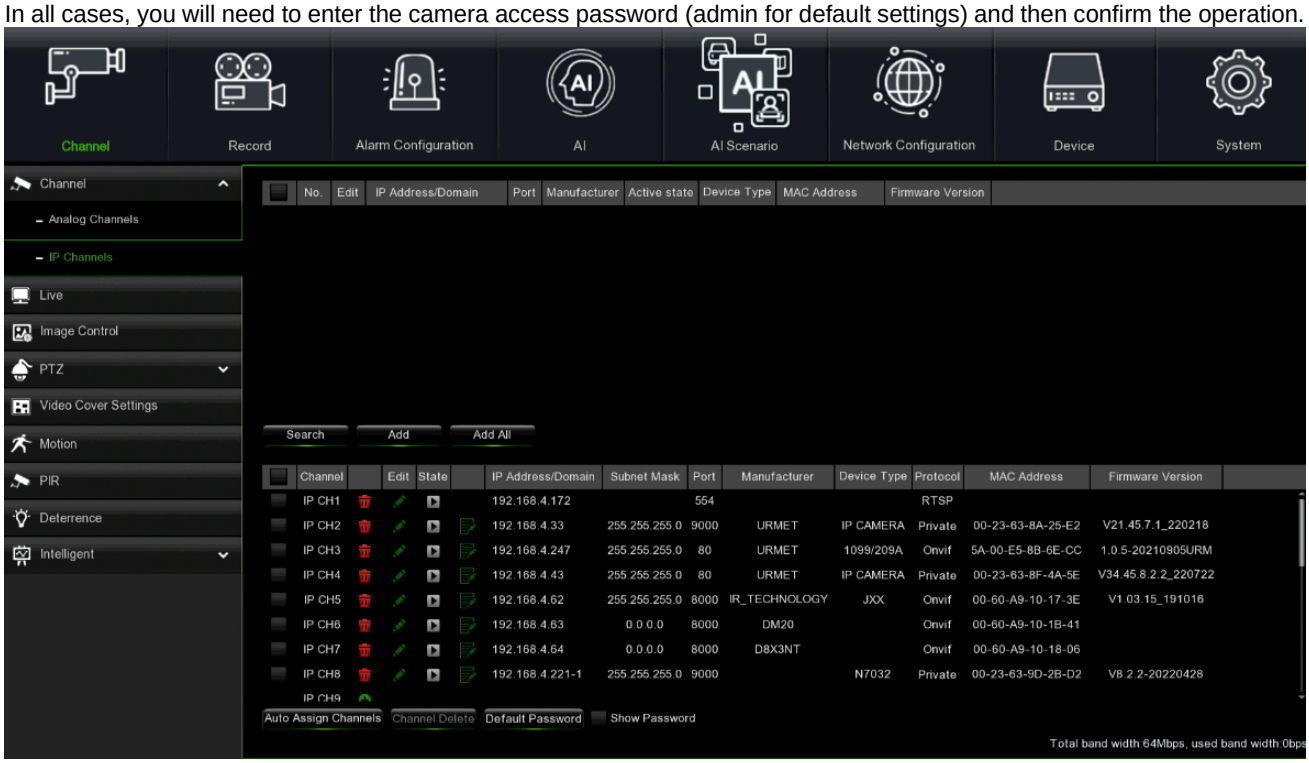
Use this menu page to enable/exclude the available analog channels. The various cameras supported on all analog channels are: Camera AHD 4K, Camera AHD 5M, Camera AHD 4M, Camera AHD 1080P, Camera AHD 720P and Camera 960H.
The list of available analog channels with the respective state is shown in the central part: Enable, Disable. Check the corresponding box to change the state of a single channel; click on the “Analog Channels” box to do the operation on all available channels. Press the “Save” button to confirm the changes made.

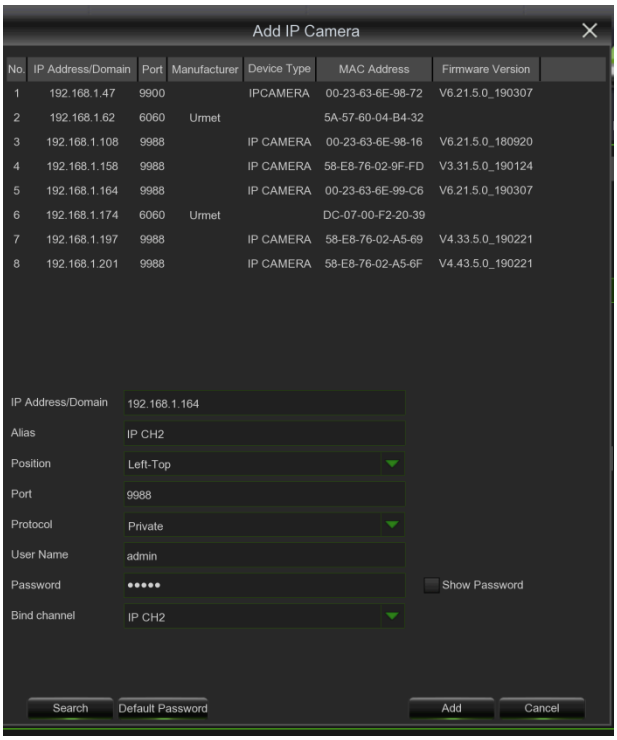
Warning: The system must be rebooted to enable or exclude one or more analog channels.

NOTE: For each disabled analogue channel and each added IP channel, the bandwidth will be increased by additional 4Mbps for 5M Lite HVR Series and 8Mbps for 4K HVR Series.

3.4.1.2 IP Channels

The IP cameras are configured by selecting IP Channels on the side menu. The four buttons on the lower part of the page can be used to add or eliminate cameras in the system.
Click [**Search**] to search IP cameras from local network. Press [**Add All**] to quickly add IP cameras present in the HVR LAN (the IP address is assigned automatically is this case). Click on [**Add**] or to manually add a camera to the system of the list of available channels.
In all cases, you will need to enter the camera access password (admin for default settings) and then confirm the operation.



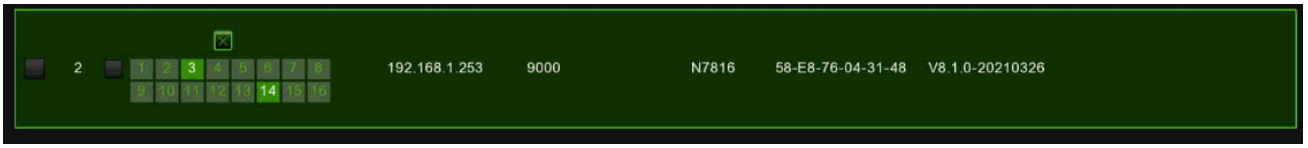


Click on **Search** to search IP cameras and then click on one of the IP camera in the device list and fill in the missing fields. Press this button to access the page for manually selecting and configuring the cameras present in the local area network (LAN); the HVR will run an automatic search and show the list of cameras in the list on the upper part of the page (the search can be run manually at any time by pressing the Search button).
To add the required cameras, simply select them from the list and press the “Add” button; the cameras will appear in the list in the bottom right of the screen at the end of the operation.
Here are the parameters to be set for adding a camera

- **IP Address/Domain:** IP address or domain name of the IP camera
- **Alias:** Name of the IP camera
- **Position:** Position to display the camera name on the screen.
- **Port:** Port of the IP camera
- **Protocol:** Choose the protocol of the IP camera from the drop down menu
- **User Name:** User Name of the IP camera
- **Password:** Password of the IP camera
- **Bind channel:** Choose the HVR channel to that you want to connect
- **Auto Assign IP to Camera(s):** The added IP camera would be not able to connect if its IP address is not in the same network segment with HVR. With this function to reassign an IP address to all added IP cameras.
- **Channel Delete:** Choose one or more added IP cameras and click this button to delete.
- **Manual Mode:** When set to Manual Mode, the user can delete or add the network IPC.
- **Auto Mode:** When set to Auto Mode, the channel automatically connects to the IPC on all POE interfaces of the HVR. The user cannot delete or add the network IPC to the channel.

  To add channels from another HVR/NVR select the + button next to the IP address of the found device.

Select the concerned channels.

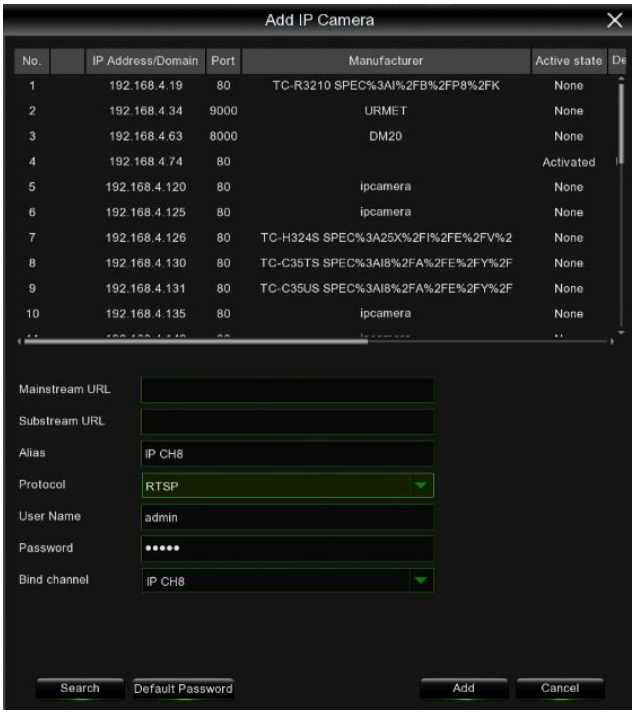


Press add and fill in the remaining fields as passwords or aliases, continue in the same way as adding a normal IP camera.
Finally, the IP channel list will show the IP address of the device with the associated channels next to it

3.4.1.3 **Protocol Manage**

Adding cameras via RTSP protocol

The RTSP (acronym of Real Time Streaming Protocol) is used to view the video mainstreams/substreams of an IP camera connected to the HVR on a web page of the PC or on the local monitor, through the RTSP port. This function is useful to manage the live stream of an IP non ONVIF camera connected to the HVR.
To confirm video streams using the RTSP protocol, click on [Add] and write the mainstream/substream URL as shown in the following page:



The following parameters must be set:

- Custom Protocol: This can be used to define the name of the RTSP protocol to be associated with the IP camera.

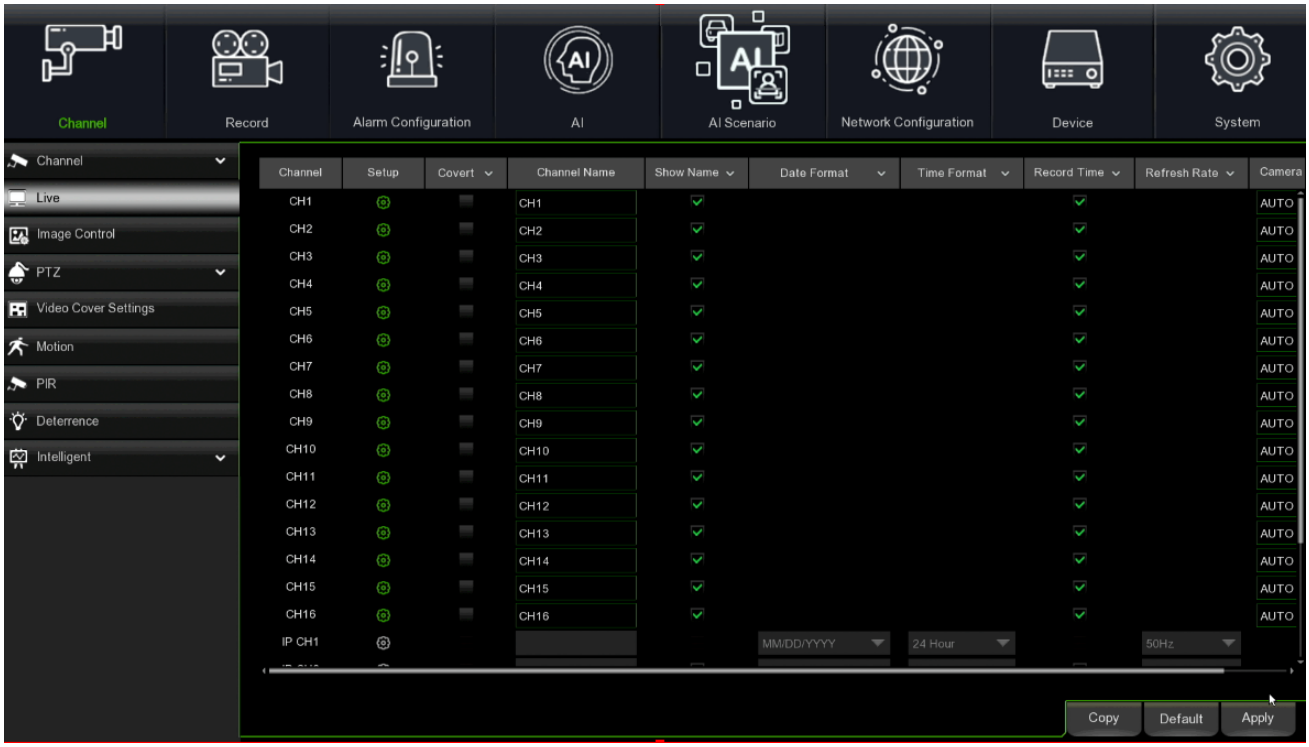
The following fields may be defined for each mainstream/substream:

- Port: The default RTSP port is 544 but this setting can be changed by the user typing a different numeric value.
- Resource path: Copy the resource path used for the VLC software (VideoLAN Client, the multimedia player used to view the camera video stream), installed in the PC for the IP camera to be added. The live stream can then be viewed only on the local HVR via the configured RTSP port.

Confirm to quit at this point. Now, the IP camera detected using the protocol employing the RTSP port can be added to the live grid of the HVR.

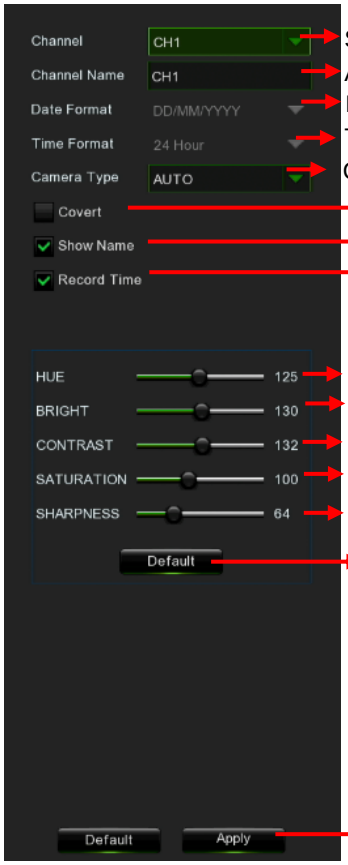
3.4.2 **LIVE**

This page of the Display menu can be used to configure the parameters related to the <Live> screen of the HVR. As shown in the following figures, the available options may be different if an analog channel is being configured (figure on the left) or an IP camera (figure on the right).



- **Channel**: This displays the channel name.
- **Setup**: Click on the icon on the configuration page.

Here are the details related to other functions:



Select a channel to be configured.

Attribute a name to the camera.

Date format to be displayed for the camera (for IP camera only).

Time format to be displayed for the camera (for IP camera only).

Choose the camera type: AUTO/TVI/AHD

Adjust the Saturation value for the image colour

This is used to view the name of the camera on the Live screen

This is used to view the system time on the Live screen.

This is used to adjust the Hue of the image colour.

This is used to adjust the Brightness of the image colour.

This is used to adjust the Contrast of the image colour.

This is used to adjust the Saturation of the image colour.

This is used to adjust the Sharpness of the image colour

Click on **Default** to load the default settings of hue, brightness, contrast and saturation parameters

Click on **Apply** to save the settings. Right-click to quit.
Click on **Default** to load the default settings.

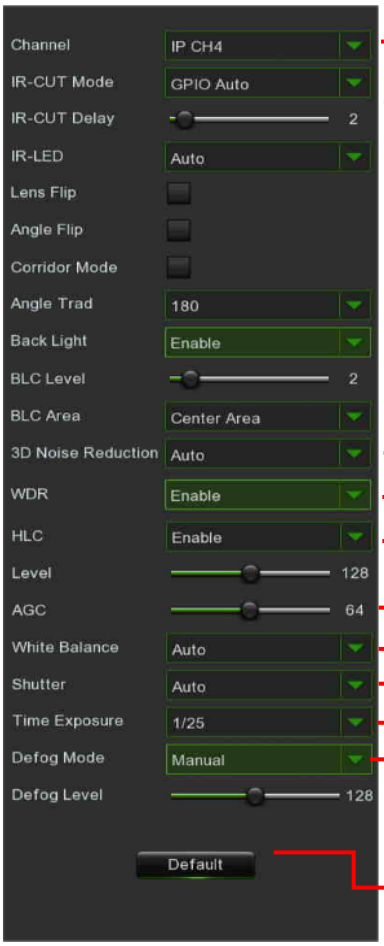
3.4.3 IMAGE CONTROL

This item of the Display menu can be used to access the page for adjusting the IP camera image quality parameters. The following figure shows a typical example and the meaning of the available options is described in the following list.

NOTE:

- The available options may differ according to the IP camera model.

- **Channel:** Channel name.
- **Setup:** Click on the icon on the setup page.



Select a channel to be configured.

Select the desired integrated IR cut filter mode to ensure the camera works correctly in D/N. Set the IR-CUT switching delay time.

Check to enable lens flip and angle flip

Set the flip angle.

To enable or disable backlight compensation.
Select the backlight compensation level and the application area

To enable or disable 3D noise reduction function setting the level.

To enable or disable Wide Dynamic Range by increasing white dynamics.

To enable or disable high light compensation, choose the desired compensation level.

Automatic gain control: OFF/Low/Middle/High

To enable or disable white balancing: Auto/Manual

To set the Auto/Manual shutter mode.

Set the shutter mode in Auto/Manual

Set Defog mode: Disable/Auto/Manual mode, if Defog is set to manual, set level to improve the video quality.

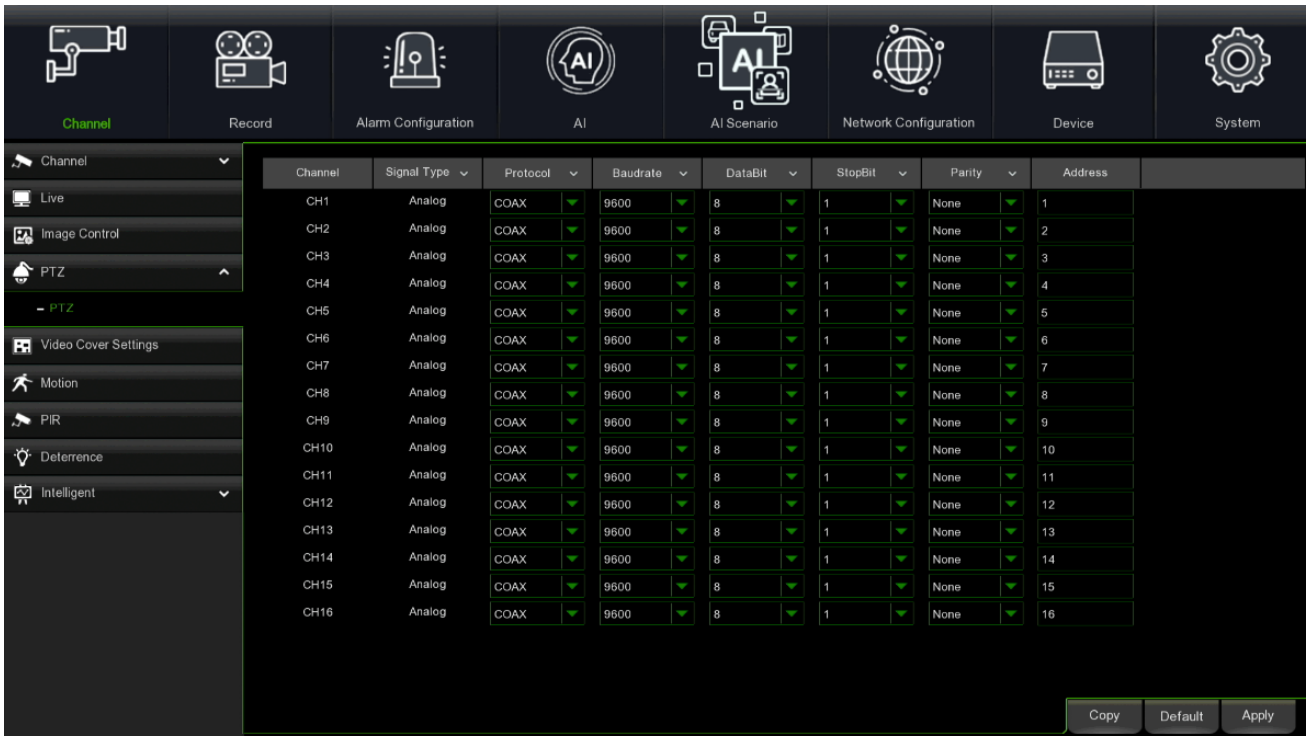
Click on **Default** to load the default settings.

3.4.4 **PTZ**

This menu can be used to configure the PTZ (Pan-Tilt-Zoom) settings for the dome camera

3.4.4.1 **PTZ**

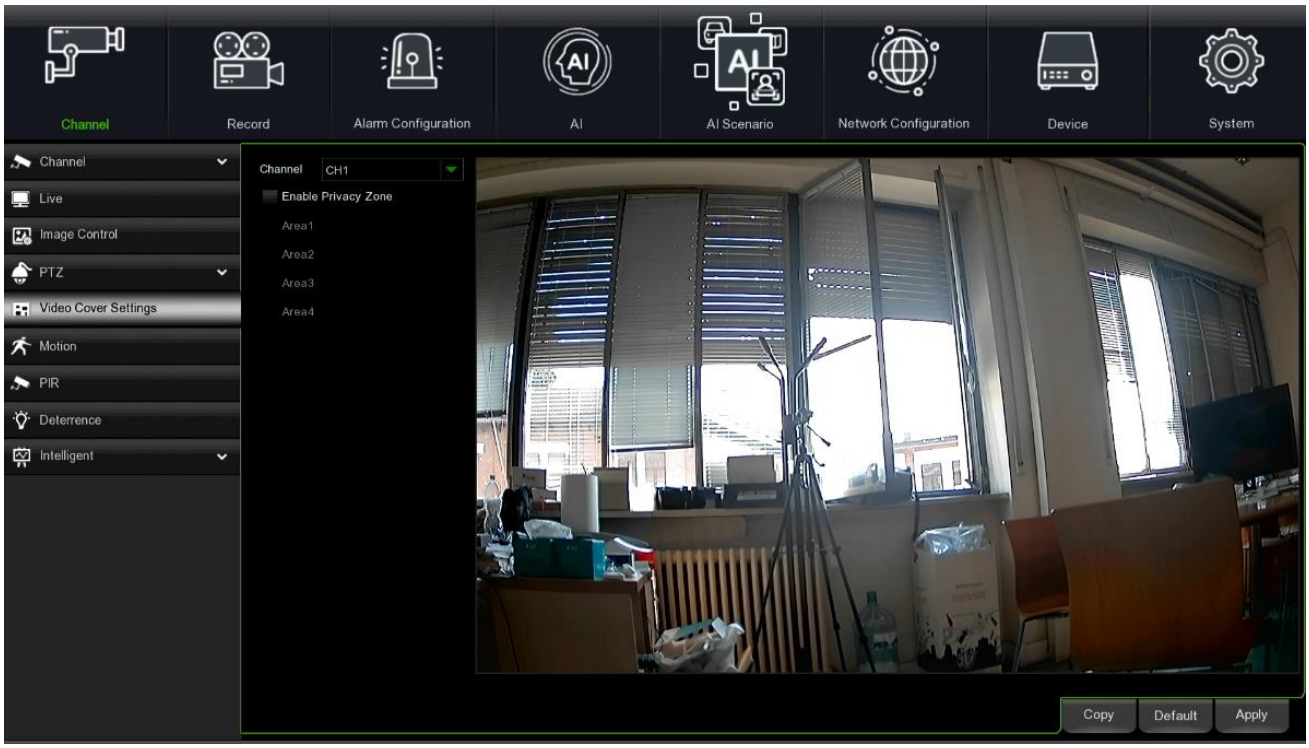
To control PTZ cameras, click on PTZ (that stands for Pan Tilt and Zoom) to open the page shown in the following figure. On each channel, you can set the communication protocol, speed and other information, as shown below:



- **Channel:** Channel name
- **Signal Type: Analog for analog channels, Analog & Digital for IP channels.**
- **Protocol:** Choose the communication protocol between the PTZ capable camera and HVR.
- **Baudrate:** This is the data transmission speed sent by the HVR to the PTZ camera. Make sure it matches the compatibility level of your PTZ-capable camera.
- **DataBit / StopBit:** The data exchanged between the HVR and PTZ camera is sent in individual packages. The **DataBit** indicates the number of bits sent, while the **EndBit** indicates the end of the package and the beginning of the next (information) package. The available **DataBit** parameters are: **8**, **7**, **6**, **5**. The available **StopBit** parameters are **1** or **2**.
- **Parity**: For error check. See the documentation of your PTZ-capable camera, to configure this setting.
- **Cruise**: Enable to use the Cruise mode. A number of preset points must be set to use the Cruise mode.
- **Address**: Set the command address of the PTZ system. Please be noted that each PTZ-capable camera needs a unique address to function properly

3.4.5 VIDEO COVER SETTINGS

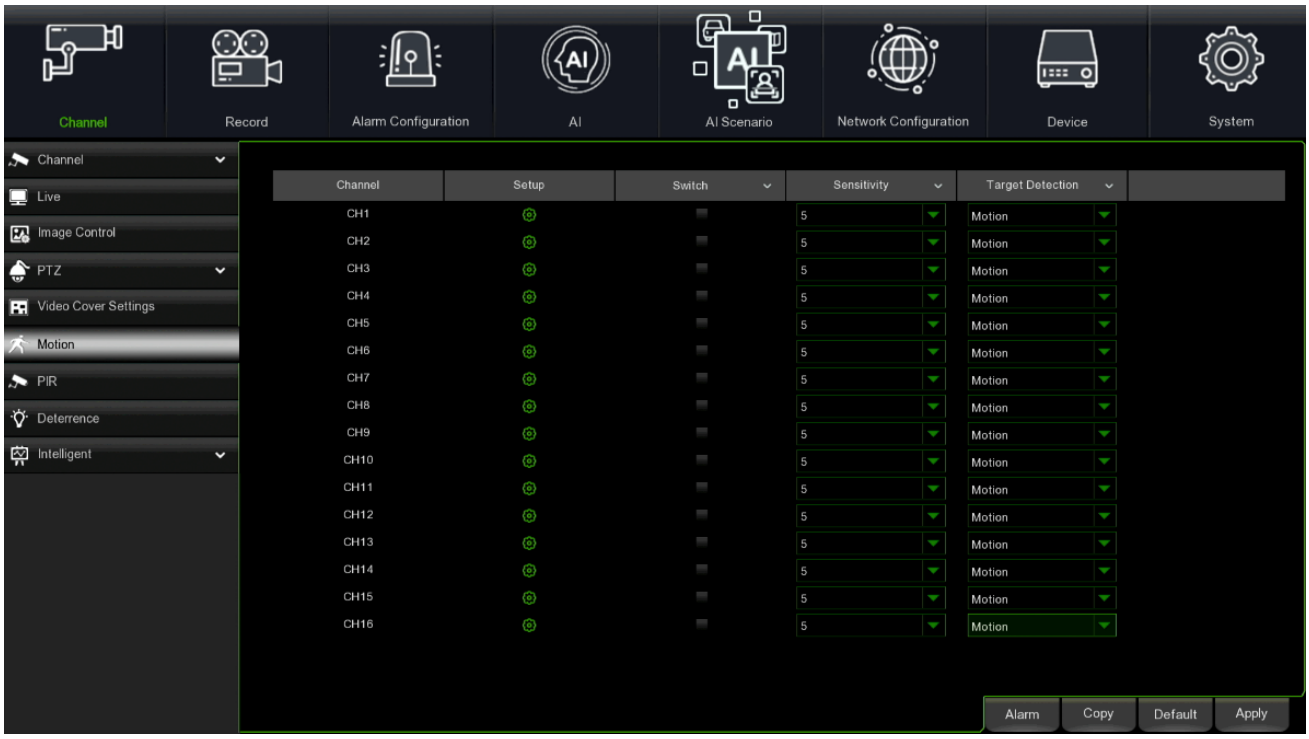
This menu allows you to create privacy zone(s) if you want to partially cover some certain part of the image. You can create up to four privacy zones in any size and location on the camera image. Enable the Privacy Zone and select how many zones you need. The zone(s) appear as “red box”. Click the edge of the red box and drag it to any size to create a privacy zone.



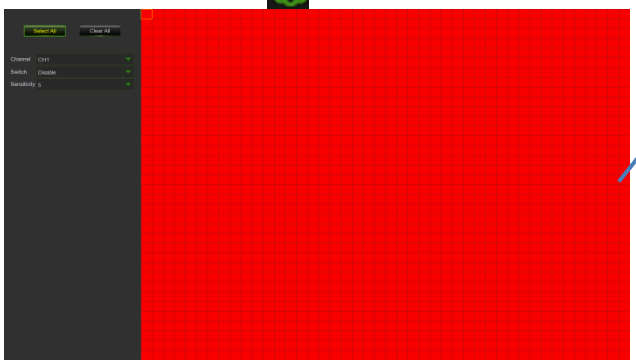
Note: The area of privacy zones you had set will be invisible in both live view & recording video.

3.4.6 MOTION

This menu allows you to configure motion detection parameters. When motion has been detected
by one or more cameras, your HVR will alert you to a potential threat at your home. It does this by sending you an email alert with an attached image from the camera to use as a reference (if this option is enabled) and/or sending push notifications via the mobile app.



Setup: Click on the icon on the configuration page.

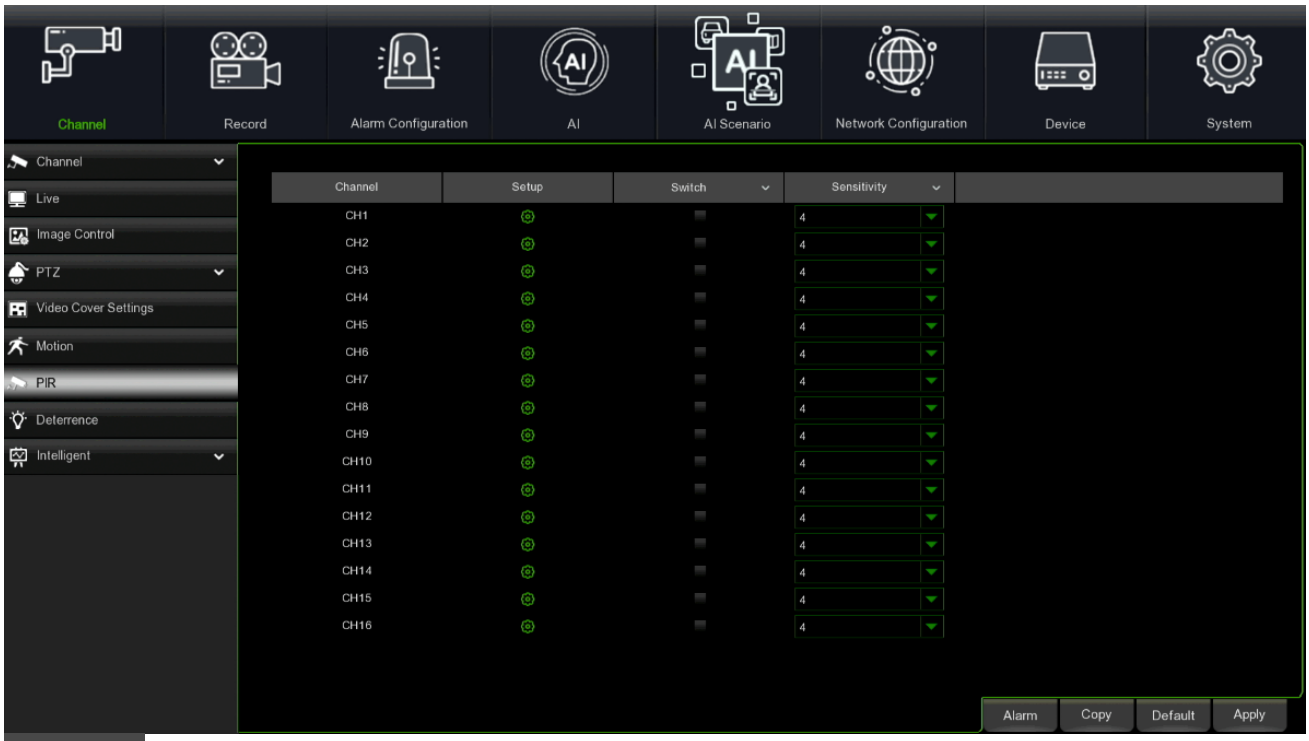


Motion Detection Area:
The whole screen is marked for motion detection (red blocks) as default. If you want to disable the motion detection on a certain area, click on the grid cursor and then drag the mouse to highlight the scope to deselect the area into transparent blocks. After the setting is completed, right-click to go back and click on **Save** to make the area setup effective.

- **Switch**: Enable or disable motion detection.
- **Sensitivity**: Set the sensitivity level. Level 1 the lowest sensitivity level and level 8 is the highest sensitivity level. Once completed, click on the **[Apply]** button.
- **Copy:** This can be used to copy current channel parameters to any other channel or to all channels.
- **Default**: This can be used to restore the default alert settings.

3.4.7 PIR

Select PIR in the side menu to open a page where to define the methods and actions to be taken in case of motion alarm detection.
Click on **PIR** button, then click on setup to configure the motion detection PIR function:

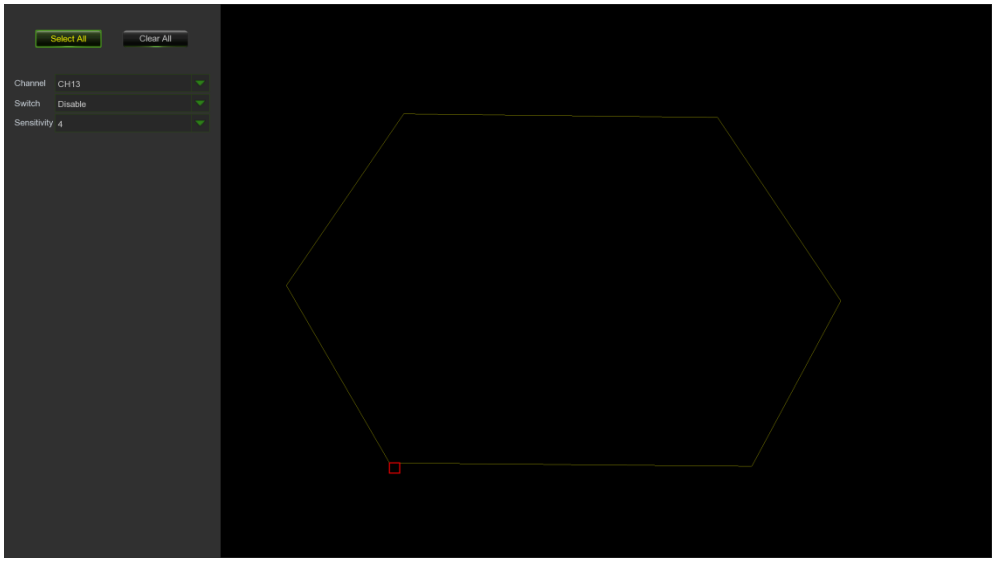


Channel : show the analog channel and IP channel.

: configure monitor area for PIR

Click on Select All to set the system to automatic motion detection of PIR function.

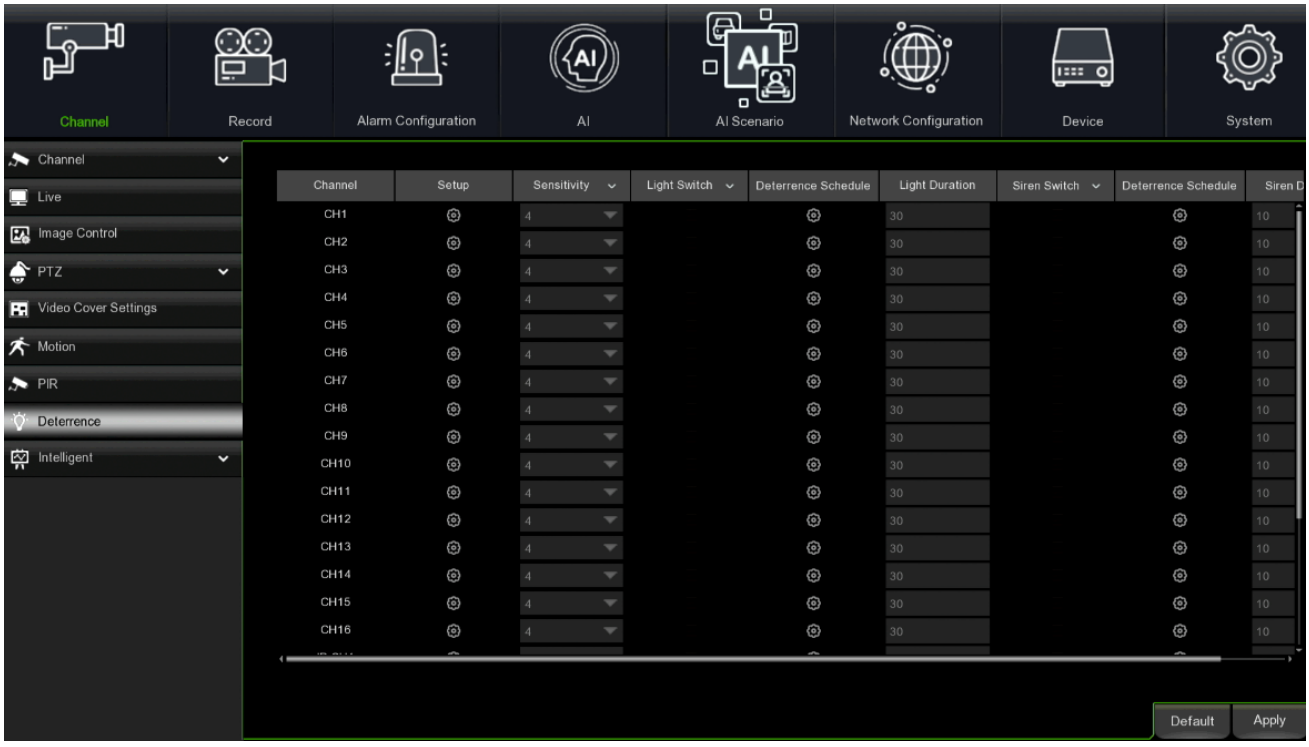
You can set an area for motion detection PIR function by clicking on:



To configure PIR Alarm, see "**Section 3.6.2-PIR** "

3.4.8 **DETERRENCE**

The deterrence function can be used to configure some actions to deter and report abnormal behaviour detected by the camera. This fuction is active from firmware version 8.2.2 and further.



3.4.9 **INTELLIGENT**

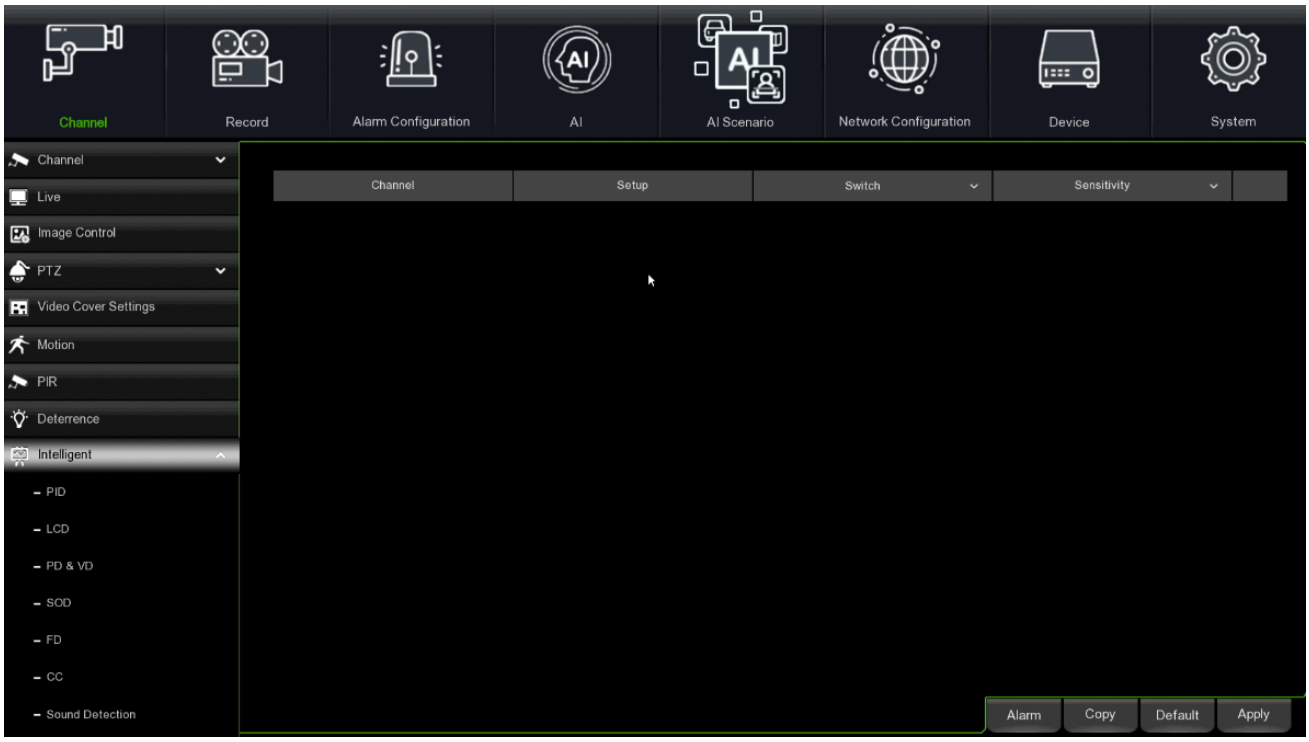
The optional intelligent functions include PID (Perimeter Intrusion Detection), LCD (Line Crossing Detection), SOD (Stationary Object Detection), PD (Pedestrian Detection), FD (Face Detection) and CC (Cross Counting).
For more information on the use and settings of intelligent video analysis functions, see the URMET website on http://www.urmet.com where it is also possible to check series or part numbers, availability of related additional material, such as **DS1093-576 Addendum Intelligent Video Analysis** and any firmware updates containing improvements made to intelligent video analysis algorithms.
The following table summarizes the possible scenarios for using intelligent algorithms for analogue or IP cameras. The IP camera functions, especially FD depend on the camera model.

	PID	LCD	PD	SOD	FD	CC	Sound detection	Video tampering
1097/624	analog+IP	analog+IP	analog+IP	IP only	IP only	IP only	analog+IP	analog+IP
1097/574	analog+IP	analog+IP	analog+IP	IP only	IP only	IP only	analog+IP	analog+IP
1097/578	analog+IP	analog+IP	analog+IP	IP only	IP only	IP only	analog+IP	analog+IP
1097/628	analog+IP	analog+IP	IP only	IP only	IP only	IP only	analog+IP	analog+IP
1097/576	IP only	IP only	IP only	IP only	IP only	IP only	IP only	IP only
1097/626	analog+IP	analog+IP	analog+IP	Solo IP	Solo IP	Solo IP	analog+IP	analog+IP

WARNINGS: PID&LCD functions are mutually exclusive with the PD function.

3.4.9.1 PID (Perimeter Intrusion Detection)

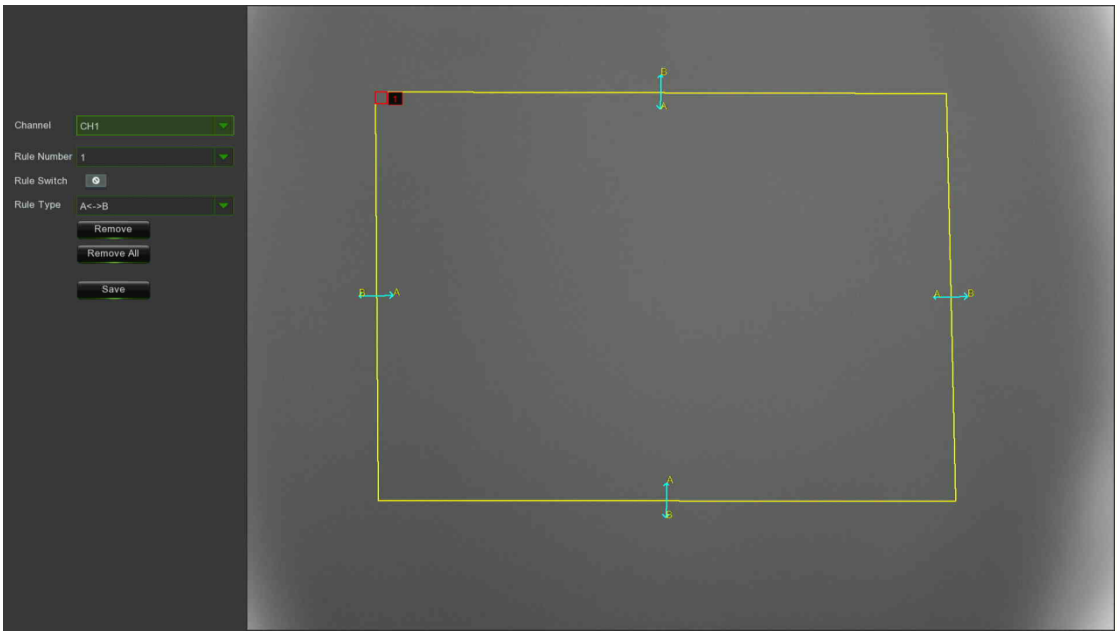
This function detects people, vehicle or other objects that enter and loiter in a predefined virtual area and some certain actions can be taken when the alarm is triggered.



- **Channel**: Select the channel you want to configure
- **Switch**: Enable or disable the PID function
- **Sensitivity**: The sensitivity level is comprised between 1 and 4. Higher sensitivity will be easier to trigger the detection.
- **Scene**: Two settings are available: Indoor and Outdoor. Select the scene to match with the place in that your camera is installed.

Selecting setup:

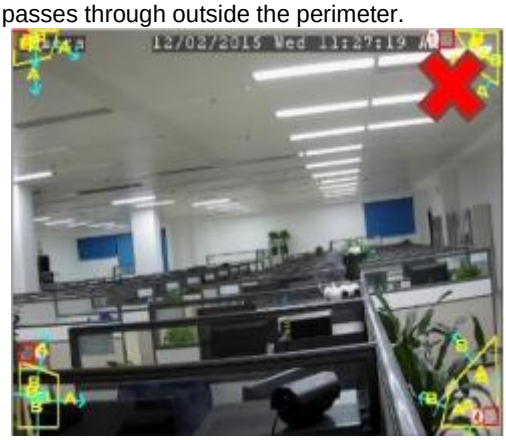
- **Channel**: Select the channel you want to configure
- **IVA Lines**: This can be used to enable or exclude IVA lines.
- **Area**: Draw a virtual area in the camera image.

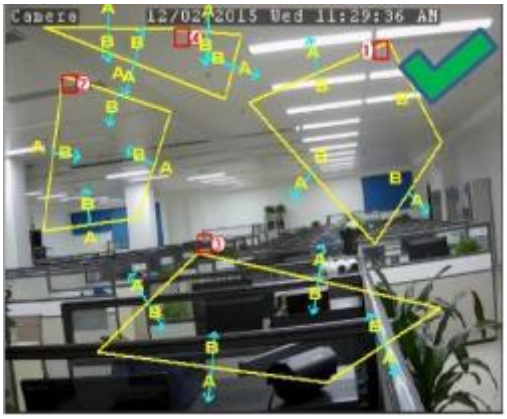


- Choose one of the Rule Number. It is the number of PID area. Up to four areas can be set for the PID function.
- To enable the detection in **Rule Switch**.
- Select a **Rule Type**.
  - **A→B**: HVR will only detect the action from side A to side B.
  - **B→A**: HVR will only detect the action from side B to side A.
  - **A←→B**: The HVR will detect the action from either side B to side A or side A to side B.
- Click on four points in the camera picture to draw a virtual area. The shape of the area should be a convex polygon. Concave polygon cannot be saved.
- Click on **Save** to save your settings.
- If you want to modify the position or shape of area, click on the red box in the area; the edges of the area will turn red. Hold the left mouse button pressed to move the position of the area or drag the corners to resize the area.
- To remove one of the areas from the camera picture, click on the red box in the area and then click on the **Remove** button. Click on **Remove All** to delete all areas.

Warning:

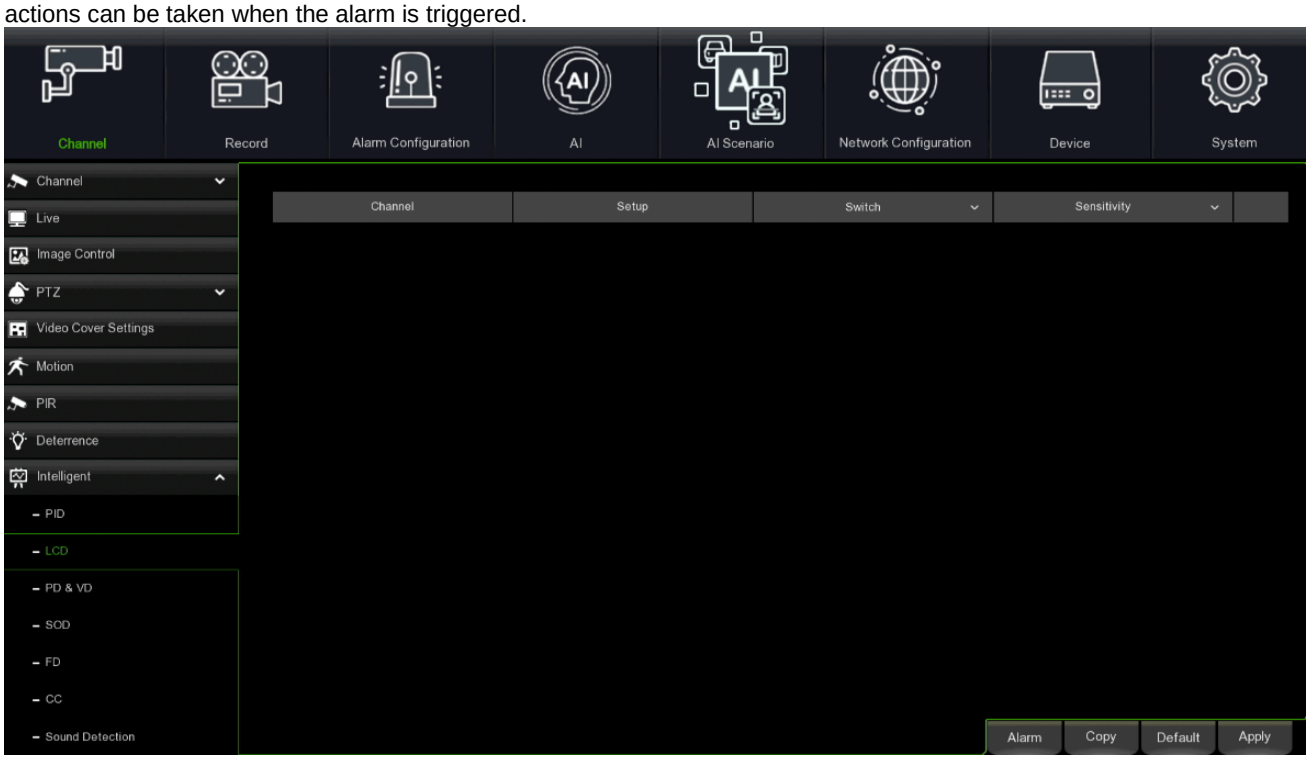
- The perimeter must not be too close to the edges/corners of the camera picture, since it may fail to trigger the detection when the target passes through the edges/corners.
- The shape of the areas shall not be too narrow/small, since it may fail to trigger the detection when the target passes through outside the perimeter.





3.4.9.2 LCD (Line Crossing Detection)

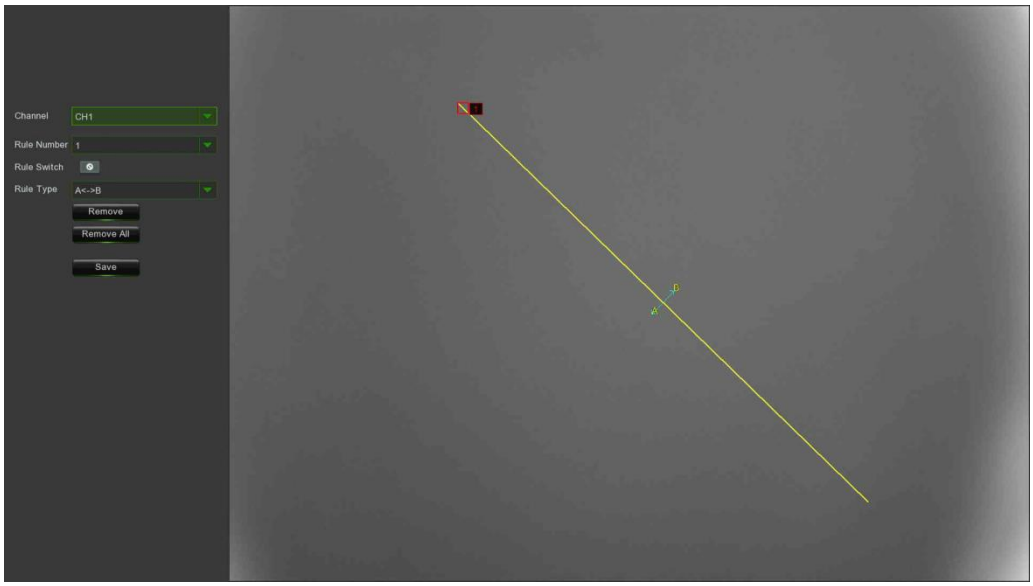
Line Crossing Detection function detects people, vehicle or other objects that cross a predefined virtual line and some certain actions can be taken when the alarm is triggered.



- **Channel:** To select the channel you want to configure.
- **Switch:** Enable or disable the LCD function
- **Sensitivity:** The sensitivity level is comprised between 1 and 4. Higher sensitivity will be easier to trigger the detection.
- **Scene**: This function has two options: Indoor and Outdoor. Select the scene to match with the place in that your camera is installed.

Selecting setup:

- **Channel**: Select the channel you want to configure.
- **IVA Lines:** Enable or disable the IVA Lines.
- **Area**: Draw a virtual area in the camera image.



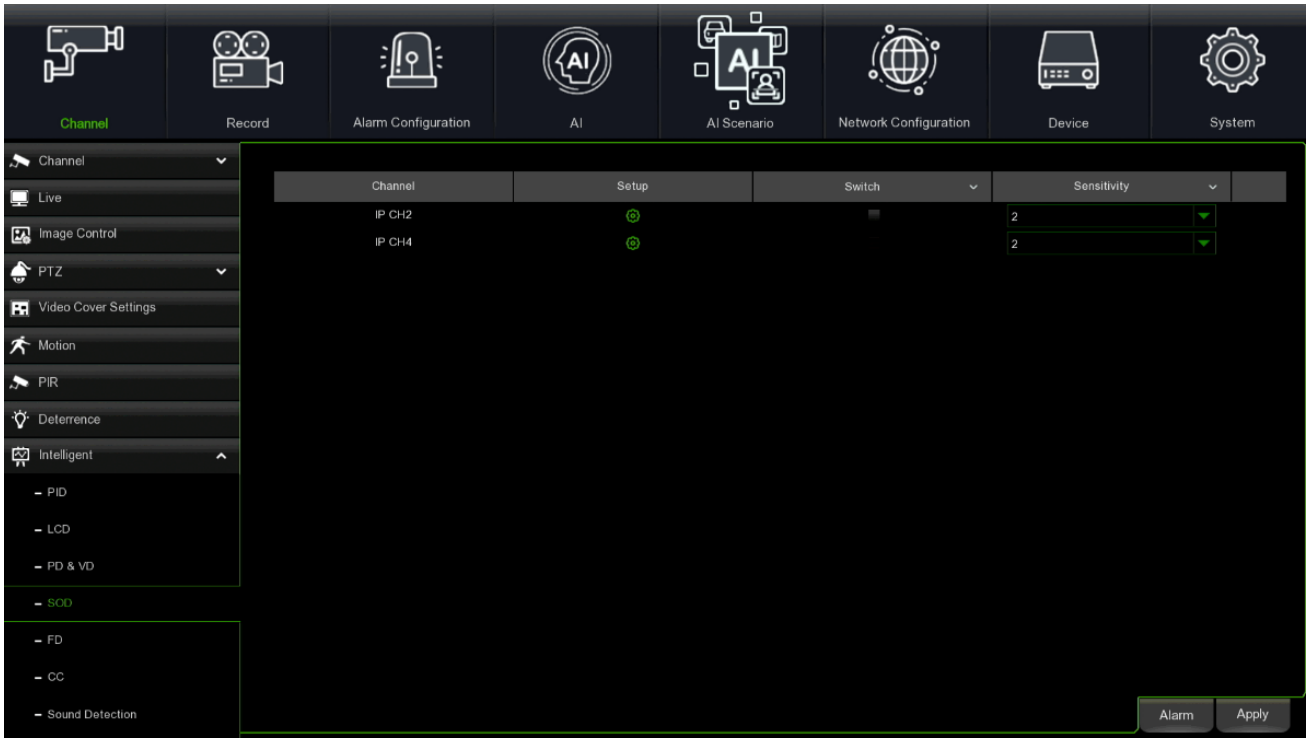
- Select one of the **Rule Number**. It is the number of LCD lines. Up to four lines can be drawn.
- To enable the detection in **Rule Switch**.
- Select a **Rule Type**:
  - **A→B**: HVR will only detect the action from side A to side B.
  - **B→A**: HVR will only detect the action from side B to side A.
  - **A←→B**: The HVR will detect the action from either side B to side A or side A to side B.
- Click on two points in the camera picture to draw a virtual line.
- Click on **Save** to save the settings.
- If you want to modify the position or length of the line, click on the red box in the line, the line will be changed to red. Hold the left mouse button pressed to move the line or drag the terminals to modify the length or position of the line.
- If you want to remove one of the lines from the camera picture, click on the red box in the line and then click on the **Remove** button. Clicking on **Remove All** will delete all lines.

Warning:

- The lines shall not be too close to the edges of the camera picture, to avoid any failure to trigger an alarm when the target cross through it.
- The lines shall not be set too short, to avoid any failure to trigger an alarm when the target passes outside it.

3.4.9.3 SOD (Stationary Object Detection)

This function detects the objects left over or lost in the predefined area such as luggage, bags, hazardous materials, etc., and a series of actions can be taken when the alarm is triggered. This alarm is only available for IP cameras



- **Channel:** To select the channel you want to configure.
- **Switch**: To enable or disable the SOD function.
- **Sensitivity:** The sensitivity level is from 1 to 4, with a default value of 2). Higher sensitivity will be easier to trigger the detection.
- **Scene**: Two settings are available: Indoor and Outdoor. Select the scene to match with the place in that your camera is installed.

Selecting setup:

- **Channel**: Select the channel you want to configure
- **IVA Lines:** Enable or disable the IVA Lines.
- **Area:** Draw a virtual area in the camera image.

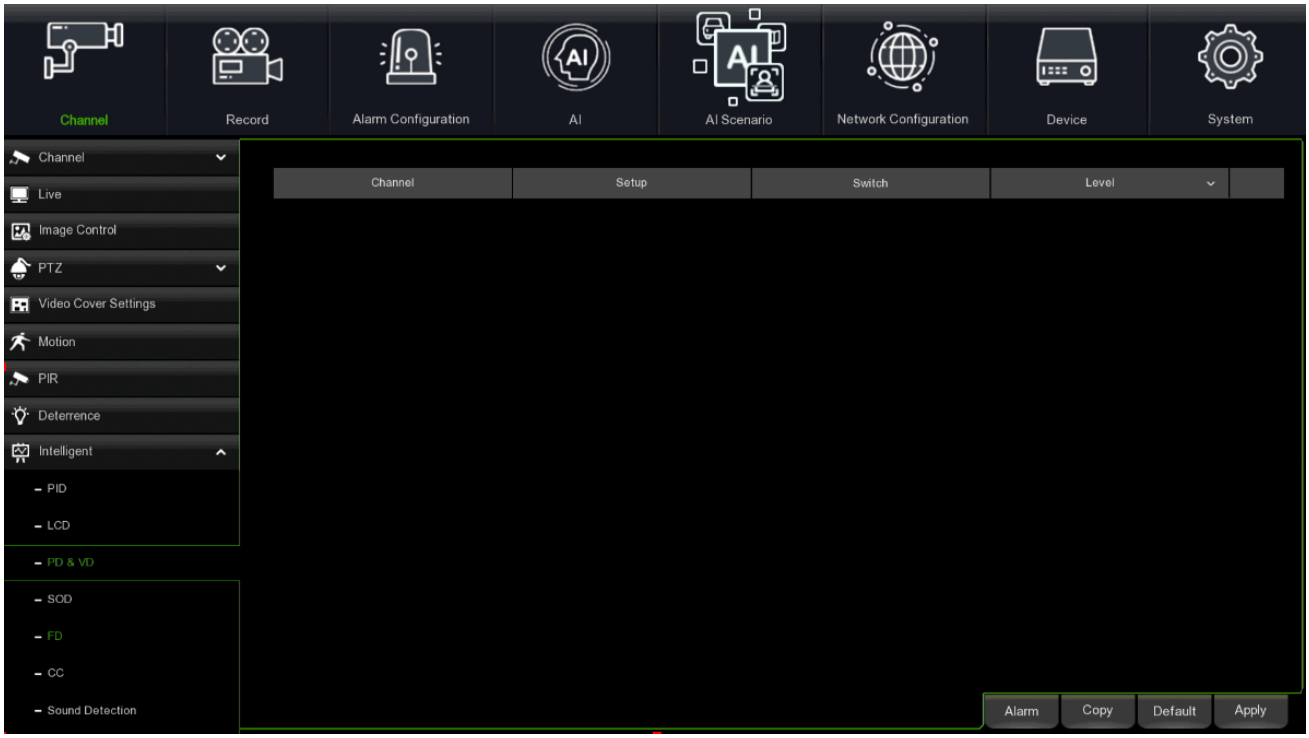
- Choose one of the Rule Number. It is the number of SOD area. Up to four areas can be set for the SOD function.
- To enable the detection in **Rule Switch**.
- Select a **Rule Type**.
  - **Legacy**: The HVR only selects the abandoned objects.
  - **Lost**: The HVR detects only lost objects.
  - **Legacy & Lost**: The HVR detects abandoned and lost objects.
- Click on four points in the camera picture to draw a virtual area. The shape of the area should be a convex polygon. Concave polygon cannot be saved.
- Click on **Save** to save your settings.
- To resize the area, click on the red box inside it. the edges of the area will turn red. Hold the left mouse button pressed to move the whole area or drag the corners to resize the area.
- If you want to remove one of the areas from the camera picture, click on the red box in the area and then click on the **Remove** button. Click on **Remove All** to delete all areas.

Warning:

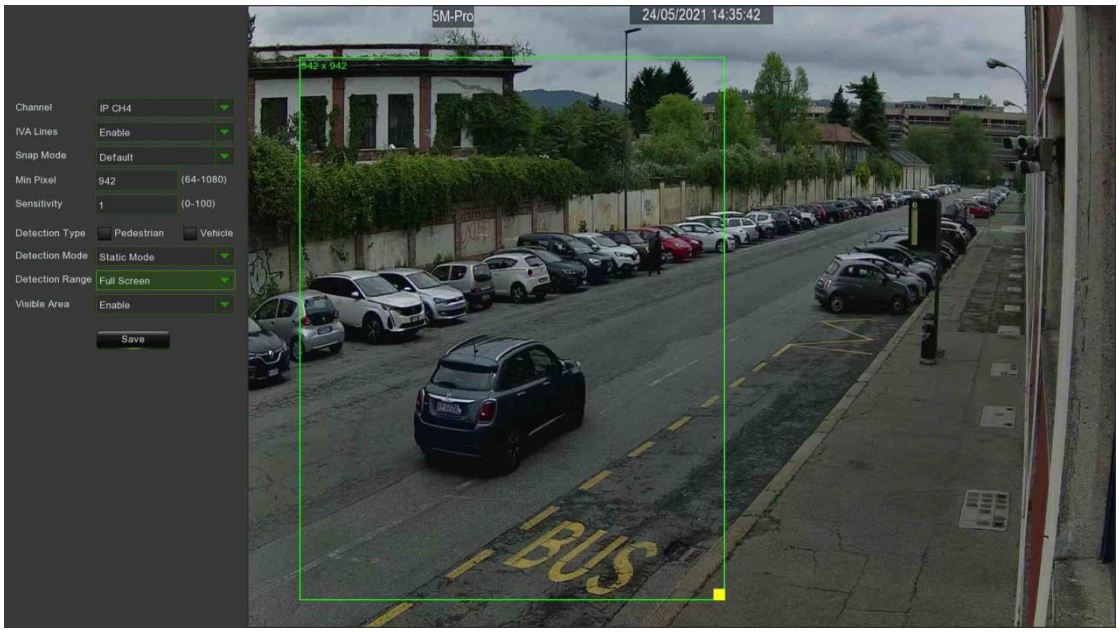
- The detection area must be greater than or equal to the size of the detected object, such as the detection of a white bottle.
- The detected object cannot be covered.

3.4.9.4 PD & VD (Pedestrian & Vehicle Detection)

This function detects people and vehicles moving in a predefined area and a series of actions can be taken when the alarm is triggered.



- **Channel**: To select the channel you want to configure.
- **Switch**: To enable or disable the PD function.
- **Level:** Small, Middle & Big. The small level is recommended to detect objects in a long distance. The big level is recommended to detect objects in a short distance.
- **Scene**: Two settings are available: Indoor and Outdoor. Select the scene to match with the place in that your camera is installed.
- **Selecting setup**:
- **Channel**: Select the channel you want to configure
- **IVA Lines:** Enable or disable the IVA Lines.
- **Area:** Draw a virtual area in the camera image.



- **IVA Lines**: Enable or disable the IVA Lines.
- **Snap Mode:** This can be used to select Real Time mode / Optimal mode / Interval mode. By selecting Interval mode, you can set Snap Num 1 ~ 3 or unlimited and change the Snap interval time from 1 to 255.

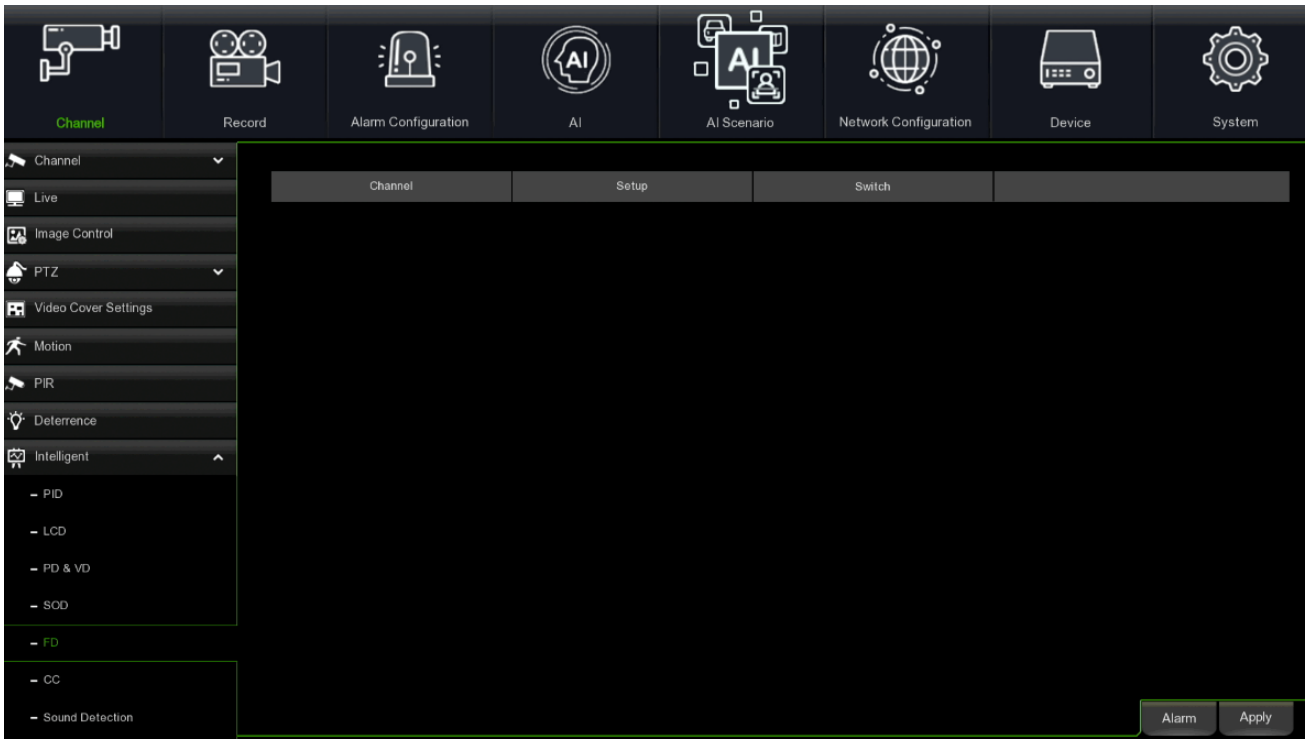
- **Min Pixel:** This can be used to set the range 32~1080, the default is 64.
- **Sensitivity:** Set the sensitivity level. Level 1 the lowest sensitivity level and level 100 is the highest sensitivity level.
- **Detection Type:** This can be used to recognize vehicles and/or people.
- **Detection Mode:** This can be used to recognize in static or moving mode.
- **Detection Range:** This can be used to configure the area for recognition.
- Click on **Save** to save your settings.
- To resize the area, click on the red box inside it. the edges of the area will turn red. Hold the left mouse button pressed to move the whole area or drag the corners to resize the area.

Warning:

- The detection area must not be in an area inaccessible to people.
- The detected people must be completely within the perimeter of the area.

3.4.9.5 FD (Face Detection)

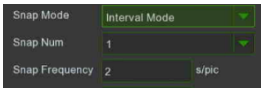
This function can be used to detect the faces of moving people appear in a predefined area.



Select Switch ON and then Apply to enable face recognition.

- **Selecting setup**:
- **Channel**: Select the channel to be configured for Face Detection.

- **IVA Lines**: Enable or disable the IVA Lines.
- **Snap Mode:** This can be used to select Real Time mode / Optimal mode / Interval mode. By selecting Interval mode, you can set Snap Num 1 ~ 3 and change the Snap interval time.



- **Apply Mode:** This can be used to configure the vision for recognition:
  - **Multi Angle:** This can be used to recognize multiple views.
  - **Frontal View:** Front recognition
  - **Customize:** Recognition with customized configurations.
    - **Roll Range**: This can be used to set the range 0~180, the default value is 30.
    - **Pitch Range**: This can be used to set the range 0~180, the default value is 30.
    - **Yaw Range**: This can be used to set the range 0~180, the default value is 45.
    - **Picture Quality**: This can be used to set the range 0~100, the default value is 100.
- **Min Pixel:** This can be used to set the range 32~1080, the default is 64.
- **Face Enhance:** Enable this function for the face recognition enhancement function.
- **Detection Mode:** The Static Mode and Motion Mode options are available.
- **Rule Kind:** Rectangular and Line options are provided.
- **Detection Range:** This can be used to customize the area of the screen.

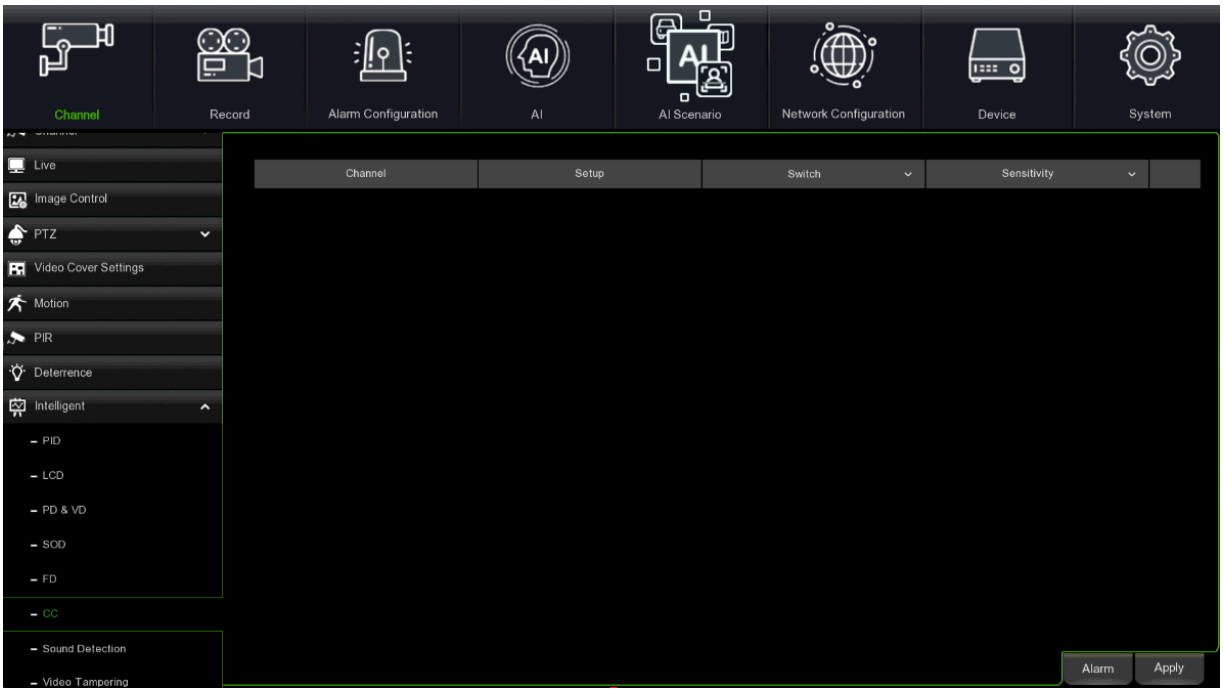
1. Enable detection in IVA Lines.
2. Select Snap Mode.
3. Click on four points in the camera picture to draw a virtual line.
4. Click on Save to save the settings.
5. To adjust the size of the area, click on the green box in the area; the edges of the area will turn green. Hold left mouse button pressed to move the entire area.
6. If you want to add a line in addition to the rectangular area select Line in Rule Kind.
7. To remove one of the areas from the camera image, click on the green box in the area and then click on the Remove button. Click on Remove All to delete all areas.

Note:

1. The detection area must not be in an area inaccessible to people.
2. The area must include the complete front face.

3.4.9.6 CC (Cross-Counting)

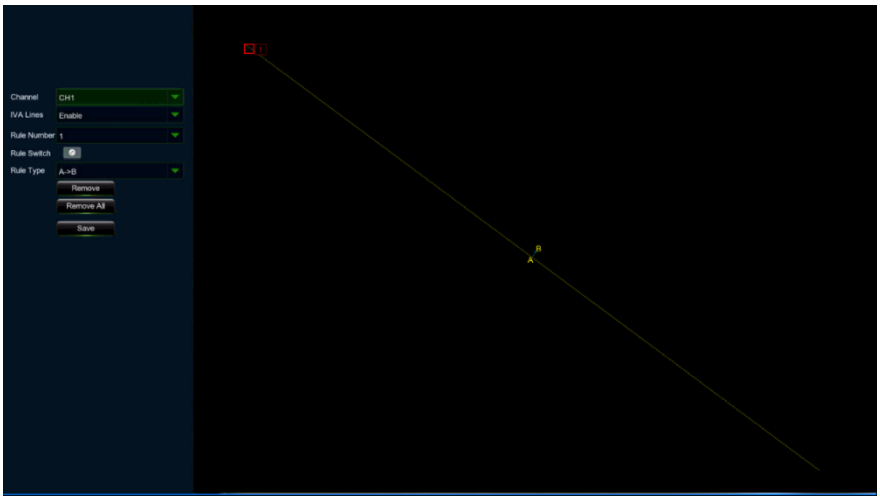
The Cross-Counting function counts the times for moving objects or people across the virtual lines.



- **Channel:** To select the channel you want to configure.
- **Switch:** Enable or disable the CC function
- **Sensitivity:** The sensitivity level is from 1 to 4, with a default value of 2). A higher sensitivity will be easier to trigger the detection.

Selecting Setup:

- **Channel**: Select the channel you want to configure
- **IVA Lines:** Enable or disable the IVA Lines.
- **Area**: Draw a virtual area in the camera image.



- Select one of the **Rule Number**. It is the number of virtual lines you can draw. Maximum: 4 lines.
- To enable the detection in **Rule Switch**.
- Select a **Rule Type**
  a) Click on two points in the camera picture to draw a virtual line. From Side A to Side B for an entrance; from Side B to Side A for an exit.
- Click on **Save** to save the settings.
- If you want to modify the position or length of the line, click on the red box in the line, the line will be changed to red. Hold the left mouse button pressed to move the line or drag the terminals to modify the length or position of the line.
- If you want to remove one of the lines from the camera picture, click on the red box in the line and then click on **Remove** button. Clicking on **Remove All** will delete all lines.

Warning:

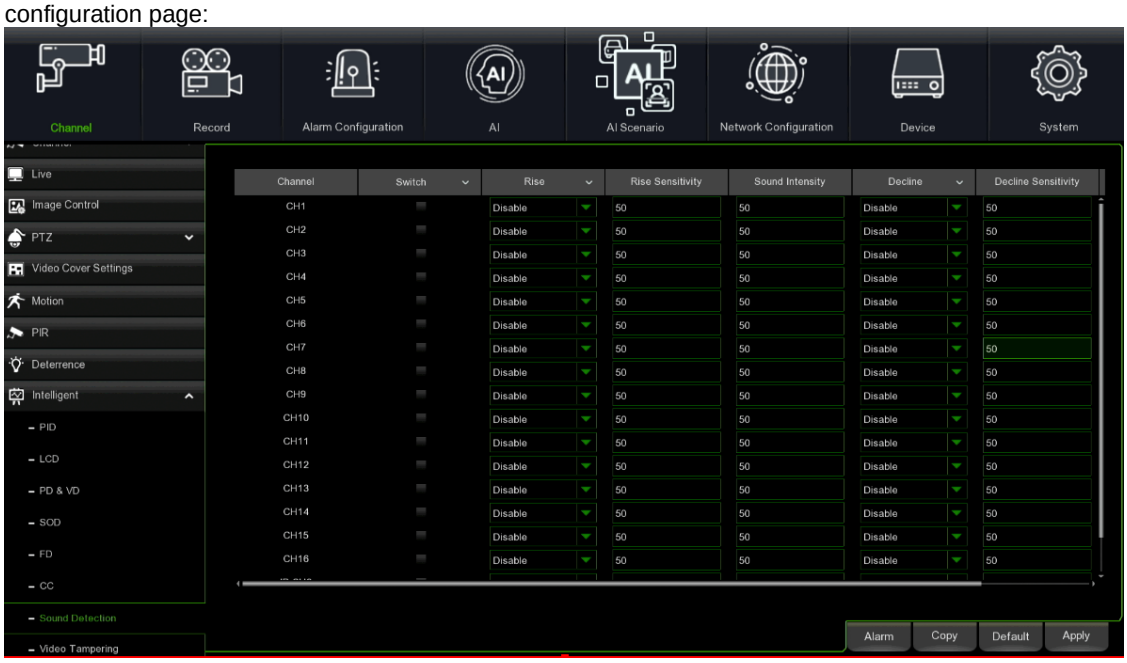
- The lines shall not be too close to the edges of the camera picture, to avoid any failure to trigger an alarm when the target cross through it.
- The lines must be in the area accessible by the detected object.
- The lines shall not be set too short, to avoid any failure to trigger an alarm when the target passes outside it.

You can search and display the statistical results of the Cross-Counting function in **3.4.9.9 - Schedule**.

3.4.9.7 Sound Detection

This function can be used to detect the sound if this function is available in Camera.

Click on Intelligent on the intelligent setup page and then click on Sound Detection on the Sound Detection configuration page:



- **Channel:** To select the channel you want to configure.
- **Switch:** To enable or disable the Sound Detection function
- **Rise:** To enable or disable the Rise function of Sound Detection
- **Rise Sensitivity:** Configure from 0 to 100; the default value is 50.
- **Sound intensity:** Configure from 0 to 100; the default value is 50.
- **Decline:** This function can be used to enable or disable the Decline Sound Detection function.
- **Decline Sensitivity:** Configure from 0 to 100; the default value is 50.

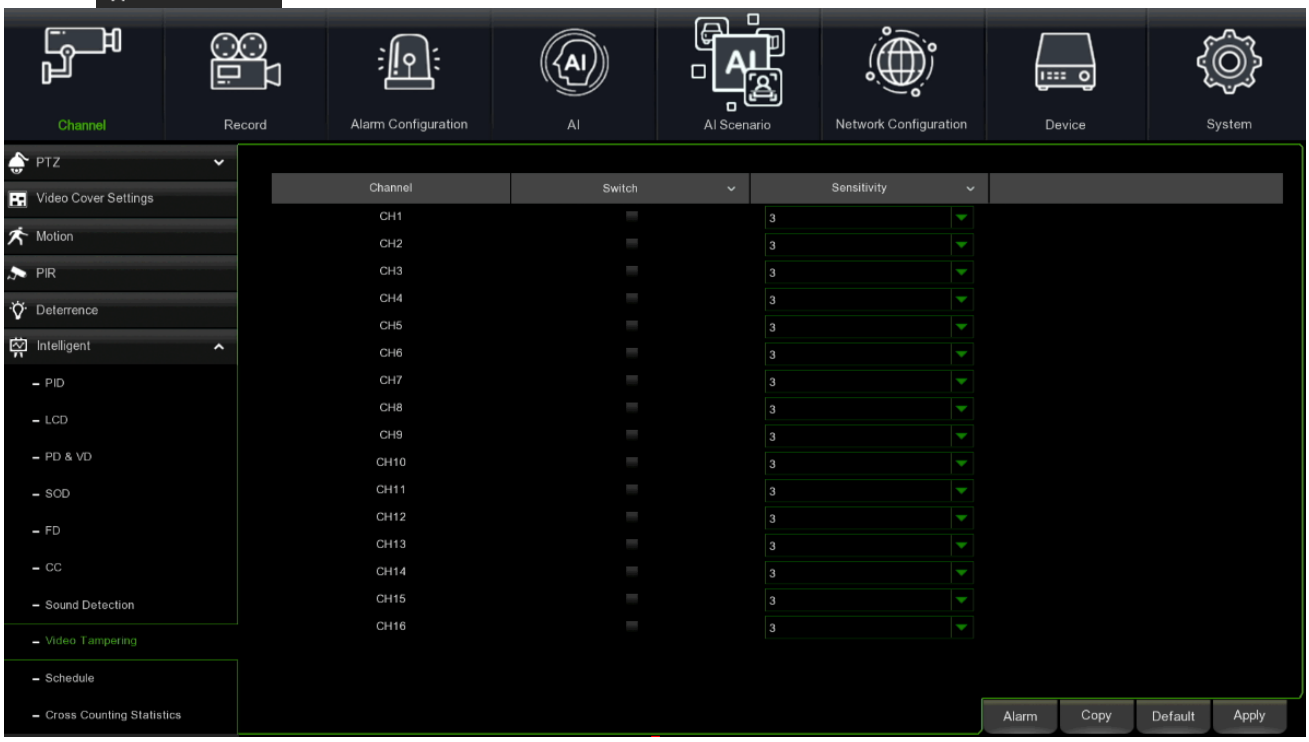
Warning:

- To enable or disable the Decline function of Sound Detection.

3.4.9.8 Video Tampering

This function allows the user to select the lens occlusion.

Click on Intelligent on the intelligent setup page and then click on the **Video Tampering** configuration page:

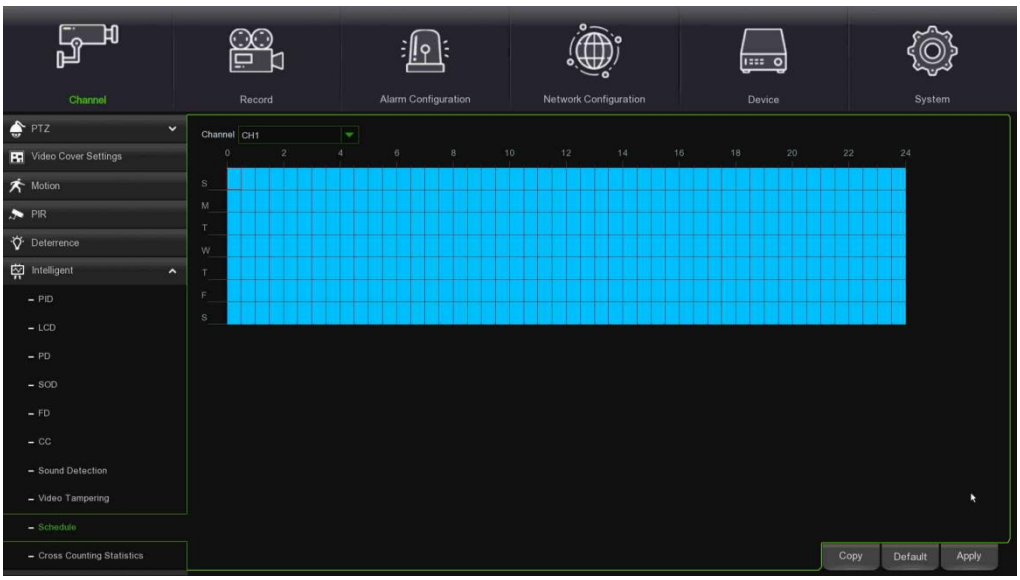


- **Channel:** Select the channel to be configured.
- **Switch:** This function can be used to enable or exclude the Sound Detection function.
- **Sensitivity:** Configure from 1 to 6; the default value is 3.

Warning:

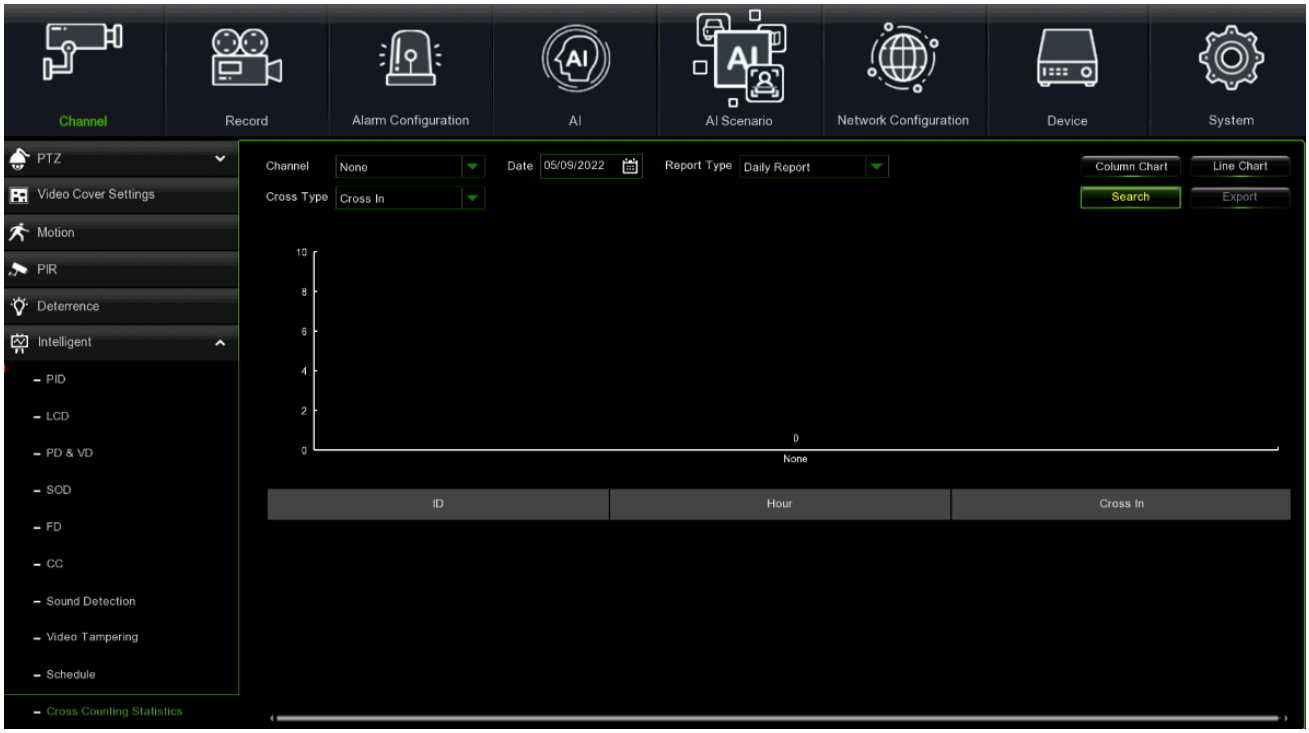
- This function may be available or not according to whether the camera supports it or not.

3.4.9.9 **Schedule**



The program must be configured to activate the intelligent function. The program will be active 24 hours a day, 7 days a week.
To set the program, select a channel and drag the cursor to mark the time slots. The blue blocks in the time slots will be active for intelligent detection. The program is valid only for the channel selected from time to time. If you want to use the same program for other channels, use the **Copy** function. Click on **Save** to save the settings.

3.4.9.10 **Cross Counting statistic**



Statistical results can be requested in Daily / Weekly / Monthly / Annual mode for Cross In and Cross Out.

3.5 RECORD SETTINGS

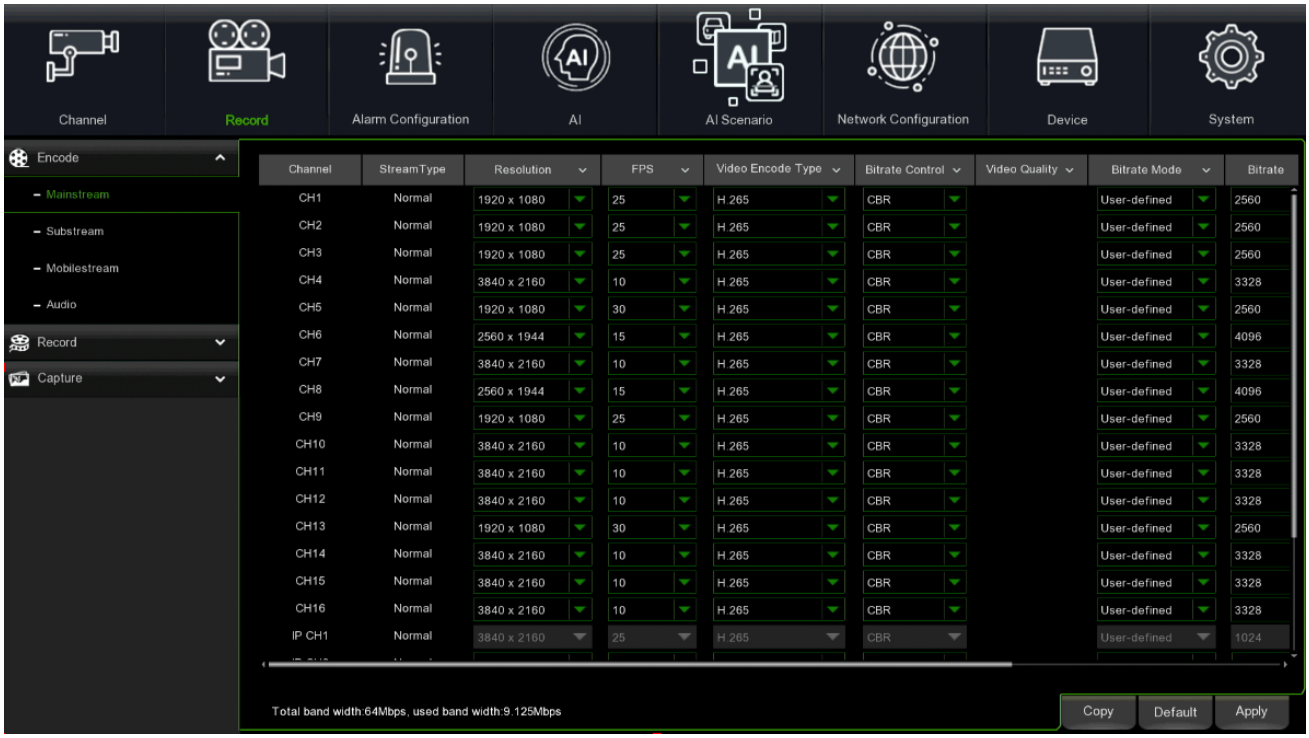
This subsection describes the configuration of the recording options made available by the HVR:

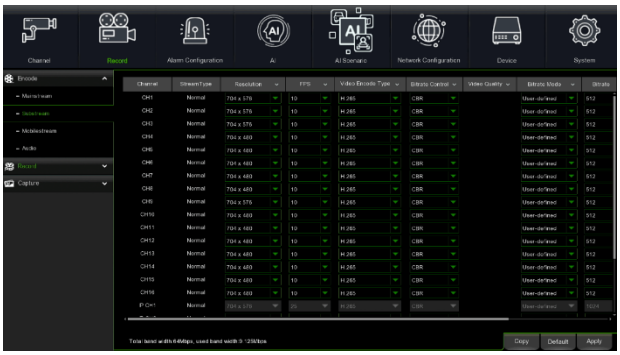
- Encode
- Record
- Capture

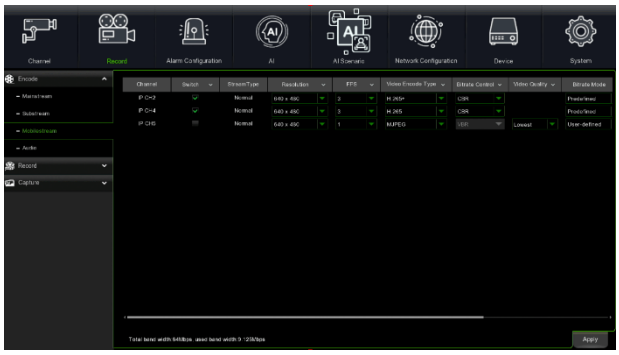
3.5.1 ENCODE

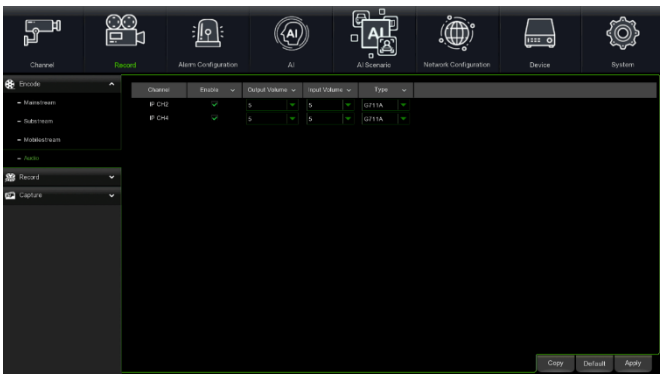
This menu can be used to configure the quality of video recording or network transmission images. As a rule, Mainstream defines the recording video quality that will be saved on the HDD, while Substream defines the video quality that is being viewed via remote access (e.g. web client & CMS; Mobile Stream defines the video quality that is being viewed via remote access via mobile devices).

3.5.1.1 Mainstream / Substream / Mobile Stream / Audio









- **Resolution**: This parameter defines the size of the recorded image.
- **Record Settings** This parameter defines the number of frames per second that will be recorded by the HVR.
- **Video Encode Type:** For the IP camera only. The HVR supports H.264 and H.265.
- **Bitrate Control**: This selects the bitrate level. For a simple scene (e.g. a grey wall), a constant bitrate **(CBR**) is suitable. A variable bitrate **(VBR**) is suitable for a more complex scene (e.g. crowded street).
- **Bitrate Mode:** To customize the bitrate, select the **User-defined** mode. Select **Predefined** mode to select the default bitrate.
- **Bitrate:** This parameter corresponds to the speed of data transfer that the HVR will use for the video recording. Recordings that are encoded at higher bitrates will be of better quality

- **Audio:** you can enable/exclude audio recording for each channel.
- **I Frame-Interval (for IP channels only)**: The I-Frame values can be set for IP channels.
- **ETR (for Main Stream AHD channels only):** Separate settings for motion recordings. Once the ETR option is enabled, motion detection will be recorded with the special resolution/framerate/bitrate parameters set.

In the **Audio** menu: Select the volume in and out audio encoding.

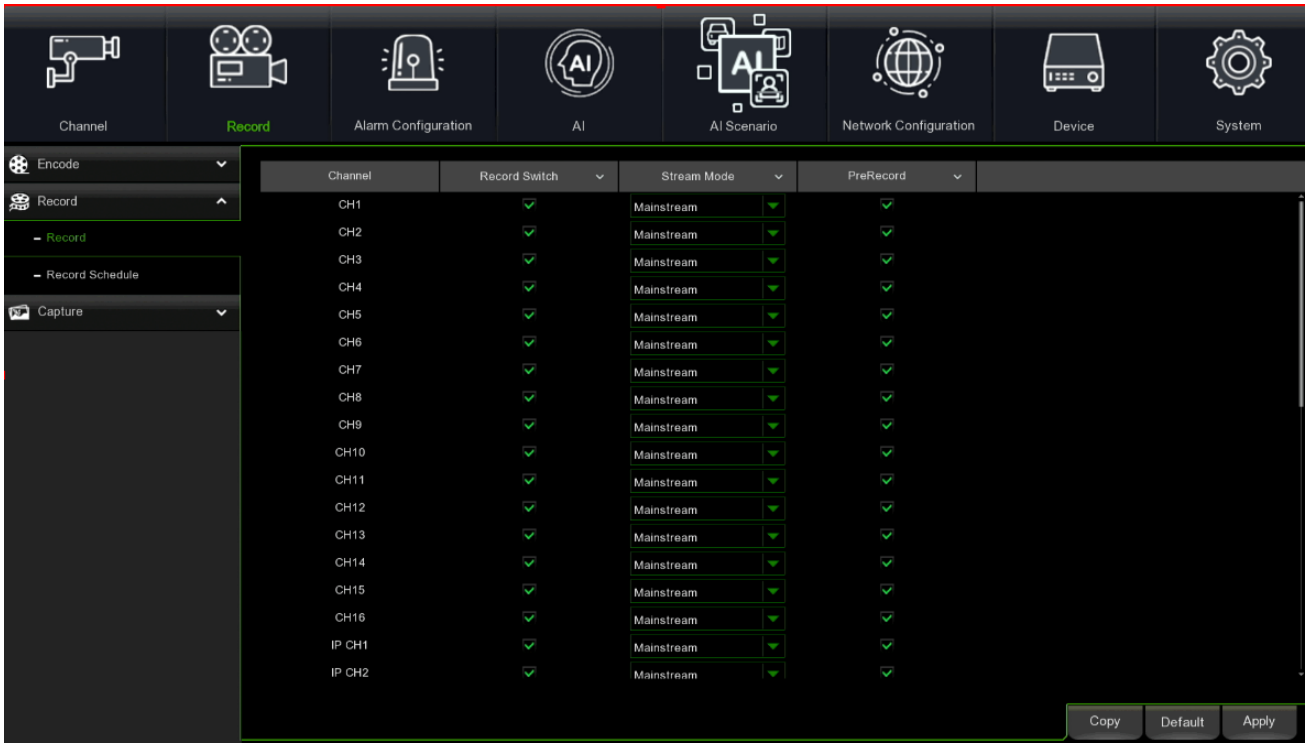
NOTE:
In CBR Predefined Bit Rate Mode, the bitrate (data transfer speed) changes automatically and accordingly with frame rate value selected for each IP channel with protocols other than ONVIF.

3.5.2 RECORD

This subsection describes the configuration of the recording options made available by the HVR.

3.5.2.1 Record

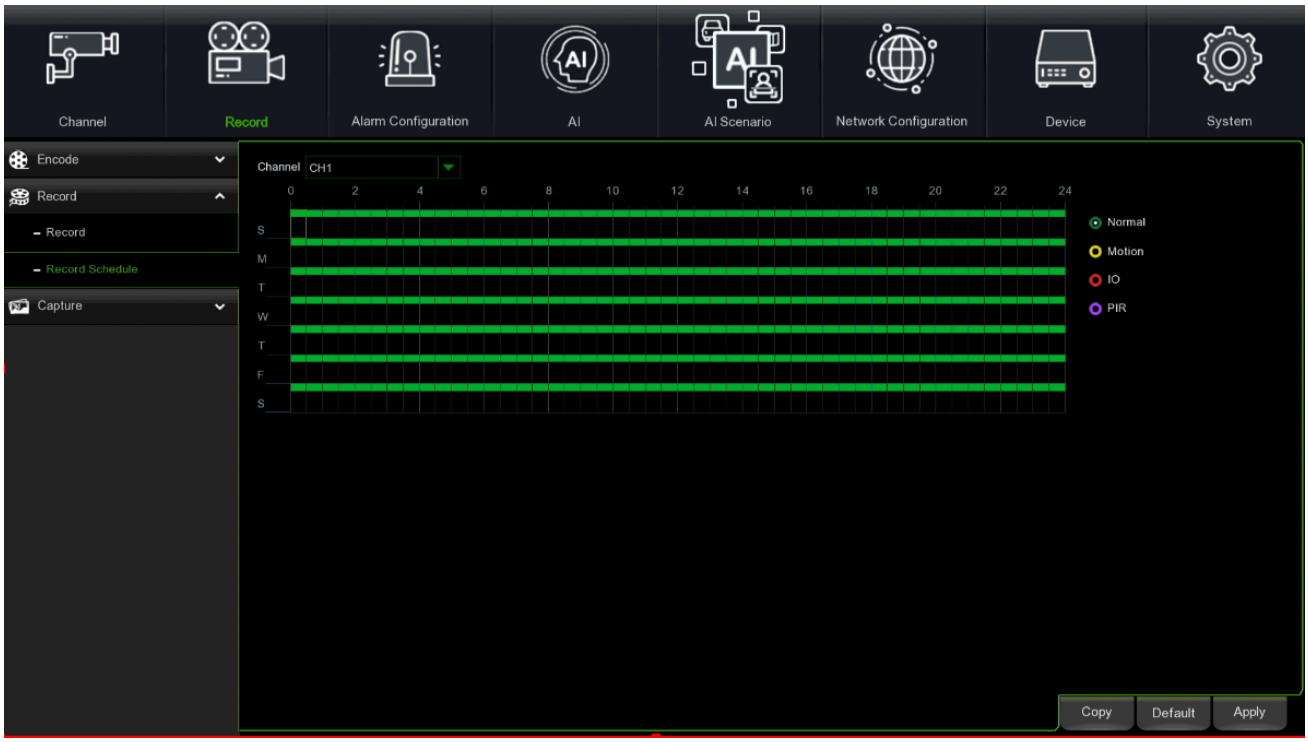
This menu can be opened by clicking on “Record” and used to set the HVR recording parameters:



- **Record Switch:** Check to enable recording on this channel.
- **Stream Mode:** Choose the recording quality. If you select Dualstream, the system will record both Mainstream and Substream.
- **PreRecord:** If this option is enabled, the HVR starts recording a few seconds before an alarm event occurs. Use this option if the main recording type is based on motion or I/O alarm.

3.5.2.2 Record Schedule

This menu can be used to set the HVR video recording program and define the recording mode for each channel. It can be used to define a daily and hourly schedule in normal (continuous) recording mode, motion recording, I/O alarm recording and PIR recording (if supported by HVR). To set the recording mode, click on the radio button (Normal, Motion, Alarm, PIR, Intelligent Analysis), then drag the cursor to mark the time slots. The registration program is only valid for one channel. Use the Copy function if you want to use the same registration program for other channels. Click on Apply to save the settings.



- **Channel:** This can be used to select the channel to set the recording parameters.
- **Normal:** When the time slot is marked red, this indicates the channel records only when the sensor is triggered during that time slot.
- **Motion:** When the time slot is marked violet, this indicates the channel records only when the sensor is triggered during that time slot.
- **IO:** A time slot marked black means that there is no recording scheduled for the time slot.
- **PIR:** A purple time slot indicates the channel records only when the sensor is triggered during the time slot.
- **No Record:** A black time slot indicates that there is no recording scheduled for the time slot.

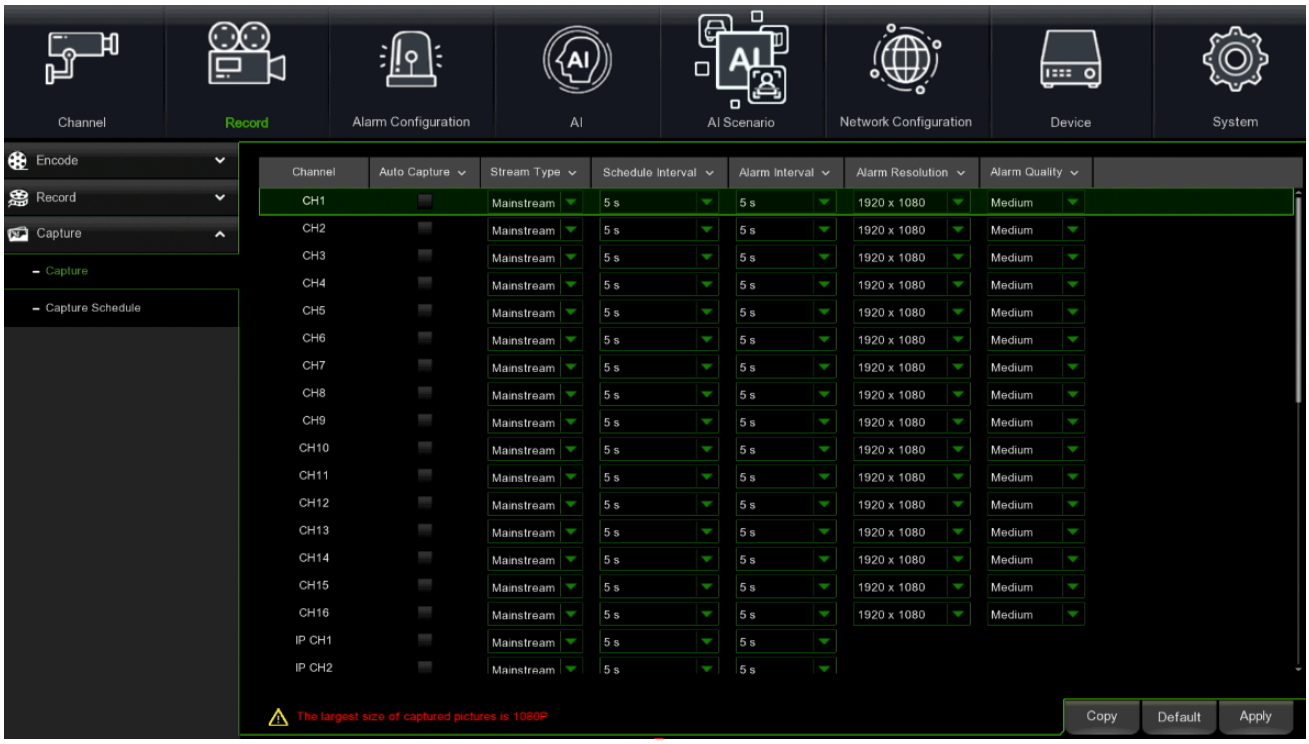
Click on the [**Save**] button once the program is completed.
Alternatively, click on the Default button to use the system default parameters.

3.5.1 CAPTURE

This subsection of the Parameters menu can be used to configure the parameters dedicated to the acquisition of images in alarm conditions and to the programming of the time slots during that the function must be active.

3.5.1.1 Capture

The Capture item is used to configure the parameters for recording images in an alarm condition; the following figure illustrates the available options:



- **Stream Type:** Select image resolution on mainstream or substream.
- **Schedule interval:** Interval between the capture of two images.
- **Alarm resolution:** Resolution of image being captures for recorded.
- **Alarm Interval**: Time interval to capture an image when motion, IO alarm is triggered.
- **Auto Capture**: This can be used to enable or disable auto capture on the channel.

3.5.1.2 Capture Schedule

This can be used to configure the time slots and days of the week during that the capture function must be operational.

- **Channel:** This can be used to select the channel to set the recording parameters.
- **Normal:** When the time slot is marked red, this indicates the channel records only when the sensor is triggered during that time slot.
- **Motion:** When the time slot is marked violet, this indicates the channel records only when the sensor is triggered during that time slot.

- **IO:** A time slot marked black means that there is no recording scheduled for the time slot.
- **PIR:** A purple time slot indicates the channel records only when the sensor is triggered during the time slot.
- **No Record:** A black time slot indicates that there is no recording scheduled for the time slot.

When the program is complete, click on the **Save** button.
Alternatively, click on the Default button to use the system default parameters.

3.6 ALARM CONFIGURATION

This section is dedicated to the set notifications for different alarm events (Motion, PIR, IO Alarm, Intelligent Analysis, PTZ Linkage, Exception, Alarm Schedule) used by the HVR for recording and notifying alarms. The submenu is:

- Motion
- PIR
- IO Alarm
- Intelligent Analysis
- PTZ Linkage
- Exception
- Alarm Schedule

3.6.1 MOTION ALARM SETTING

Select Motion from the side mention to open a page for defining the methods and actions to be started if a motion alarm is detected.

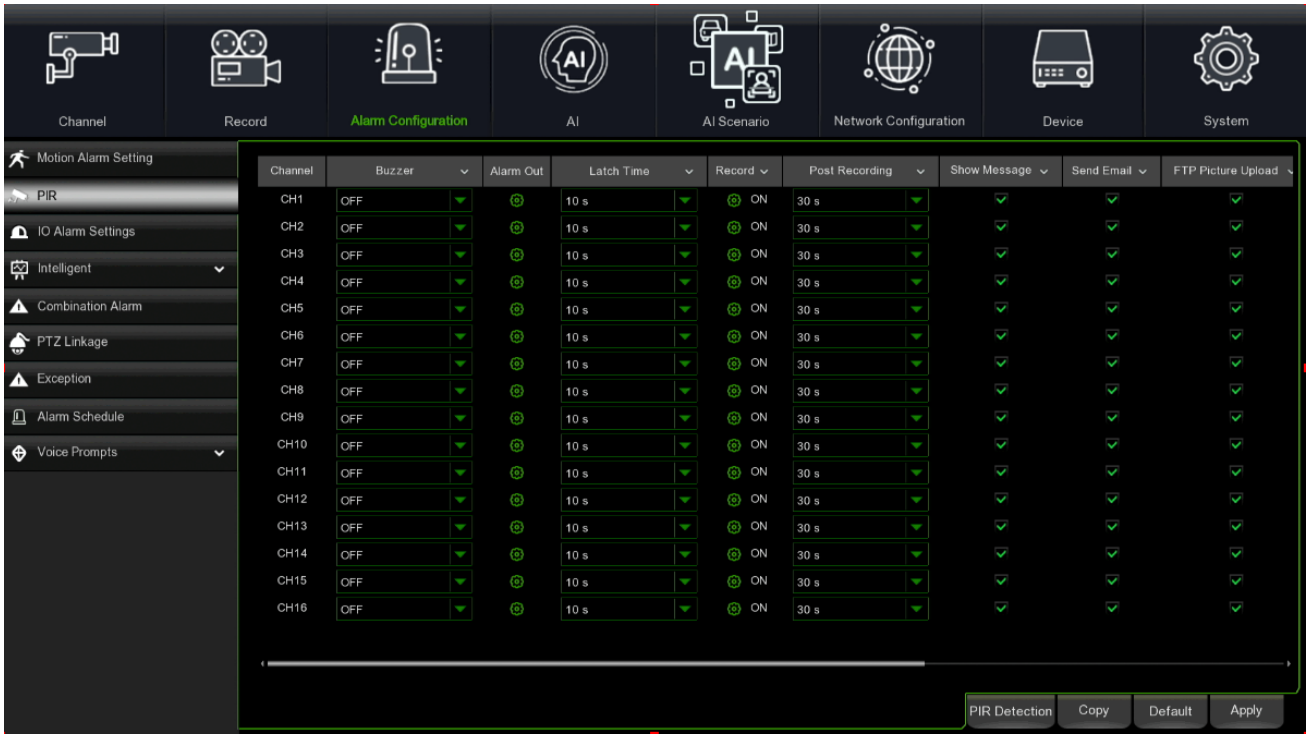
Here is a brief description:

- **Channel:** This is used to select the channel with that the motion detection function is associated.
- **Buzzer:** This can be used to set for how long and when to enable the buzzer when motion is detected
- (Disable, 10sec, 20sec, 40sec, 60sec).
- **Alarm Out:** This can be used to match the correct external alarm sensor number.
- **Latch time:** This can be used to set the external sensor alarm time when motion is detected (10sec, 20sec, 40sec, 60sec).
- **Record: This can be used to select the channels to be recorded following the alarm detected by the NVR from the displayed list.**
- **Post Recording:** This can be used to set the recording time at the end of the Motion alarm (10sec, 30sec, 1min, 2min, 5min).
- **Show Message:** This is used to set the appearance of the icon on the screen when a motion alarm is detected. For icon types, see section 3.2 **Live interface and pop-up menu**
- **Send Email**: This can be used to send alarm images to the configured email addresses (for more information, see 3.9.3 **Email**).
- **FTP Picture Upload**: This can be used to send the image to the FTP server in case of a Motion alarm event.
- **FTP Video to Upload**: This can be used to send the video to the FTP server in case of a Motion alarm event.
- **Picture to Cloud**: This can be used to send the picture to Cloud Server in case of a Motion alarm event.
- **Video to Cloud**: This can be used to send the video to Cloud Server in case of a Motion alarm event.
- **Full screen:** This can be used to set displaying the video in full-screen mode when Motion is detected.

- **Motion:** This menu allows you to configure motion detection parameters. When a movement is detected by one or more cameras, the NVR will alert you to a potential threat.
- **Copy:** This can be used to copy current channel parameters to any other channel or to all channels.
- **Default**: This can be used to restore the default alert settings.
- **Apply** to save the changes.

3.6.2 PIR

This is an optional function that appears if the camera supports the PIR sensor; PIR alarm devices with external sensor must be connected. Select PIR in the side menu to open a page where to define the methods and actions to be taken in case of PIR alarm detection.

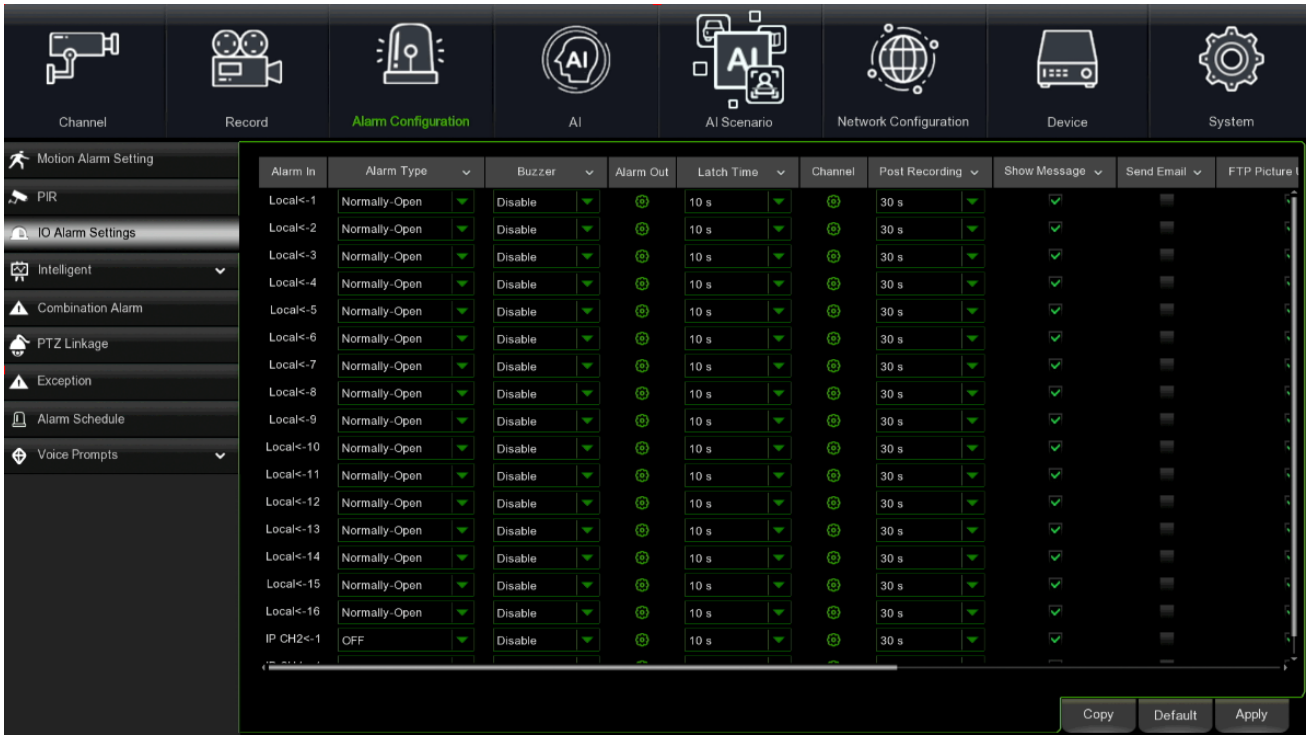


Here is a brief description:

- **Channel:** This is used to select the channel with that the PIR detection function is associated.
- **Buzzer:** This can be used to set whether and how long to enable the buzzer in case of PIR detection (Disable, 10sec, 20sec, 40sec, 60sec).
- **Alarm Out:** This can be used to match the correct external alarm sensor number.
- **Latch time:** This can be used to set the external sensor alarm time when a PIR event is detected (10sec, 20sec, 40sec and 60sec).
- **Record Channel:** This can be used to select the channels to be recorded following the PIR alarm detected by the HVR from the displayed list.
- **Post Recording:** This can be used to set the recording time at the end of the PIR alarm (10sec, 30sec, 1min, 2min, 5min).
- **Show Message:** This can be used to show the icon on the screen when PIR alarm is detected. For icon types, see section “0 - Live interface and pop-up menu”
- **Send Email**: This can be used to send alarm images to the configured email addresses (for more information, see the section “3.9.3 - Email”).
- **Post Recording:** you can set how long alarm record will last when the Motion alarm ends (10sec, 30sec, 1min, 2min, 5min).
- **FTP Picture Upload**: This can be used to send the image to the FTP server in case of PIR event.
- **FTP Video to Upload**: This can be used to send the video to the FTP server in case of PIR event.
- **Picture to Cloud**: This can be used to send the video to Cloud Server in case of PIR event.
- **Video to Cloud**: This can be used to send the video to Cloud Server in case of PIR event.
- **Post Recording:** you can set how long alarm record will last when the Motion alarm ends (10sec, 30sec, 1min, 2min, 5min).
- **PIR Detection**: Click on **PIR Detection** and then click on setup to configure the motion detection PIR function:
- **Copy:** This can be used to copy current channel parameters to any other channel or to all channels.
- **Default**: This can be used to restore the default alert settings.
- **Apply** to save the changes.

3.6.3 I/O ALARM SETTINGS

Read the description under the following figures for this menu page: At this point, the alarms can be set according to the different states.



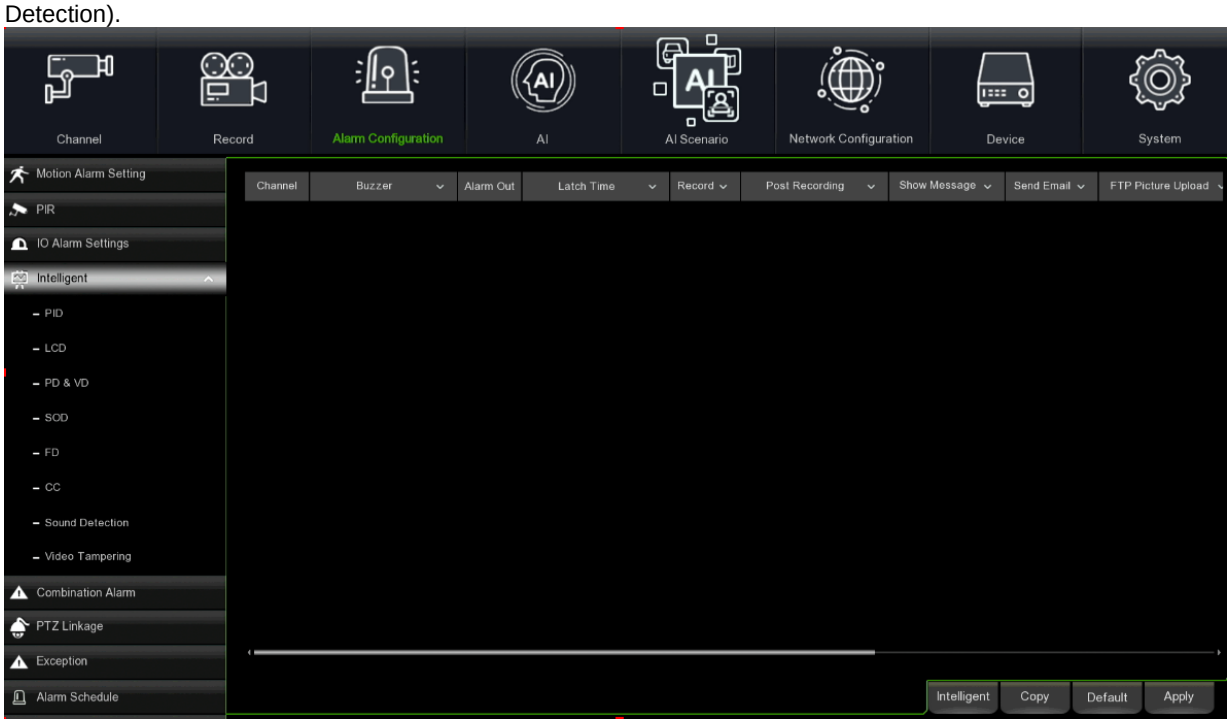
Here is a brief description:

- **Alarm In:** This is used to select the required alarm number.
- **Alarm Type:** This is used to select three options, i.e. NO (Normal Open), NC (Normal Close) and OFF. By selecting “Normal Open”, the I/O state alarm will be activated when the sensor is ON; by setting Normal Close”, the I/O state alarm will be activated when the sensor is OFF; by setting “OFF”, the I/O state will not trip.
- **Buzzer:** This can be used to program the time of the auditory signal generated when a sensor alarm is detected (OFF, 10sec, 20sec, 40sec, 60sec).
- **Alarm Out:** This can be used to match the correct external alarm sensor number.
- **Latch Time:** This can be used to set the external sensor alarm time when a sensor alarm is detected (10sec, 20sec, 40sec, 60sec).
- **Channel:** This can be used to match the channel with the I/O alarm. The channel will be activated in case of alarm detection.
- **Post Recording:** This can be used to set the recording time at the end of the alarm (10sec, 30sec, 1min, 2min, 5min).
- **Show Message:** This can be used to set the appearance of the icon on the screen when a sensor alarm is detected. For icon types, see section “0 - Live interface and pop-up menu”
- **Send Email**: This can be used to send alarm images to a specific email address (for more information, see “3.9.3 - Email”).
- **Full screen:** This can be used to set displaying the video in full-screen mode when an alarm event is detected.
- **FTP Picture Upload**: This can be used to send the image to the FTP server in case of I/O alarm event.
- **FTP Video to Upload**: This can be used to send the video to the FTP server in case of I/O alarm event.
- **Picture to Cloud**: This can be used to send the video to Cloud Server in case of an I/O alarm.
- **Video to Cloud**: This can be used to send the video to Cloud Server in case of an I/O alarm.
- **Copy:** This can be used to copy the I/O parameters to any other I/O.
- **Default**: This can be used to restore the default alert settings.
- **Apply** to save the changes.

Alarm type	Function
Motion/PIR	The alarm trips when an object moves in the motion detection area. The sensitivity level can be adjusted according to application needs.
IO Alarm	The alarm can convert the alarm signal emitted by the external sensor into a signal that can be identified by the system itself.

3.6.4 INTELLIGENT ANALYSIS NOTIFICATION

Notifications can be set for each intelligent analysis event (PID, LCD, SOD, PD & VD, FD, CC, Sound Detection, Occlusion Detection).

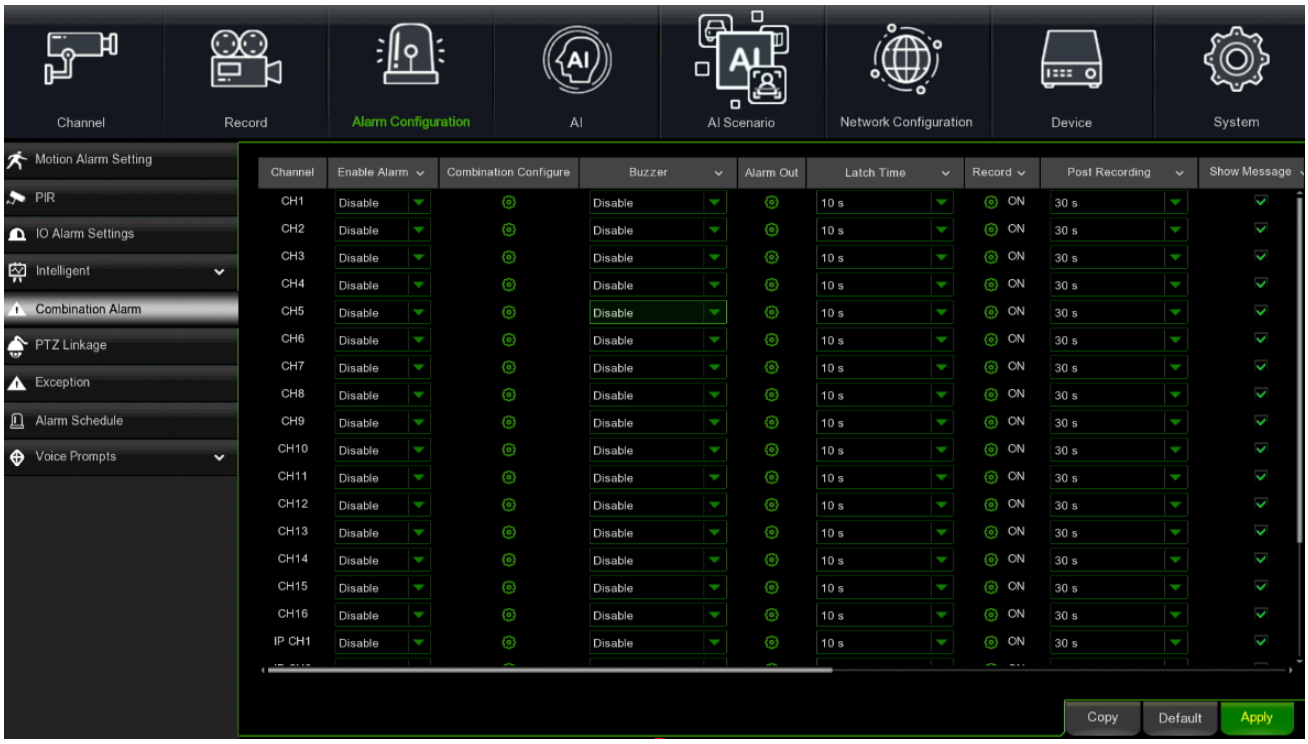


Here is a brief description:

- **Channel:** This is used to select the channel with that the intelligent detection function is associated.
- **Buzzer:** This can be used to set whether and how long to enable the buzzer when an intelligent event is detected (Disable, 10sec, 20sec, 40sec, 60sec).
- **Alarm Out:** This can be used to match the correct external alarm sensor number.
- **Latch Time:** This can be used to set the external sensor alarm time when an intelligent event is detected (10sec, 20sec, 40sec, 60sec).
- **Record Channel:** This can be used to select the channels to be recorded following an intelligent event detected by the HVR from the displayed list.
- **Post Recording:** This can be used to set the recording time at the end of the alarm (10sec, 30sec, 1min, 2min, 5min).
- **Show Message:** This can be used to show the icon on the screen when an intelligent alarm is detected. For icon types, see “0 - Live interface and pop-up menu”
- **Send Email**: This can be used to send alarm images to the configured email addresses (for more information, see the section “3.9.3 - Email”).
- **Full screen:** This can be used to set displaying the video in full-screen mode when an intelligent event is detected.
- **FTP Picture Upload**: This can be used to send the image to the FTP server in case of an intelligent event.
- **FTP Video to Upload**: This can be used to send the video to the FTP server in case of an intelligent event.
- **Picture to Cloud**: This can be used to send the video to Cloud Server in case of an intelligent event.
- **Video to Cloud**: This can be used to send the video to Cloud Server in case of an intelligent event.
- **Intelligent**: For the intelligent function, see section 3.4.9.
- **Copy:** This can be used to copy current channel parameters to any other channel or to all channels.
- **Default**: This can be used to restore the default alert settings.
- **Apply** to save the changes.

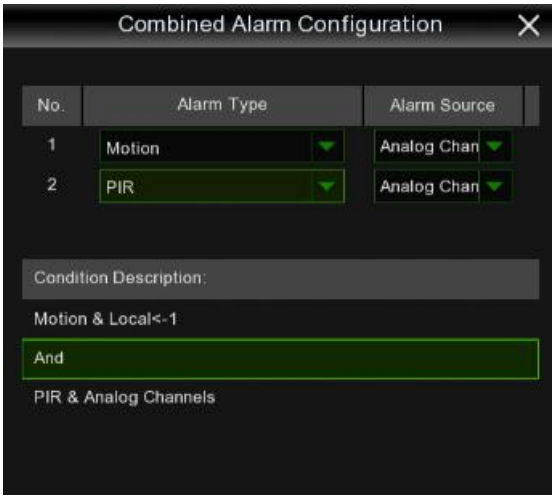
3.6.5 COMBINATION ALARM

It is possible to assign several intelligent analysis conditions simultaneously to generate an alarm. Actions can also be defined in response to the activation of set alarms (buzzer sound, switching of alarm output, sending e-mails, etc.).



Channel: channel name
Enable Alarm: enables/disables the combination of alarms on the desired channel
- Enable Alarm: The alarm will only be generated if the combination alarm occurs. Single alarm activation will not generate any combination alarm.
- Disable: Does not enable the combination alarm and individual alarm set conditions will be active independently of each other.

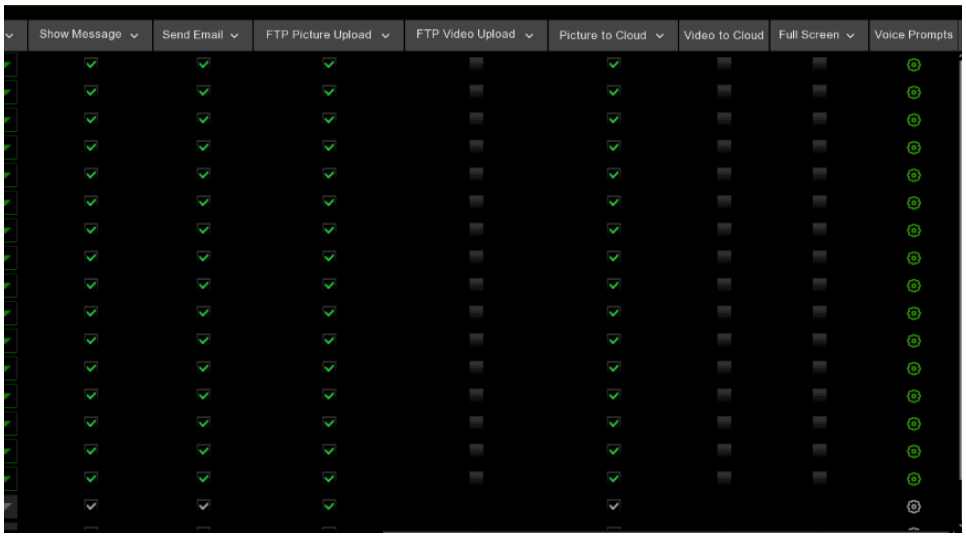
Press on to choose the combined alarms and the channels that you would like to assegn.



Select two alarm types. When both alarms are activated at the same time, the set notifications (buzzer, e-mail, alarm output, etc.) will be forwarded. On the other hand, when only one of the alarms will be activated when alarms other than those set by the combination occur, notifications will not be sent.
Buzzer: It is possible to set the duration of the buzzer when the combination alarm is triggered. You can choose between 10 sec, 20 sec, 40 sec and 1 min.
Alarm Out: The switching of the alarm output after the activation of the combined alarm can be set.
Latch time: The duration of alarm output switching can be set. It can be set between 10sec, 20sec, 40sec, 1min.

Record: Press on and select the channel to be recorded when the combined alarm is triggered:

Post Recording: The duration of continuous recording of the HVR after the event has occurred can be set. The recording time can be 30 seconds, 1, 2 and 5 minutes.

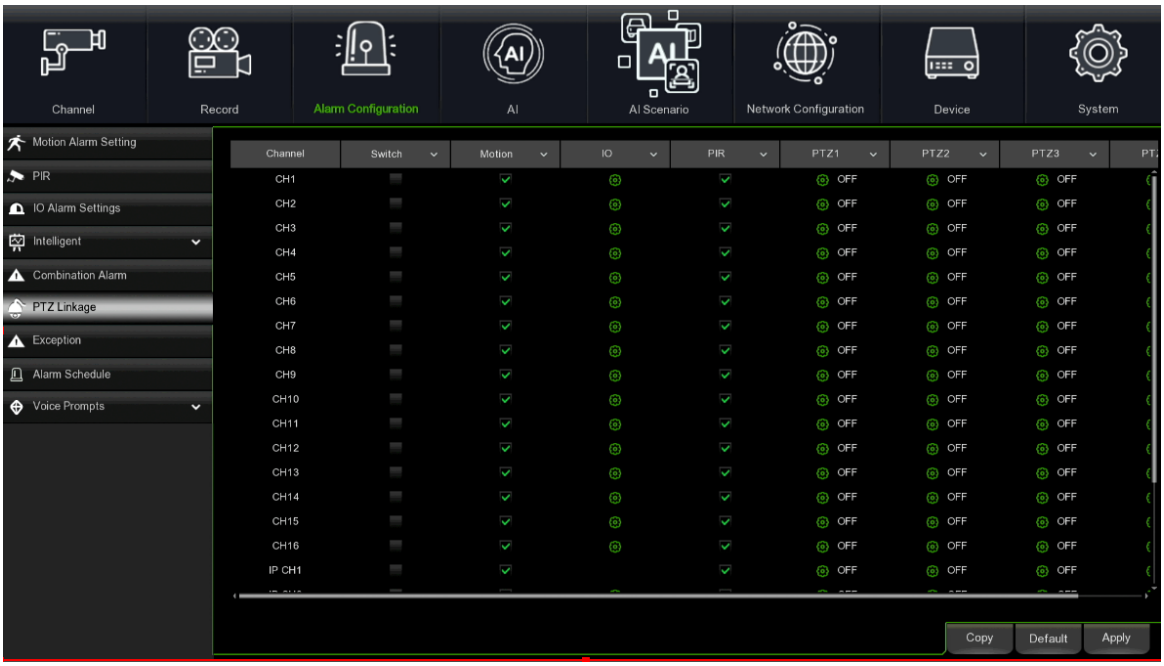


Show message: check this box to display the corresponding alert icon on the live view screen when a combined alarm is detected.
Send Email: Allows an email to be sent to the specified address when the alarm is triggered.
FTP Picture Upload: Allows images of alarms to be uploaded to the FTP server when the combined alarm is triggered.
FTP Video Upload: Allows video uploads of alarms to the FTP server when the combined alarm is triggered.
Picture to Cloud: Allows uploading pictures of alarms to the Cloud when the combined alarm is triggered.
Video to Cloud: Allows uploading videos of alarms to the Cloud when the combined alarm is triggered.
Full Screen: When the combined alarm is activated, the corresponding channel will be shown in full screen mode.

Voice Prompts: Select the icon to set the function. The voice prompt will be played after the combined alarm is activated (it is necessary that the IP camera supports the voice prompt function).

3.6.6 PTZ LINKAGE

A connection may be established between a Speed Dome Camera (if present) and the Motion Detection alarm and/or the I/O alarm sensor. This function can be used to move the Speed Dome Camera to the associated preset point when a motion or sensor alarm is triggered.

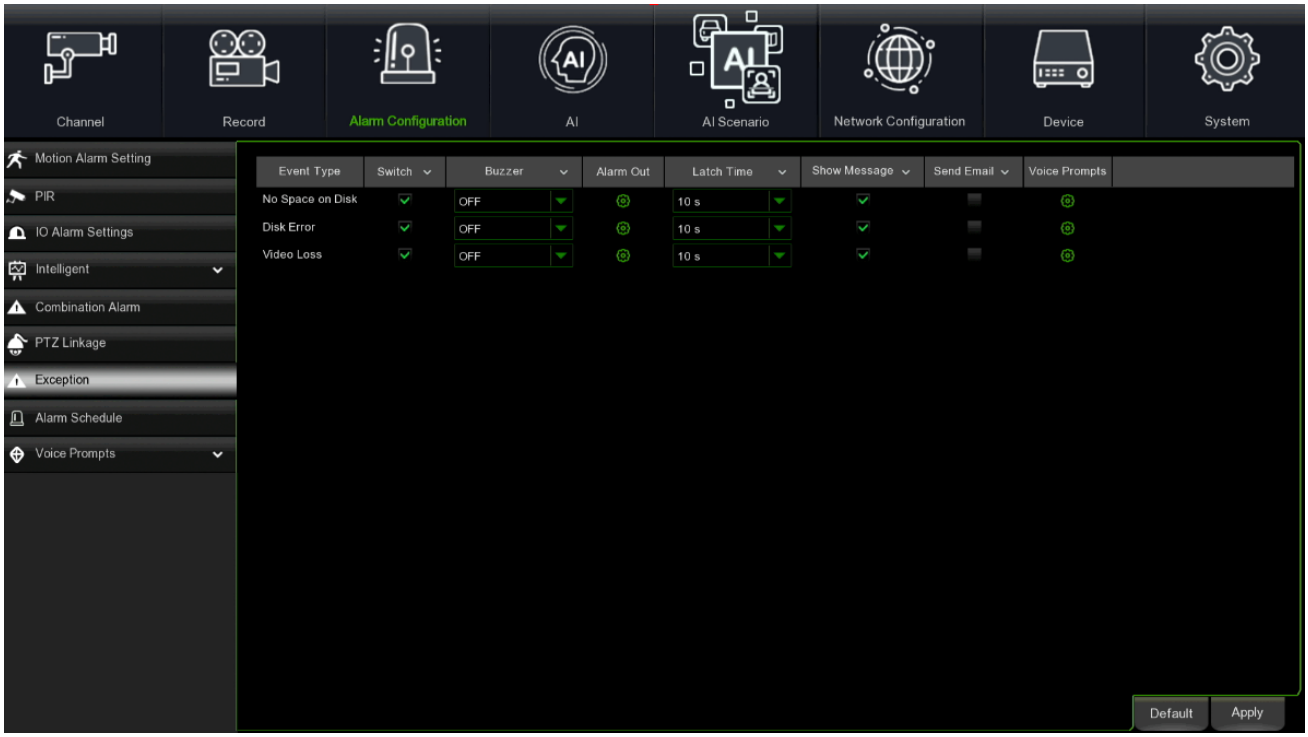


- **Channel:** To select the channel to be set.
- **Switch:** This used to enable or disable the PTZ linkage function on and off
- **Motion**: The motion detection alarm will activate the PTZ linkage function (if checked).
- **IO**: The I/O detection alarm will activate the PTZ linkage function (if checked).
- **PIR**: The PIR alarm will activate the PTZ linkage function (if checked).
- **PTZ1…4:** Click on to associate the PTZ Dome camera with the preset points.
- **Copy:** This can be used to copy current channel parameters to any other channel or to all channels.

- **Default**: This can be used to restore the default alert settings.
- **Apply** to save the changes.

3.6.7 EXCEPTION

This menu can be used to set the event type (e.g. full HDD, disk error, video loss) for that you want to be alerted by the HVR.

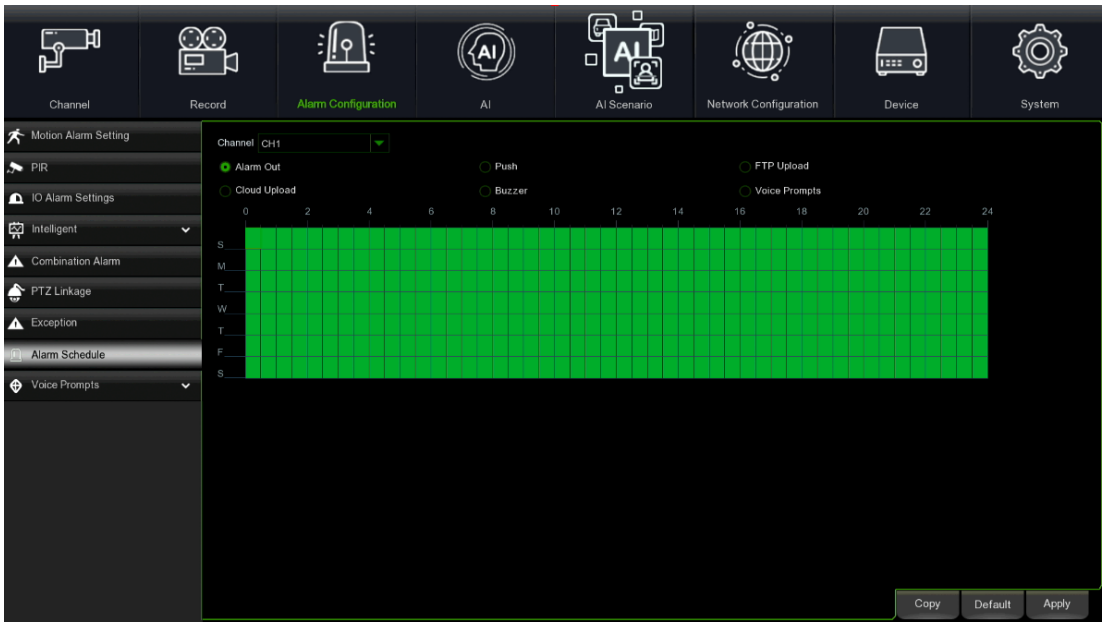


Here is a brief description:

- **Channel:** this is used to select the channel with that the Intelligent detection function is associated.
  - **No Space on Disk**: When an HDD is full.
  - **Disk Error**: When the HDD is not correctly detected.
  - **Video Loss**: If a camera is not connected correctly.
- **Switch:** Check the box to enable event monitoring.
- **Buzzer:** This can be used to set the buzzer time when an event occurs (Off/10s/20s/40s/60s). To exclude the buzzer, select OFF.
- **Latch Time:** This is an optional function. This can be used to determine the time of the external alarm device sound signal (10s, 20s, 40s, 60s) if the HVR supports such a connection.
- **Show Message:** Check the box to display a message in case of No Space on Disk (Disk Error or Video Loss). For icon types, see “3.2 - Live interface and pop-up menu”
- **Send Email:** This can be used to allow the HVR to send an automatic email in case of an event (for more information, see 3.9.3 **-** Email).
- **Default**: This can be used to restore the default alert settings.
- **Apply** to save the changes.

3.6.8 ALARM SCHEDULE

This function can be used to program the alarm output and other alarm notifications (Buzzer, Push, FTP Upload, Cloud Upload) for each channel.



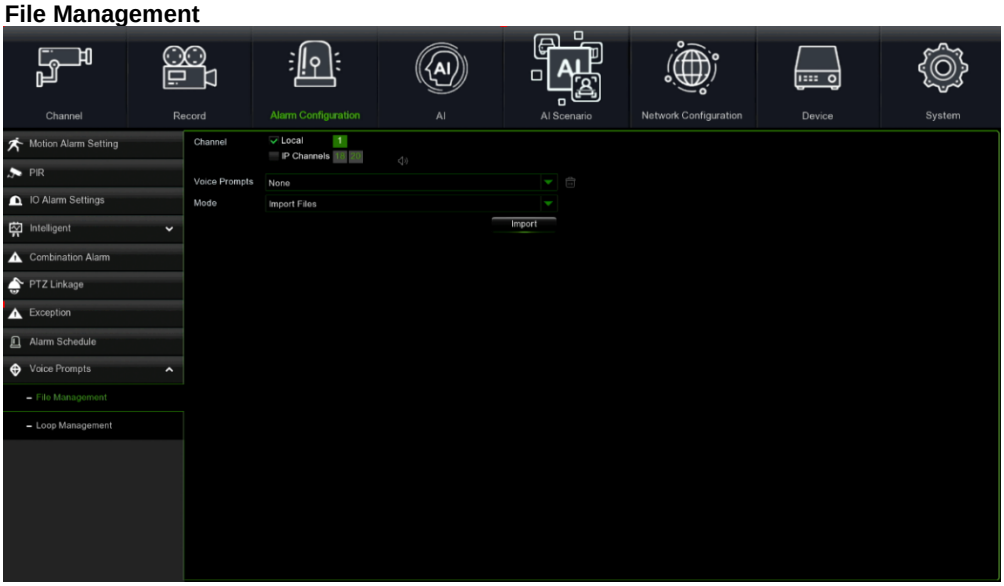
Here is a brief description:

- **Alarm Out**: This can be used to set the alarm output program in case of an event.
- **Push**: Set the program for push notifications to a mobile device in case of an event.
- **Buzzer:** This can be used to set the buzzer program in case of an event.
- **FTP Upload:** Set the FTP Upload program in case of an event.
- **Cloud Upload:** This can be used to set the Upload Cloud program in case of an event.
- **Copy:** This can be used to copy current channel parameters to any other channel or to all channels.
- **Default**: This can be used to restore the default alert settings.
- **Apply** to save the changes.

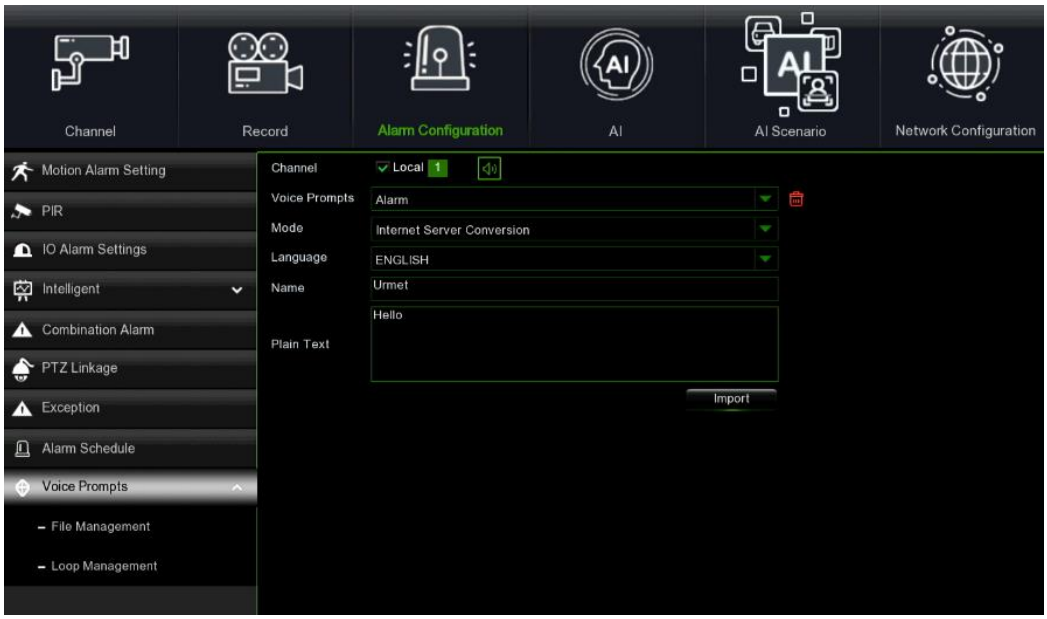
3.6.9 VOICE PROMPTS

A customised alarm voice message can be uploaded. The system will automatically or manually play the audio associated with the intrusion event at the scene.

3.6.9.1 File Management

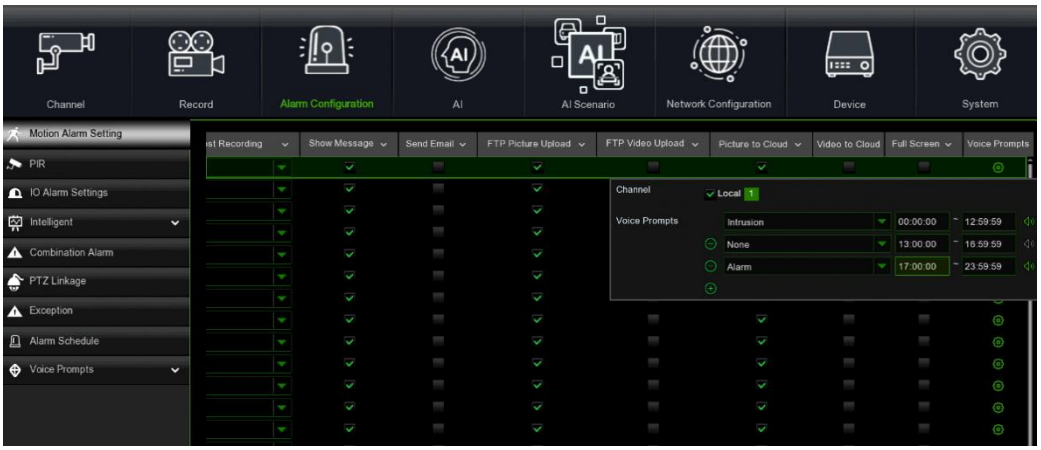


Press on **Mode** to choose the mode for importing the audio file. There are three modes to choose from:
- Import Files: import a file locally (supports MP3, WMA and WAV audio formats)
- Local Conversion: enter the text content to be converted into an audio file and automatically save to the hard disk.
- Internet Server Conversion: enter the text content that will be sent to the network server for conversionbe to audio files and automatically saved to the local hard disk.
Local Conversion and Internet Server Conversion have more language and text boxes than the file being imported. The Local Conversion language selection defaults to English and the user cannot choose any other language.
The input box has a maximum allowed length of 1,024 bytes. The import of the audio file, face database and number plate database can be 1~500K in size; the non-face database and number plate database can be 1~5M in size.
After importing the audio file, you can select the file to be played in the voice prompt. The voice prompt supports two modes, local channel and IPC channel.

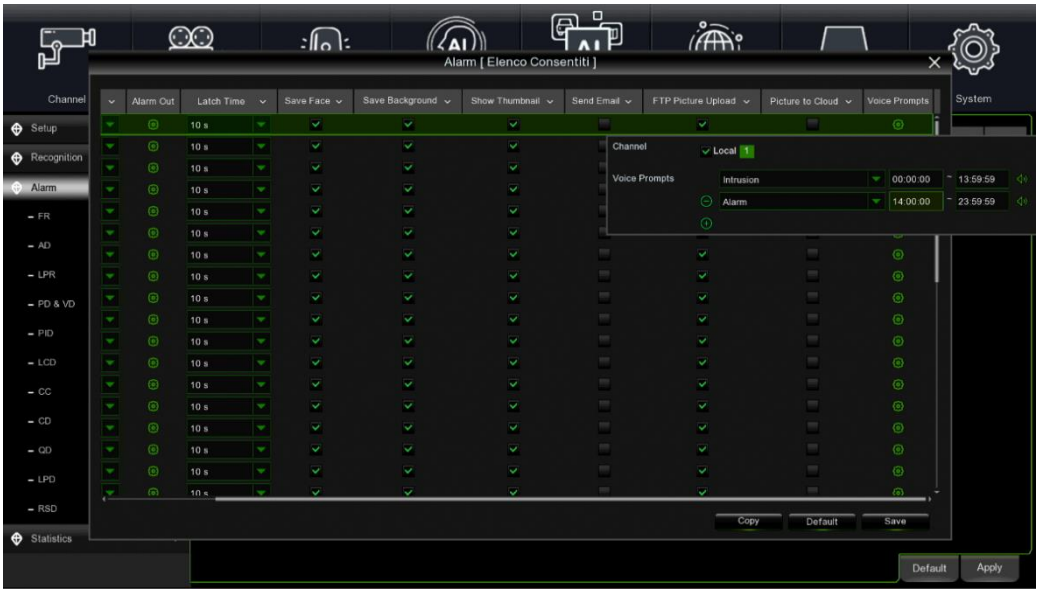


Local: Local transmission. When this transmission mode is chosen, the audio output is connected to the side of the device.
IPC (IP Camera) : transmission from network camera. Choosing this transmission mode requires that the camera supports the voice transmission function and has an audio output.

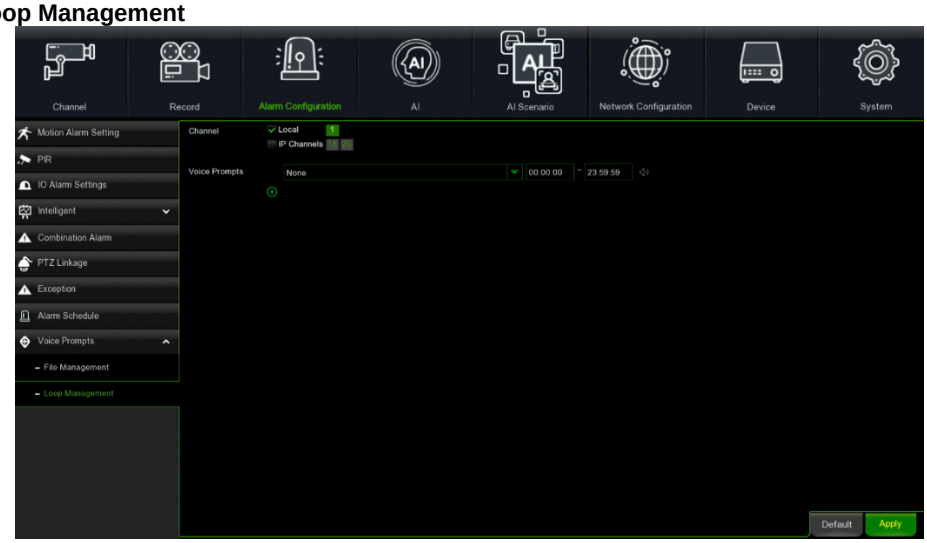
It is possible to set voice messages according to time periods: each alarm can support up to 12 time periods.



It is also possible to set up voice message transmission based on face detection. When face detection is activated, a voice message is output.



3.6.9.2 Loop Management



Once the audio file has been selected, it is possible to set the period of time during which the audio file is played repeatedly without an alarm or without listening to the audio file itself, up to a maximum of 12 settable time periods.
Local: Local transmission. When this transmission mode is chosen, the audio output is connected to the side of the device.
IPC (IP Camera) : Transmission from network camera. Choosing this transmission mode requires that the camera supports the voice transmission function and has an audio output.

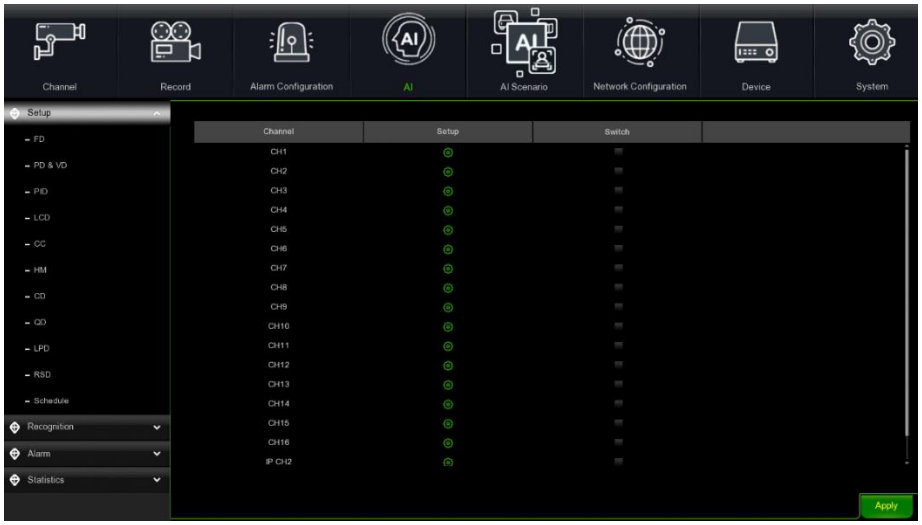
3.7 AI

The AI (Analysis Intelligent) section provides access to all HVR settings to manage video analysis alarms.
The submenu is as follows:

- Setup
- Recognition
- Alarm
- Statistics

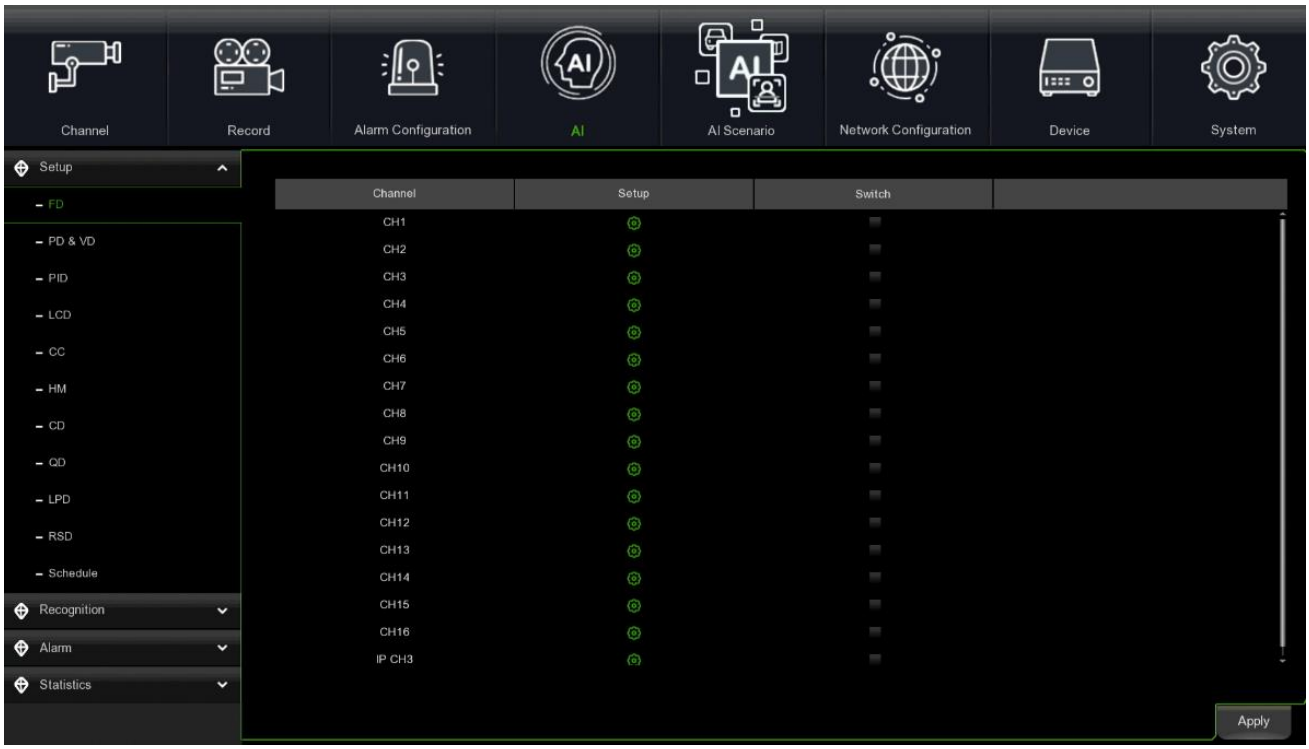
3.7.1 SETUP

This menu allows you to set the conditions that generate an alarm according to the desired intelligent video analysis function.



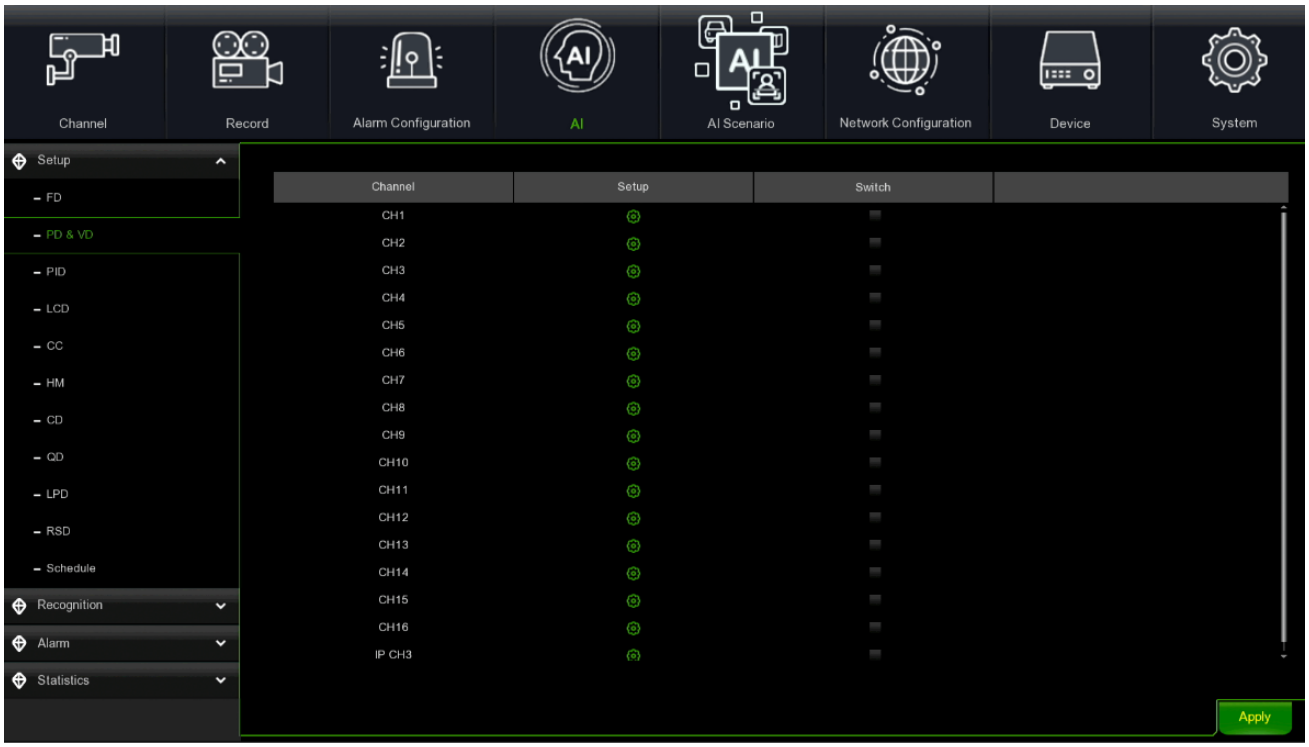
3.7.1.1 **FD (Face Detection)**

This menu allows you to set the rules for face detection. Please refer to section 3.4.9.5 FD (Face Detection) of this manual for the parameters to be configured.



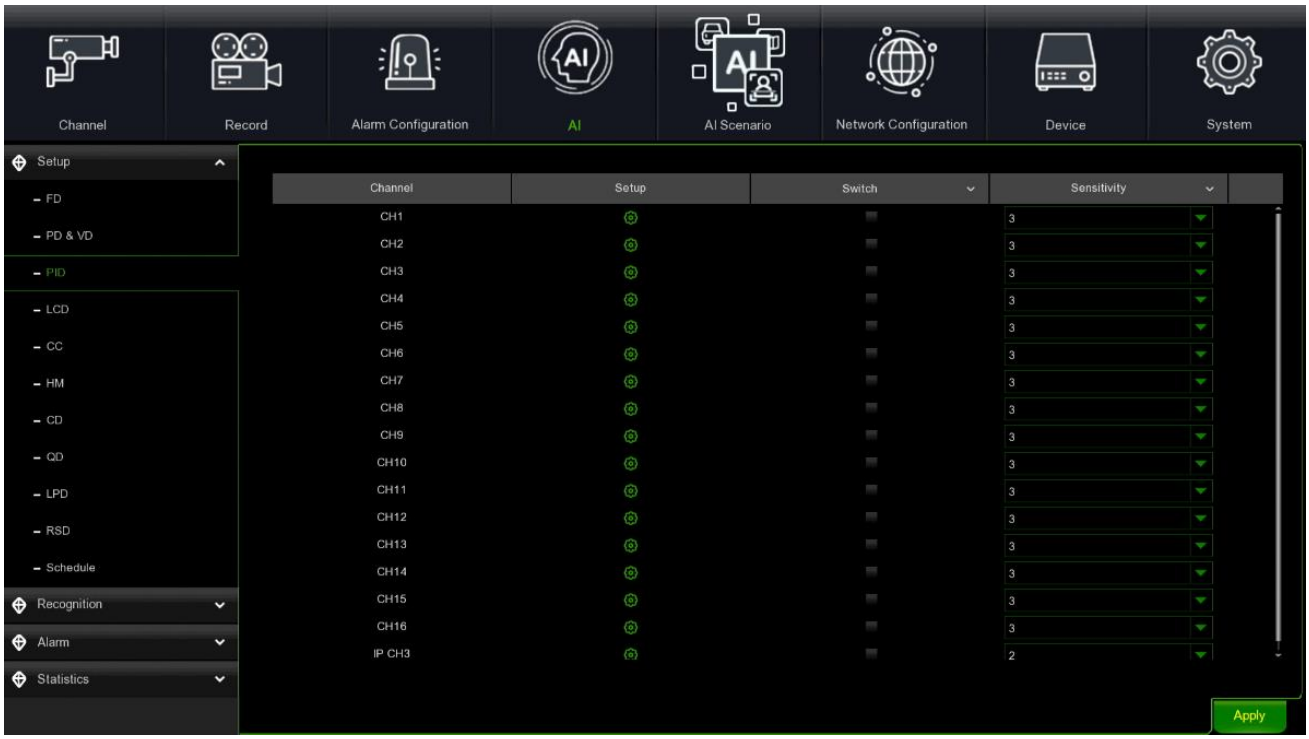
3.7.1.2 **PD & VD (Pedestrian & Vehicle Detection)**

This menu is used to set the rules for pedestrian and vehicle detection. Please refer to section 3.4.9.4 PD&VD (Pedestrian&Vehicle Detection) of this manual for the parameters to be configured.



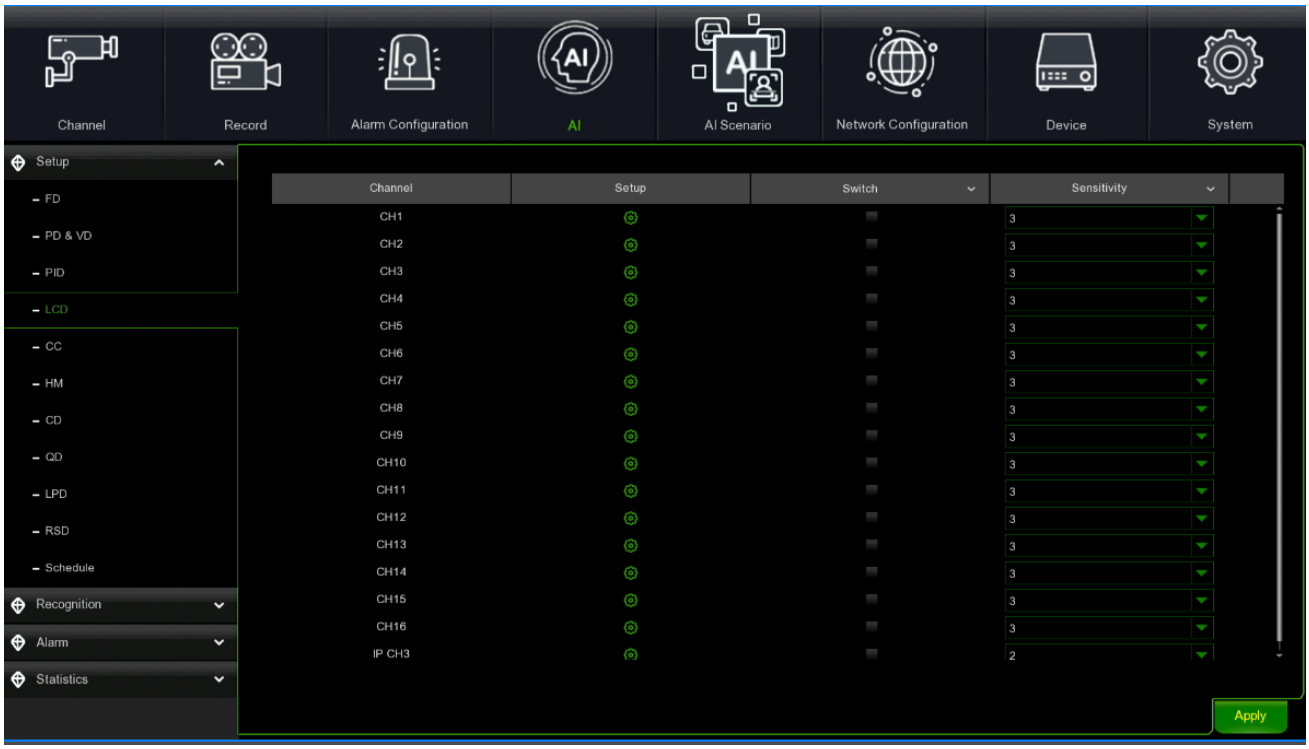
3.7.1.3 PID (Perimeter Intrusion Detection)

This menu allows you to set the rules for perimeter intrusion detection. Please refer to section 3.4.9.1 PID (Perimeter Intrusion Detection) of this manual for the parameters to be configured.



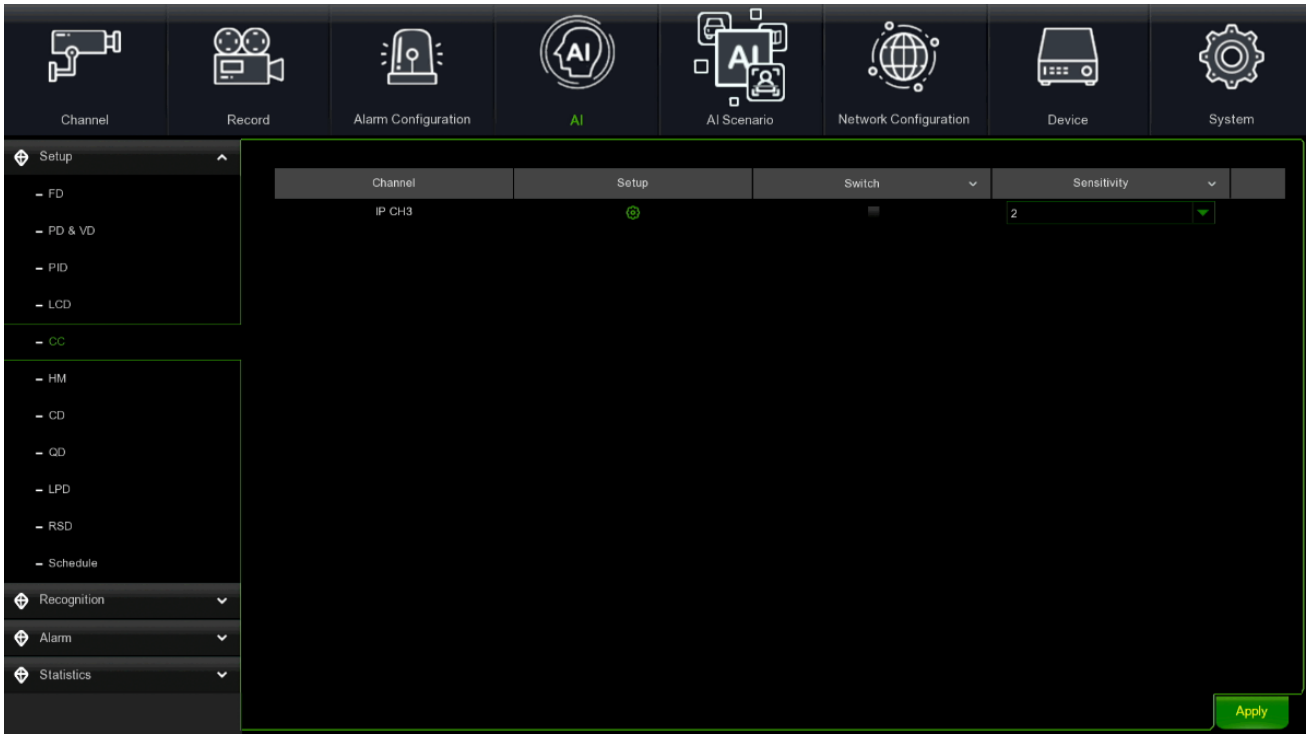
3.7.1.4 LCD (Line Crossing Detection)

This menu is used to set the rules for line-crossing detection. Please refer to section 3.4.9.2 LCD (Line Crossing Detection) of this manual for the parameters to be configured.



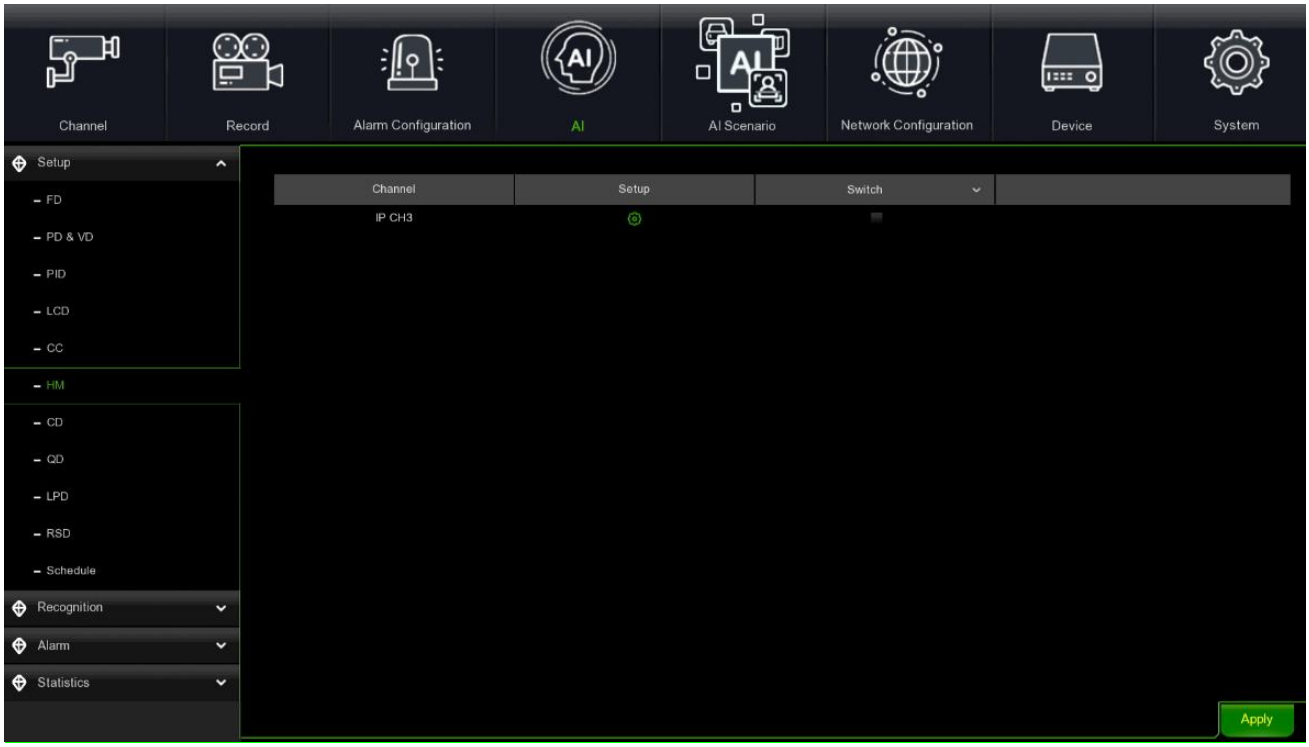
3.7.1.5 CC (Cross Counting)

This menu allows you to set the rules for counting the movement of objects and people across virtual lines. Please refer to section 3.4.9.6 CC (Cross Counting) of this manual for the parameters to be configured.



3.7.1.6 HM (Heat Map)

This menu allows you to set the rules for the areas with the most visitors.



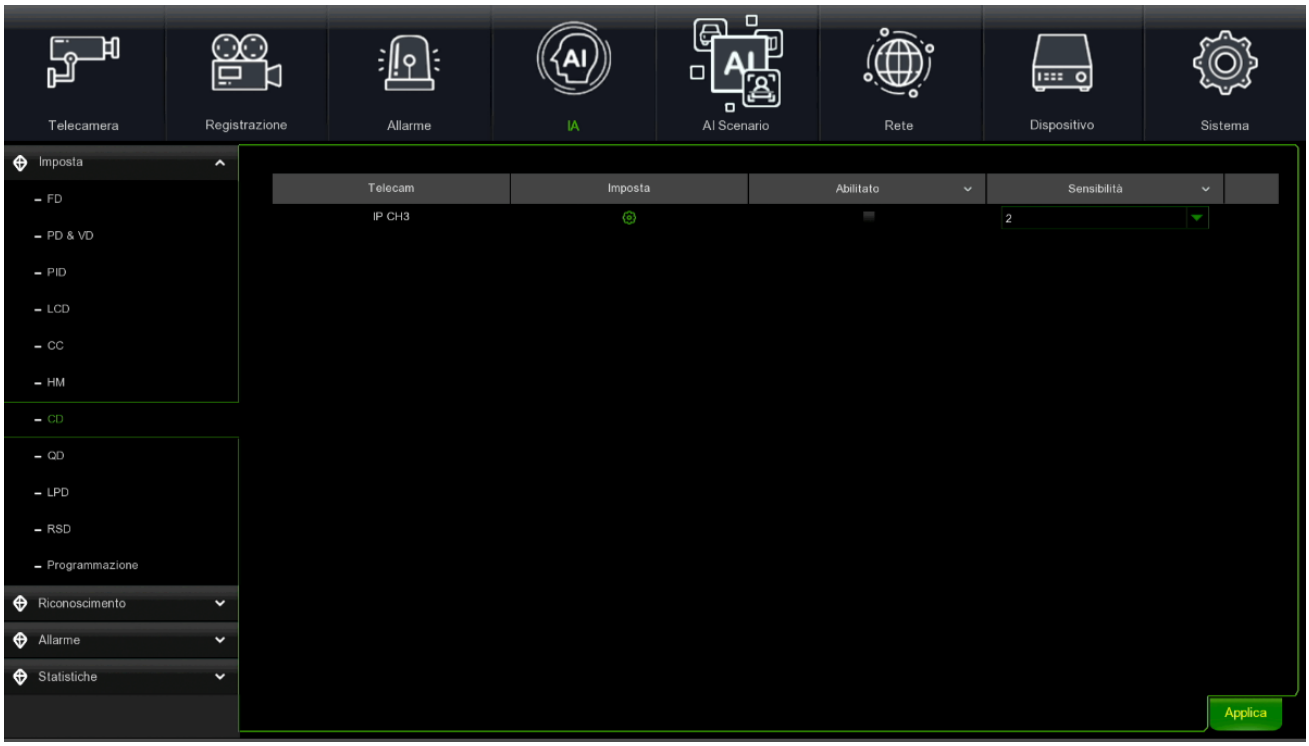
Switch: enable or disable the heat map function.

Setup: press on to draw the virtual area on the image.

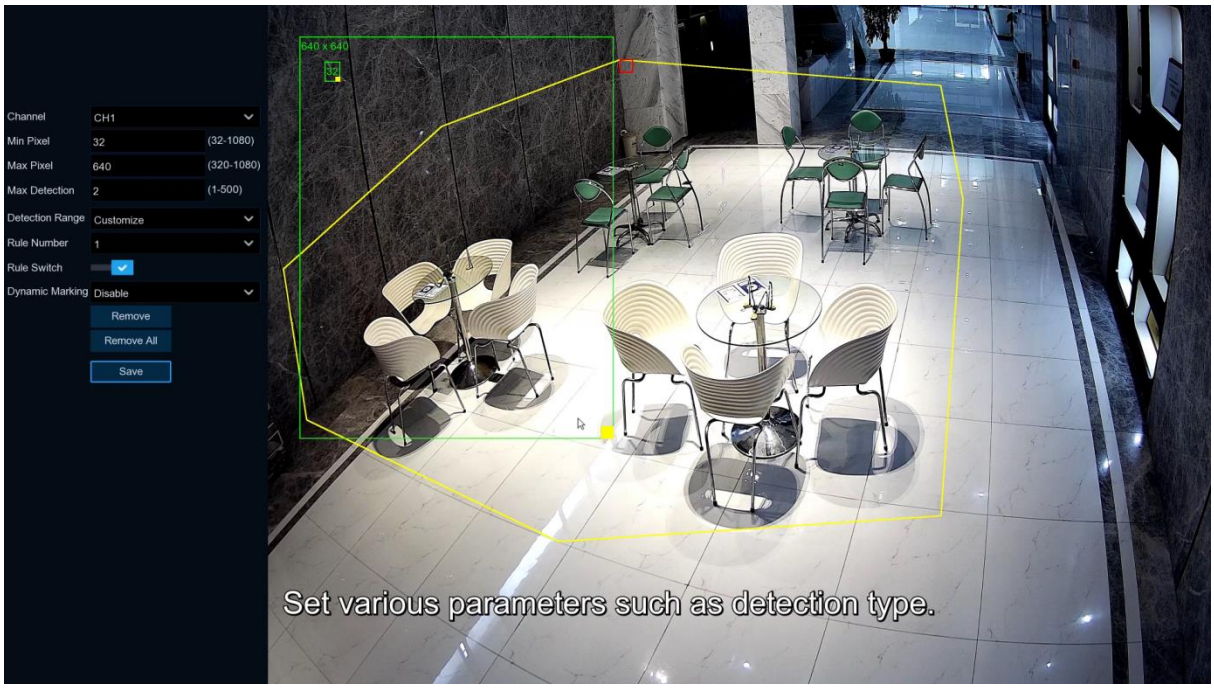
Channel: Select the channel to be configured.
Rule Number: Select the rule number representing the number of heat map detection areas. HM can only set one area.
Rule Switch: Enable or disable the rule.
Remove: Press on the detection area box and press Remove to delete the area.
Remove All: Press Remove All to delete the detection box directly.

3.7.1.7 CD (Crowd Density Detection)

This menu allows you to set the rules for detecting crowding in a specific area.



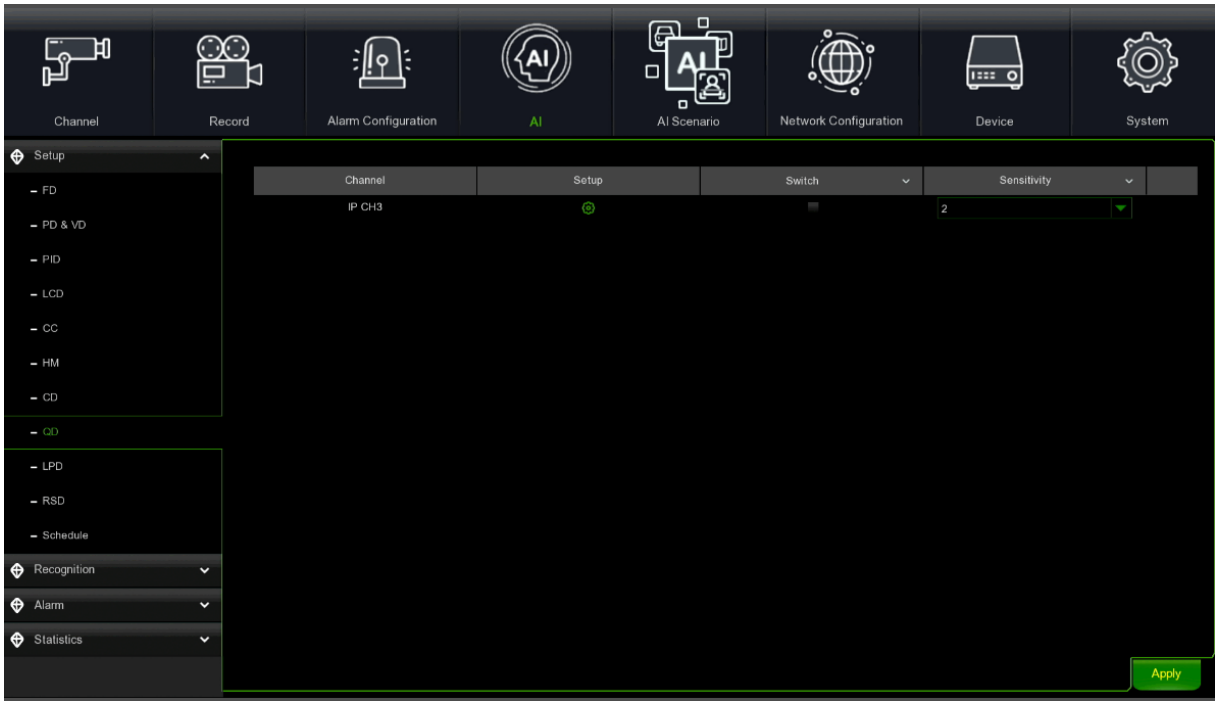
Switch: enables and disables the crowd detection function.
Sensitivity: a value between 1 and 4 can be chosen. The higher the value the more sensitive the detection will be.
Setup: press on to draw the virtual area on the image.



Channel: Choose the channel to be configured.
IVA Lines: Enable or disable IVA lines.
Min Pixel: Set the minimum recognition pixel box; the person must be greater than the set pixel to be identified.
Max Pixel: Set the box for the maximum recognition pixel; persons must be less than the set pixel to be identified.
Max Detection: The HVR generates an alarm if the number of people in the detection area exceeds the maximum number of people set.
Detection Range: You can choose the full screen or you can customise the area.
If you want to draw a custom area, you must first select the red box and then you can move the eight points of the virtual area by dragging them with the mouse cursor.
Rule Number: Select the rule number representing the number of crowd detection areas. The CD function can only set one area.
Rule Switch: Enable or disable the rule.
Visible Area: Decide whether or not to display the crowd detection area.
Remove: Press on the detection area box and press Remove to delete the area.
Remove All: Press Remove All to delete the detection box directly.
Save: Press Save to confirm the configured settings.

3.7.1.8 QD (Queue Length Detection)

This menu allows you to set the rules for detecting the length and dwell time of the queue in a specific area.



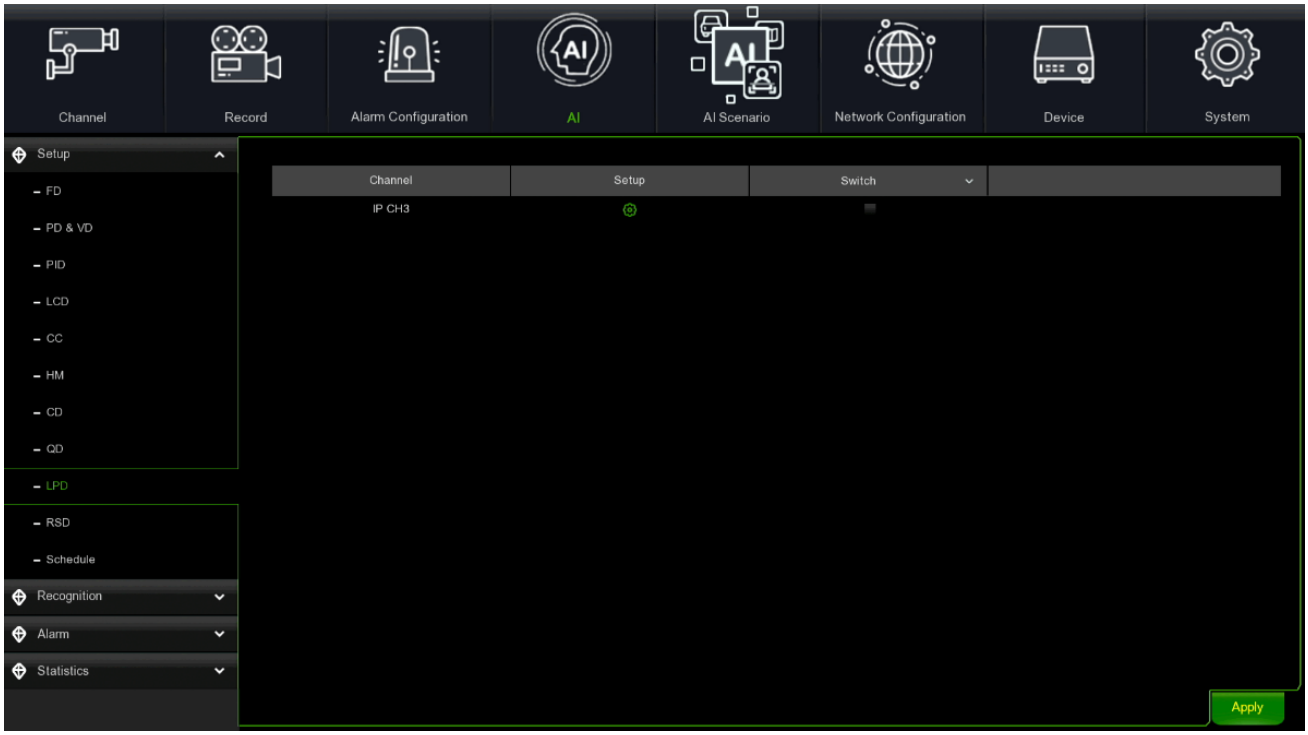
Switch: enable or disable the crowd detection function.
Sensitivity: A value between 1 and 4 can be chosen. The higher the value the more sensitive the detection will be.

Setup: Press on to draw the virtual area on the image.

Channel: Choose the channel to be configured.
IVA Lines: Enable or disable IVA lines.
Min Pixel: Set the minimum recognition pixel box; the person must be greater than the set pixel to be identified.
Max Pixel: Set the box for the maximum recognition pixel; persons must be less than the set pixel to be identified.
Max Detection: The HVR generates an alarm if the number of people queuing in the detection area exceeds the maximum number of people set.
Max Pro Time: If the queue stays longer than the set time, the HVR generates an alarm.
Detection Range: You can choose the full screen or you can customise the area.
If you want to draw a custom area, you must first select the red box and then you can move the eight points of the virtual area by dragging them with the mouse cursor.
Rule Number: Select the rule number representing the number of crowd detection areas. The CD function can only set one area.
Rule Switch: Enable or disable the rule.
Visible Area: Decide whether or not to display the crowd detection area.
Remove: Press on the detection area box and press Remove to delete the area.
Remove All: Press Remove All to delete the detection box directly.
Save: Press Save to confirm the configured settings.

3.7.1.9 LPD (License Plate Detection) Beta Version

This menu allows rules to be set for detecting the number plate reading of vehicles in a database or unknown vehicles. The number plate information of the unknown vehicle can also be backed up. The function supports European and American number plates.



Switch: Enable or disable the number plate reading detection function.

Setup: Press on to draw the virtual area on the image.

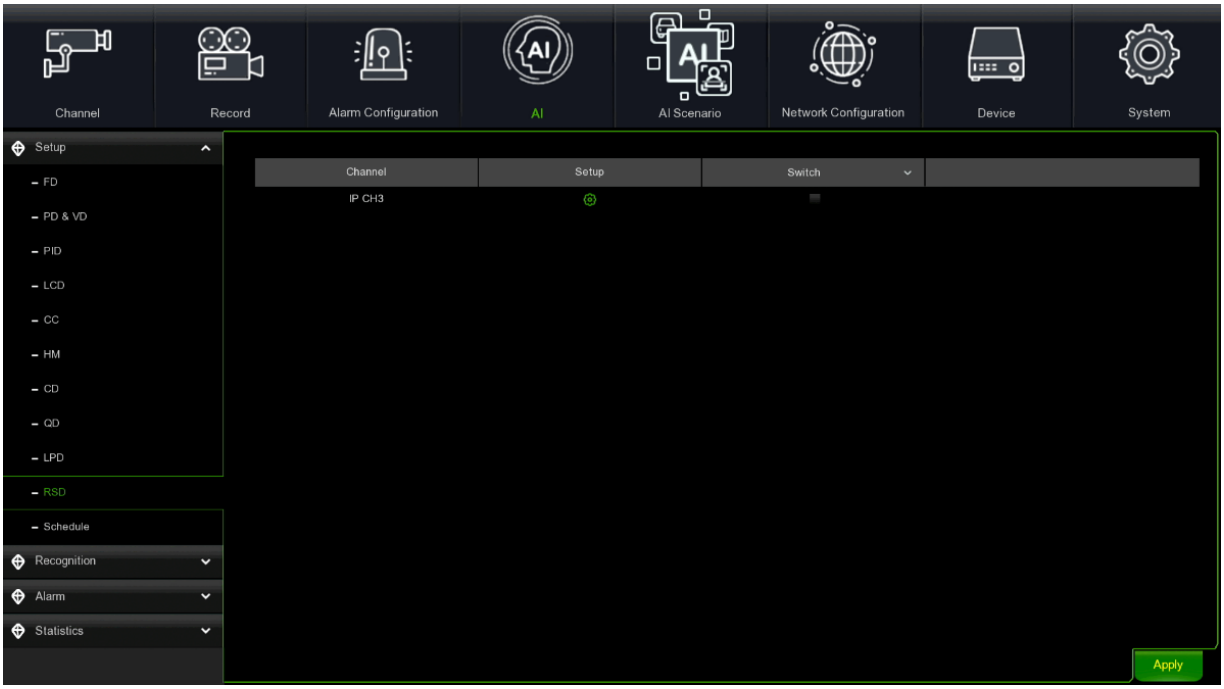
Channel: Choose the channel to be configured.
IVA Lines: Allows you to enable or disable IVA lines.
Snap Mode: There are three recognition modes, default mode, real-time mode, and interval mode.
- Default Mode: When the vehicle's number plate enters the monitoring area, the camera will always detect. After the vehicle number plate has left the monitoring area, the best and clearest of the images captured during this time will be sent to the device.
- Realtime Mode: One image will be sent to the device at the moment the vehicle's licence plate enters the monitoring area and a second image will be sent to the NVR when the vehicle's licence plate has left the monitoring area.
- Interval Mode: The maximum number of times and the interval for sending each image to the device can be set.
Snap number: The number of push images per number plate detection can be set from 1, 2, 3 up to unlimited, i.e. send images to the device one, two, three or infinitely many times. (Note: this parameter is available in interval mode)
Snap Frequency: n s / pic (n can be set to 1-255), chooses the best snapshot every N seconds and sends it to the device. (Note: this parameter is available in interval mode)

Min Pixel: sets the minimum pixel for number plate recognition. The licence plate must be larger than the set minimum pixel in order to be recognised. The value can be set from 64 to 1080.
Max Pixel: setting of the maximum number plate recognition pixel. The licence plate must be smaller than the set maximum pixel in order to be recognised. The settable value ranges from 320 to 1080.
Sensitivity: The higher the value, the more sensitive the detection. A value from 1 to 100 can be set.
Detection Type: Two types of number plate can be chosen: European number plate or American number plate.
Detection Mode: Two detection modes can be chosen, static mode or motion mode.
- Motion Mode: captures the number plate of the moving vehicle.
- Static Mode: Captures the number plate of stationary vehicles.
Detection Range: You can choose between two detection ranges, full screen or customised.
- Full Screen: The detection area coincides with the coverage area of the camera.
- Customise: if this mode is selected a region box will appear in the right-hand window. Select the small red box next to the region's digital ID box to change the region itself.

Save: To save the set parameters.

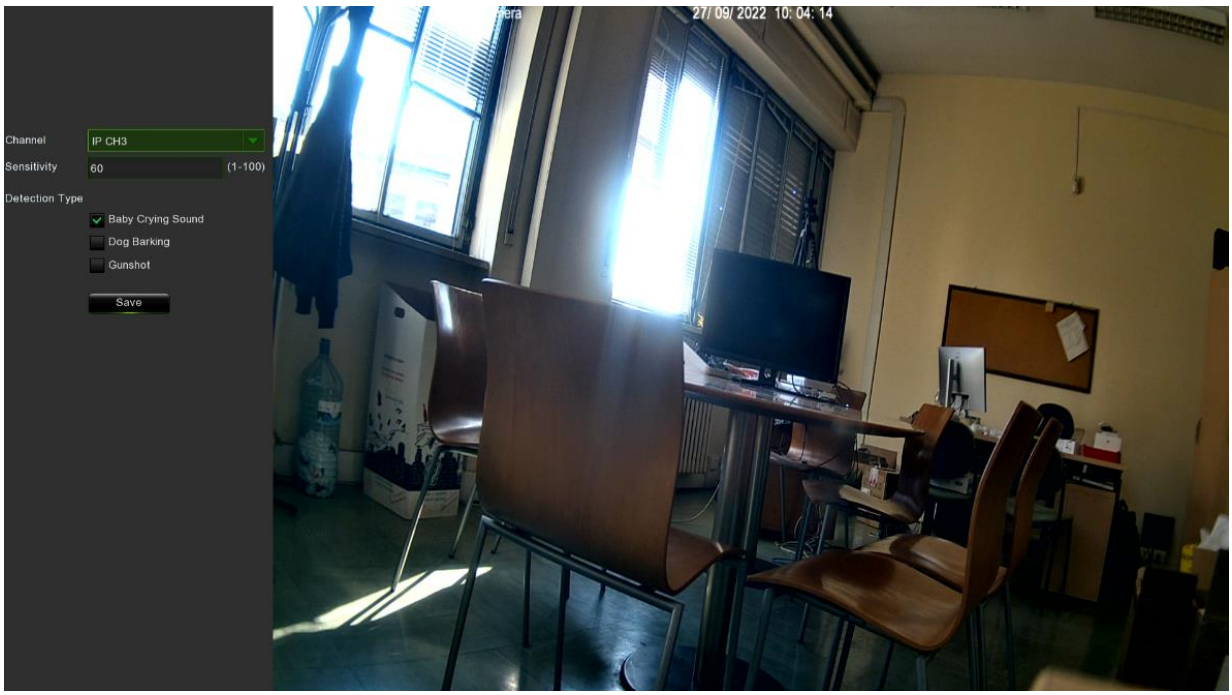
3.7.1.10 RSD (Rare Sound Detection)

This menu allows you to set which of the specific background noises the camera should detect. You can choose dog barking, a child crying and/or gunshot.



Switch: Enable or disable the number plate reading detection function.

Setup: Press on to draw the virtual area on the image.



Channel: Choose the channel to be configured.
Sensitivity: The higher the value, the more sensitive the detection. The value can be set from 1 to 100.
Detection Type: Three types of sounds can be chosen: baby crying, dog barking and gunshot.
- Baby Crying Sound: Check the box to activate cry detection
- Dog Barking: Check the box to activate barking dog detection.
- Gunshot: Check the box to activate gunshot detection

Save: Check the box to save the set parameters.

3.7.1.11 AI Schedule

In this section it is possible to programme for each type of AI alarm at which time slots the intelligent function algorithms are active.

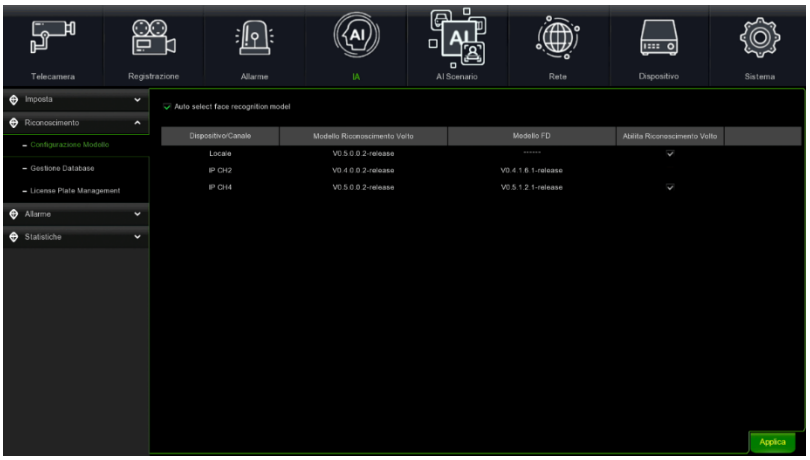
Channel: Choose the channel on which to set the time schedule.
Select the AI function and with the left mouse button select or deselect the boxes according to your needs. Green: function on / Black: function off.
The functions are mutually exclusive.
Apply: To save the set parameters.

3.7.2 RECOGNITION

This menu allows management of the database for authorised/prohibited people to access.

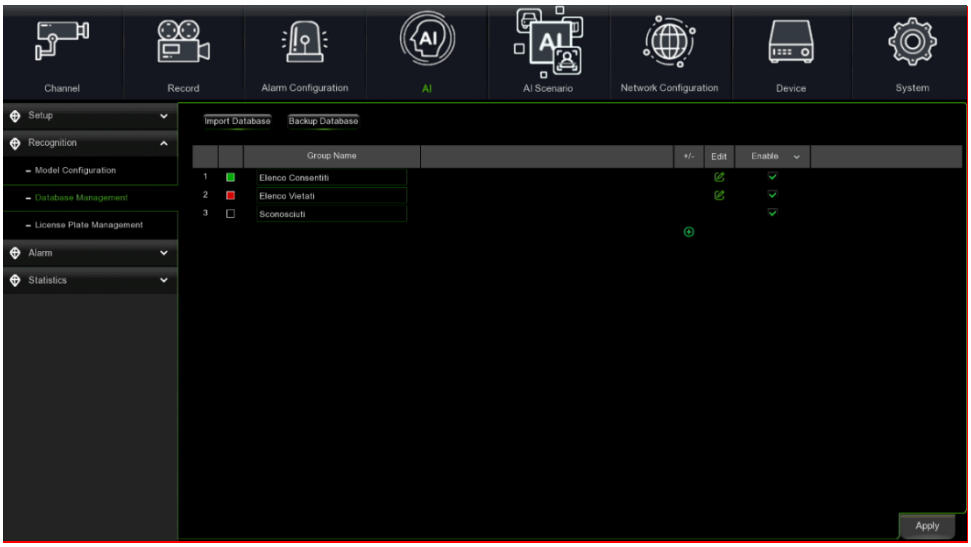
3.7.2.1 Model Configuration

In this menu, the algorithm model can be selected. There are local and IP camera algorithm models (some devices do not have local algorithm models and must take the IP camera of the algorithm model).



3.7.2.2 Database Management

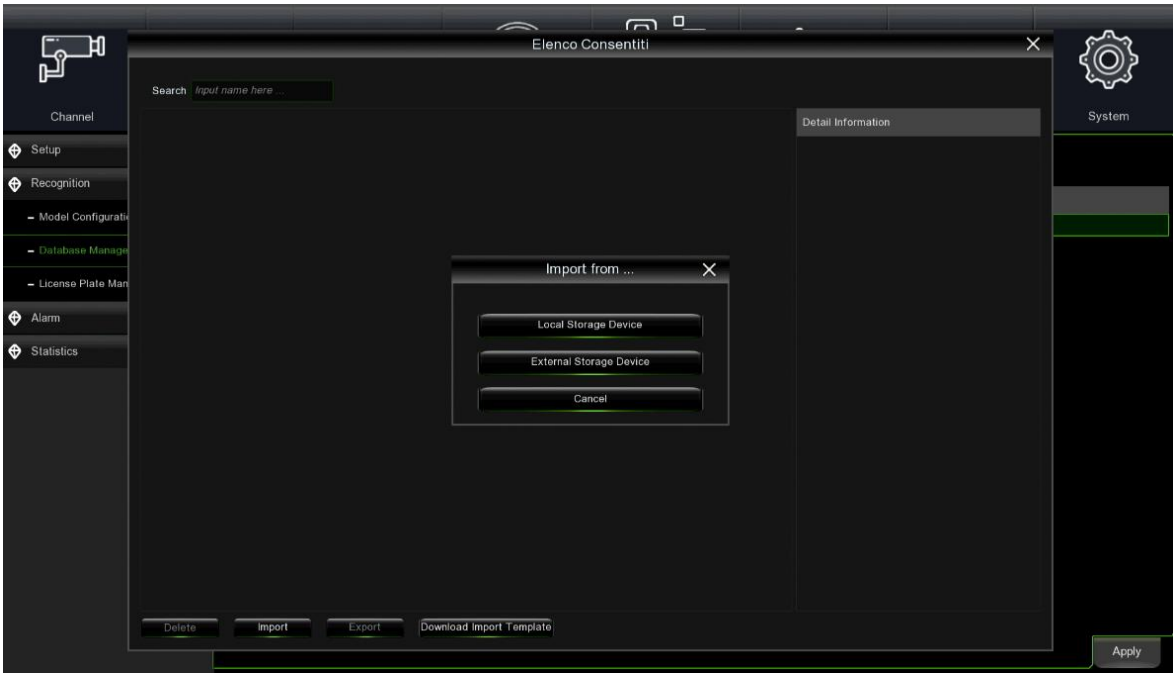
Allows you to set the list of faces of people who are allowed or forbidden to pass and to add other customised groups.



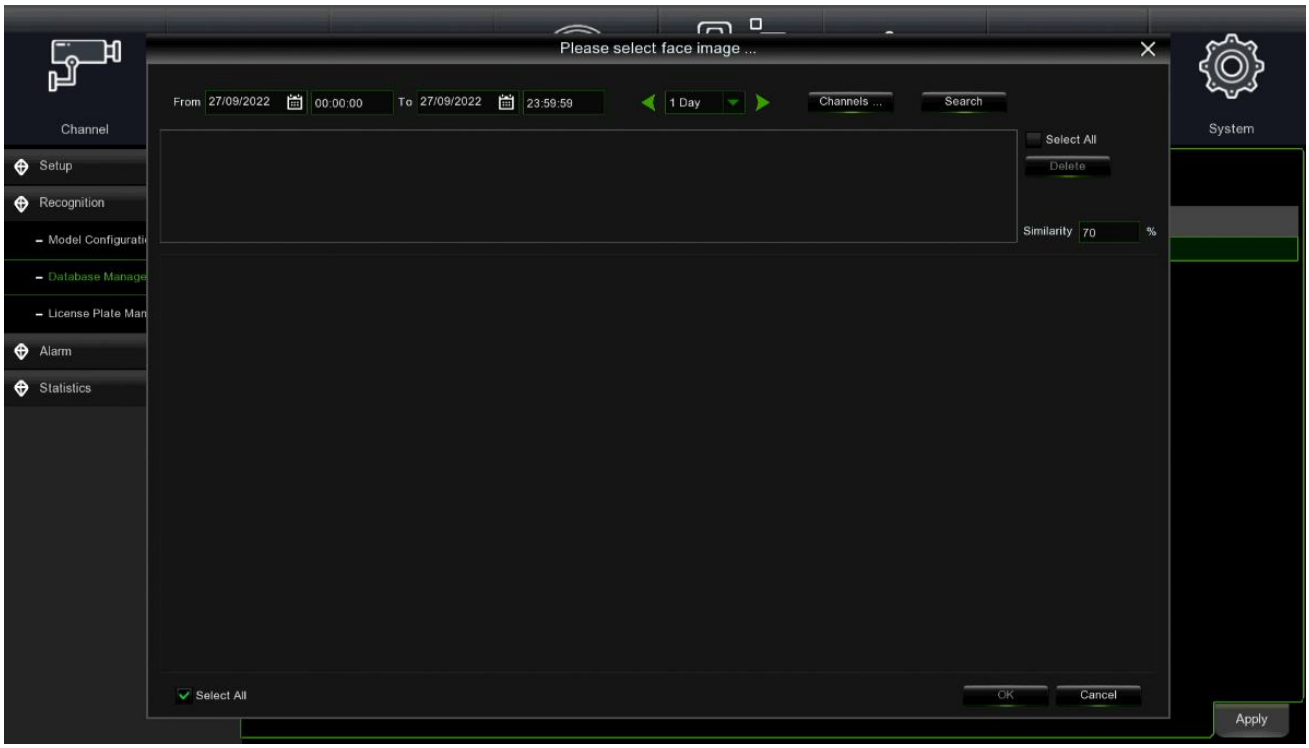
Enable: enable the list of allowed/ banned/unknown faces/etc.

Group Name: Allows setting the name of the database group, Allow List , Block List , and Stranger group .
Allow List Edit: Imports face images to the Allowed List.
Block List Edit: Import images of faces in the prohibited list.
Import Database: Import the file into the device.
Backup Database: exports all groups to the U-disk.

Press on / to add a new face group or delete an existing one (the first three predefined face groups cannot be deleted).
Edit: Press to edit the desired face group.

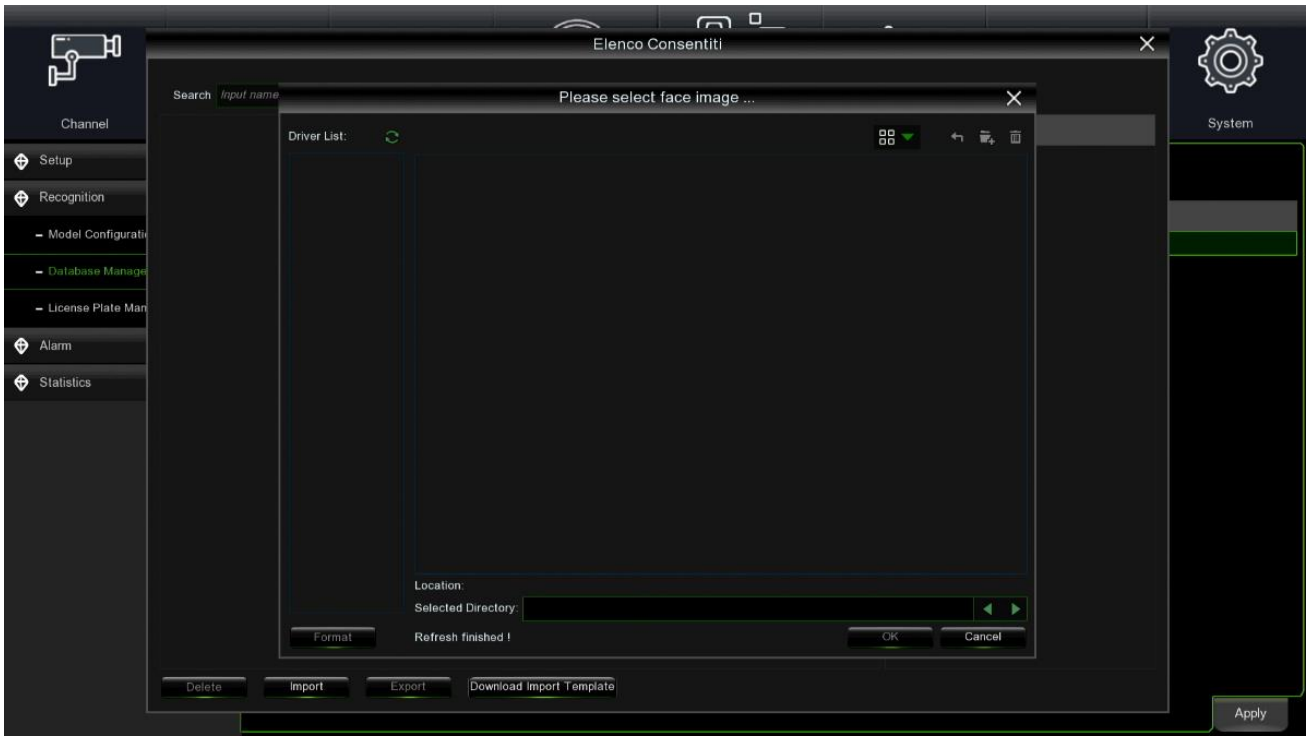


Import: Press on **Local Storage Device** to access the local import interface.



Select date, duration and channels, press **Search** to search all faces saved on the devices in that period. If you select the similarity of faces and then press on **Search**, faces matching the similarity will be searched. Press on the face results image and select the desired face. Press **OK** to access the face import page.
Edit the face information in the box on the right and press on Import to complete the operation. Press on **Exit** to exit the interface.

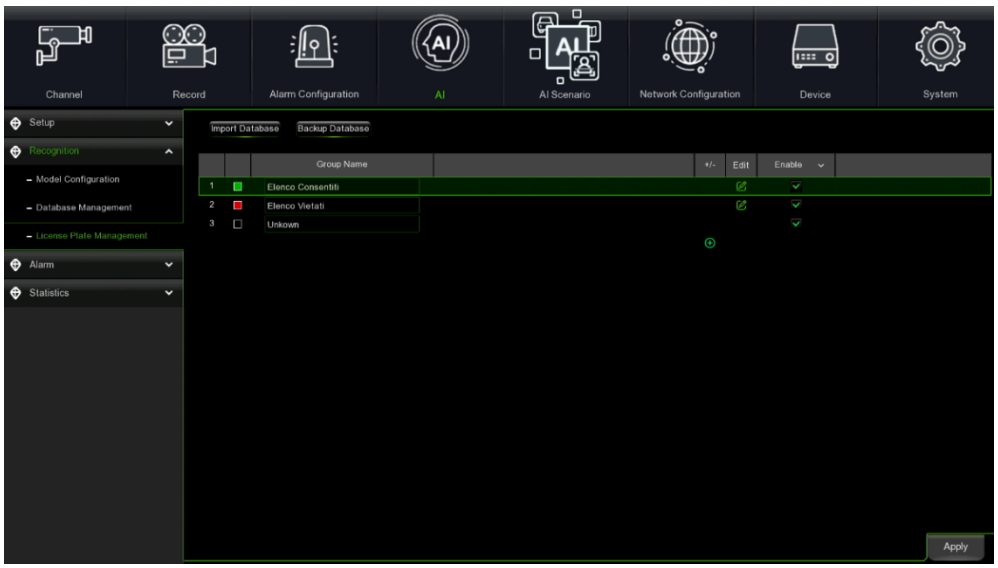
Press on **External Storage Device**, select the face image you wish to import; the procedure is the same as for importing the local face.



Export: Allows you to export the face image to an external memory.
Download import template: It is possible to export a template to an external memory. This template can contain a form and instructions for use. It is possible to fill in the information of the face image. Press the mouse button to select the face image, select **Edit** to enter the face image editing interface, and press on **Additional Face Image** to import the image.

3.7.2.3 License Plate Management

Allows you to set the list of number plates that are allowed and forbidden to drive through and also add customised groups.



Enable: enables the desired LPD group.

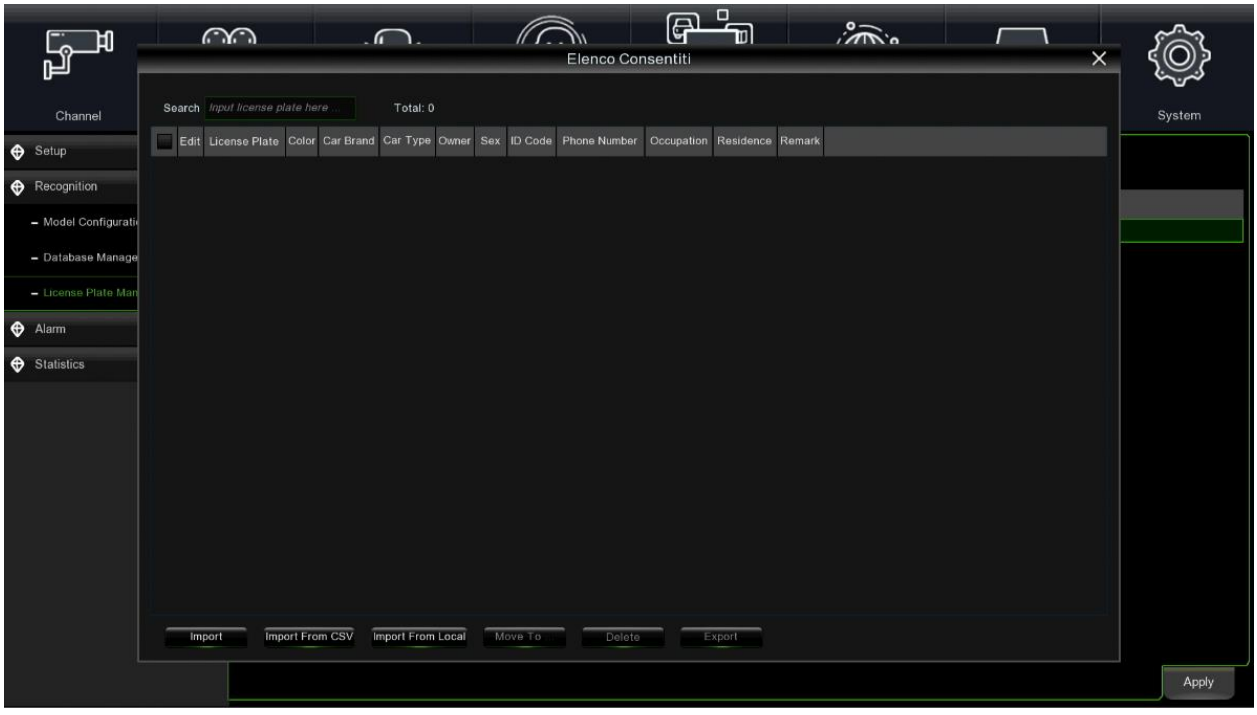
Group Name: Allows setting the name of the database group, Allow List , Block List and Stranger group . Up to 61 custom groups can be added, for a total of 64 groups. Each group can contain up to 5000 number plates, the entire database can contain 10000 number plates.

Backup Database: exports all groups to the U disk.

Press on / to add a new face group or delete an existing one (the first three predefined face groups cannot be deleted).

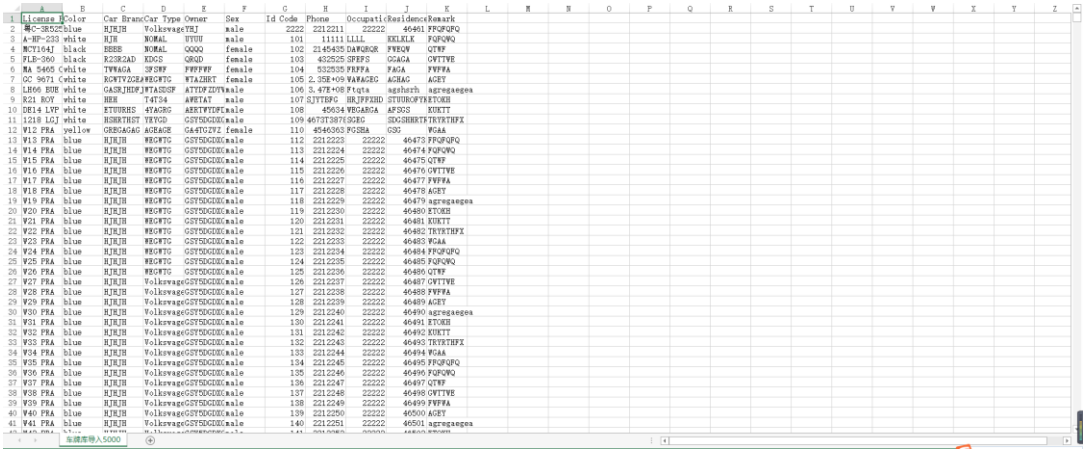
Edit: Press to edit the desired face group.

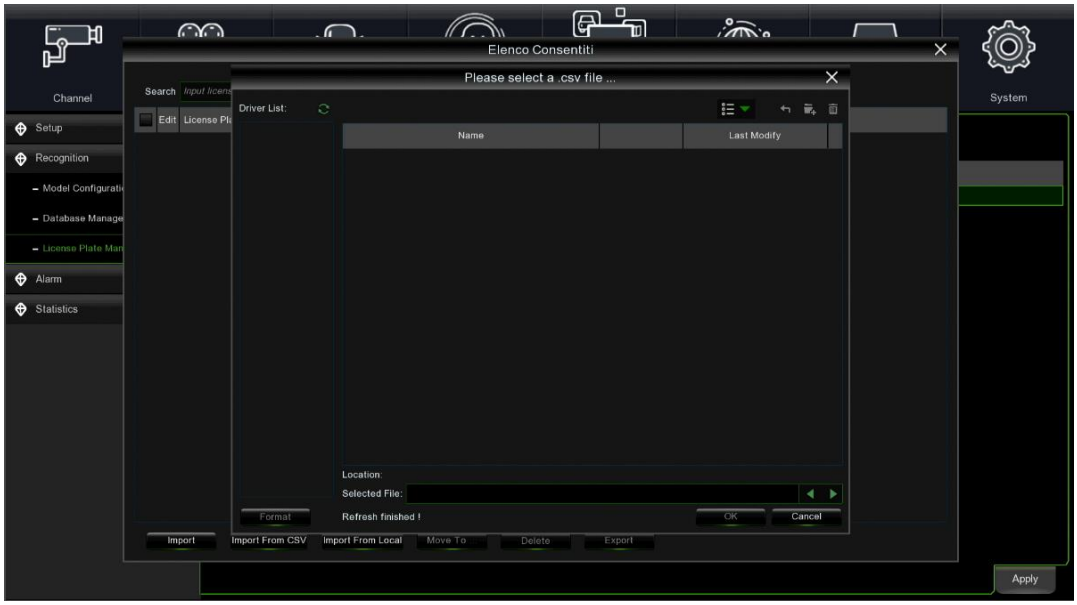
Press on to edit the plate data. Three types of licence plate import can be used: **Import (manual addition)**, **Import from CSV** and **Import from capture**.



Press the **Import** button to manually enter the data for the individual number plate.

Press the **Export** button to export the entire group data to an external drive.
Press the **Move To...** button to check the plate data box and transfer it to another group.
Press the **Delete** button to select the plate data box and delete it from the group.
Press the **Import from CSV** button to import one or more data. The format of the CVS table is shown below:





Press the **Import/Modify** button to add a group and edit the licence plate data. When more than 5000 data are added, the message **Add data has reached the upper limit of the group is displayed**.

Press the **Import from local** button to locally import licence plate data from the capture database.
Select date, duration and channels and press on **Search** to search for number plates saved by the device in that time period.

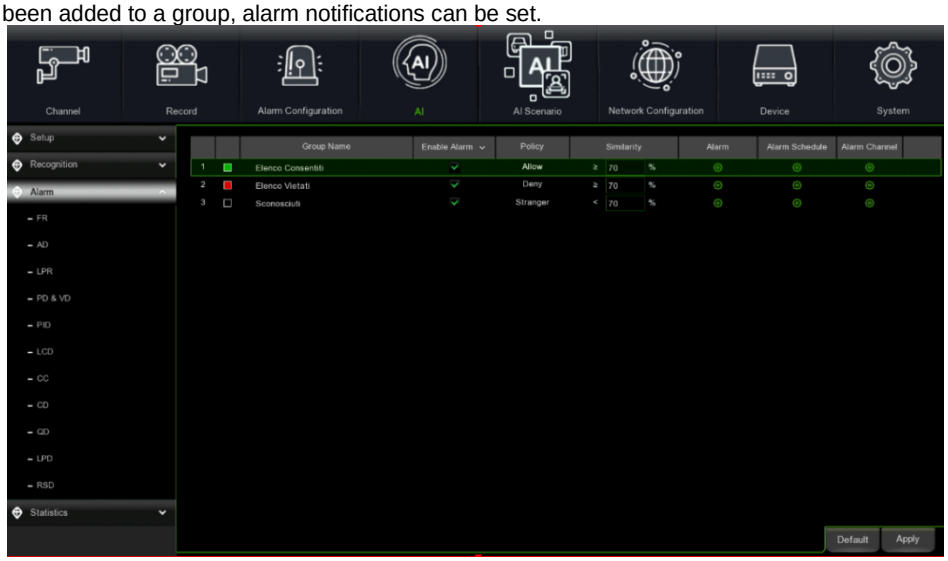
Channels: Licence plate reading event triggered on each channel.
Select All: Selects all licence plate information.

3.7.3 ALARM

In this submenu, it is possible to set the action following the alarm, such as saving the image, activating the buzzer, sending an e-mail etc.

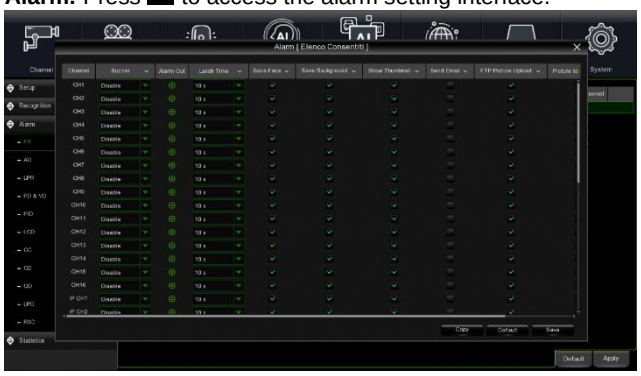
3.7.3.1 FR (Face Recognition)

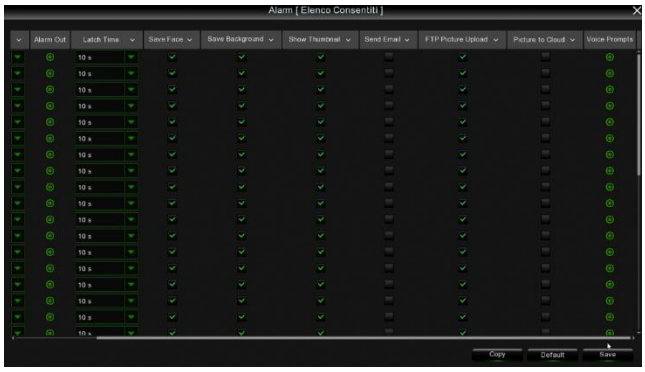
Once faces have been added to a group, alarm notifications can be set.



Enable Alarm: enable or disable face detection
Policy: Set the permissions for the face group alarm
Similarity: Set the similarity percentage

Alarm: Press to access the alarm setting interface.





Buzzer: allows the duration of the buzzer to be set in the event of an alarm.
Alarm Out: if enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 0-5s, 10s, 20s, 40s and 60s is allowed.
Save Face: Enables the saving of the alarm image.
Save Background: Enables the saving of the entire preview image when the FD alarm is triggered.
Show Thumbnail: When an FD event is detected, the thumbnail will be displayed in the thumbnail.
Send Email: If enabled, allows a notification email to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: if enabled, this allows the alarm picture to be uploaded to the cloud after the alarm has been triggered.
Voice Prompts: When the alarm is triggered, the audio file is played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

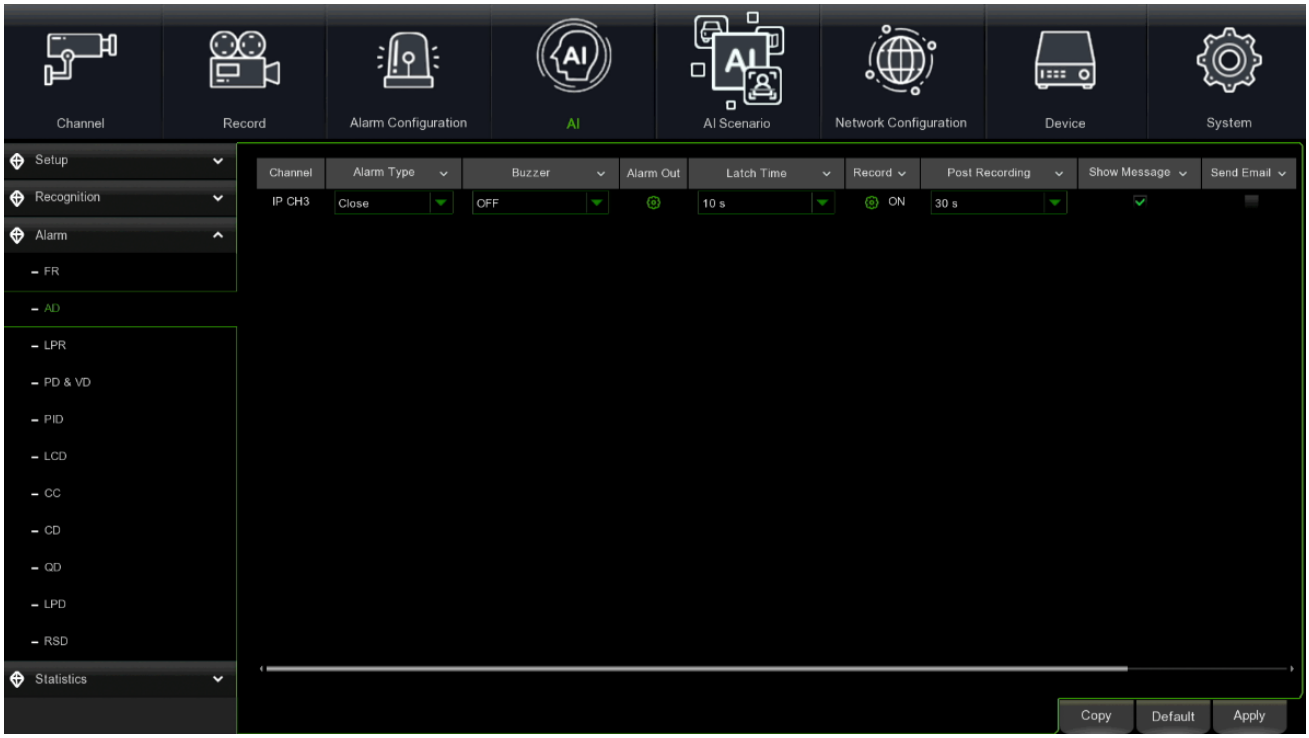
Alarm Schedule: press on to access the alarm schedule interface. The table consists of a grid of 30-minute boxes. You can hold down the left mouse button to scroll through the time table and select/deselect fields.

Press **Save** to store the desired time settings.

Alarm Channel: Press on to select the channels subject to alarm.

3.7.3.2 **AD (Attribute Detection)**

In this section, it is possible to configure possible actions related to the recognition of certain facial characteristics (e.g. presence or absence of the mask).



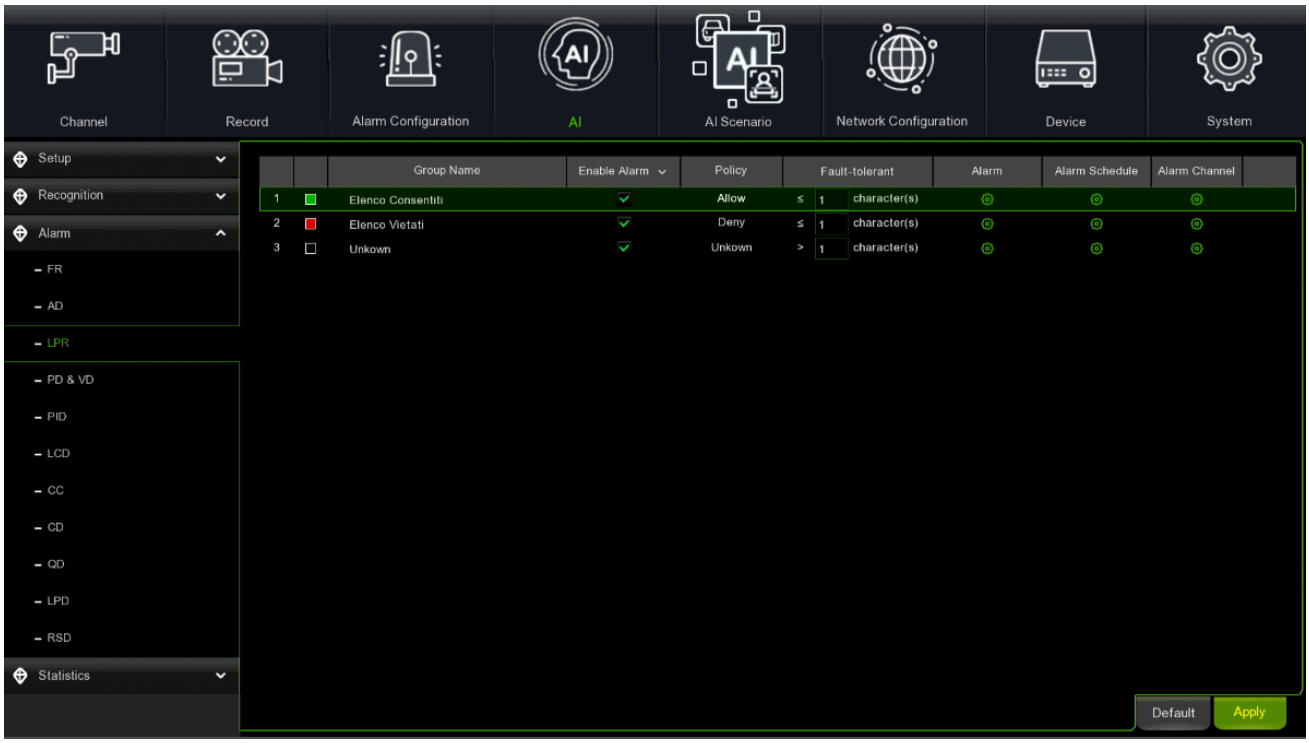
Alarm Type: there are three types of alarm, close, no mask, with mask.
Buzzer: allows the duration of the buzzer to be set in the event of an alarm.
Alarm Out: if enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
Voice Prompts: when the alarm is triggered the audio file is played (The IP camera must support the voice message function).
Apply: To save the set parameters.

3.7.3.3 LPR (License Plate Recognition)

Once licence plates have been added to a group, alarm notifications can be set up.

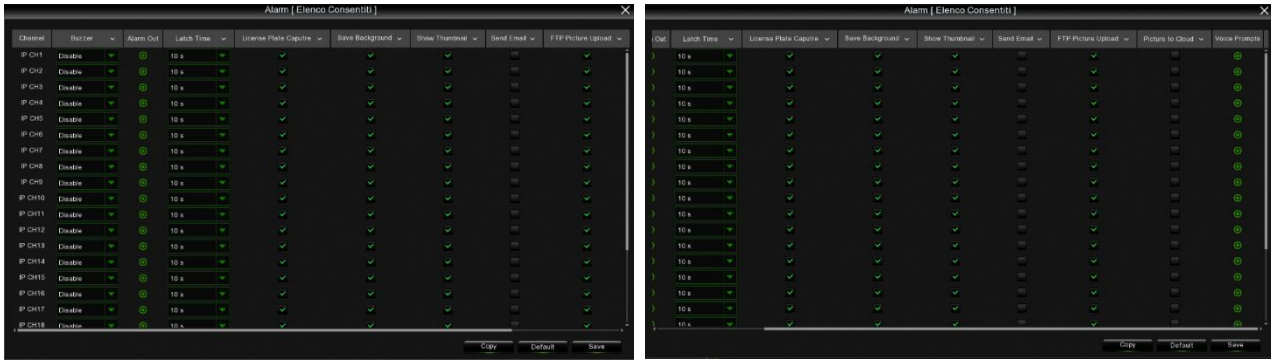


Group name: Group name.
Enable Alarm: Enables or disables licence plate reading detection
Policy: Set the permissions for the licence plate group alarm
Similarity: Set the similarity percentage

Alarm: Press to access the alarm setting interface.
Fault-tolerant: Fault-tolerant can be set by choosing the number of licence plate characters that can be read incorrectly.

Alarm Channel: By pressing on you can select the channels subject to alarm.

Alarm: Press to access the alarm setting interface.



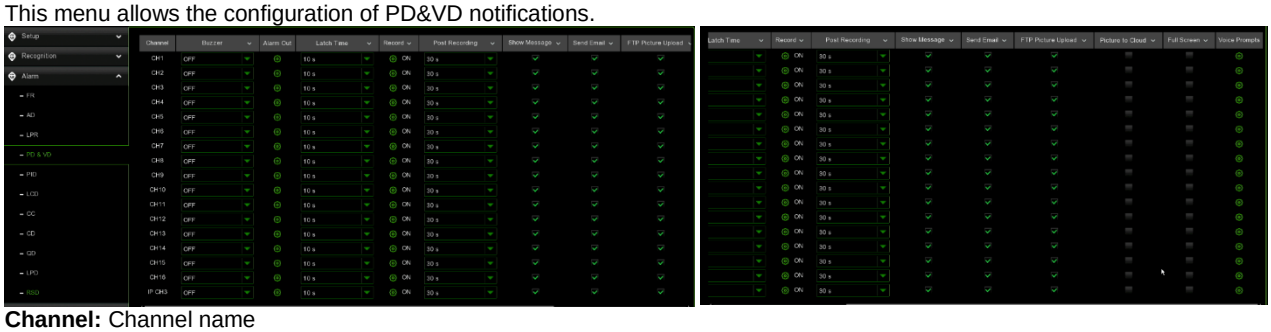
Buzzer: allows the duration of the buzzer to be set in the event of an alarm.
Alarm Out: if enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 0-5s, 10s, 20s, 40s and 60s is allowed.
License Plate Capture: Enable the capture of the licence plate after the alarm has been triggered.
Save Background: Enables the saving of the entire preview image when the LPD alarm is activated.
Show Thumbnail: When an LPD event is detected, the thumbnail will be displayed in the thumbnail.
Send Email: if enabled, allows a notification email to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: if enabled, this allows the alarm picture to be uploaded to the cloud after the alarm has been triggered.
Voice Prompts: When the alarm is triggered, the audio file is played (The IP camera must support the voice prompt function).
Save: To save the set parameters.

Alarm Schedule: press on to access the alarm schedule interface. The table consists of a grid of 30-minute boxes. You can hold down the left mouse button to scroll through the time table and select/deselect fields.

Press **Save** to store the desired time settings.

3.7.3.4 PD & VD (Pedestrian & Vehicle Detection)

This menu allows the configuration of PD&VD notifications.



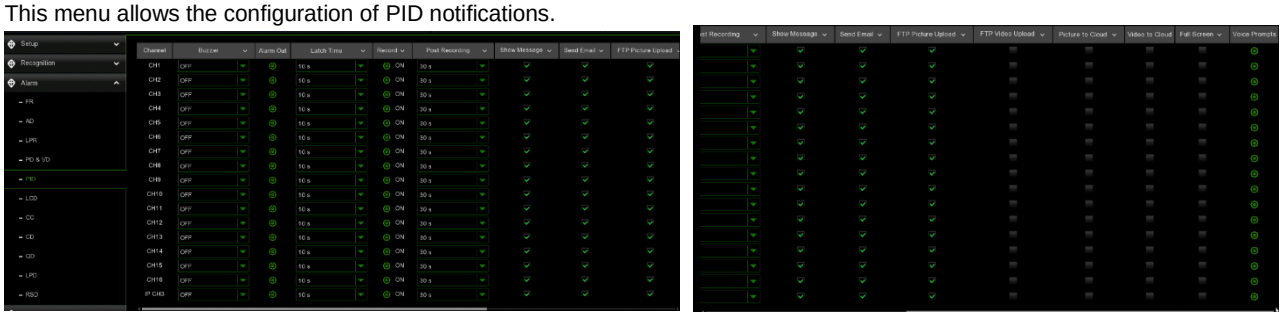
Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: if enabled, allows the alarm picture to be uploaded to the cloud after the alarm has been triggered.
Full Screen: The channel will be displayed in full screen when the alarm is triggered.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.3.5 PID (Perimeter Intrusion Detection)

This menu allows the configuration of PID notifications.



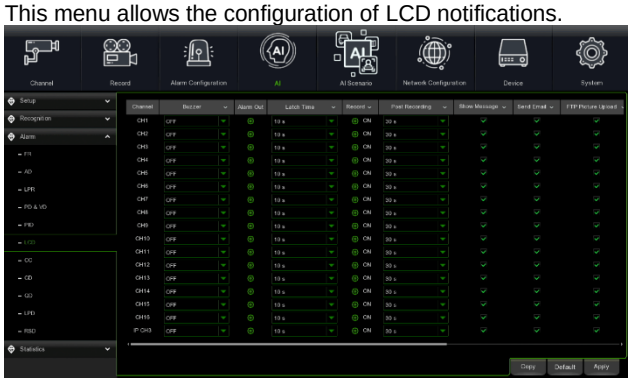
Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
FTP Video Upload: If enabled, this allows the alarm video to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: If enabled, this allows you to upload the alarm picture to the cloud after the alarm has been triggered.
Video to Cloud: If enabled, this allows you to upload the alarm video to the cloud after the alarm has been triggered.
Full Screen: When the alarm is triggered, the channel will be displayed in full screen.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.3.6 LCD (Line Crossing Detection)

This menu allows the configuration of LCD notifications.



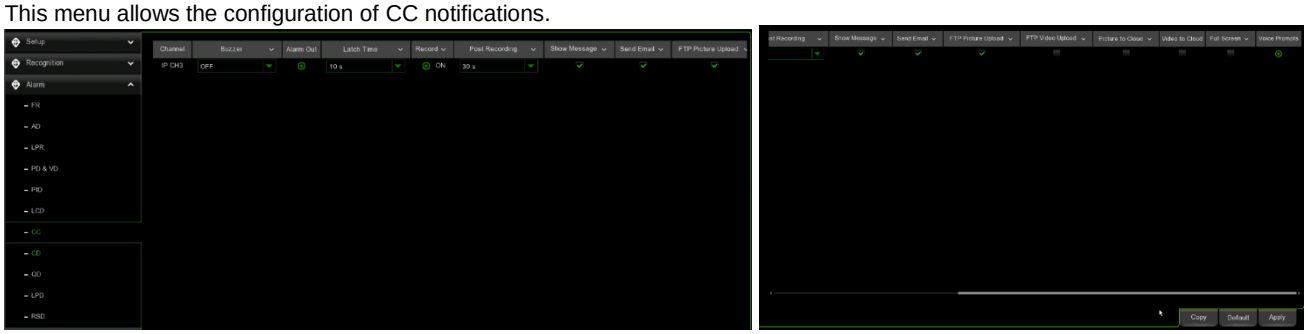
Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
FTP Video Upload: If enabled, this allows the alarm video to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: If enabled, this allows you to upload the alarm picture to the cloud after the alarm has been triggered.
Video to Cloud: If enabled, this allows you to upload the alarm video to the cloud after the alarm has been triggered.
Full Screen: When the alarm is triggered, the channel will be displayed in full screen.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.3.7 **CC (Cross Counting)**

This menu allows the configuration of CC notifications.



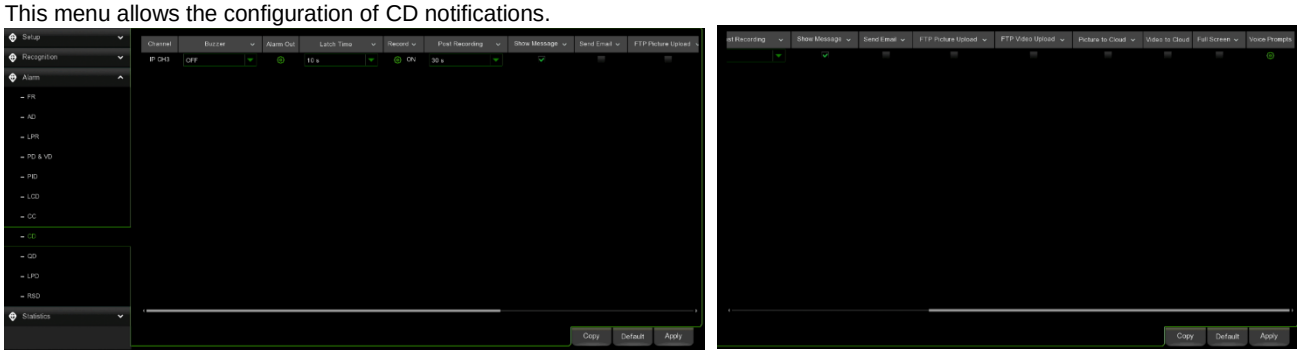
Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
FTP Video Upload: If enabled, this allows the alarm video to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: If enabled, this allows you to upload the alarm picture to the cloud after the alarm has been triggered.
Video to Cloud: If enabled, this allows you to upload the alarm video to the cloud after the alarm has been triggered.
Full Screen: When the alarm is triggered, the channel will be displayed in full screen.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.3.8 **CD (Crowd Density Detection)**

This menu allows the configuration of CD notifications.



Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

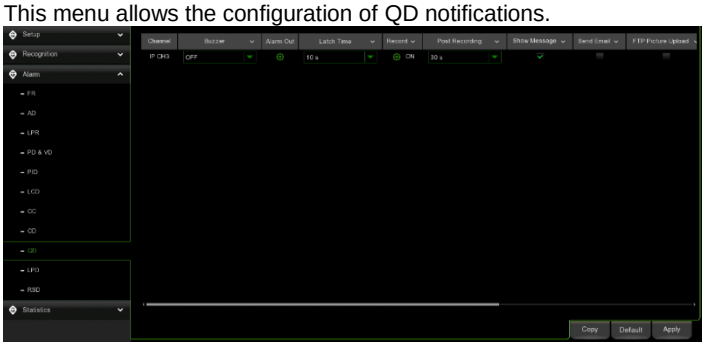
Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.

FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
FTP Video Upload: If enabled, this allows the alarm video to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: If enabled, this allows you to upload the alarm picture to the cloud after the alarm has been triggered.
Video to Cloud: If enabled, this allows you to upload the alarm video to the cloud after the alarm has been triggered.
Full Screen: When the alarm is triggered, the channel will be displayed in full screen.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.3.9 QD (Queue Length Detection)

This menu allows the configuration of QD notifications.



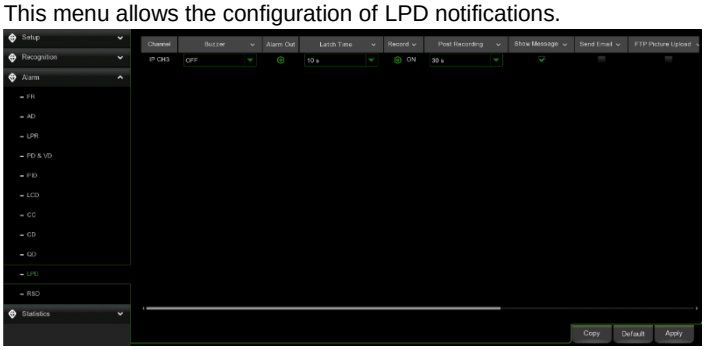
Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
FTP Video Upload: If enabled, this allows the alarm video to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: If enabled, this allows you to upload the alarm picture to the cloud after the alarm has been triggered.
Video to Cloud: If enabled, this allows you to upload the alarm video to the cloud after the alarm has been triggered.
Full Screen: When the alarm is triggered, the channel will be displayed in full screen.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.3.10 LPD (License Plate Detection)

This menu allows the configuration of LPD notifications.



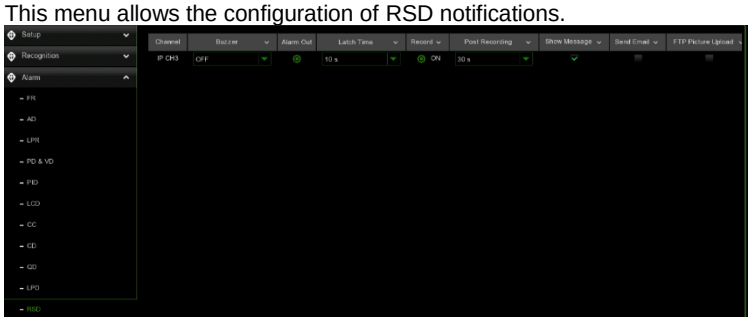
Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

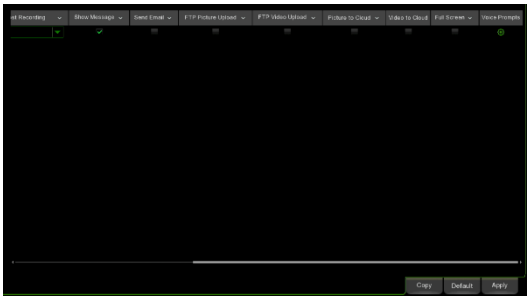
Record: Press on and select the channel to be recorded after alarm activation.

Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
FTP Video Upload: If enabled, this allows the alarm video to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: If enabled, this allows you to upload the alarm picture to the cloud after the alarm has been triggered.
Video to Cloud: If enabled, this allows you to upload the alarm video to the cloud after the alarm has been triggered.
Full Screen: When the alarm is triggered, the channel will be displayed in full screen.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.3.11 RSD (Rare Sound Detection)

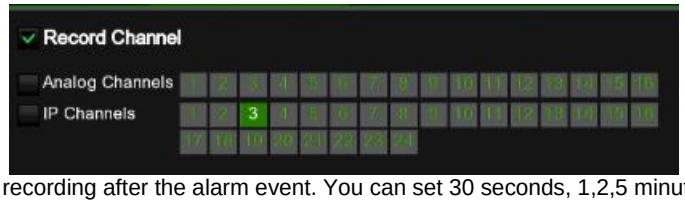
This menu allows the configuration of RSD notifications.





Channel: Channel name
Buzzer: allows you to set the duration of the buzzer in the event of an alarm.
Alarm Out: If enabled, allows the alarm output to be switched after the alarm has been triggered.
Latch Time: Set the alarm time, a time period of 10s, 20s, 40s and 1 min is allowed.

Record: Press on and select the channel to be recorded after alarm activation.



Post Rec.: Set the duration of recording after the alarm event. You can set 30 seconds, 1,2,5 minutes.
Show Messagge: If selected, shows the alarm icon when it is generated.
Send Email: if enabled allows an email notification to be sent after the alarm has been triggered. It is necessary to configure the e-mail data in the Remote Setup menu under E-mail Network.
FTP Picture Upload: If enabled, allows the alarm picture to be uploaded to the FTP server after the alarm has been triggered.
FTP Video Upload: If enabled, this allows the alarm video to be uploaded to the FTP server after the alarm has been triggered.
Picture to Cloud: If enabled, this allows you to upload the alarm picture to the cloud after the alarm has been triggered.
Video to Cloud: If enabled, this allows you to upload the alarm video to the cloud after the alarm has been triggered.
Full Screen: The channel will be displayed in full screen when the alarm is triggered.
Voice Prompts: when the alarm is triggered the audio file will be played (The IP camera must support the voice prompt function).
Apply: to save the set parameters.

3.7.4 STATISTICS

In this submenu, statistics can be viewed and exported according to the chosen intelligent video analysis function.

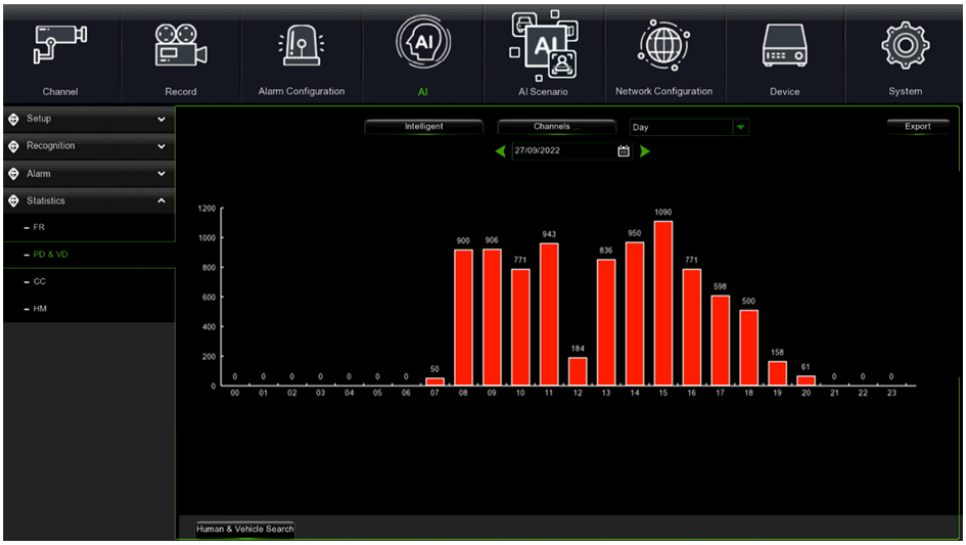
3.7.4.1 FR Statistics

It is possible to display face statistics based on a specific time period and represented in the form of a graph as shown in the figure below:

Select **Groups**, **Channels**, **Date** to view statistical results. Press on **Export** to save the data to a U disk.

3.7.4.2 PD & VD Statistics

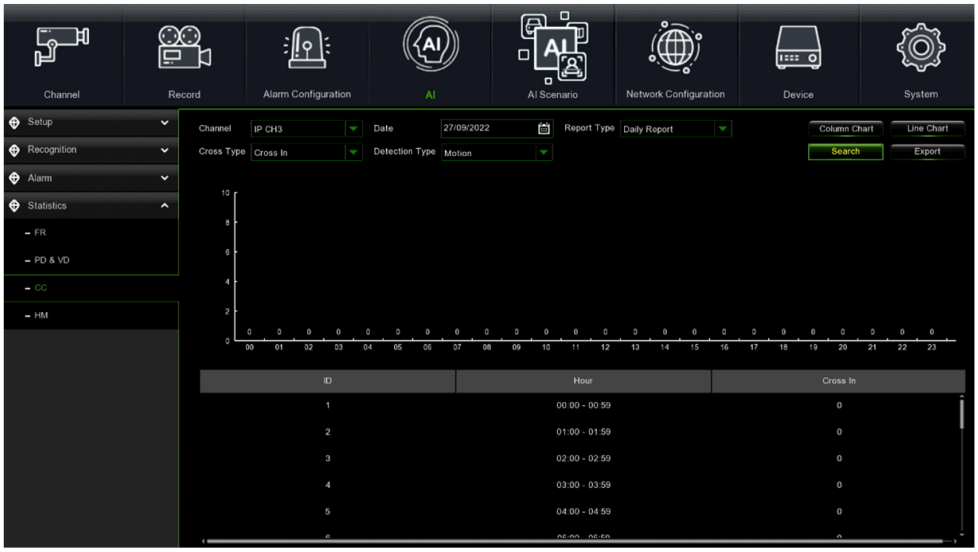
It is possible to display the statistics of persons and vehicles based on a specific time period and represented in the form of a graph as shown in the figure below:



Select **Intelligent, Groups**, **Channels**, **Date** to view statistical results. Press on **Export** to save the data to a U disk.

3.7.4.3 CC Statistics

People and vehicle counting statistics can be displayed on the basis of a specific time period and represented in diagram form.



Channel: Select the desired channel.
Date: Select the date of the search.
Report Type: You can choose between Daily Report, Weekly Report, Monthly Report, Annual Report.
Cross Type: you can select Cross In or Cross Out
Detection Type: you can choose between Motion, Person, Vehicle.
Press on **Search** to search the results.
Export: The result is exported to an external USB drive.
Two display modes of the statistics can be selected, column graph or line graph.

3.7.4.4 **HM Statistics**

It is possible to display heat map statistics based on a specific time period and represented as a coloured map or graph.

Channel: Select the desired channel.
Date: Select the date of the search.
Report Type: Select from Daily Report, Weekly Report, Monthly Report, Annual Report.
Start Hour: Select the start hour.
End Hour: Select the End Hour.
Press on **Search** to search for results.
Export: The result is exported to an external USB drive.
Two display modes of the statistics can be selected, columnar time graph or spatial heat map.
In the latter case, the red colour coincides with the part of greatest activity and the blue with the part of least activity.

3.8 AI SCENARIO

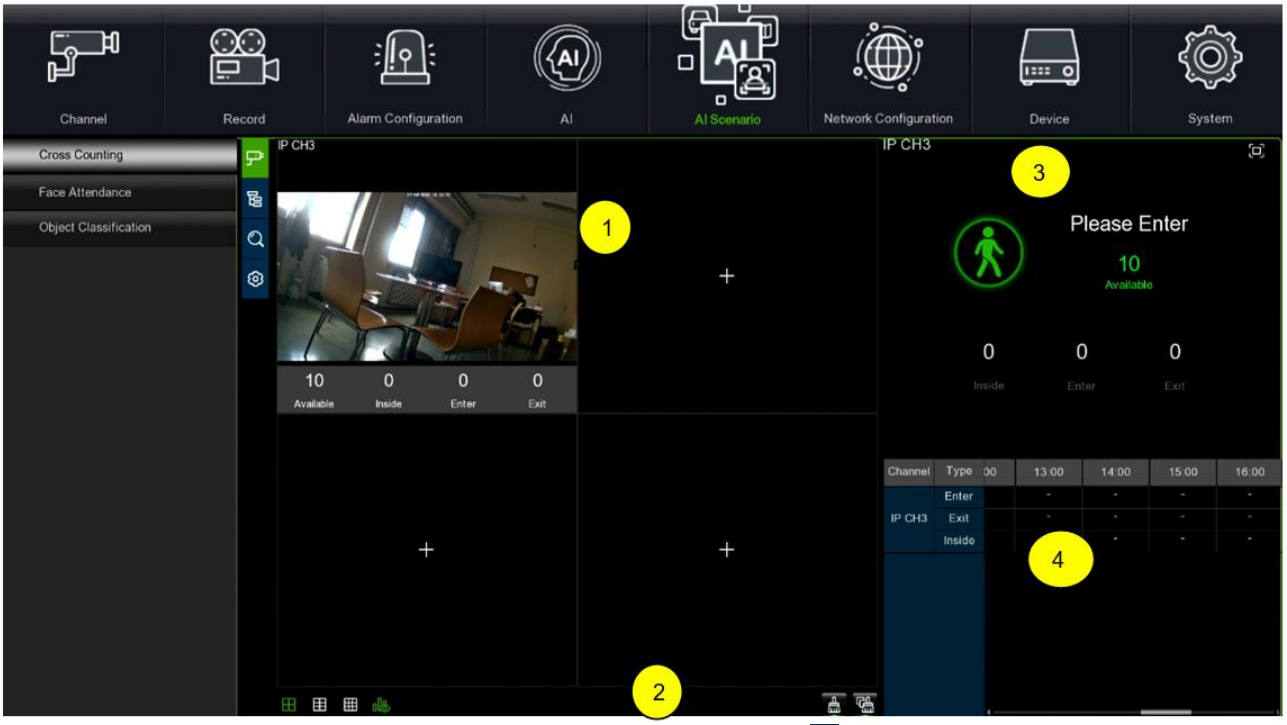
In this section you can set up intelligent analysis scenarios.

3.8.1 CROSS COUNTING

It is an AI application based on cross-counting functions that helps to control the attendance of customers/visitors/vehicles in public places such as restaurants, parks, zoos, theatres, museums and car parks.

3.8.1.1 Channel

Enables real-time counting and display of results through a single camera. Used mainly for small locations with single entrances and exits.



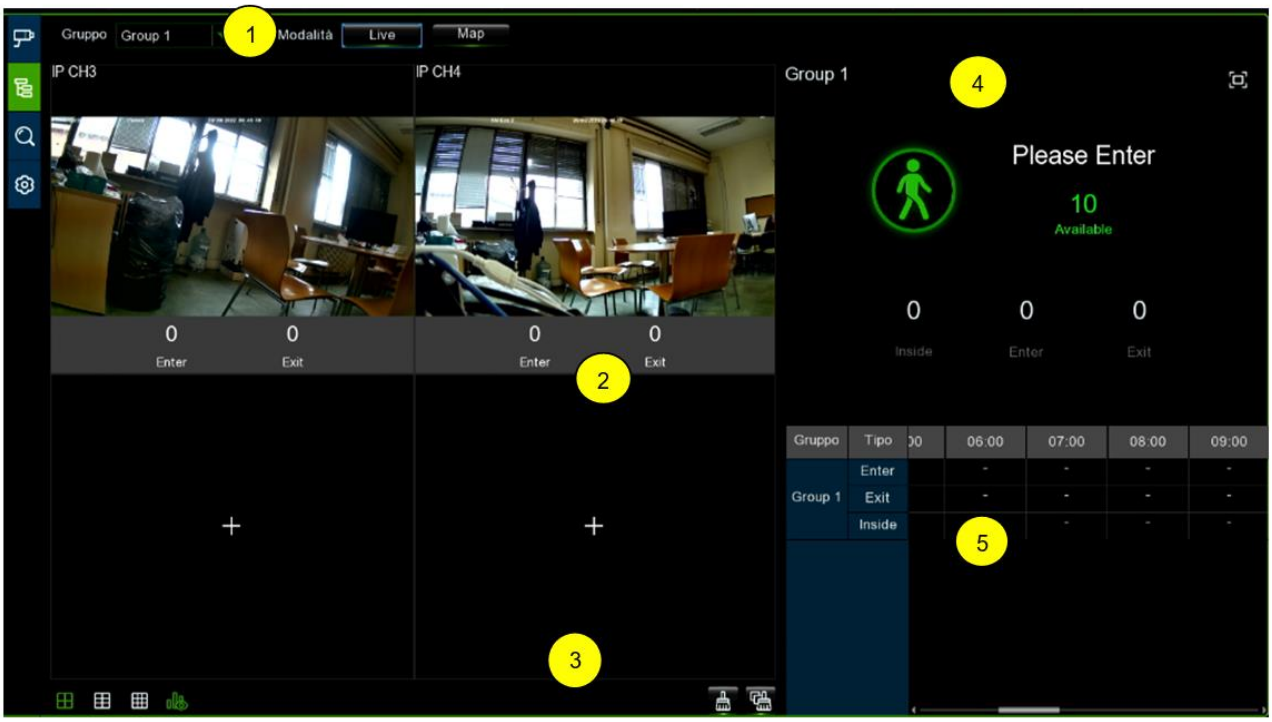
1. Channel and real-time crossing statistics. The channel can be selected in .

Available: Number of remaining places allowed.
Inside: Current quantity present in the monitoring area.
Enter: Number of registered inputs.
Exit: Number of recorded exits.

2. Select the desired number of windows: 4, 6, 9 windows . Press on to display/hide statistics for the selected channel. Press on to clear current channel statistics; press on to clear all channel statistics.
3. Real-time count data, press on to display total statistics on internal screen.
4. Data and output information for each channel in each time period.

3.8.1.2 **Group**

Allows statistics and results to be displayed in real time per group. Mainly used for large venues with multiple camera-monitored entrances.

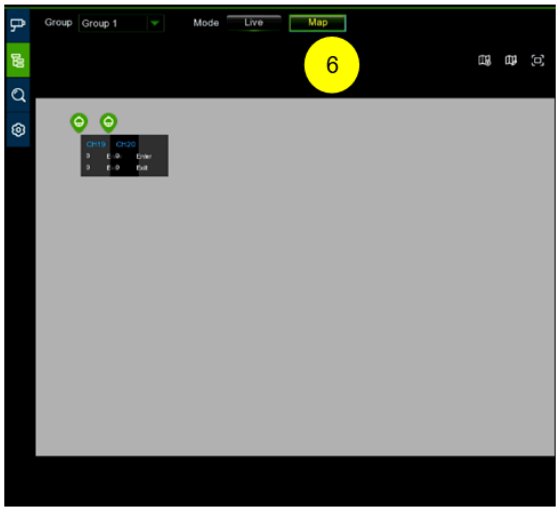


1. **Group:** allows you to select the camera group whose information you wish to view. Live: Displays the preview screen and status of the channels appearing in the group. **Map:** shows the information on the loaded map.
2. Shows the camera and real-time line-crossing statistic data:

Enter: Number of recorded inputs
Exit: Number of recorded outputs.

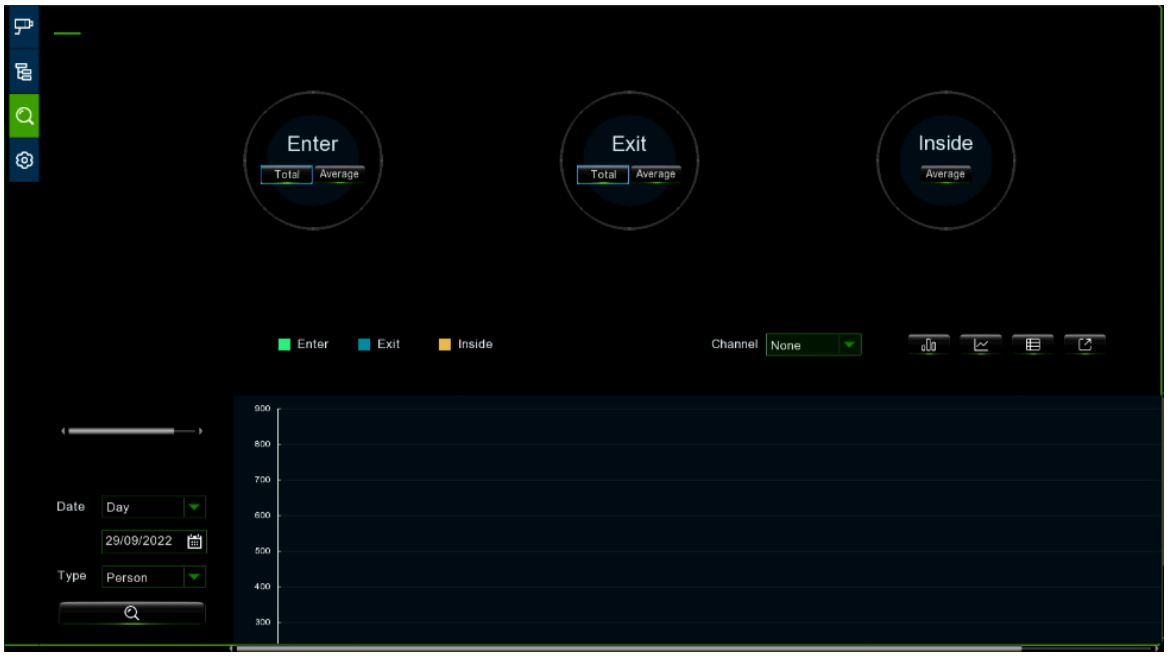
3. Select the desired number of windows: 4, 6, 9 windows . Press on to display/hide statistics of the selected group. Press on to delete statistics of the current group; press on to delete all statistics of the group.
4. Real-time count data, press on to display total statistics on the internal screen.
5. Information on data and outputs of each group in each time period.
6. Configuring Map Information

   Press on to add the Map. Press on to set the camera position on the map. Press on to display full-screen map information and the current group's crossing statistics.



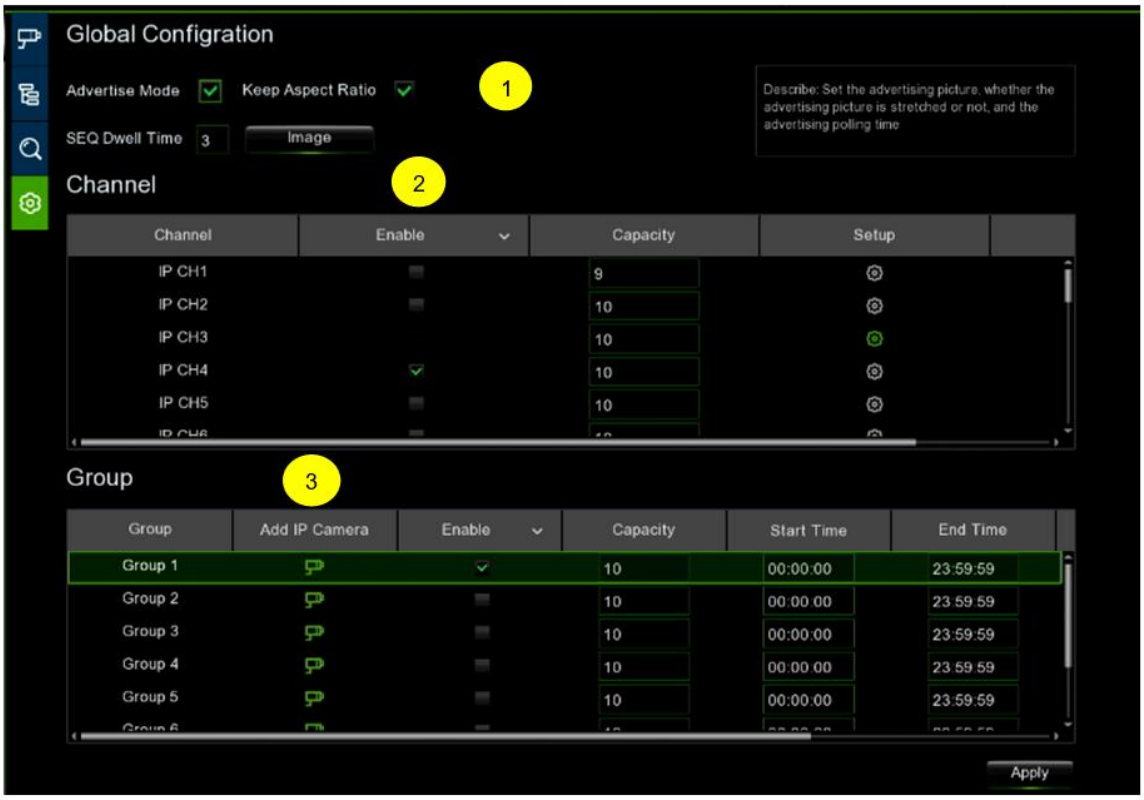
3.8.1.3 **Search**

Allows you to search separately for statistical data by channel or group. Select the channel or group to search for, set the search duration by day, week, month or year and select the type of search (Person/Vehicle/Motion). Press on the search icon and the results will appear on the right side of the window.



3.8.1.4 **Setup**

Allows you to set the configuration of the individual channel or desired camera group.



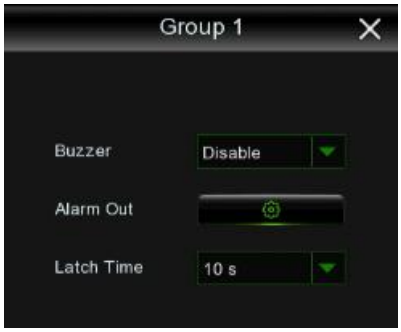
1. Select **Advertise Mode** to set AD mode. Set the **SEQ Dwell Time in** seconds that refers to the time each image stays on the screen (default time set to 3 seconds). Press on **Image** to load advertising images from the USB device (supports up to 16 images in jpg, png and bmp format with a maximum resolution of 2560*1600).

Press on to add a new image; press on to delete added images one at a time.

Check the Keep Aspect Ratio box if you wish to display an image with the original aspect ratio, or uncheck the box if you wish the image to stretch and appear full screen.

Return to camera or group viewing mode and press the full screen button in the top right-hand corner to display the image and live count data for the selected camera or group.

2. Select **Enable** to enable the camera you wish to display on the channel page. If the camera supports AI functionality, the **Setup** and **Alarm** icons will be green, otherwise they will remain grey. Set the **Capacity** value representing the maximum presence limit. Press on **Setup** to configure the detection conditions. Press on **Alarm** to set alarm notifications when the number is 0.

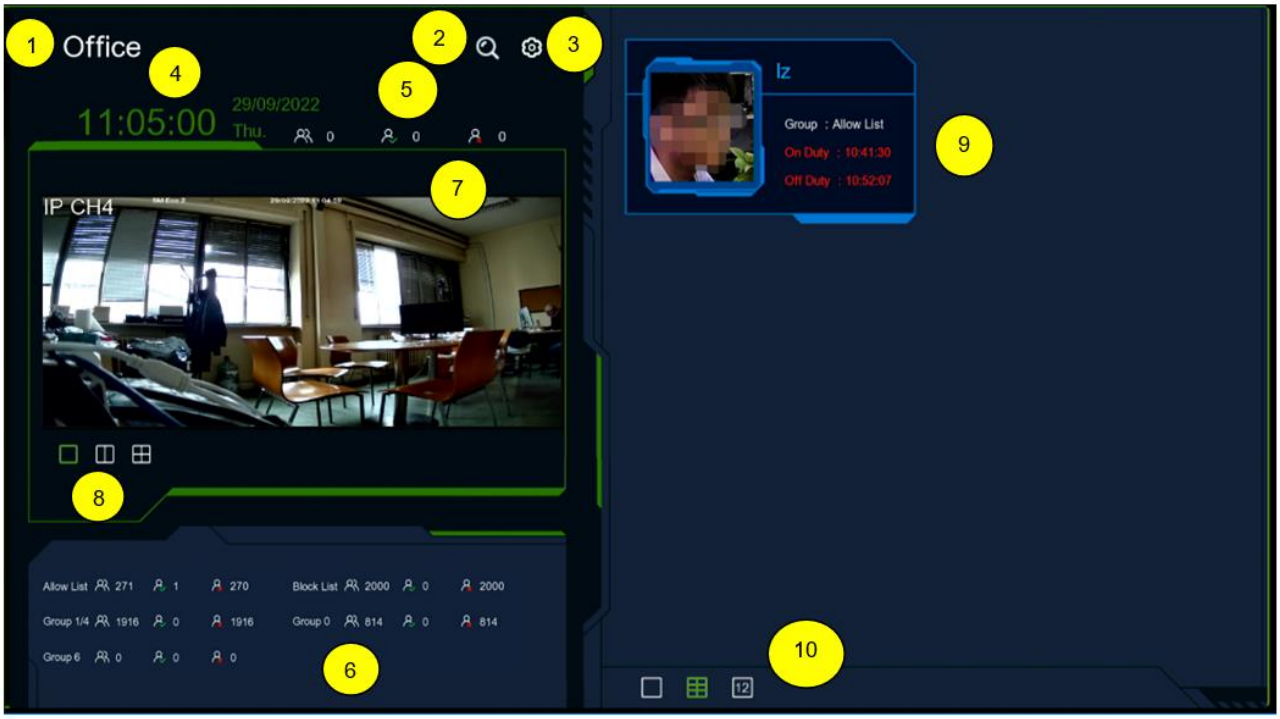


Buzzer: Set the duration of the buzzer in seconds when the available number is 0.
Alarm Out: Set the switching of the HVR or camera outputs (if available).
Latch Time: Set the output switching time when the number is 0.

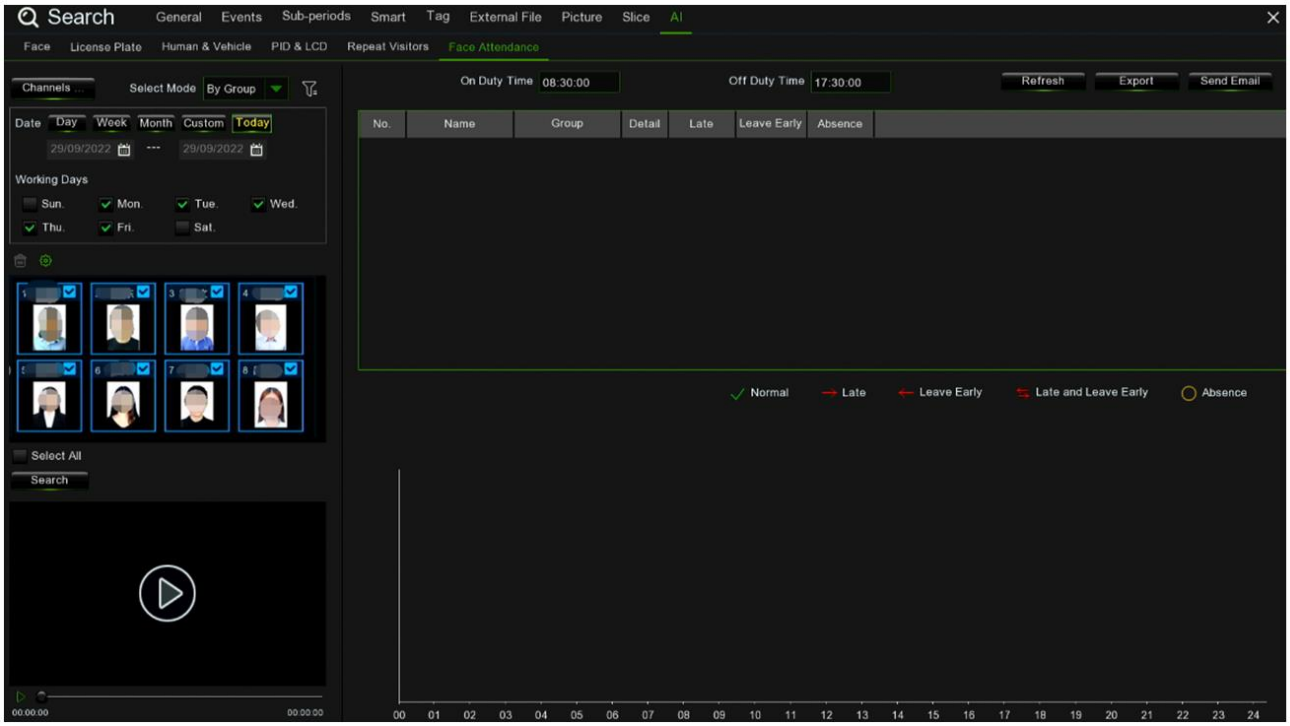
3. Press on **Add IP Camera** to add cameras to a group. Up to eight groups can be configured, but only one group can be associated per camera. If cameras are enabled in channel view mode, they cannot be added to any group.
Check the **Enable** box to activate the group. You can set the maximum number of presences **Capacity**, **Start Time**, **End Time**, **Detection Type** (person, vehicle and motion) and **Alarm** notifications.

3.8.2 FACE ATTENDANCE

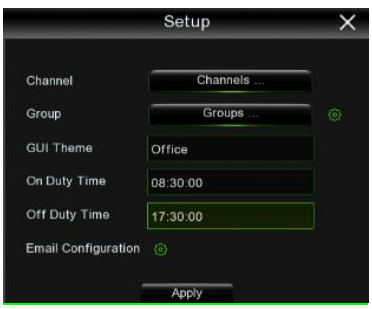
This menu manages the attendance screen, which can record both attendance and results in real time.



1. Name of the face presence interface (GUI Theme)
2. Press up to access the face search interface (Face Attendance) in playback and select face images in the face group as default.

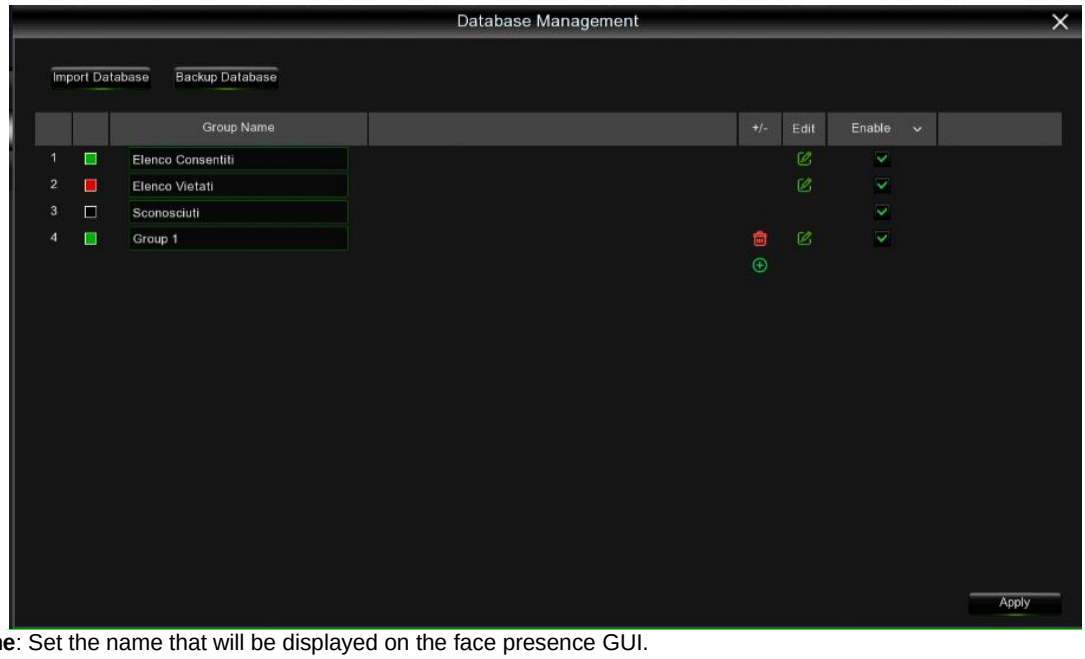


3. Press on ⚙ to access the configuration interface.



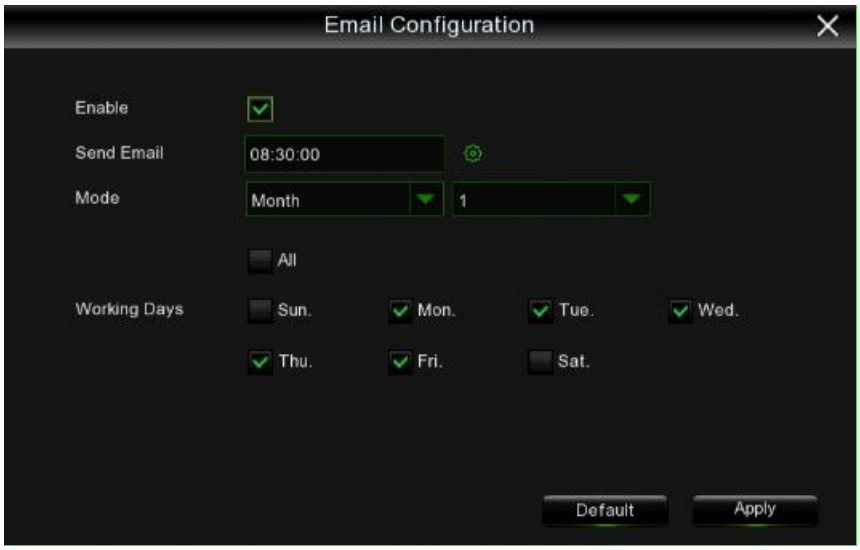
Channels: Select the desired camera.

Groups: select faces from the desired database. Press on to access the AI face database management interface.



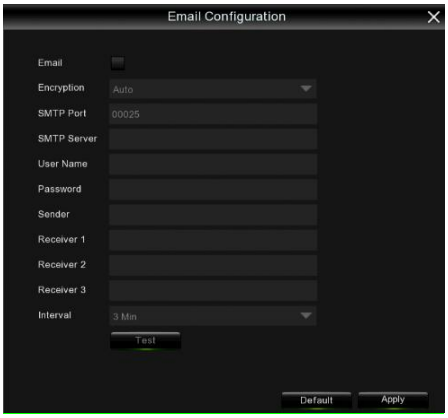
GUI Theme: Set the name that will be displayed on the face presence GUI.
On Duty Time: Set the service start time.
Off Duty Time: Set the service end time.

Email configuration: Press on to set the conditions for sending the face presence result by e-mail.



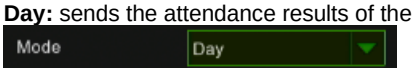
Enable: send an email with the attendance results.

Send Email: Set the time for sending the attendance results email. Press on to set the parameters of the e-mail address to which the results file is to be sent. For further details please refer to the E-mail configuration section in this manual.

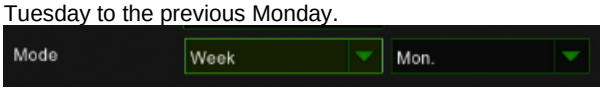


Mode: choose the mode for sending attendance results, day, week, month.

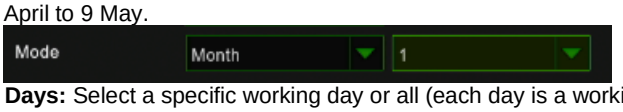
- **Day:** sends the attendance results of the previous day once a day.



- **Week:** Sends attendance results once a week. It is possible to choose the week of which to send the e-mail. For example: if you set Monday as the day to send the email, the attendance record that is sent will be from the previous Monday to Sunday. Again: if you set Tuesday as the day to send the email, the attendance record sent will be from the previous Tuesday to the previous Monday.



- Month: You can set the day on which each month the results file of the previous month is sent.
  For example: If you set the 10th of each month, the attendance record sent will be from the 10th of the previous month until the 9th of the current month. So if I wish to receive the email on 10 May, in it I will find the attendance record from 10 April to 9 May.



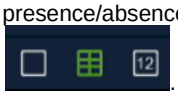
Working Days: Select a specific working day or all (each day is a working day).
Apply: Press **Apply** to save the settings.
Default: Returns the E-mail sending settings to the factory default settings.

4. Displays the current date and time.
5. Total number of current attendances.

Total number of attendances required.

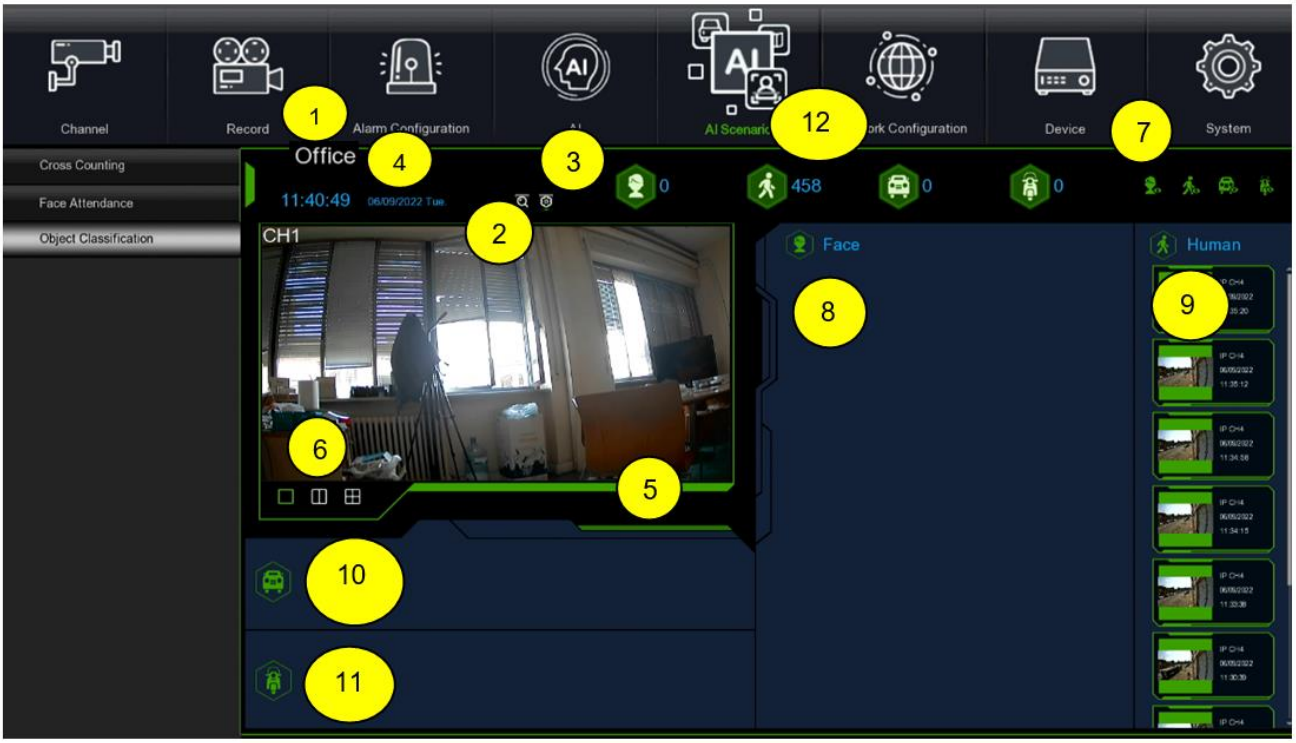
Number of attendances.

No attendance.

6. The presence status of each face group.
7. The camera display. Press on and select **Channels** to choose the channels to be displayed.
8. Select the number of windows, single, double or four windows .
9. Real-time Face Presence Notification: Displays the person's face image, name, group name, and presence/absence time.
10. The interface allows you to choose the maximum number of face presence notifications, 1, 6, 12  .

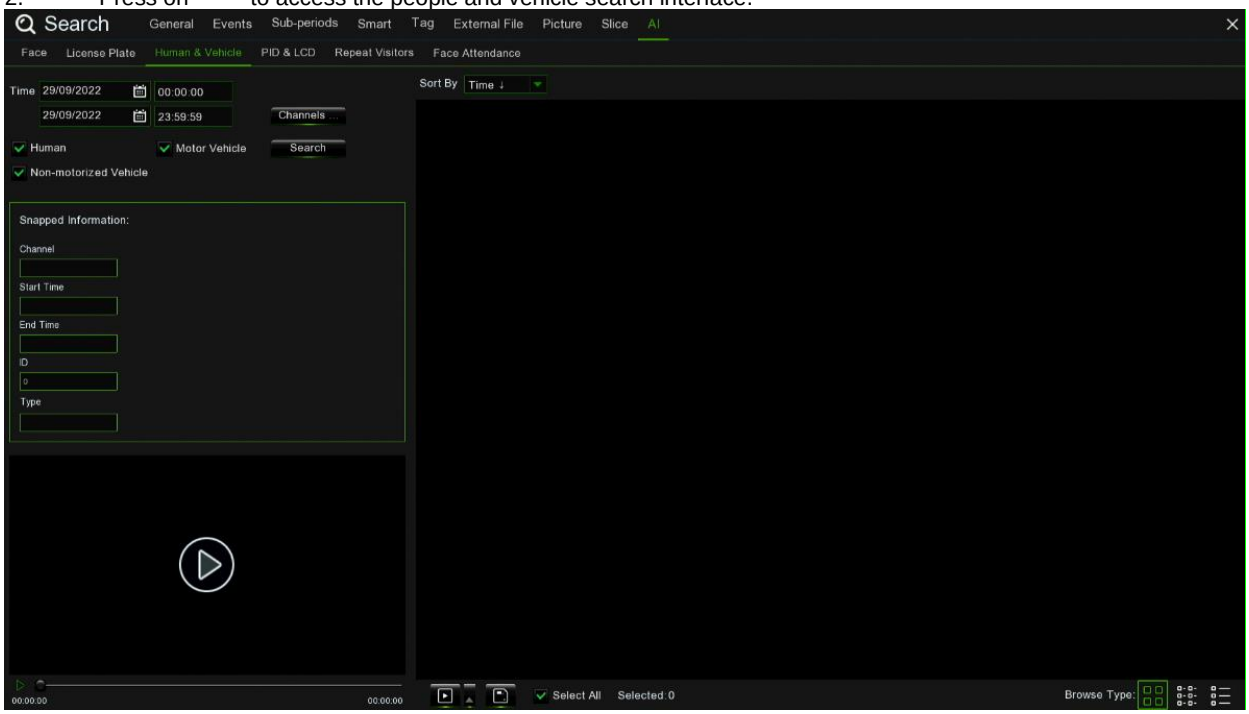
3.8.3 OBJECT CLASSIFICATION

It is the real-time, full-screen display interface of face, person, motor vehicle and non-motor vehicle detection.

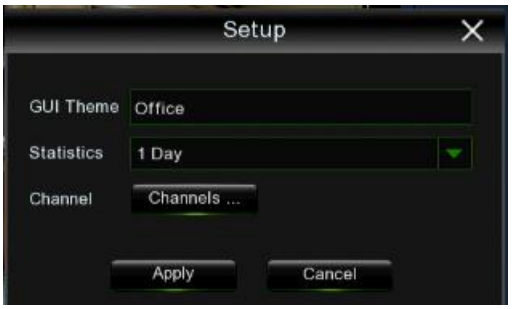


1. Name of the vehicle and object statistics interface.

2. Press on to access the people and vehicle search interface.



3. Press on to access the configuration page.



GUI Theme: Name displayed on the interface.
Statistics: The statistics time period can be set between 1, 2, 3, 4, 5, 6, 7 days, week, month and year.
Channel: Select the channels whose statistics you want to view.

4. Display the current date and time.
5. Image of selected cameras in .
6. Select the number of windows to be displayed in the interface, 1, 2, 4 windows .
7. Real-time notification display button. Press on the icon to display or hide the corresponding detection results (Face/Person/Motor Vehicle/Non-Motor Vehicle).
8. Real-time notifications of face detection and display of detected face image including name and group name.
9. Real-time notifications of person detection and display of image of detected person including channel and time of detection.
10. Real-time notifications of motor vehicle detection and display of image of detected vehicle including channel and time of detection.
11. Real-time notifications of non-motor vehicle detection and display of image of detected vehicle including channel and time of detection.
12. Statistics of the number of faces, persons, motor and non-motor vehicles detected.

3.9 NETWORK CONFIGURATION

The Network section of the Parameters menu can be used to access all the HVR settings for accessing the Internet and the local area network (LAN), the email notification functions, the use of a DDNS (Dynamic DNS), etc.
The submenu is:

- General
- DDNS
- Email
- FTP
- IP filter
- Voice Assistant
- Platform Access

3.9.1 GENERAL

The first time concerns the settings for configuring access to the IP network by the HVR; there are three available methods for selecting the IP address and the respective parameters:

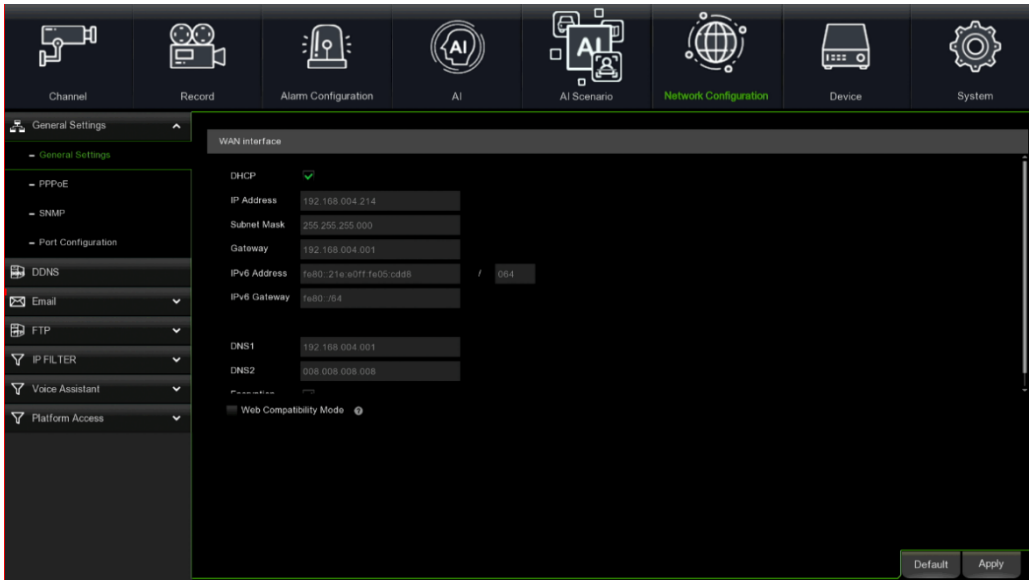
- PPPOE
- DHCP
- Static

After selecting the network mode (DHCP, PPPOE or Static) and setting the ports the Client Port [2] and the HTTP Port [3] this can be used to access the HVR locally or remotely, via a local network or the Internet.

Some parameters that are in common to all functions are available in addition to the specific parameters of every single mode illustrated below.

3.9.1.1 General Settings

This menu makes it possible to configure your WLAN network settings.



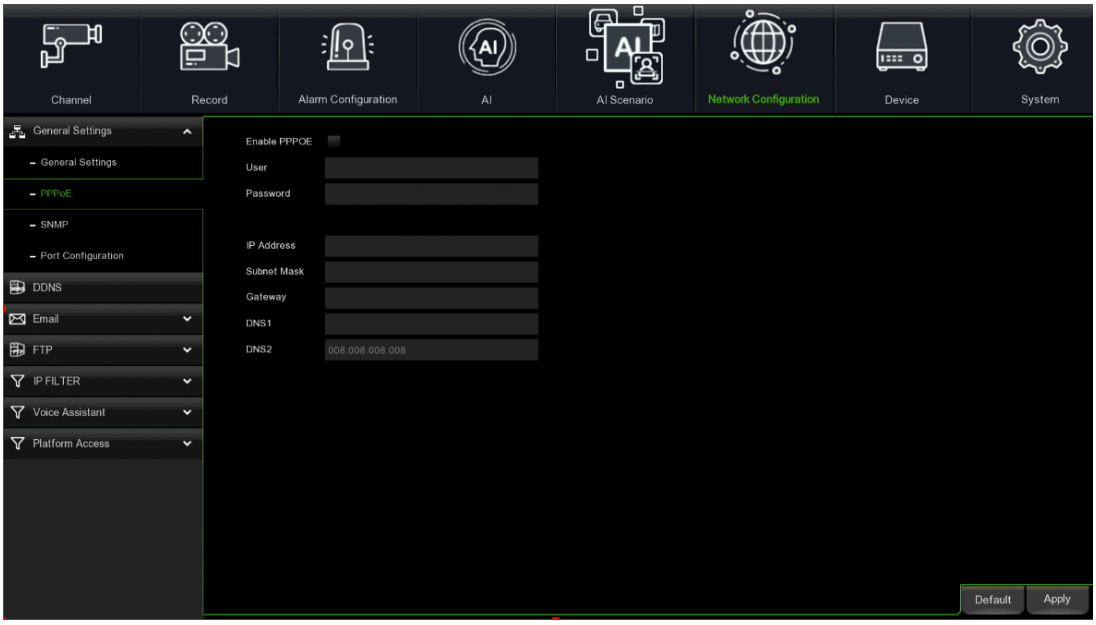
Check the DHCP box if you connect to a router to use DHCP. The router will automatically assign all network parameters for the HVR. The parameters are as follows unless the network address is set manually:

- **IP Address**: The IP address identifies the HVR on the network. It consists of four groups of digits between 0 and 255, separated by dots. For example “192.168.001.100”.
- **Subnet Mask**: This is a network parameter that defines a range of IP addresses that can be used in a network. Assuming the IP address is the street on that you live, the subnet mask is your neighbourhood. The subnetwork address also consists of four groups of digits, separated by dots. For example “255.255.000.000”.
- **Gateway**: This address allows the HVR to access the Internet. The format of the Gateway address is the same as the IP address. For example “192.168.001.001”.
- **IPv6 Address**: The IPv6 address identifies the HVR on the network.
- **IPv6 Gateway**: This address allows the HVR to access the Internet with an IPv6 address.
- **DNS1/DNS2**: DNS1 is the main DNS server, while DNS2 is the backup DNS server. As a rule, simply enter the address of the DNS1 server.
- **Encryption:** This can be used to set the security encryption protocol.

[2] Default value for the Client port: 9000
[3] Default value for the HTTP port: 80

- **Web Compatibility mode:** Web compatibility can be enabled if you cannot open the web page of the device at the expense of security. Use with caution.

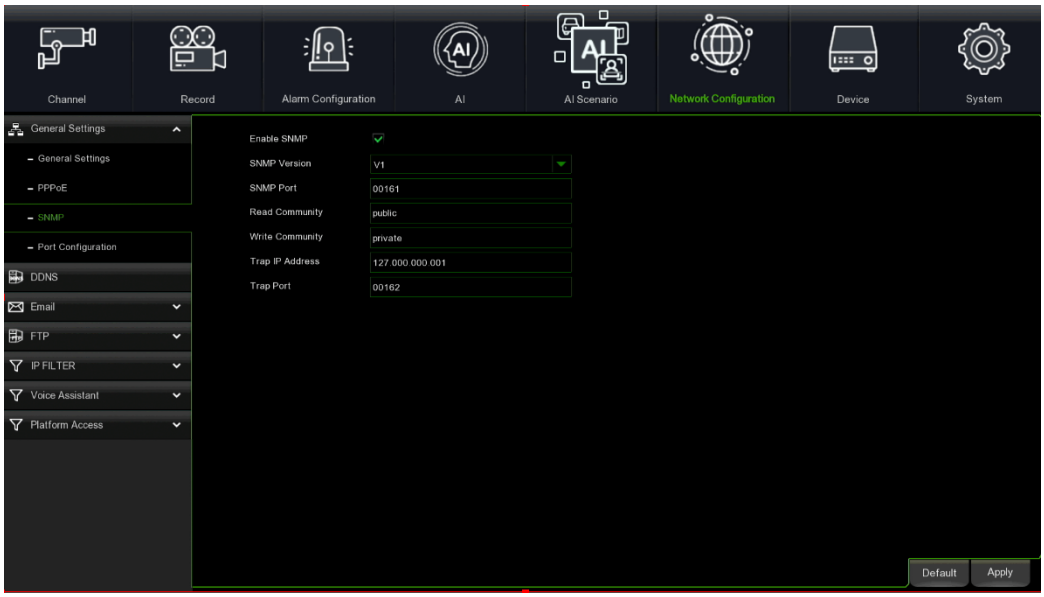
3.9.1.2 **PPPoE**



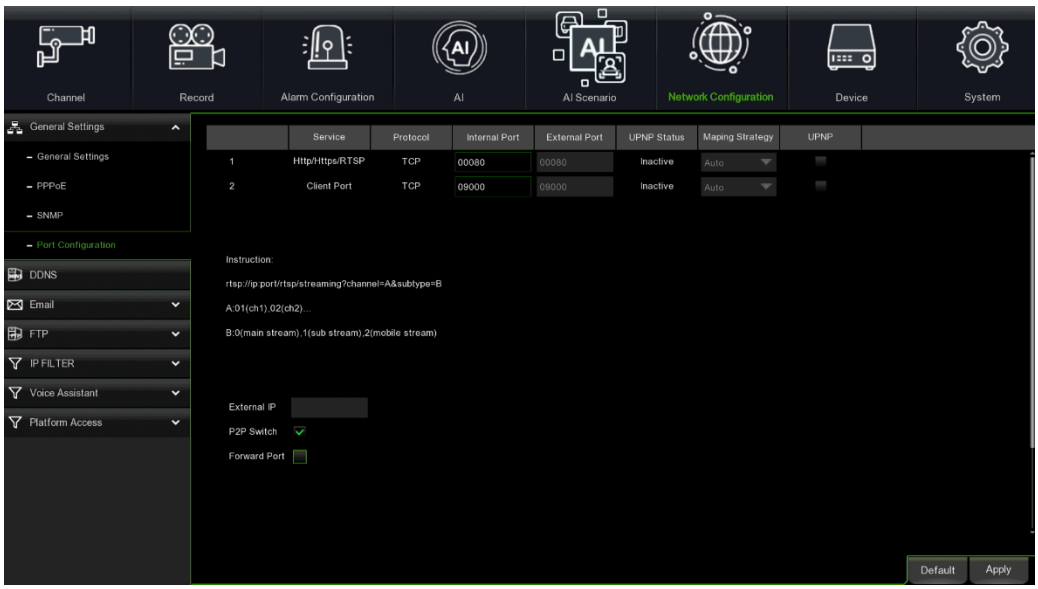
This is an advanced protocol that allows the HVR to connect to the network more directly, via a DSL modem.
Check the “Enable PPPOE” box, then enter the username and password for the PPPoE.
Click on Apply; the system will reboot to activate the PPPoE setting.

3.9.1.3 **SNMP**

(For future use) SNMP: Simple Network Manage Protocol, open-source. SNMP can verify the basic parameters of the device, such as IP, hardware information and software information.



3.9.1.4 Port Configuration

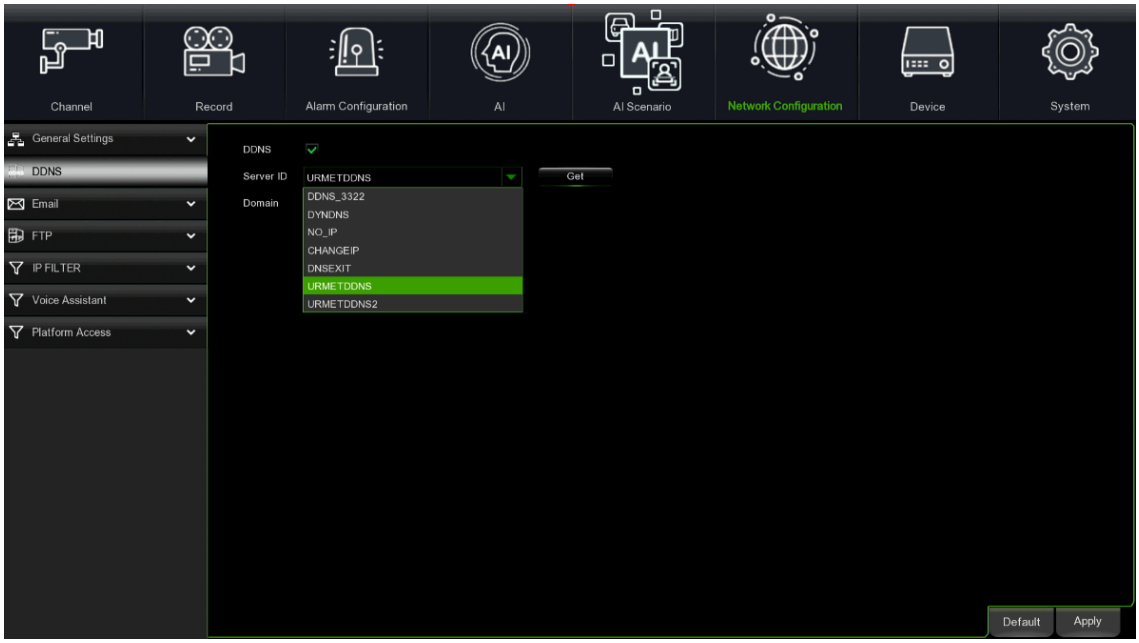


- **Web Port**: This is the port that will be used to connect remotely to the HVR (i.e., via the Web Client). If the default port 80 is already used by other applications, you must change it.
- **Client Port**: This is the port that the HVR will use to send information. If the default port 9000 is already used by other applications, you must change it.
- **RTSP Port:** The default port is 554; if the default port 554 is already used by other applications, you must change it.
- **Https Port:** This is the port that will be used to connect remotely with the NVR in encrypted mode (i.e., via the Web Client).
- **UPNP**: Port-forwarding must be completed to connect remotely to the HVR via the Web Client. Enable this option if your router supports UPnP. It is necessary to enable UPnP both on the HVR on the router. In this case, it will not be necessary to configure port-forwarding manually on the router. If your router does not support UPnP, complete the port-forwarding manually.
- **Forward Port**: if selected, allows port mapping on the router of the port range chosen by the HVR using a single IP address (that it will be the HVR address).

3.9.2 DDNS SET

DDNS (or Dynamic DNS - see glossary for more information) is a service used to record a domain name and floating IP address with the DDNS server for the domain name to be routed towards the IP address even if it is modified in a dynamic IP system.
The user can access a remote HVR using DDNS on three previous types (Static, DHCP and PPPoE).

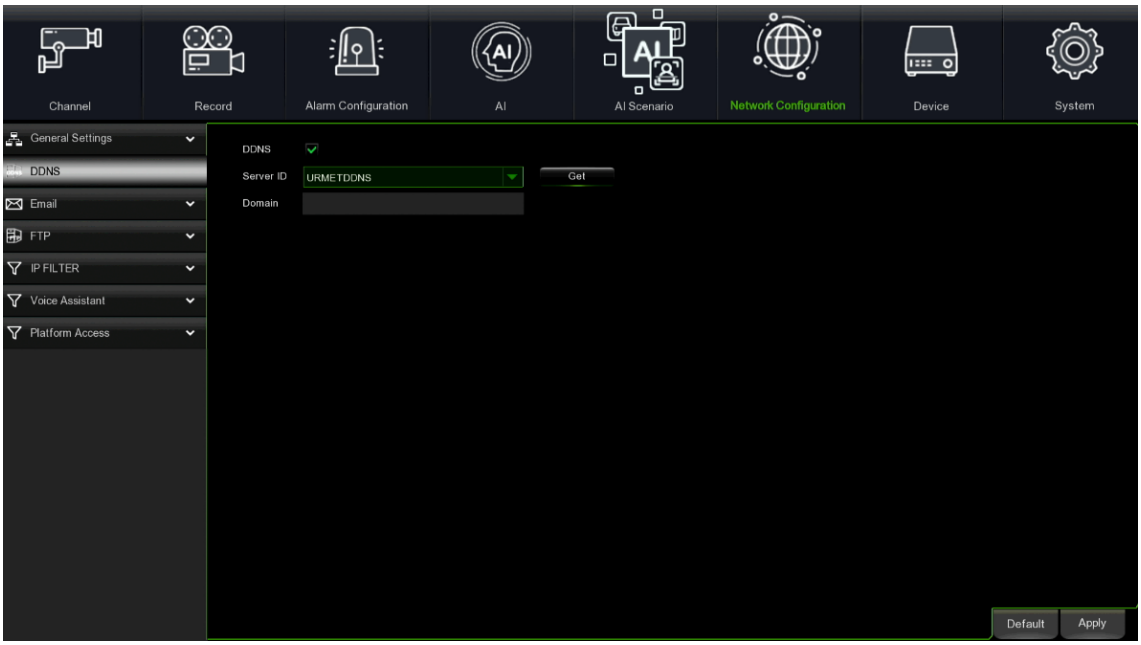
Read the description under the following figures for this menu page:



IMPORTANT NOTE:

- Before obtaining the Urmet DDNS1 or DDN2 ID, check that the user password is enabled; if not, you will not be able to complete the procedure.

Check that the DDNS function is enabled and that the URMETDDNS server is selected. Click on the **Get** button and wait for approximately 10 seconds for the HVR ID may be generated. (see figure below).

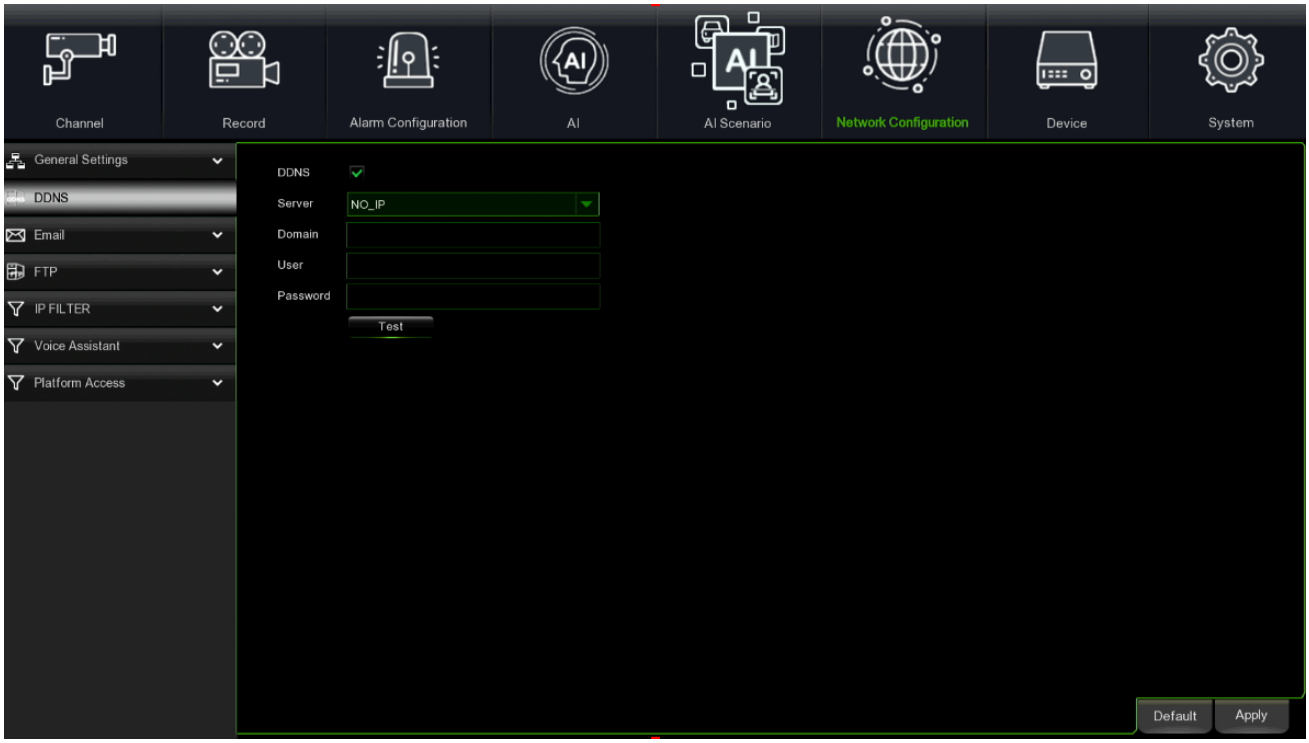


Take note of your HVR ID, issued by the URMETDDNS1 or URMETDDNS2 server.

IMPORTANT NOTE:

- A DDNS server different from URMET DDNS can be used. Select the available options from the list. See the instructions on the user manual of the device and those of the DDNS quick guide ("DDNS Configuration Guide it_en" that can be downloaded from the Urmet website for more information.

Now, save the changes by clicking on [Save] and wait for the device to restart to make the changes effective.



A DDNS account can be requested free of charge from the websites www.3322.org, www.changeip.com or www.no-ip.com or a DDNS account can be requested for a charge on the website www.dyndns.org.
You can register on the DDNS Service website to obtain a domain name, a user name and a password.
The options to configure are:

- **Server:** Select the DDNS provider. Possible values: DDNS_3322, DYNDNS, NO_IP CHANGEIP. DNSEXIT, URMETDDNS.
- **Domain:** Enter the registered host domain name in the dynamic domain name system; for example: username.changeip.com;
- **User Name:** enter a registered user name before requesting a domain name.
- **Password:** enter a password set while recording a user name.

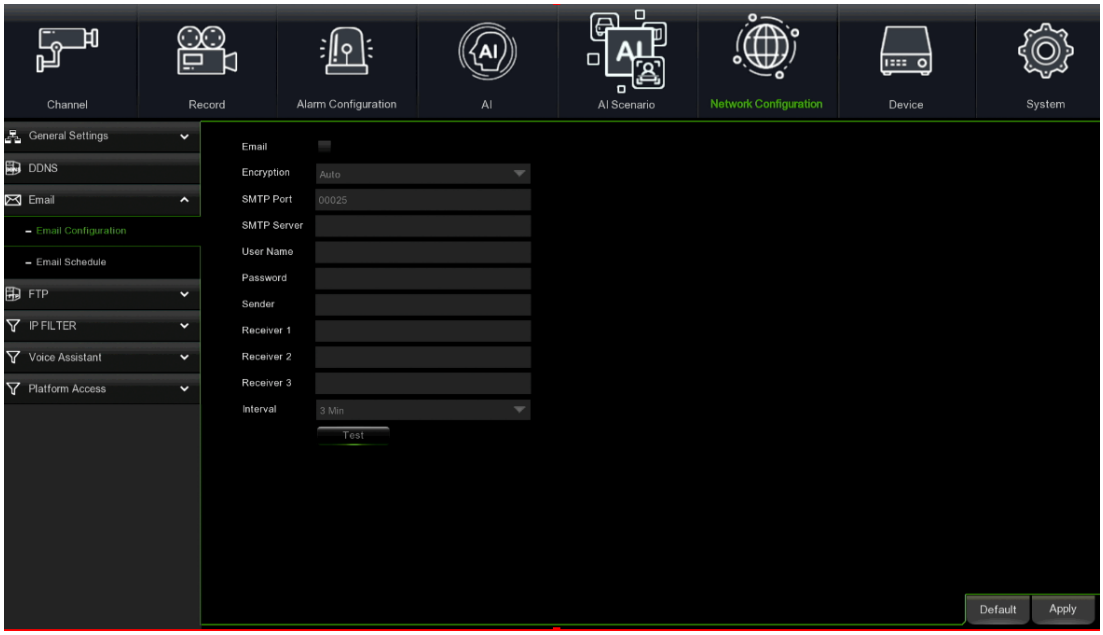
Click on the Save button and restart the HVR to make the changes effective; with the system running again, enter the domain name (for example: username.no-ip.com) to access the remote HVR.

Subnet Mask: Subnet mask is a network parameter that defines a range of IP addresses that can be used in a network.

3.9.3 EMAIL

The e-mail menu can be used to access the configuration of the parameters for alarm notifications via email.

3.9.3.1 Email Set



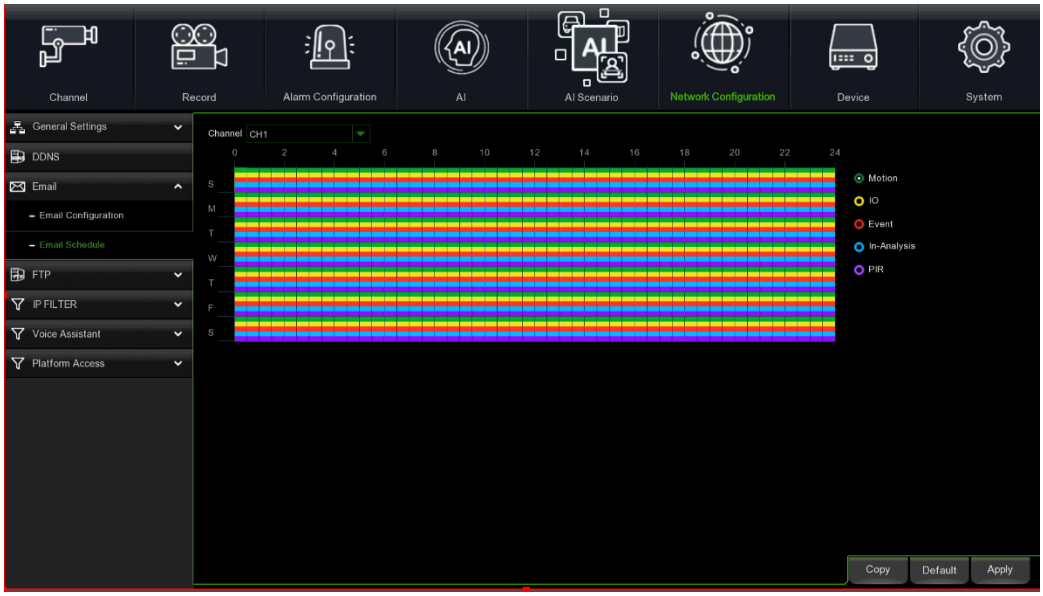
- **Email:** This can be used to enable or disable the configuration of the email parameters.
- **Encryption:** This is used to specify whether communication with the email servers is encrypted or not; the use of a safety transfer protocol with data encryption makes it possible to encode the communicated information (including your email) to prevent monitoring of transmitted data or the password to hackers. It is recommended to activate an encryption option, if possible. Ask your email provider for more information. Possible values: Disable, SSL, TLS and Auto
- **SMTP Port:** this indicates a port type for email transmission via Simple Message Transfer Protocol (SMTP). The port number for most emails is 25 [4].
- **SMTP server:** This indicates the address of the server used.
- **Username:** This is used to set the user name used for authentication on the SMTP server.
- **Password:** This sets the password assigned to the email account by the sender.
- **Sender:** This is the sender's email address. The email address must be coherent with the server used. In other words, if the aaa@gmail.com email address is used, the server must be smtp.gmail.com.
- **Receiver1:** This indicates the email address of the first recipient The email address is used to receive the image transmitted by the HVR alarm. Delete all the received images as soon as possible to prevent filling your email account.
- **Receiver2, Receiver3:** You can indicate a second and third email address to that the images transmitted by the HVR will be sent.
- **Interval:** If there are attachments in the notification email (images taken during an alarm), it will take longer to send the email to the recipients. During this time, no further reports can be sent. This option allows you to set this interval; possible values: 1 min, 3 min, 5 min, 10 min.
- **Test Email:** Click on the TEST Email button to check the configuration operation.

Note:
When configuring messages sent by e-mail, to ensure proper operation, it is recommended to configure a user account (sender address and password) with the same address as the SMTP server. For example, if the mario.rossi@dominio.it email address is used, the SMTP address must be "**smtp.dominio.it**".

[4] If you are using Gmail, set the SMTP port to 465 and enable the Encryption option.

3.9.3.2 Email Schedule

This configuration page can be used, as seen in the other cases, to select in that time slots and on what days of the week the HVR must send an email in case of a given event.



- **Channel:** This can be used to select the channel to be configured.
- **Motion:** Use this option to define the time slots at that to enable sending in case of automatic motion detection.
- **IO** Use this option to define the time slots at that to enable sending in case of sensor alarm detection.
- **Event:** Select to define the time slots at that the system will send an email in case of a system event.
- **In-Analysis:** Use this option to define the time slots at that to enable sending in case of intelligent video analysis detection.
- **PIR:** Use this option to define the time slots at that to enable sending in case of PIR automatic motion detection.
- **Default**: This can be used to restore the default settings.
- **Copy:** This is used to copy the current channel settings on another or on all other channels.

.

When finished, click on the [**Apply**] button to make the configuration permanent.
Alternatively, click on the Default button to use the system default parameters.

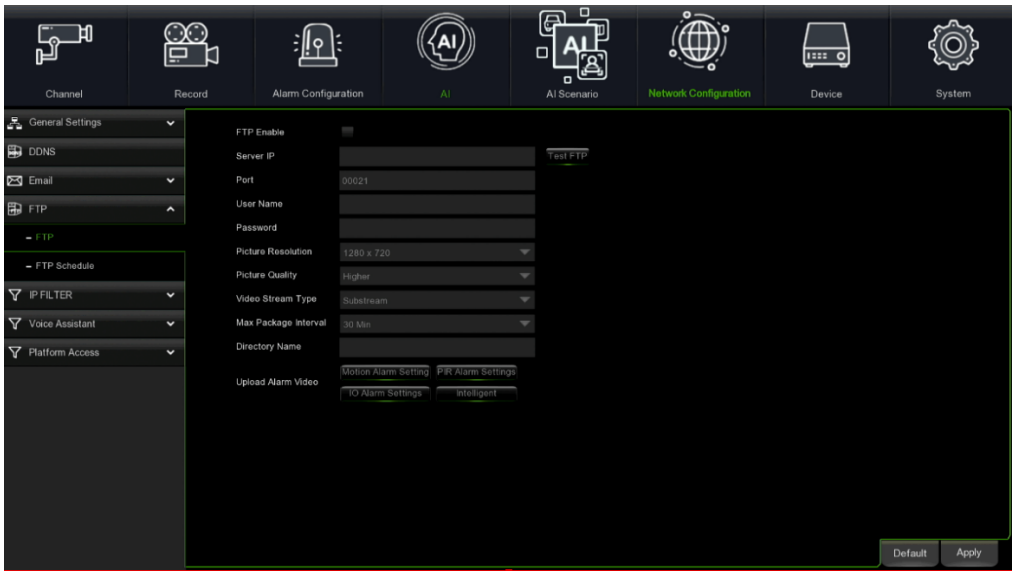
NOTE:
The green bar refers to the motion alarm time slots, the red bar to the system event time slots.

3.9.4 FTP

The FTP section can be used to configure the parameters to access an FTP server on that to load the images and the recordings acquired following an alarm detected by the HVR.

3.9.4.1 FTP

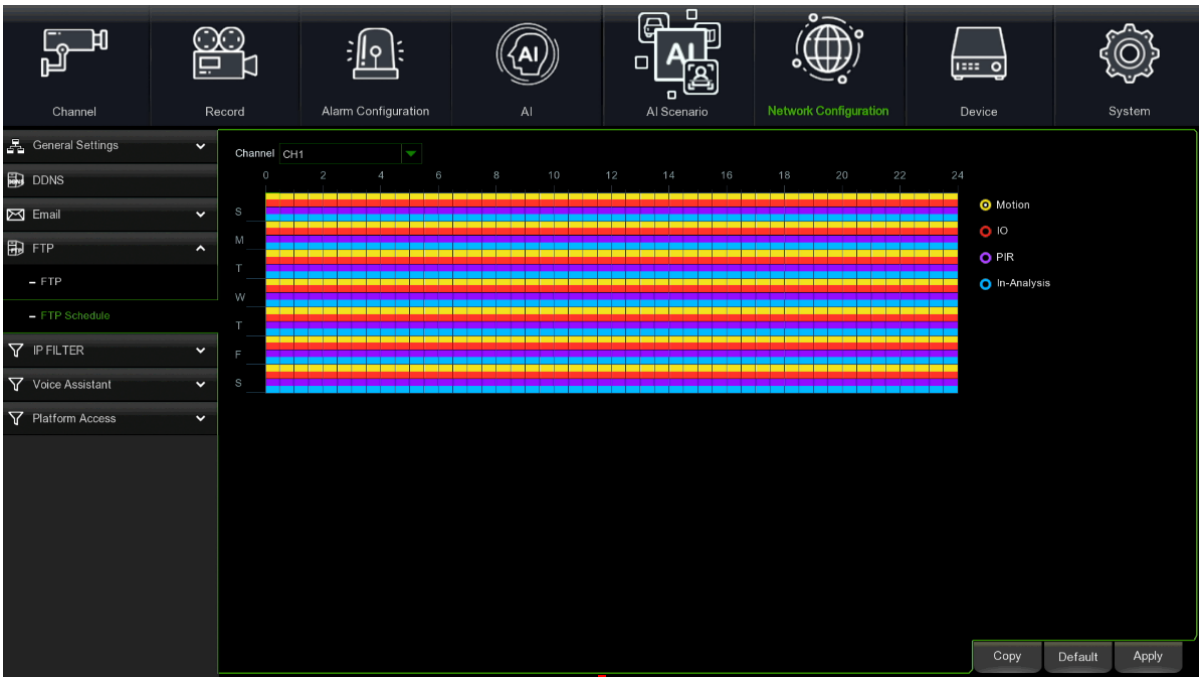
This menu can be used to enable the FTP function to view and upload snapshots captured by the HVR to the FTP storage device.



- **FTP Enable:** Select the desired option to enable or disable the operation.
- **Server IP:** Enter the address of the FTP server name.
- **Port:** Port of the FTP service. Default value: 21.
- **Username**: User name to access the FTP.
- **Password:** Password for accessing the FTP server.
- **Picture Resolution:** You can set the resolution of images sent to the FTP server.
- **Picture Quality**: You can set the quality level of the pictures sent to the FTP server.
- **Video Stream Type:** Select the stream type (i.e., mainstream, substream) for videos sent to the FTP server.
- **Max Package Interval**: Select the interval for sending pictures/videos to the FTP server.
- **Directory Name:** Name of the folder in that to transfer the recorded images or motion alarms.
- **Normal Video Upload:** It is possible to enable or disable the option to send the normal video recording to the FTP server.
- **Upload Alarm Video:** It is possible to set the FTP video/image notification in case of an event (e.g. Motion, IO, PIR, Intelligent).
- **FTP TEST**: Click the FTP TEST button to check how the configuration works.

3.9.4.2 FTP Schedule

This configuration page can be used, as seen in the other cases, to select on that times and days of the week the HVR must send the images/video to the FTP in case of a given event.

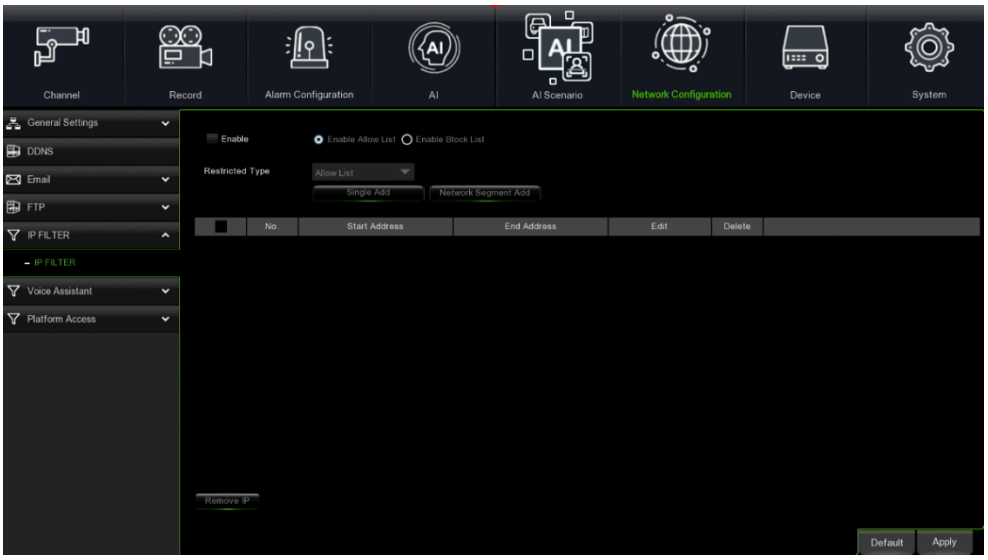


- **Channel:** This can be used to select the channel to be configured.
- **Normal:** Use this option to define the times at that to enable sending of images/videos in case of normal recording.
- **Motion:** Use this option to define the times at that to enable sending of images/videos to the FTP in case of automatic motion detection.
- **IO:** Use this option to define the times at that to enable sending of images/videos to the FTP in case of sensor alarm detection.
- **PIR:** Use this option to define the times at that to enable sending of images/videos to the FTP in case of automatic PIR detection.
- **In-Analysis:** Use this option to define at what times you want to enable the sending of images/videos to FTP in case of detection of Intelligent Video Analysis.
- **Default**: This can be used to restore the default settings.
- **Copy:** This is used to copy the current channel settings on another or on all other channels.
- **Apply** to save the changes.

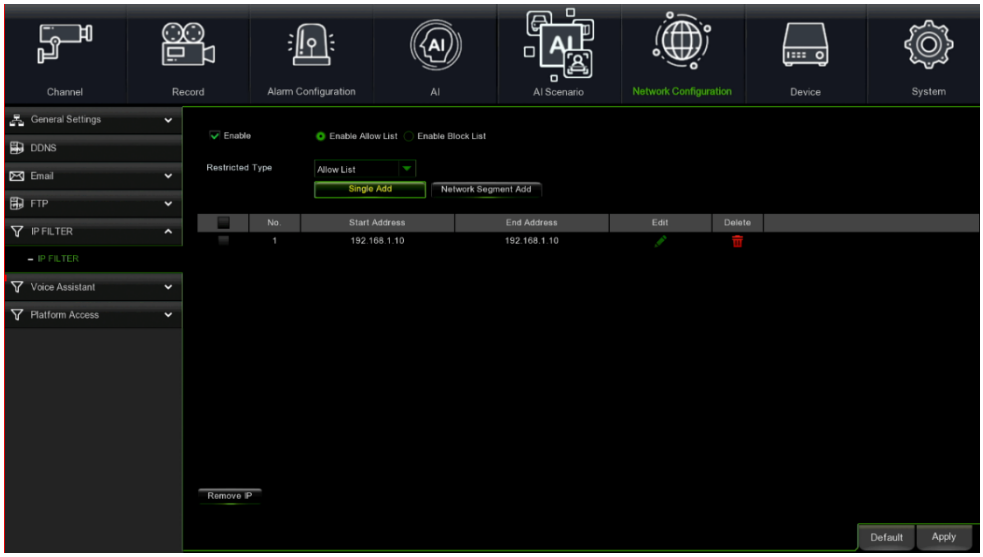
3.9.5 IP FILTER

3.9.5.1 IP Filter

You can configure **IP FILTER** for the HVR from **Menu Start → Setup → Network → IP FILTER**



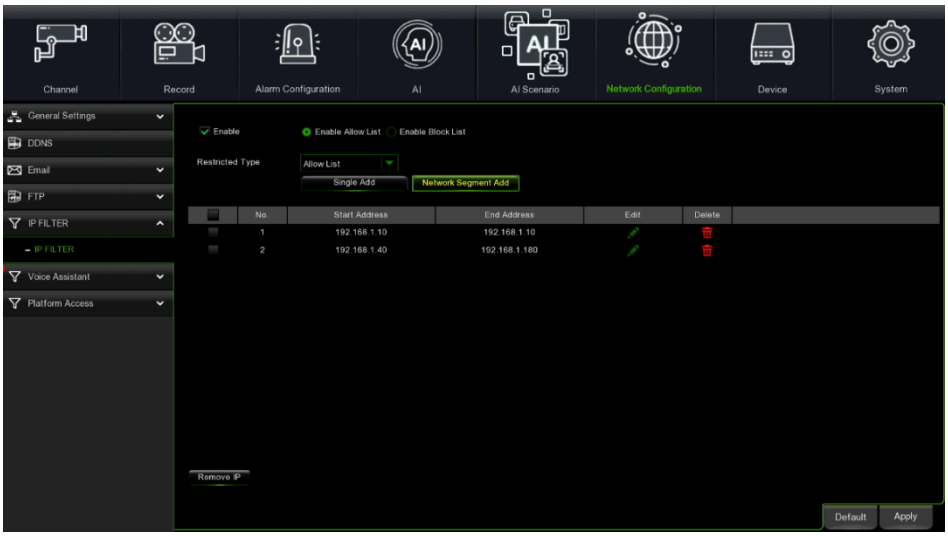
- **Enable:** Select **Enable** to configure the allow list and the block list.
- **Enable Allow list:** The **Allow List** is enabled by default; first check **Enable**, then set **Start Address** and **End Address** of the allow list.
- Single Add You can set a single address in the list, then click on Single add. Once added to the list, you can edit the address using the Edit as shown below.



- **Edit:** Click on to edit the IP address, enter the new Start Address and End Address that must be the same.

- **Delete**: Click on . The dialogue box "**Warning!**" will appear. Click on OK to clear the Address list

Network Segment Add: A network segment can be set up using the Network Segment Add button, enter start address and end address is shown below.

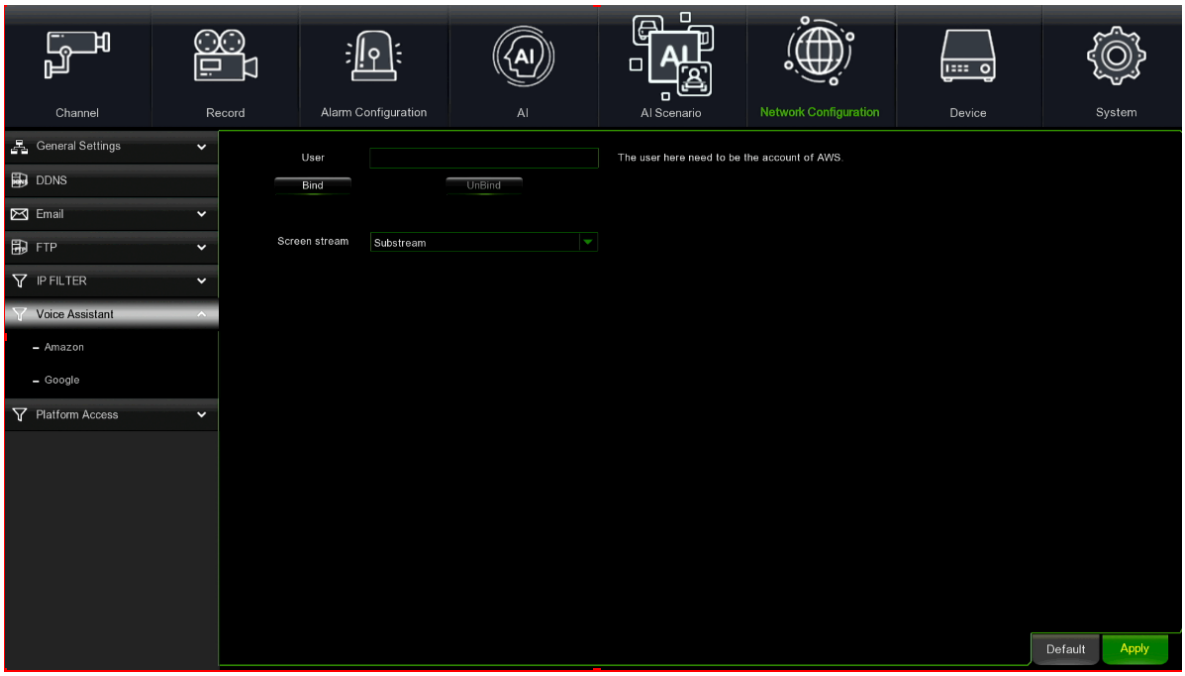


- **Edit:** Click on to change Start Address and End Address; you can set one or more addresses.

- **Delete**: Click on . The "**Warning!**" dialogue box will appear. Click on OK to clear the Address list
- **Enable Block lists**: The **Block list** is disabled by default; first check **Enable Block lists**, then refer to the Allow List configuration options to modify the Block List.

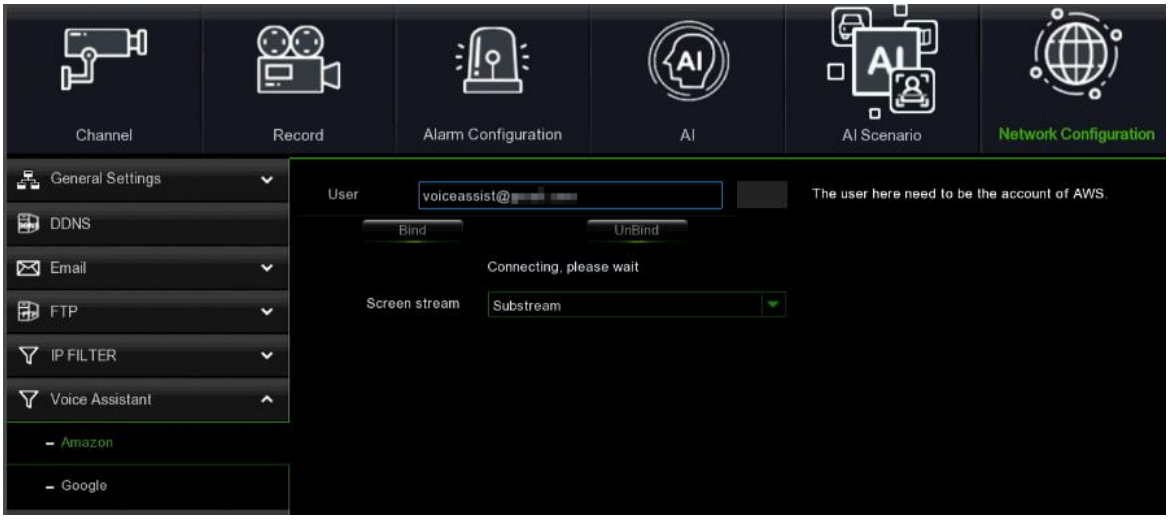
3.9.6 VOICE ASSISTANT (BETA VERSION)

The voice assistant function allows you to connect the HVR to GoogleCast or Amazon Fire TV Stick and transmit real-time surveillance images to the TV monitor via voice control. Available from firmware version 8.2.2 and further.



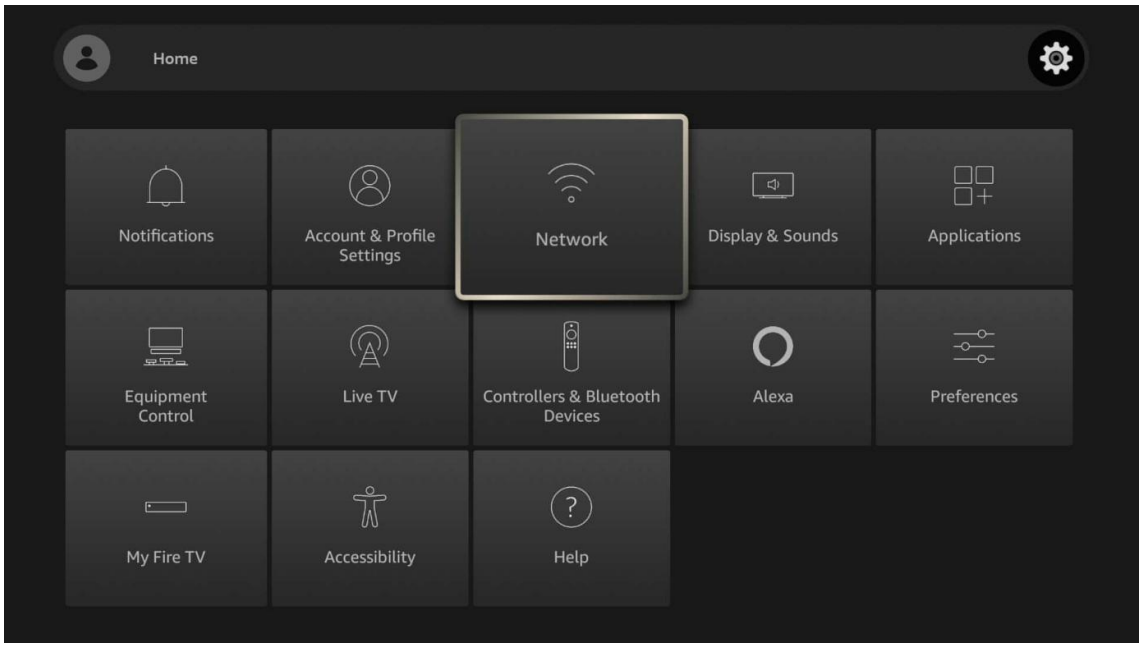
3.9.6.1 Voice Assistant with Amazon Fire TV Stick

Input your Amazon account, and the click Bind button to connect to bind your Amazon account. To choose the video stream you want to cast to your TV monitor.

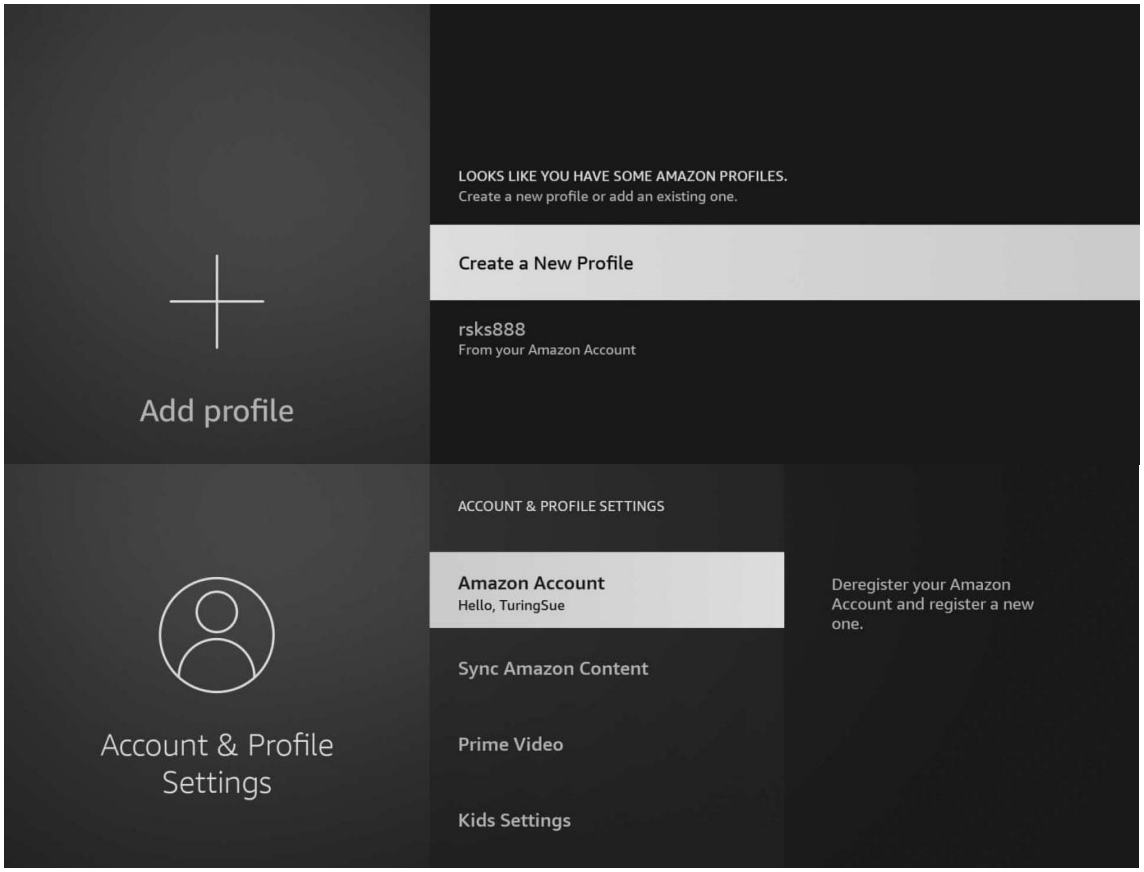


Go to Channel – Live menu, and give a Channel Name which is easy to call to the channel(s) you want to cast to your TV monitor.

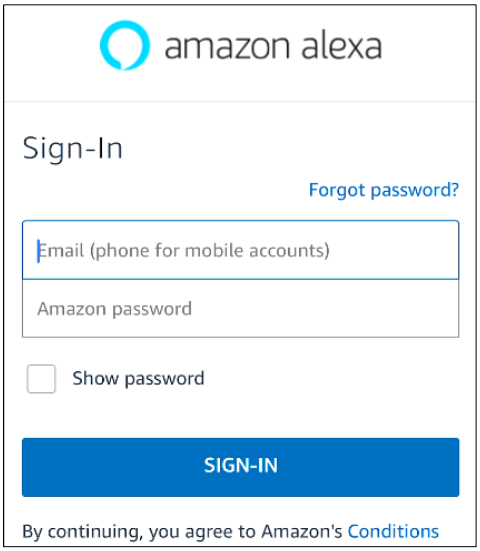
Connect the Fire TV Stick to your TV monitor, and power on it. Connect the Fire TV Stick to the Wi-Fi which is in the same LAN with your HVR.



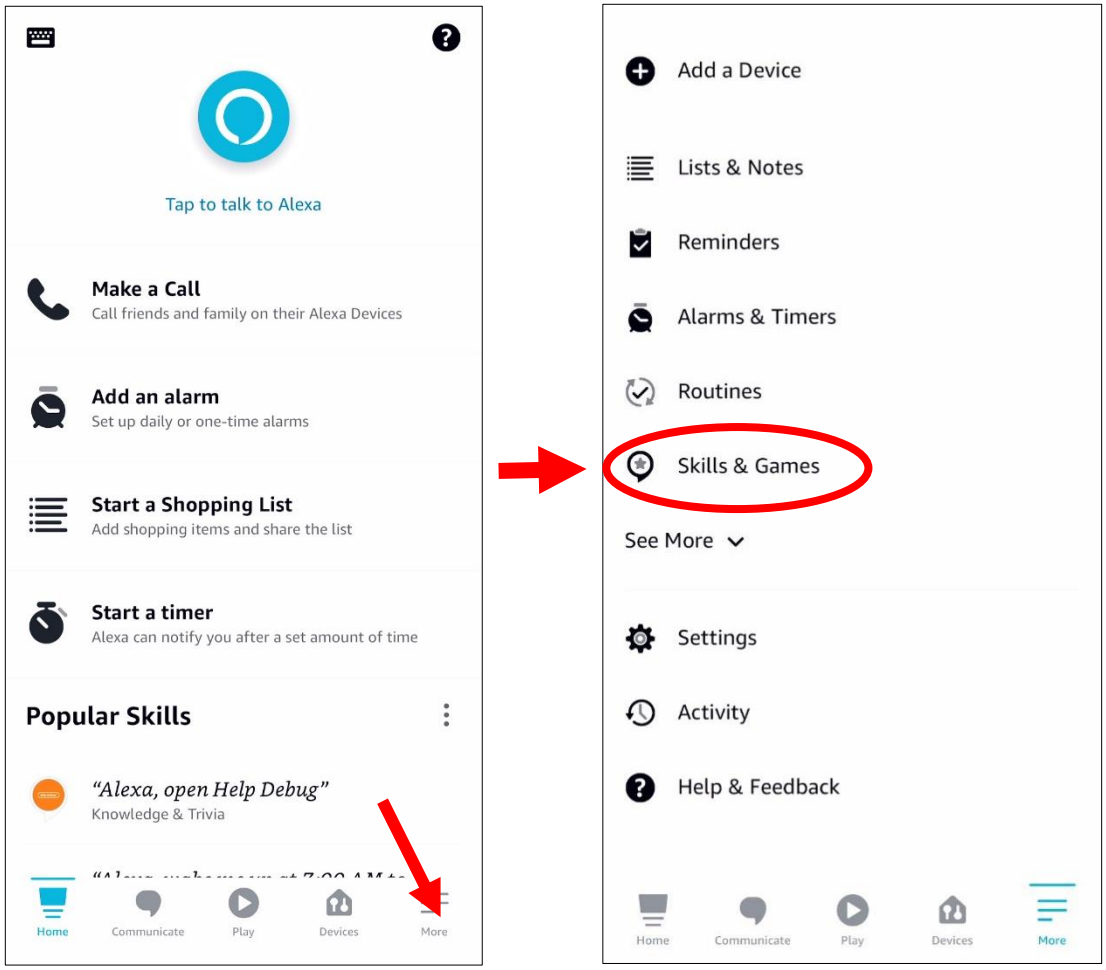
To use your existing profile or add a new profile and login your Amazon account which is same as the one you bind to the HVR.



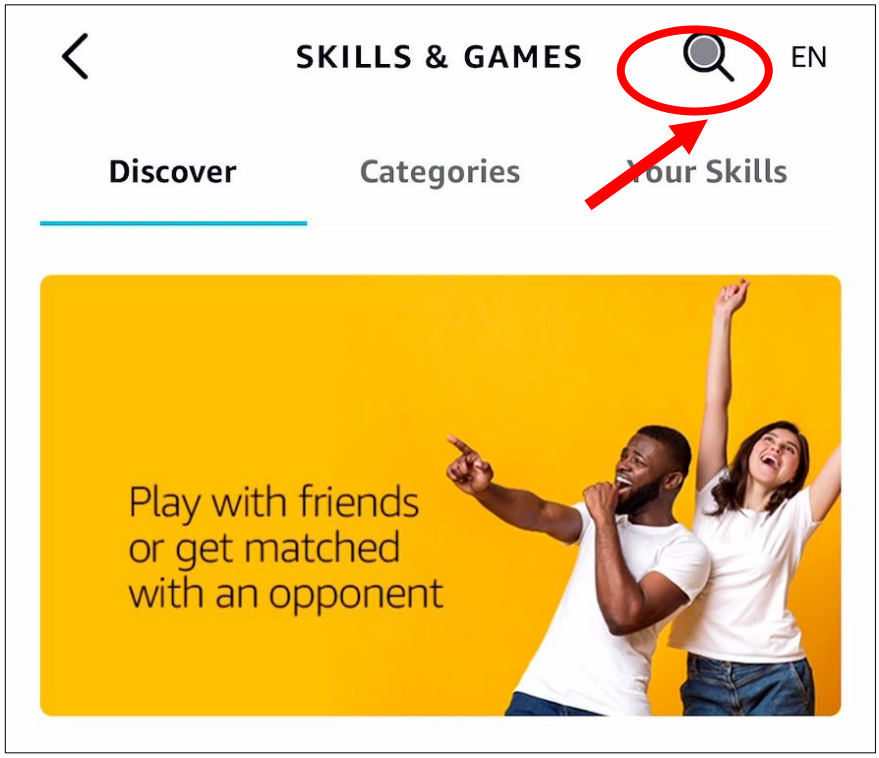
Search cand install Amazon Alexa to your mobile phone from app store, and then login with the Amazon account which is same as the one you bind to the HVR.



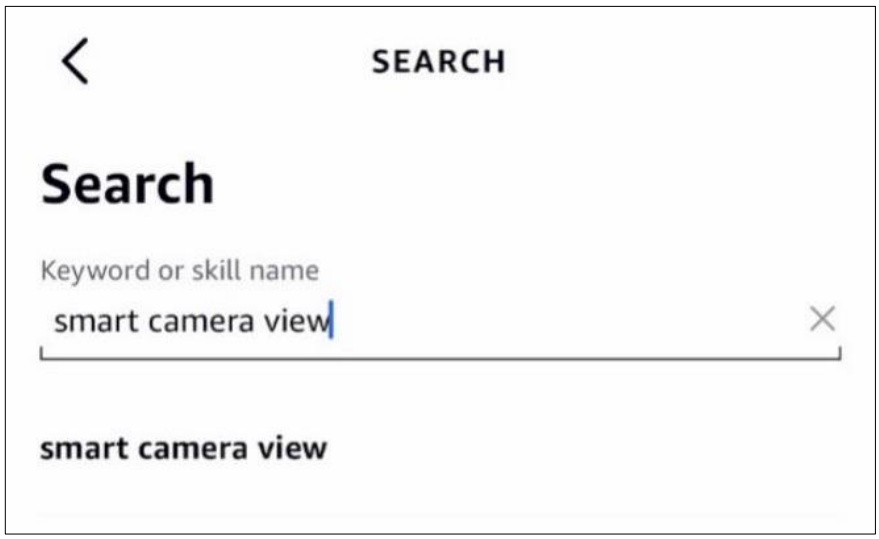
Touch “More”, and then touch “Skills & Games”.



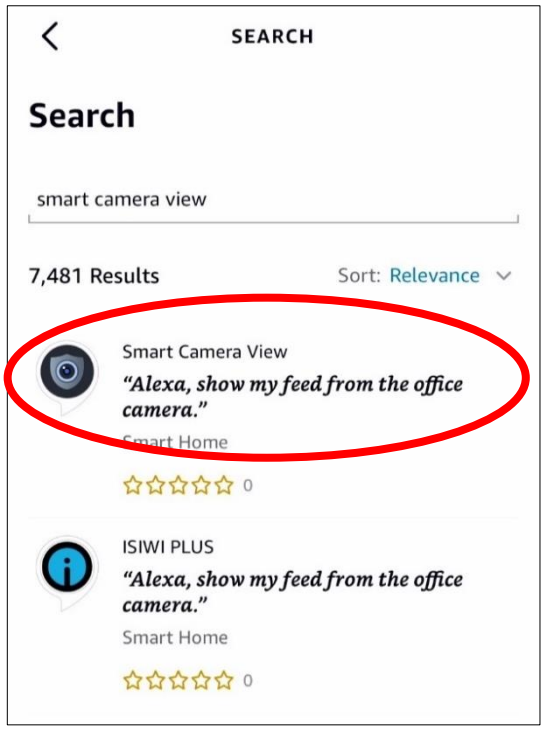
Touch the search icon on the right top corner.



Input the keyword: smart camera view, and search.

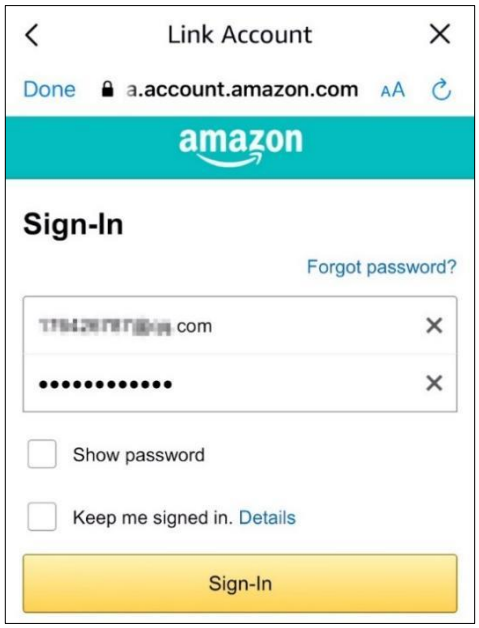


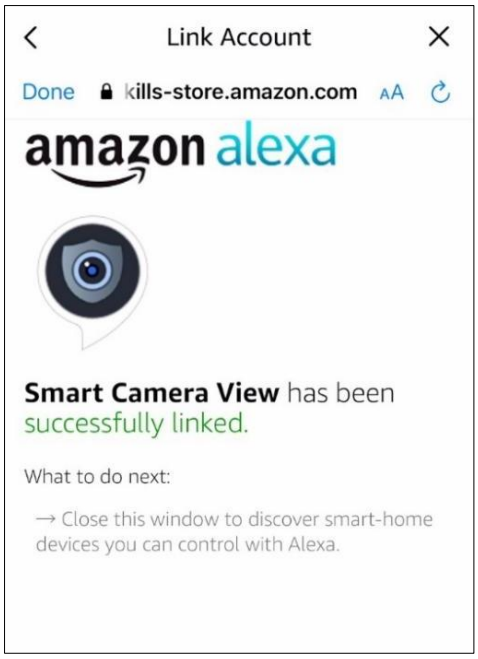
Touch the “Smart Camera View” in the search result list.



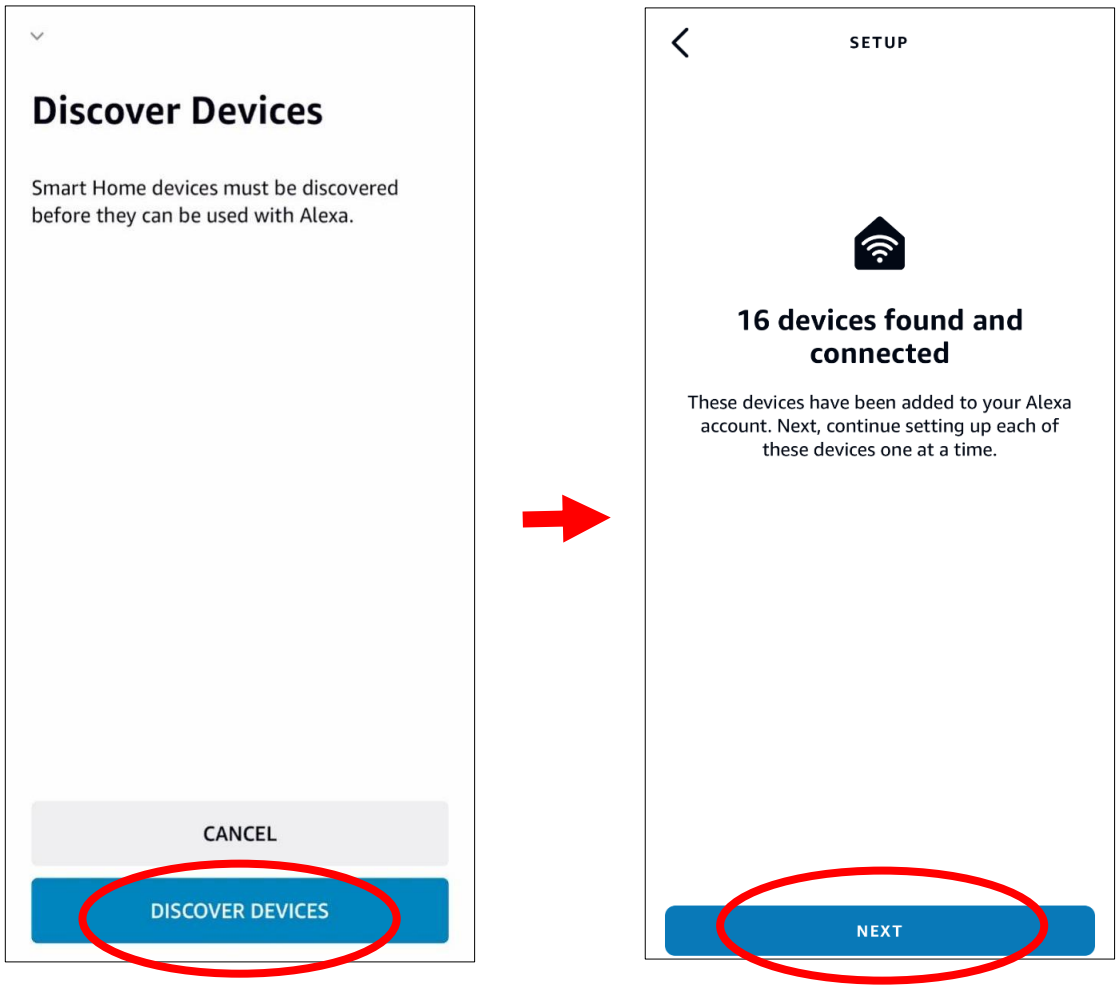
Touch “ENABLE TO USE”.

You would need to link your Amazon account. Sign in the Amazon account which is same as the one you bind to the HVR. Touch “Done” after the skill is successfully linked.

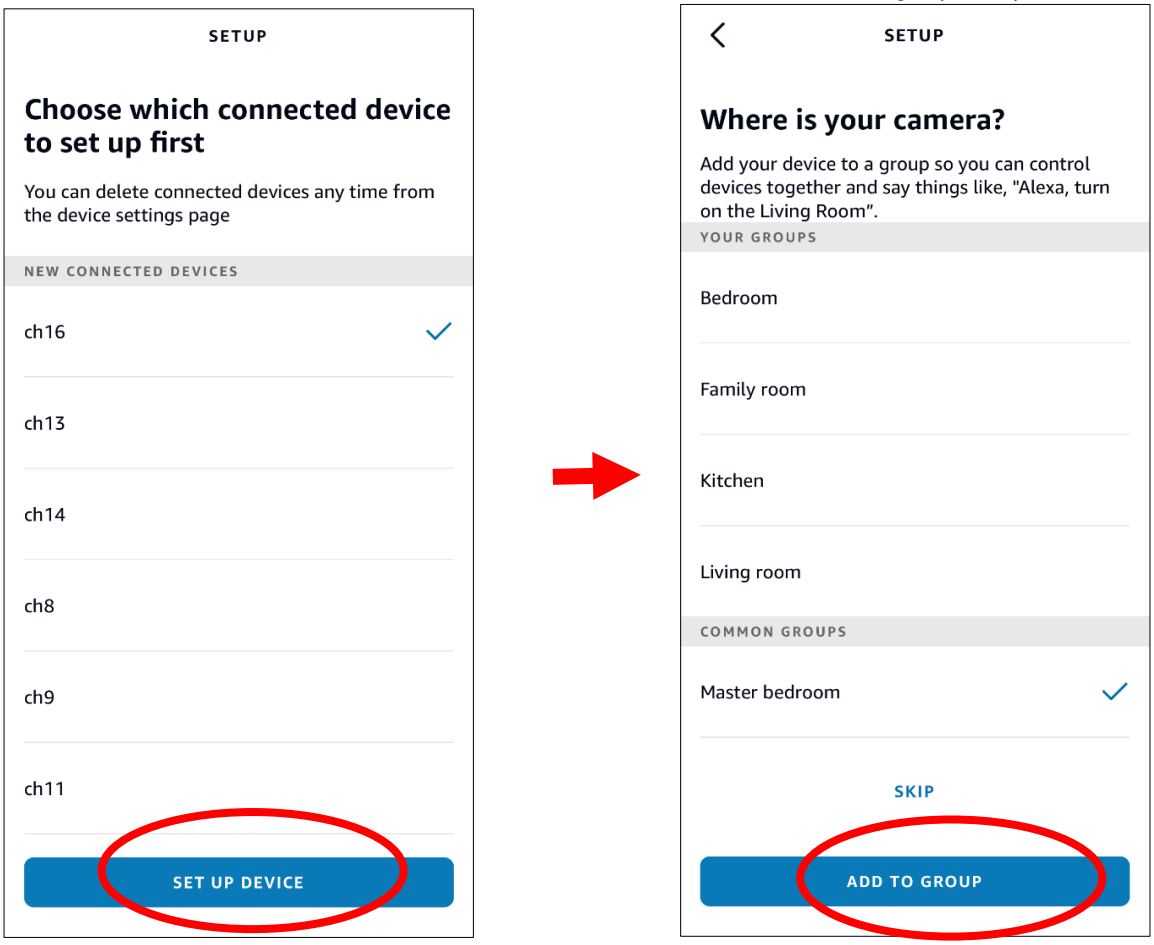




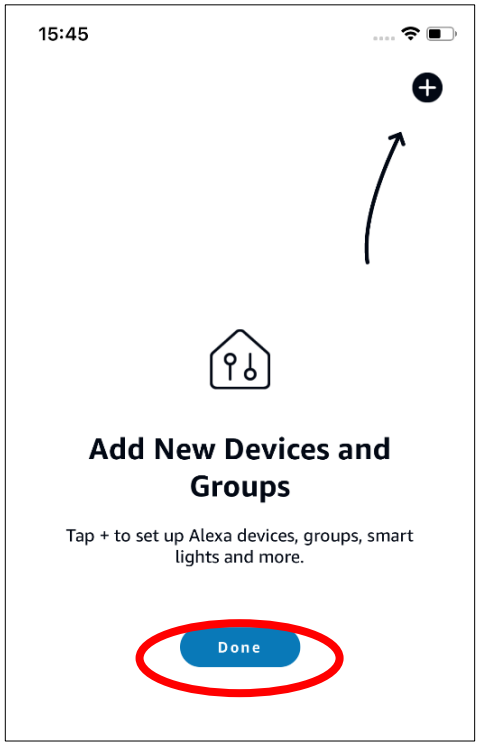
Touch “DISCOVER DEVICES” and wait a moment for the app to search the cameras. Touch Next when the devices were found and connected.



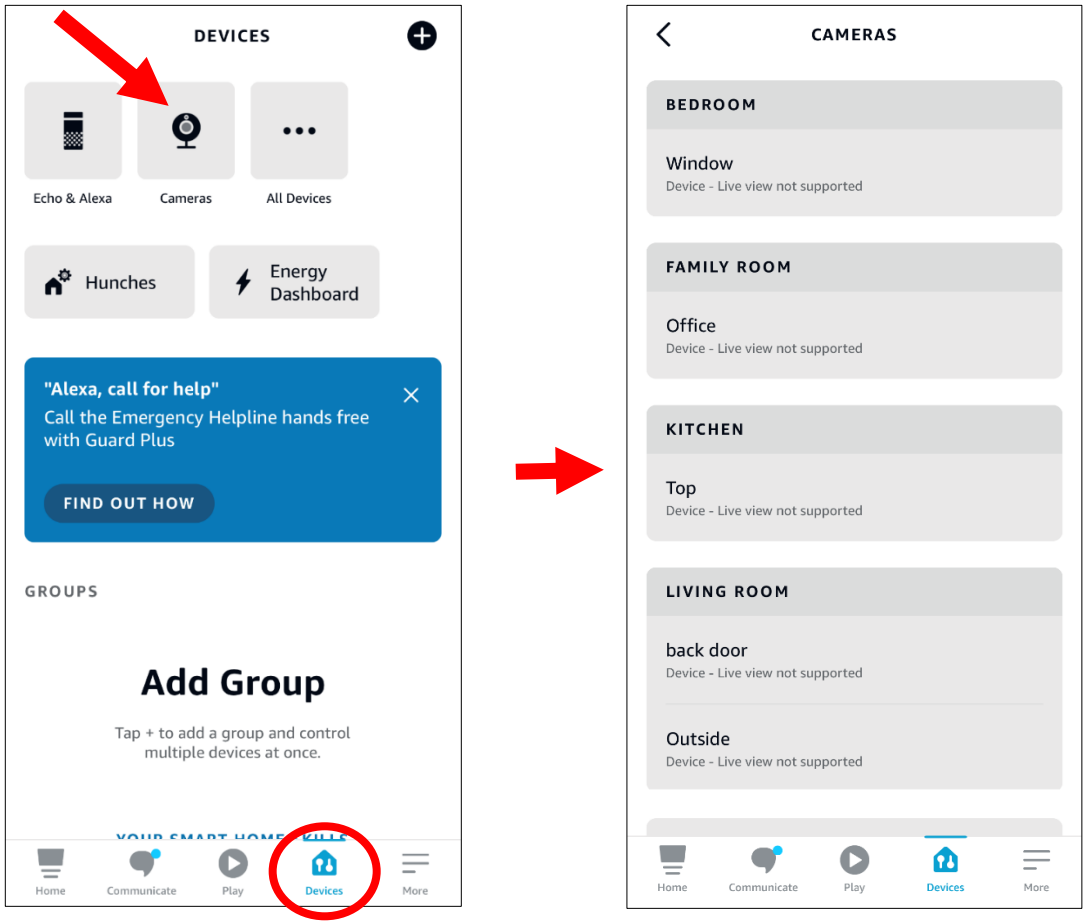
Choose one of the devices and then touch SET UP DVICE. You can add the camera to a group or skip.



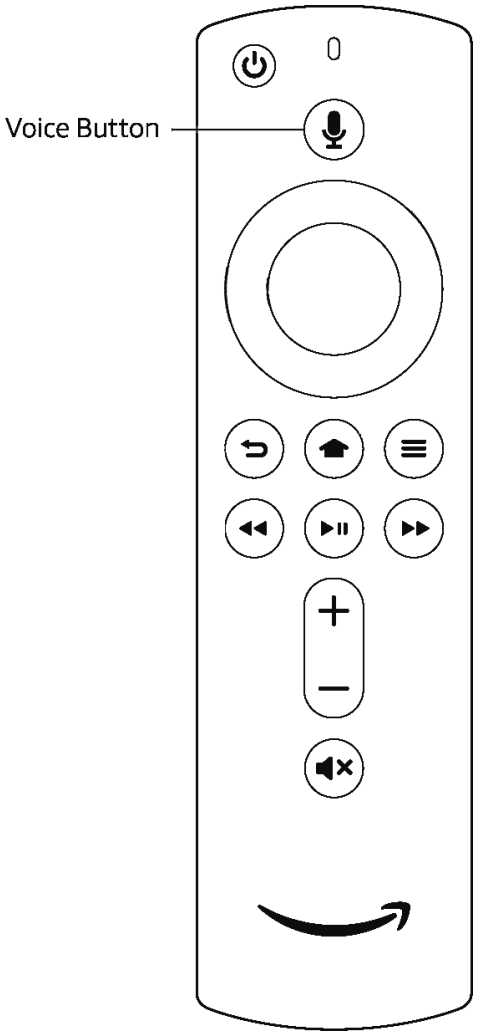
Repeat the previous setup to add all cameras and then touch Done to finish.



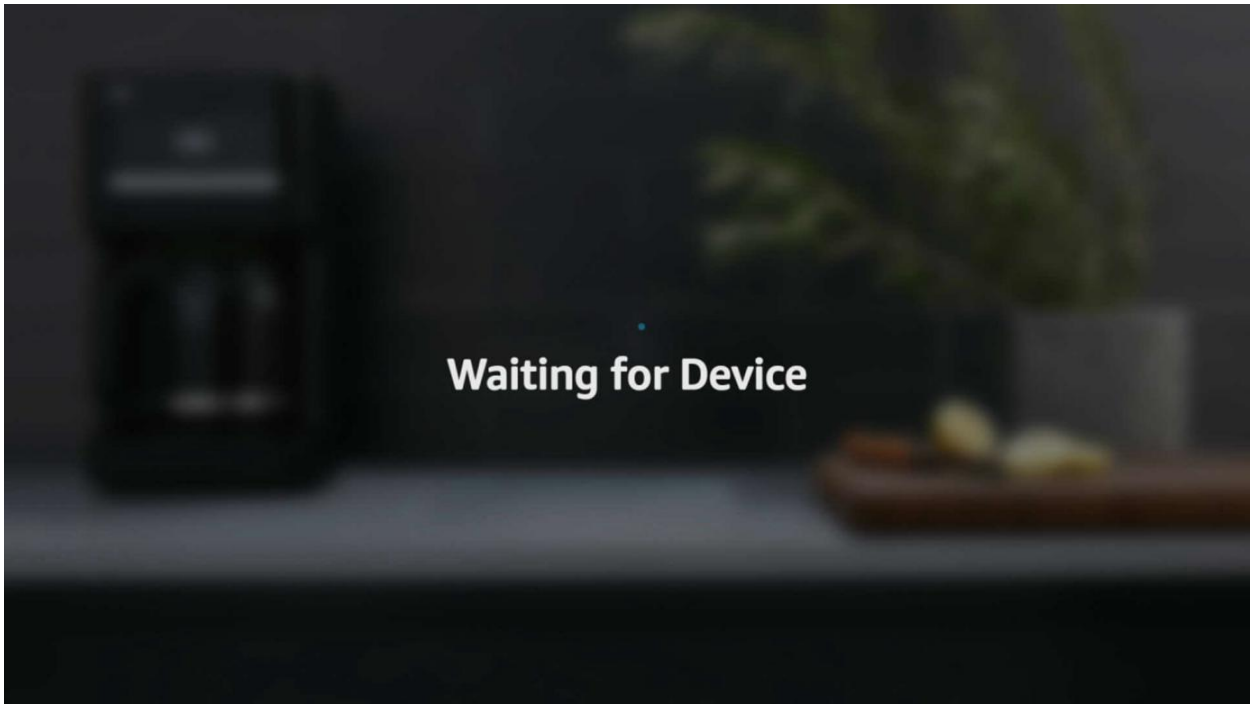
All added cameras will be listed in the Devices. Touch the Cameras icon to check all added cameras.

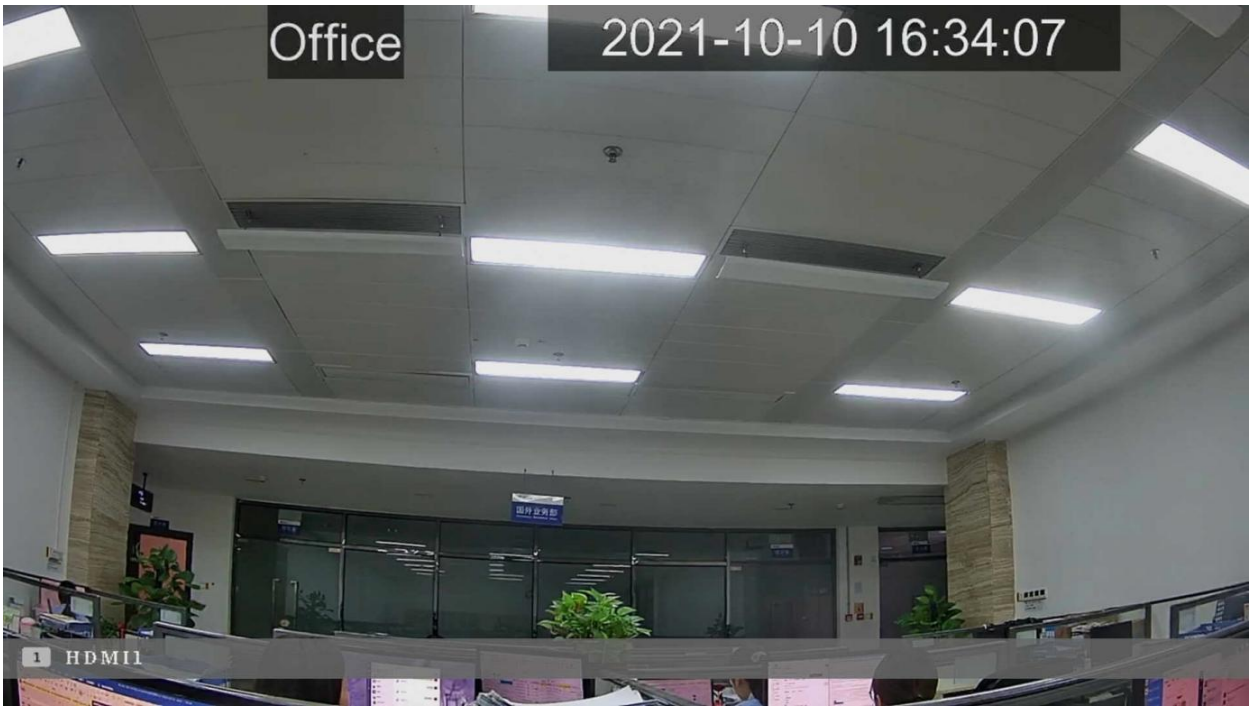


Press and hold on the voice button on the remote controller of the fire TV stick, and speak the command clearly. The command could be like: Show the XXX camera / Show XXX. XXX is the camera channel name. For example, if the channel name is “Office”, you could speak “Show my office camera”.



Wait for a while, you will see the real time images from the Office camera in your TV monitor.

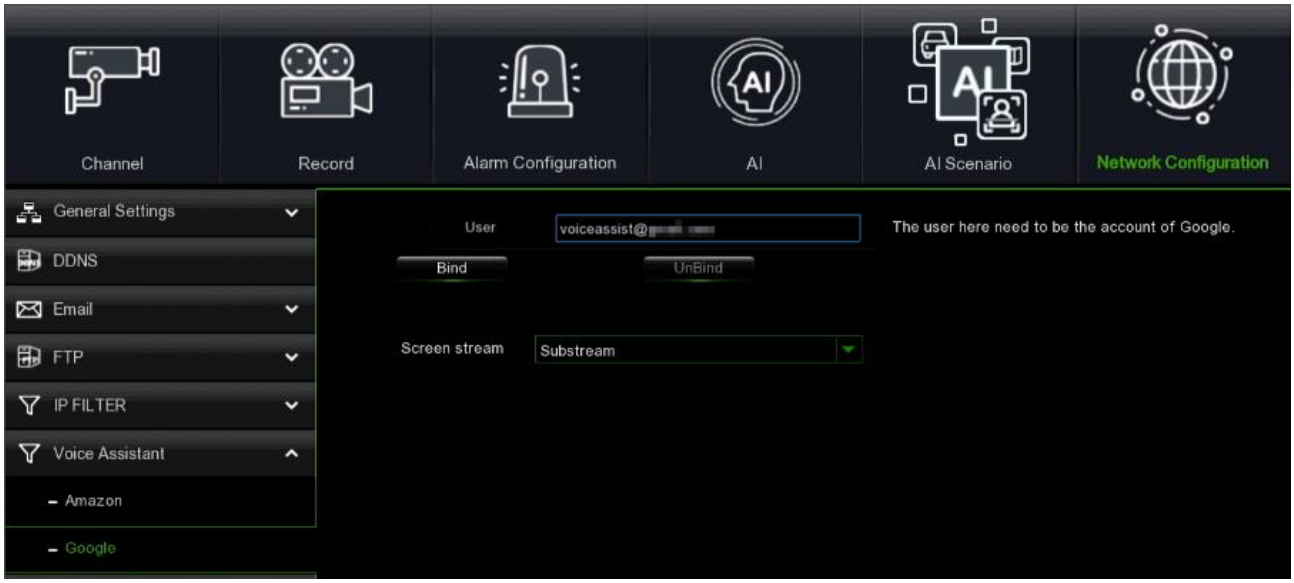




If you want to quit the camera live view, speak “Stop”.
If you have changed the channel name, you would need to discover and add the camera again.

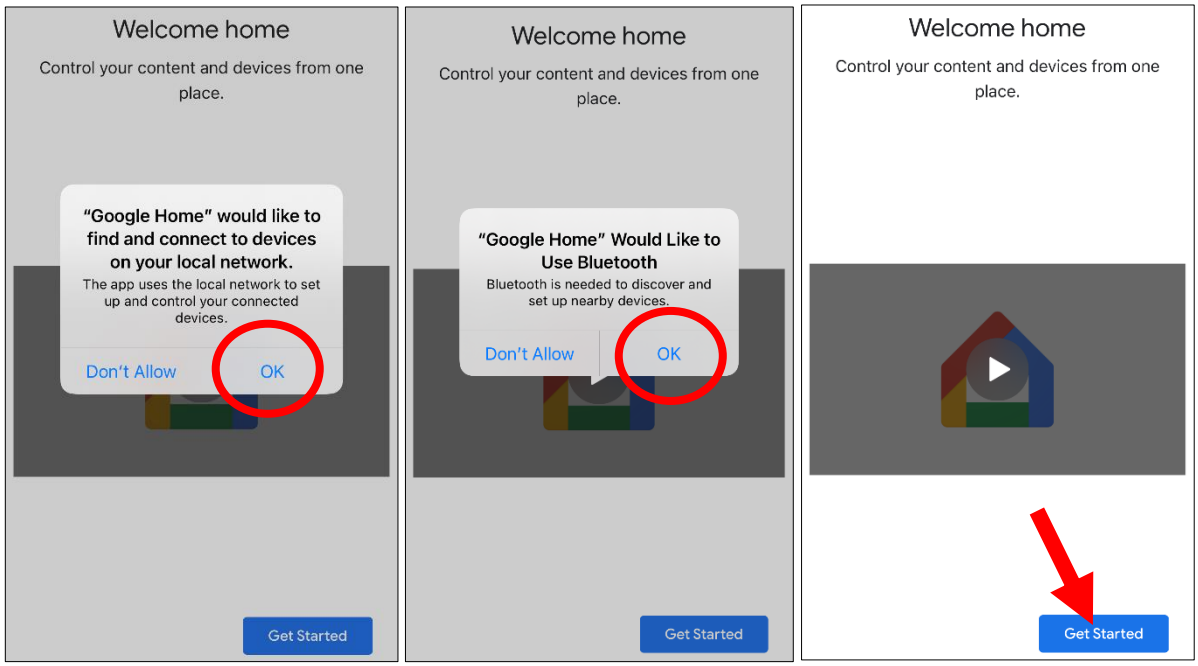
3.9.6.2 **Voice Assistant with Google Chromecast**

Input your Google account, and the click Bind button to connect to bind your Google account. To choose the video stream you want to cast to your TV monitor.

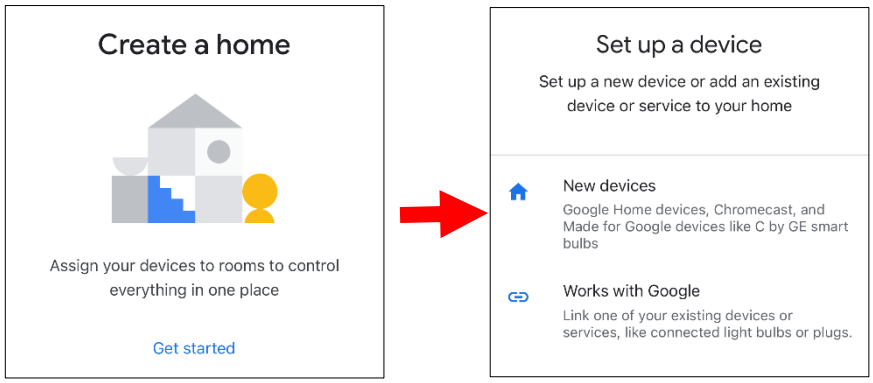


Go to Channel – Live menu, and give a Channel Name which is easy to call to the channel(s) you want to cast to your TV monitor.

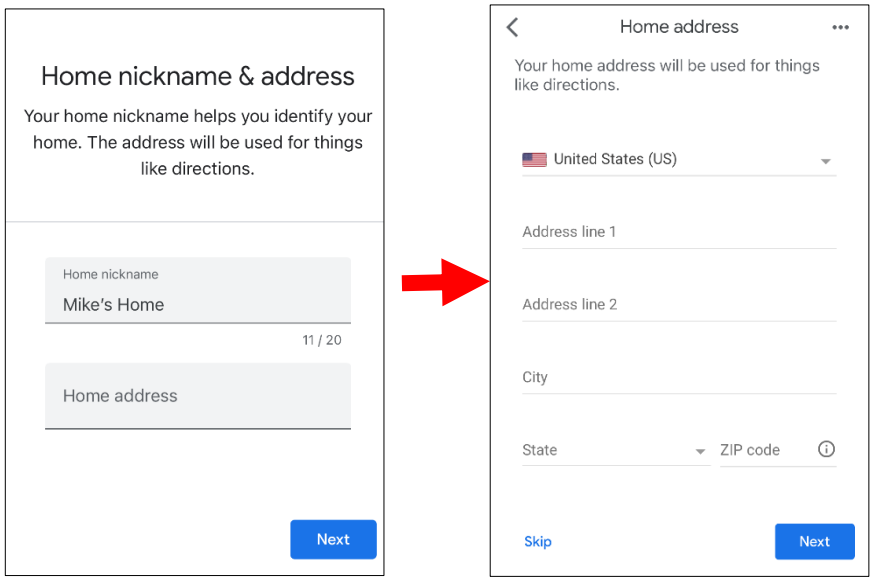
Connect the ChormeCast to your TV monitor, and power on it.
Search and install Google Home app to your mobile phone from app store. Run the installed Google Home app, touch OK to allow the app to use your local network and Bluetooth and then touch Get Started.



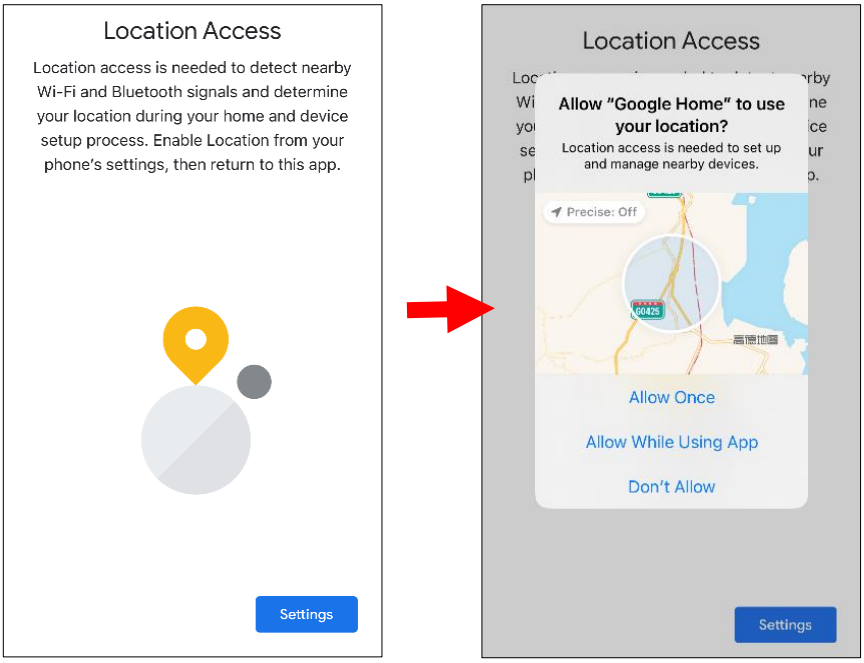
To login your Google account which is same as the one you bind to the HVR.
Touch "Get Started" to create a home, and then touch "New devices".



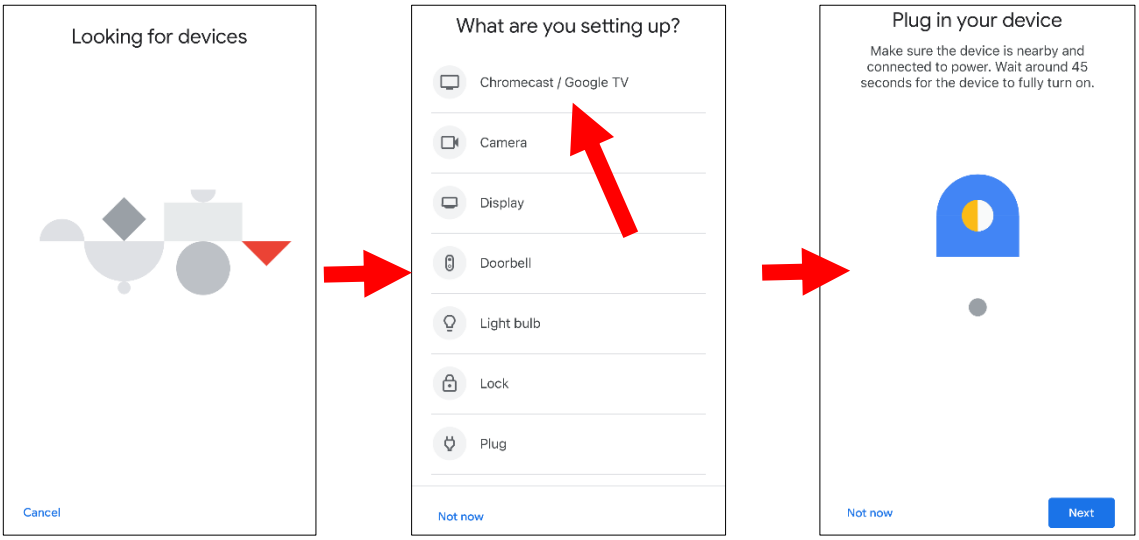
Input the Home nickname and address and then touch "Next".



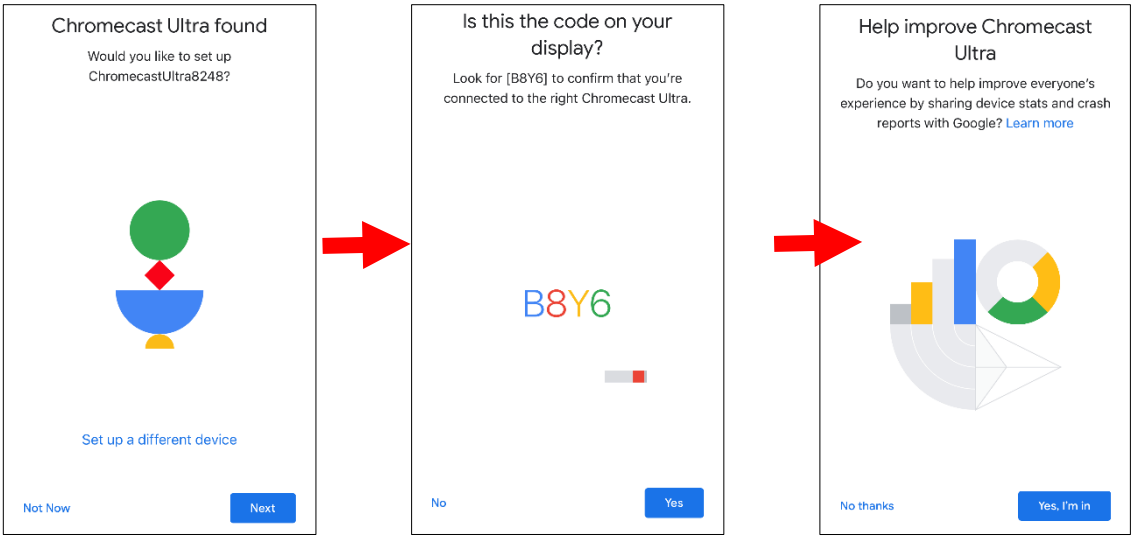
To allow location access for the app.



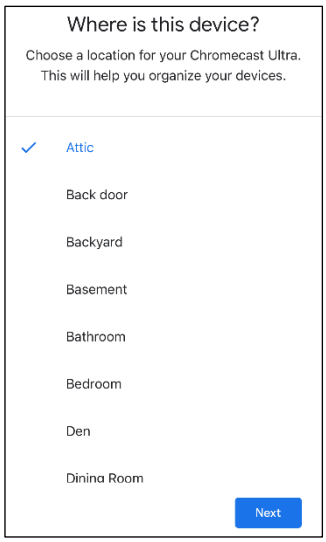
The app will automatically try to search devices from your local network. Choose Chromecast / Google TV. Make sure your Chromecast is turned on already, then touch Next.



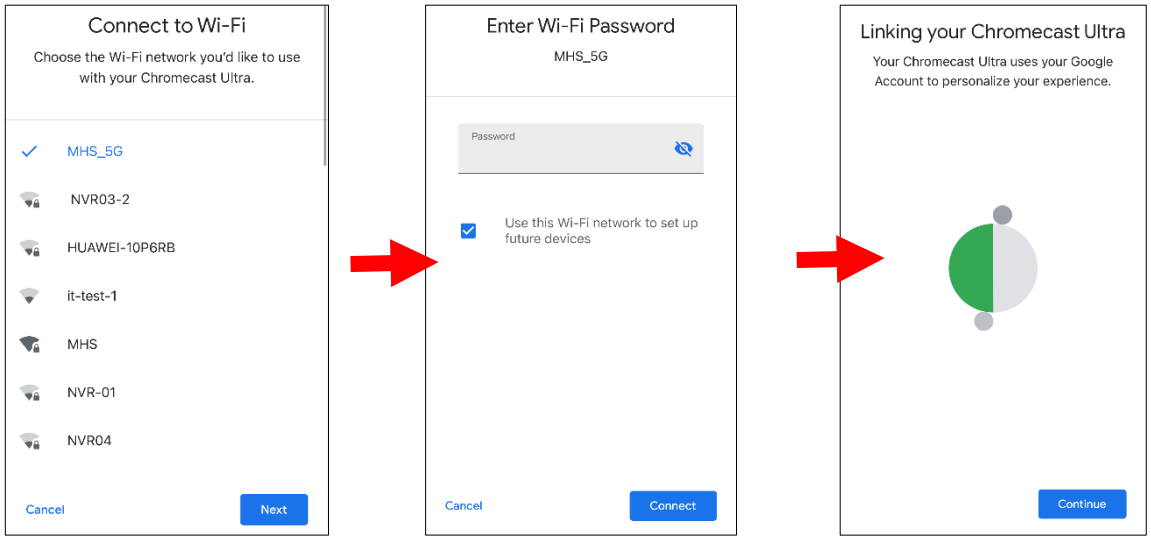
Your Chromecast will be found. Touch Next to connect. Confirm the code by touching Yes.



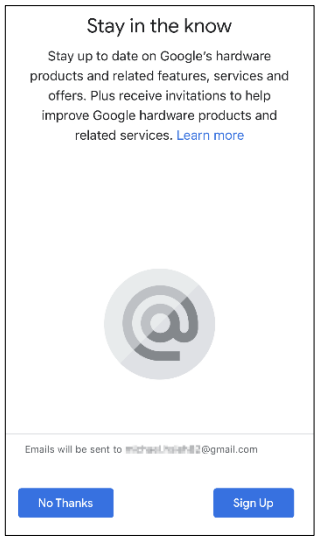
Choose a location for your Chromecast, then touch Next.



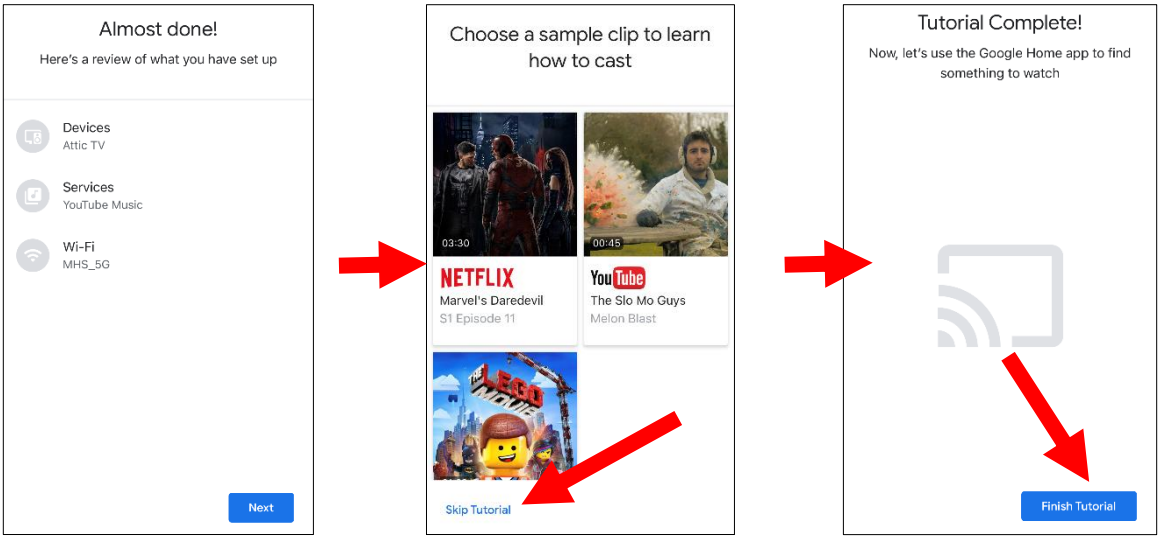
Choose the Wi-Fi network for your Chromecast and input the Wi-Fi password to connect. Make sure the Wi-Fi you choose is the same one with your mobile phone and is in the same local network with your HVR. Touch Continue to next step.



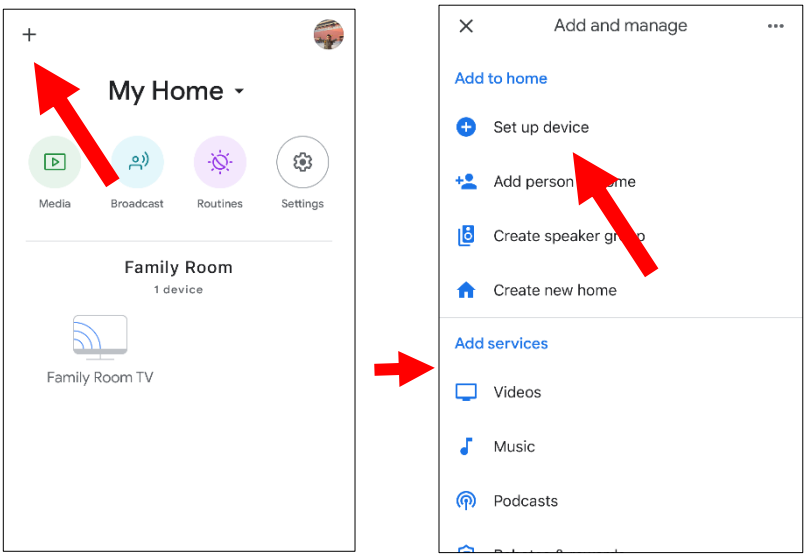
Touch No Thanks or Sign Up to login your google account.



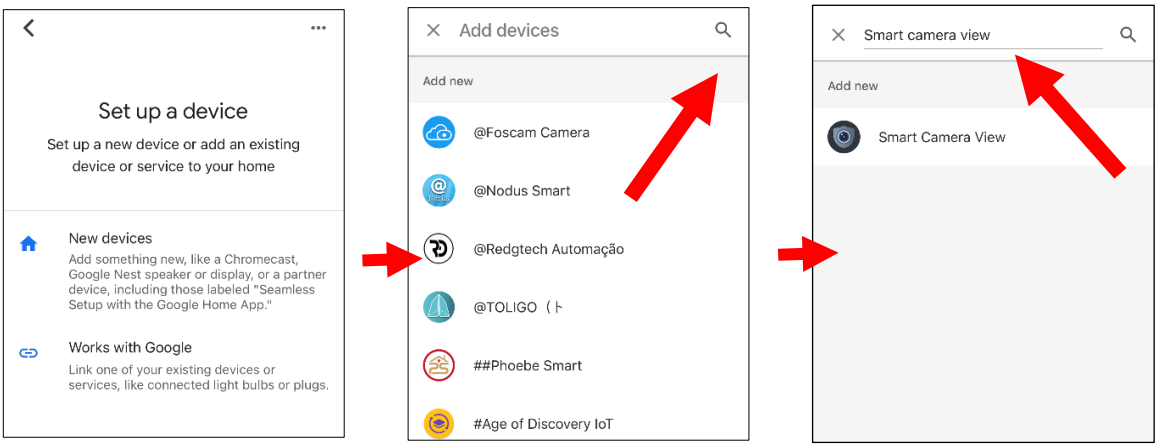
Touch Next and Skip and finish the tutorial.



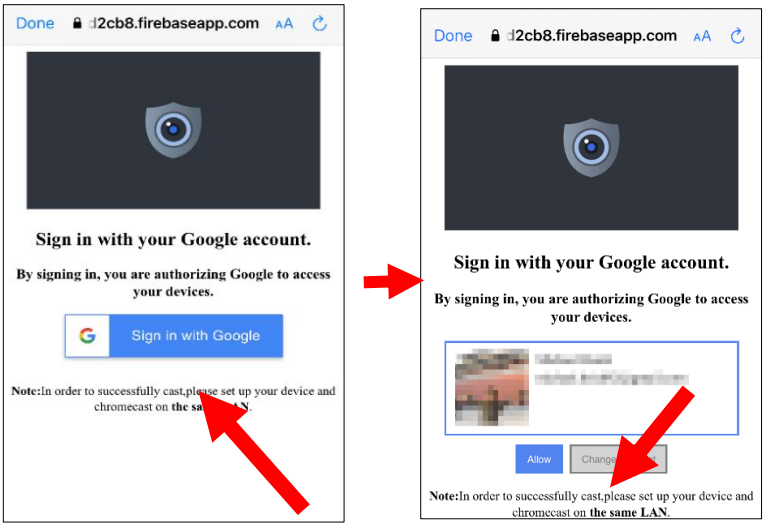
Now the Chromecast has been added to your Google Home. Touch the + icon on the left top corner. Indoor, then choose Set up device.



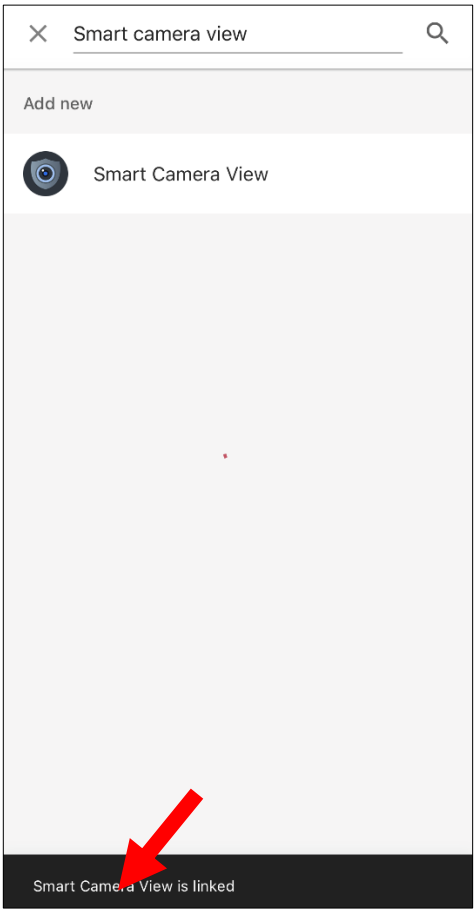
Choose “Work with Google”, touch the search icon on the right top corner and then input “smart camera view”.



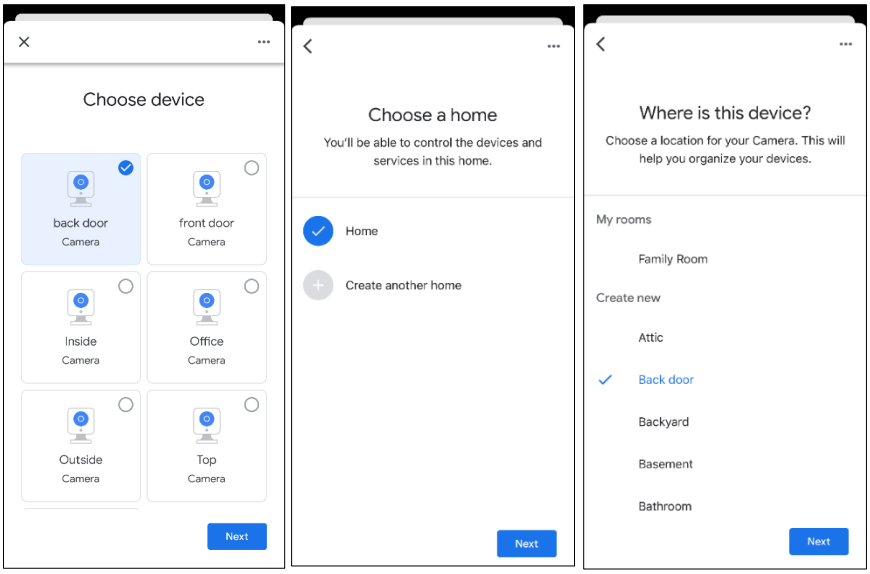
Touch on “Smart Camera View” in the search result. You would need to sign in your google account and allow the Google to access to your device.



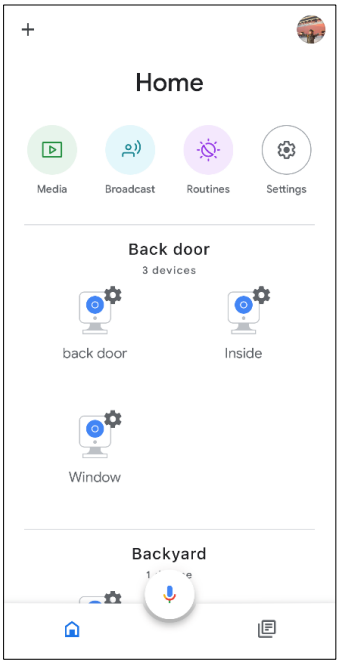
Wait for a while, the Smart Camera View application will be linked to the Google Home.



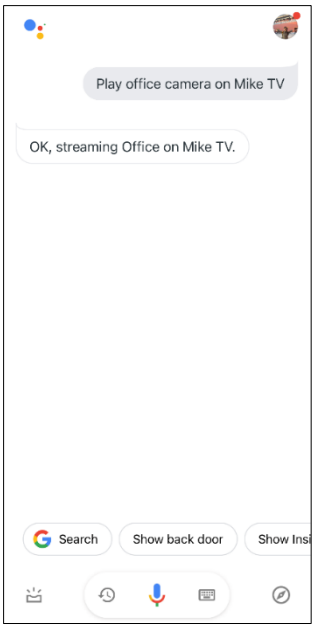
Now the available cameras in your HVR will be displayed. Choose one of the cameras and then touch Next button. Choose a home & location for the cameras step by step.



Repeat the previous step to add all cameras.



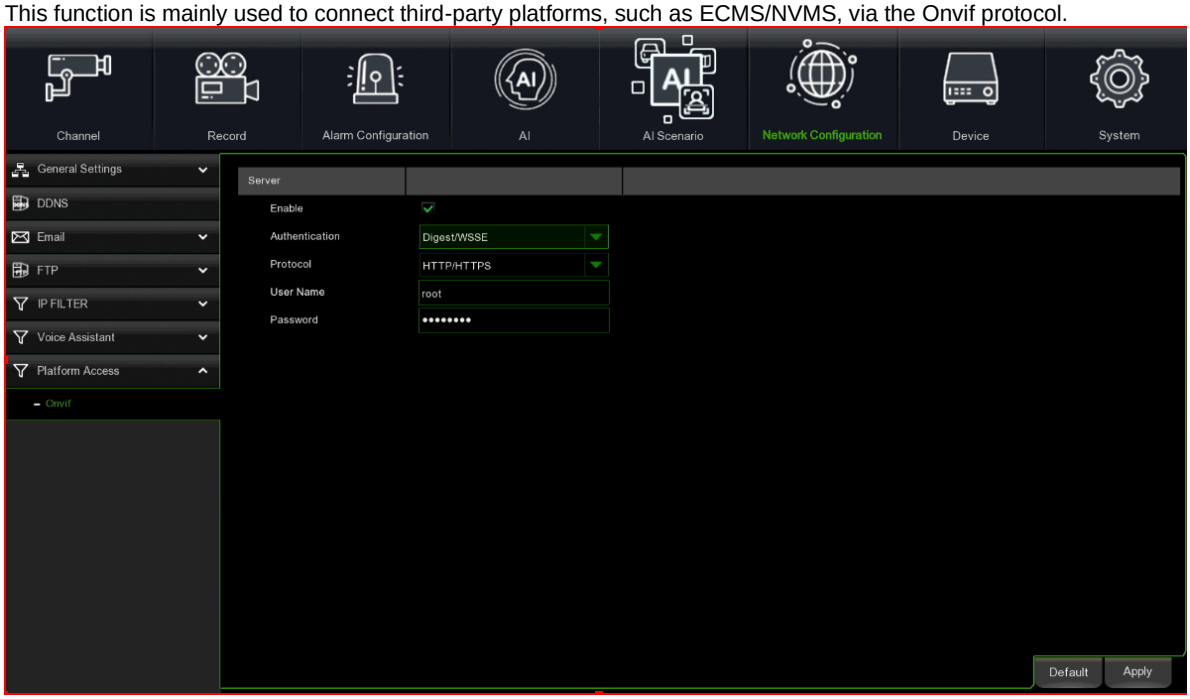
Search and install Google Assistant app to your mobile phone from app store.
Run the Google Assistant, login your google account which is same as the one you bind to the HVR.
Now, you're able to stream your camera to your TV monitor by using text or voice command, like "Show/play the *** Camera on XXX TV", in which *** is the channel name of the camera, XXX is your TV's name.



3.9.7 PLATFORM ACCESS

3.9.7.1 Onvif

This function is mainly used to connect third-party platforms, such as ECMS/NVMS, via the Onvif protocol.



Enable：Check the box to enable the function.
Authentication：Set the type of login authentication. The options are Digest_sha256, Digest, Digest/WSSE, WSSE. Choose one of these options to suit your third-party platform.
Protocol: Choose http, https or both.
User Name: Set a user name to connect to the platform.
Password: Set a password for connecting to the platform.

3.10 DEVICE

This section can be used to access the configuration and control functions of the devices and services available on the HVR. Click on “Device” (HDD) at the top to open the following subsections:

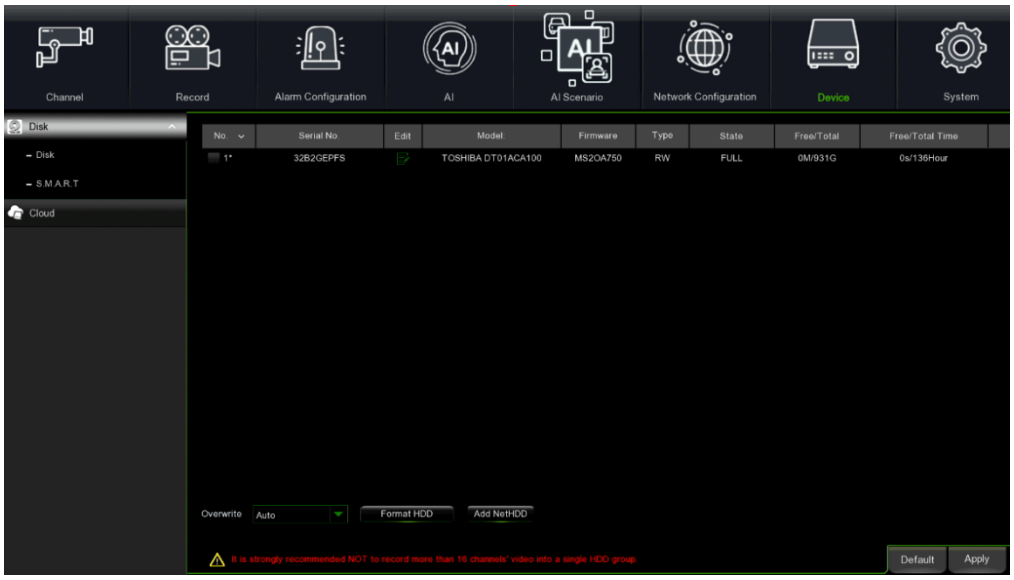
- HDD
- Cloud

3.10.1 DISK MANAGE

In this section, you can configure the internal HDD function.

3.10.1.1 Disk Manage

This menu can be used to check and configure one or more internal HDDs. You need to format the HDD only the first time it is started and when it is replaced.
Select the item to access the settings of the hard disk connected to the HVR.

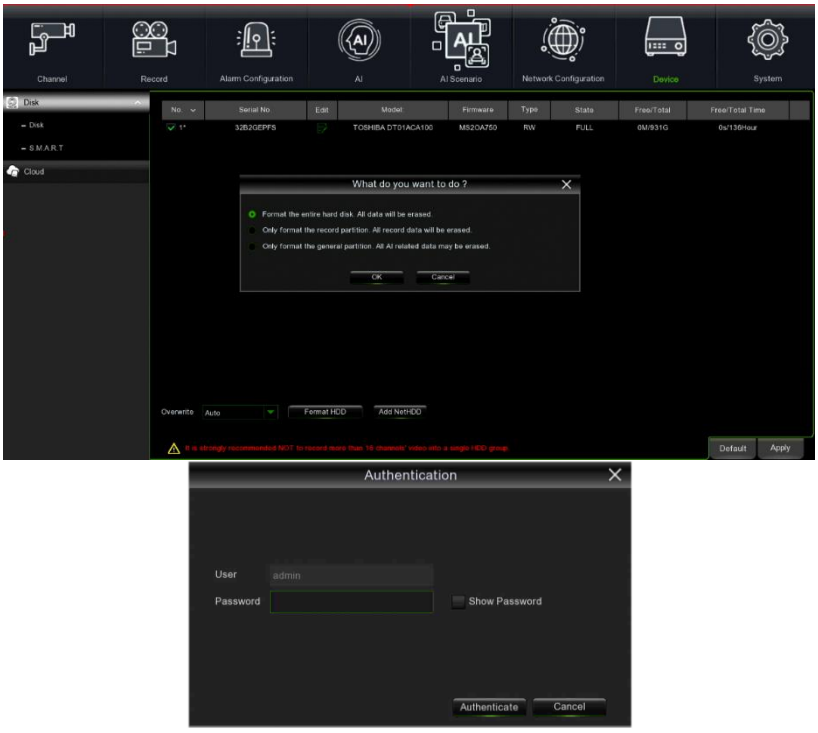


The page with the list of main parameters can be accessed via this side menu item.

When the HVR is connected to an HDD, the system automatically detects whether the HDD is normal or not.

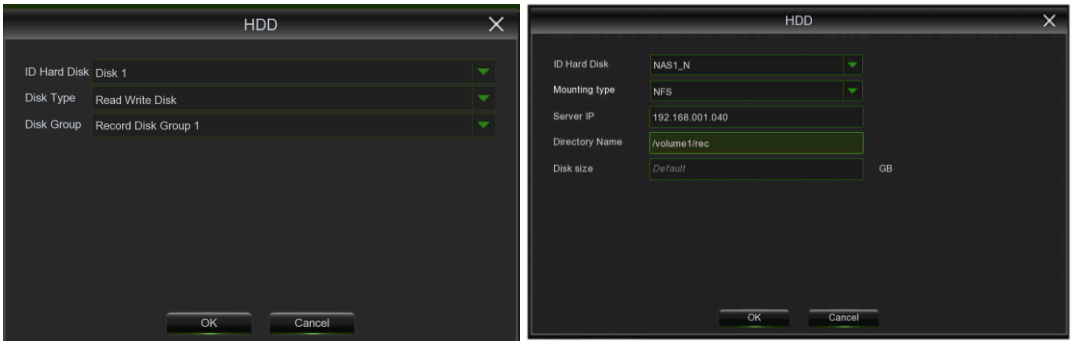
If the wire connected to the HDD is not connected well or if the HDD is not normal, its state will be “No Disk”; if the HDD must be formatted, its state will be “no format”. Otherwise, the state will be “Normal”.

To format an HDD you will be asked for the password



- **No:** This indicates that the HDD was not reconfigured by the system.
- **Type:** this indicates the disc type, possible values: RW (Read Write), RE (Redundant), RD (Read Only)
- **Model:** The model of the HDD is shown.
- **FW (FW):** This indicates the FW of the HDD
- **Serial Number**: This shows the serial number of the HDD.
- **Disk Group:** Group with that the HDD is associated.
- **Status:** This is only available if the HDD was formatted.
- **Total Space –** Total size of installed HDD.
- **Free Space –** Free space available on the installed HDD.
- **Free Time –** Free space in time.
- **Edit:** This can be used to configure the HDD; click to open the following pop-up:

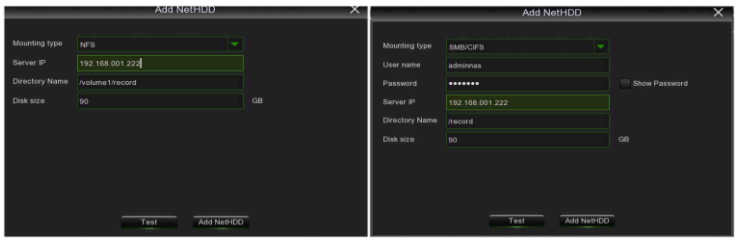
  Click on in HDD Status to change Disk Type and Disk group or the parameters of NAS:



- **Hard Disk ID:** HDD ID (set by the system).
- **Disk Type:** This indicates the disk type. Possible values are: Read Write Disk, Redundant Disk, Read Only Disk
- **Disk Group:** Group with that to associate the HDD; up to 16 different groups are available.

The following options are also available on the lower part of the page:

- **Overwrite -** If set to AUTO, the HVR will record over the oldest files on the hard disk. The HVR will always be able to record the events as they occur; however, this means that important events must be transferred from the hard disk before they are overwritten; if overwriting is set to OFF, the HVR will stop recording when it is full. Although old recordings will not be lost, the risk is that it may not be possible to record any new events. Be very sure before selecting this function. Furthermore, the period (in days) during that the recording file can be played may be shown in "SEARCH RECORDING". Select a value (in days) from the available options.
- **HDD Format -** Formatting the HDD will delete all data (i.e. recordings) contained on it and will recreate the FAT (File Allocation Table). Enter the correct HVR password after having selected the [Format HDD] button.
- **Record On ESATA:** If enabled, this allows video files to be recorded on the external HDD connected to the ESATA (**E**xternal **S**erial **A**dvanced **T**echnology **A**ttachment) port on the rear panel of the device.
- **Add Net HDD:** This can be used to add 1 network HDD (NAS) for making recordings. There are two connection modes, **NFS** (Network File System) and SMB/CIFS (Server Message Block protocol). SMB/CIFS is preferred when data must be accessed by multiple users. The parameters to be configured for the two versions are shown in the following screenshots. The IP address of the network HDD, the HDD path (a folder must be created on the NAS beforehand) and the folder size must be defined for NFS mode. For SMB/CIFS mode, the username and password to access the NAS must also be entered.
  Important: On NAS, you need to enable write and read privileges on the folder and access privileges from all Ips. In case of SMB, you need to put only SMB1 protocol, so if there is max and min SMB1 and SMB2 in the NAS you need to put only SMB1.

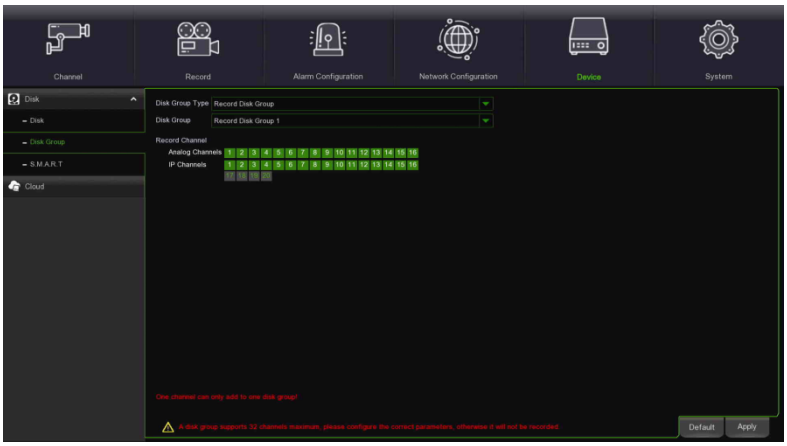


Note:

- **When configuring the HVR, it is important to check that the hard disk (HDD) options are set correctly. For this reason, it is strongly advised to format the HDD before starting the first recording.**
- If the eSATA recording function is enabled, the eSATA backup function will be disabled.

3.10.1.2 Disk Group

This menu item can be used to define the association between hard drives, analog channels and IP cameras. The available operations are listed underneath the figure.

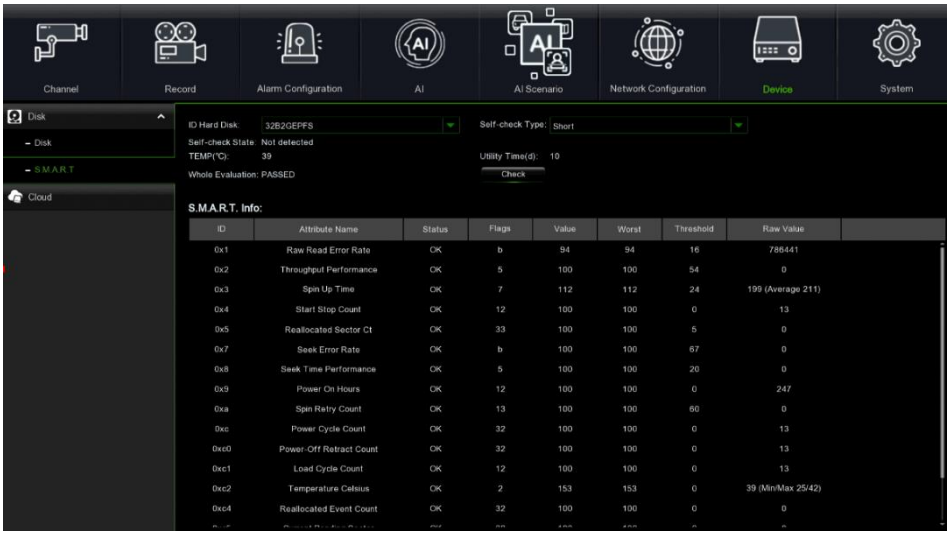


- **Disk Group Type:** Group type, possible values: Record Disk Group, Redundant Disk Group, Read Only Disk Group.
- **Disk Group:** Group with that to associate the HDD within the selected type.
- **Record Channel:** this section can be used to define that channels, analog and/or IP, belong to the selected Disk Group. The “Select all” and “Invert Selection” all buttons can be used to add all the available channels to the group or invert the selection made.
- **Analog Channels:** if the option is active, it can be used to add the channels related to analog cameras to the group.
- **IP Channels:** if the option is active, it can be used to add the channels related to IP cameras to the group.

Important: A camera cannot be added to two or more groups at the same time.

3.10.1.3 S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology)

This function can be used to display technical information about the hard disk installed inside the HVR. You can also run a test (three types are available) to evaluate and detect possible disk errors.
It can be used to control the S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) functions of the hard disks connected to the HVR.



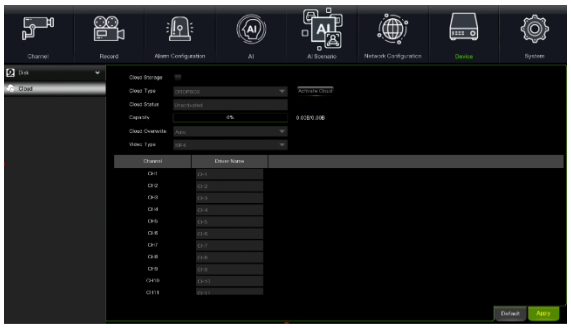
The **Self-Monitoring, Analysis, and Reporting Technology or S.M.A.R.T.** system is a hard drive and SSD monitoring system for detecting and providing reliability indicators with the goal of anticipating faults.

- **Whole Evaluation not passed, continue to use the disk:** If selected, this indicates that the HDD was not entirely analysed but that it can be used by the system all the same.
- **Hard Disk ID:** HDD ID (set by the system).
- **Self-check Type:** This can be used to select the type of analysis to be performed on the HDD, possible values:
- **Self-check State:** This indicates the state of the control performed on the disc (if it was run).
- **TEMP (°C):** Temperature of the HDD.
- **Utility Time (d) (g):** Time of use (in days).
- **Whole Evaluation:** Result of the complete HDD analysis, possible values: PASSED, NOT PASSED.
- **S.M.A.R.T. Info:** list of information provided by the S.M.A.R.T. system and respective results with respective reference values. The information is primarily intended for experienced personnel.

3.10.2 **CLOUD**

The HVR can transfer the images and videos, captured by the cameras in case of alarm, to a Cloud storage service via Dropbox and Google Drive, a free service that allows you to easily store and share snapshots and have them always at hand when you need them. The configuration is accessible via the Cloud item in the side menu.
Before activating the Cloud function, it is recommended that you create a Dropbox or Google Drive account using your chosen HVR email address and password. Go to the main Dropbox or Google Drive site, enter your name, email address and password, accept the terms and conditions, then click on the Sign up button.

Go to [Main Menu→Device→Cloud] to open the following page.



- **Cloud Storage**: the Cloud storage function can be activated.
- **Cloud type**: You can select the Cloud type; the default option is DROPBOX. Google Drive can also be used.
- **Time trigger**: This is the image loading frequency (OFF, 3min, 5min, 10min, 20min, 30min, 60min).
- **Alarm detection**: this function may be activated.
- **Driver name**: It will be available only when HDD has been formatted. Total Space – Total size of the hard drive currently installed.
- **Activate Cloud**: Click on this button to activate the Cloud storage function.
- **Advanced Email settings**: Click on the button shown in the figure to open the email parameter configuration window (activate SSL, SMTP port, SMTP server, sender, sender password, recipient).

3.11 SYSTEM

This section allows you to configure the functional parameters of the system. To access it, press “System” at the top of the screen. The following subsections will appear in the menu below:

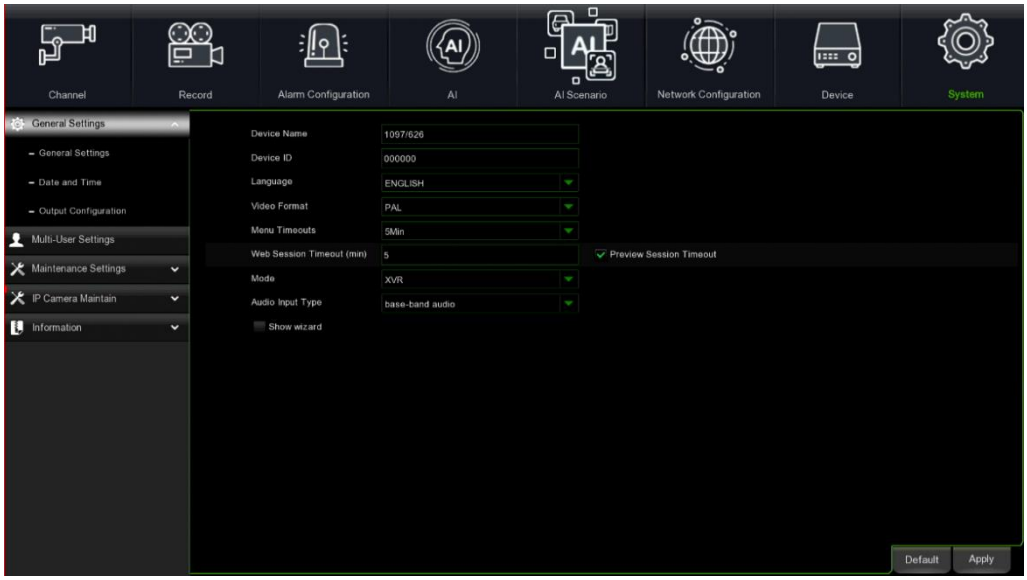
- General settings
- Multi-User settings
- Maintenance settings
- IP Camera Maintain
- Information

3.11.1 **GENERAL SETTINGS**

This area contains all the general settings of the HVR.

3.11.1.1 General settings

Select the first item in the side menu to access the general settings of the system as shown in the figure.



This can be used to edit the system date and time, the date/time format, the video format, the automatic logout and the HVR operating mode.

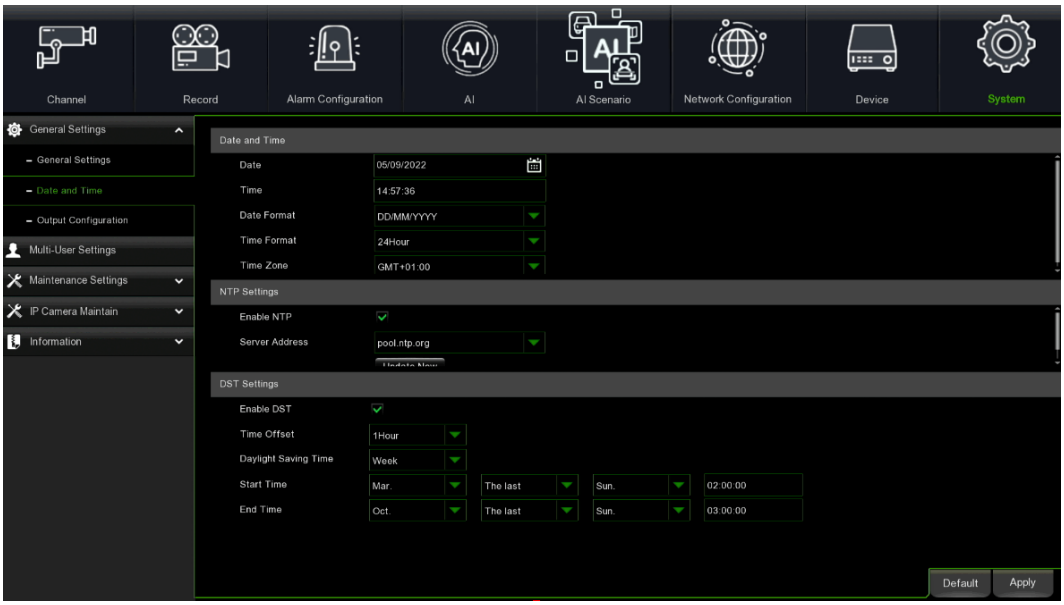
- **Device Name**: Enter the name of the HVR. The name may include both letters and numbers.
- **Device ID:** Enter the HVR ID. The device ID is used to identify the HVR and can only consist of numbers. For example, 2 HVRs are installed in the same place. The device ID is 000000 for one of the HVRs and 111111 for the other HVR. Select the value (i.e. days) between the suggested options. If you want to control only the HVR with Device ID 111111, you can enter Device ID 111111 on the login page to perform further operations with the remote control.
- **Language:** Select the desired system menu display language. Multiple languages are available.
- **Video Format:** Select the correct local video standard.
- **Menu Timeouts**: Click on the drop-down menu to select the time frame after that the HVR will exit the Main Menu in case of inactivity. To disable this function, select “OFF” (password protection will be temporarily excluded).
- **Web Session Timeouts**: Enter the time in minutes after that the web session will exit and ask for access credentials. Exiting the web session can be disabled for Preview/Playback only.
- **Mode:** Two modes can be set:
    - **Record Channel:** this section can be used to define that channels, analogue and/or IP, belong to the selected Disk Group. The “Select all” and “Invert Selection” all buttons can be used to add all the available channels to the group or invert the selection made.
    - **Analog Channels:** if the option is active, it can be used to add the channels related to analogue cameras to the group.
- **Show Wizard**: Click on the check box if you want to display the Startup Wizard every time you turn on or restart the HVR.

Note:

- For technical details regarding resolution, see "**Section 6 - 1097/574 1097/578 and 1097/576 specifications (PAL format)**" and "**Section 7 - 1097/624 1097/628 and 1097/626 specifications (PAL format)**”.

3.11.1.2 Date and Time

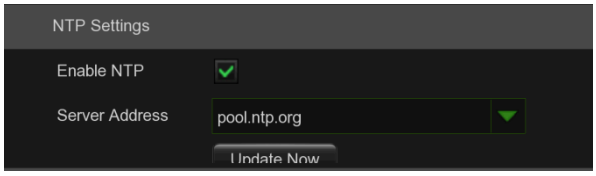
1. **Date and Time**: The date and time can be set.



- **Date**: Click on the calendar icon to edit the date.
- **Time**: Click on the dialogue box to change the time.
- **Date Format**: Select your preferred date format.
- **Time Format**: Select your preferred time format.
- **Time Zone:** Select the time zone for your region or city.

2. NTP Settings

The NTP (Network Time Protocol) function allows the HVR to automatically synchronize its clock with a time reference server. This allows for precise time adjustment at all times (the HVR will automatically synchronize periodically).



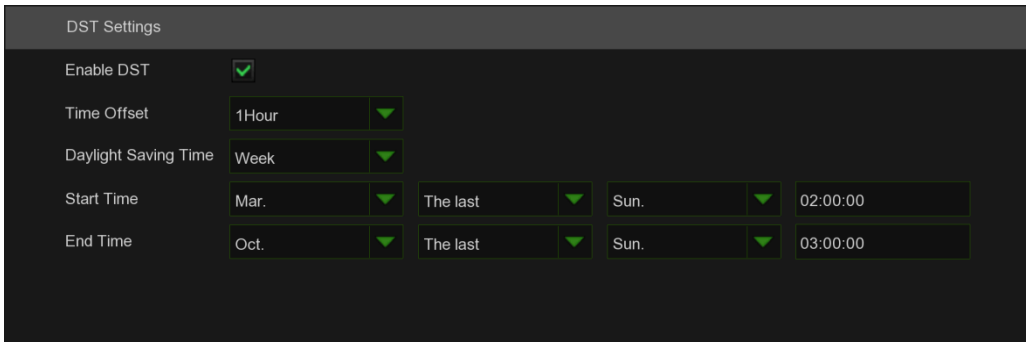
Check to enable **NTP**, select a **Server Address** and click on the **Update Now** button to manually synchronize the date and time.

Click on **Apply** to save the settings.

When the NTP function is enabled, the system time is updated at 00:07:50 every day or at every system startup.

3. DST Settings

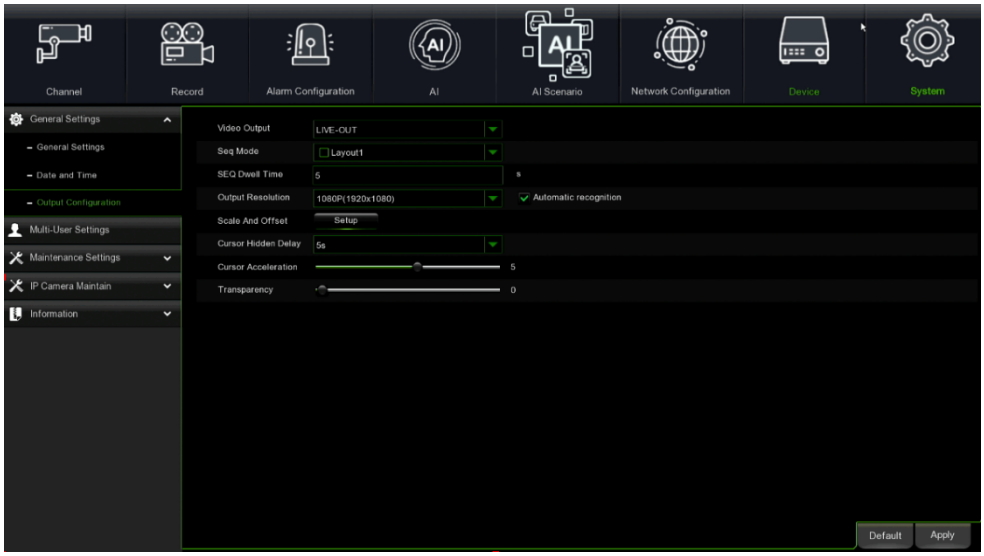
The DST (Daylight Saving Time) function can be used to select the time difference due to daylight saving time in your local time zone or region.



- **Enable DST**: If daylight saving time applies to your local time zone or region, check this option to enable it.
- **Time Offset**: Select the time difference due to daylight saving time in the local time zone. This is the difference in minutes between Coordinated Universal Time (UTC) and local time.
- **Daylight Saving Time:**
  - **Week**: Select the month, day and time of the start and end of summer time. For example, 02.00 on the first Sunday of a given month.
  - **Date**: Select the start date (click the calendar icon), end date and daylight saving time.
- **Start Time / End Time**: Set the start **time** and end time of daylight saving time.

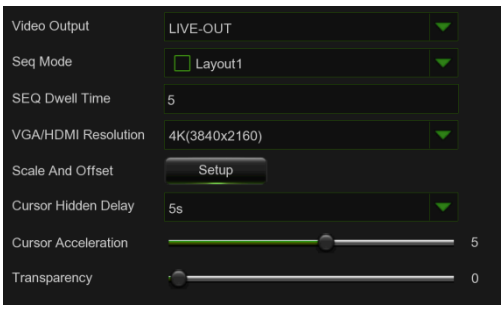
3.11.1.3 Output Configuration

This menu can be used to configure the video output parameters.



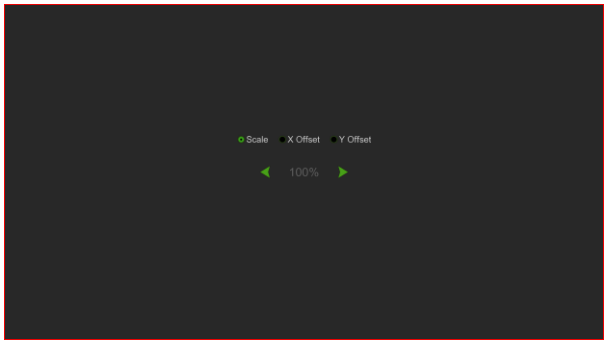
- **Video Output**: Select the output options:
  - **LIVE-OUT** can be used to configure the main output parameters.
  - **SPOT OUT:** This option is used to configure the spot output parameters on BNC.

1. LIVE-OUT



Select **LIVE-OUT** from the Video Output drop-down menu.

- **SEQ Mode**: Select the video channels to be viewed when the HVR is in sequence mode.
- **SEQ Dwell Time:** Enter the maximum time (in seconds) during that you want to display a video channel in sequence mode before switching to the next video channel (maximum 300 seconds).
- **Output Resolution**: Select a video resolution compatible with your monitor. The 1920 x 1080 resolution is suitable for most monitors. If the HVR supports 4K output resolution, you can select 4M (2560 x 1440) or 4K (3840 x 2160) to benefit from the best resolution offered by the 4K monitor.
- **Scale and Offset**: The HVR supports adjusting the size and position of the display screen to suit the monitor or monitor being used.

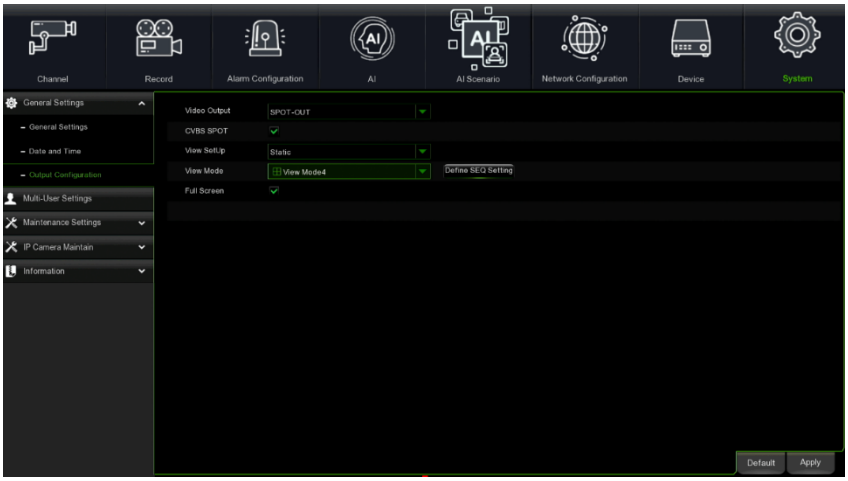


Scale: This can be used to adjust the size of the screen displayed in scale.
X Offset: This can be used to move the displayed screen leftwards/rightwards.
Y Offset: This can be used to move the displayed screen upwards/downwards.

Click once or hold down the left mouse button on the arrow to adjust the size and position; alternatively, slide the mouse wheel to adjust them. Right-click to exit and click on **Apply** to save the changes.

- **Cursor Hidden Delay**: Click on the drop-down menu to select the time after that the HVR will hide the mouse cursor in case of inactivity. To disable this function, select “OFF” (password protection will be temporarily excluded).
- **Cursor Acceleration**: This can be used to adjust the speed at that the mouse cursor moves.
- **Transparency**: Click and hold the cursor on the left or right to change the transparency level of the menu bar and main menu on the screen. Adjust accordingly.

2. SPOT OUT



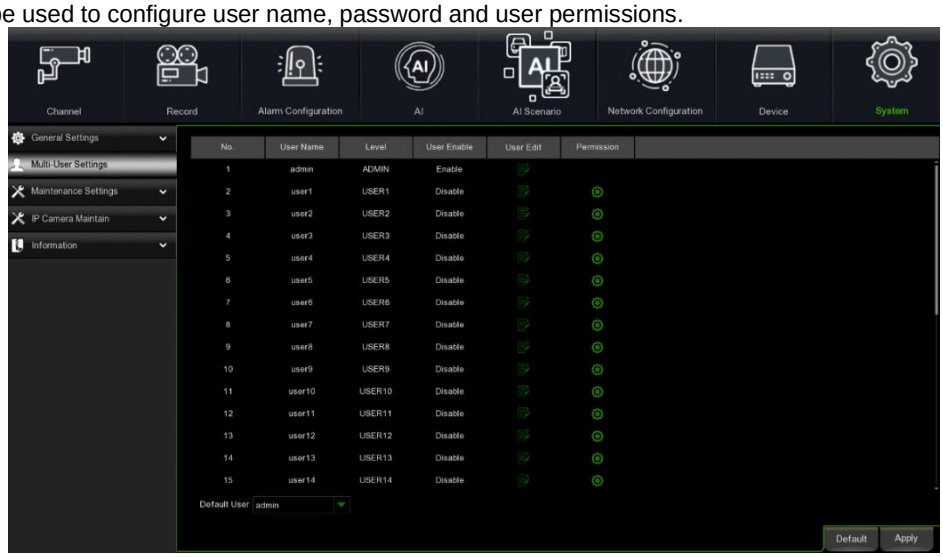
Select **SPOT-OUT** from the Video Output drop-down menu.

- **CVBS SPOT**: This option can be used to enable/exclude CVBS SPOT output.
- **View Setup**: This can be used to set the Static or Dynamic option.
  A static grid allows you to view the channel preferences to be defined.
  - ***Define SEQ Mod:***: button: Select this button to define the order of the channels displayed on the grid.
  - **View Mode**: Select the layout for displaying channels on the grid.

  A dynamic grid view can be defined by setting a channel grid rotation time sorted as preferred.
  - ***Spot Poll Setting***: Select this button to define the rotation order of the channels displayed on the grid.
  - **Seq Mode:** This option makes it possible to set the Layout for the cyclic rotation function. Possible values: Layout1, Layout4, Layout9, Layout10, Layout10-1, Layout12, Layout13, Layout13-1, Layout14, Layout16, Layout19, Layout20, Layout22.
  - **SEQ Dwell Time:** Time interval of the cyclic rotation function. The default setting is 5 seconds. The user can change this setting according to their needs. The minimum set time is 1 second.
- **Full Screen:** When enabled in Dynamic Mode, this option can be used to view cyclically rotating channels in full-screen mode. If enabled in Static Mode, this option makes it possible to display channels only on the set grid.

3.11.2 MULTI-USER SETTINGS

This menu can be used to configure user name, password and user permissions.

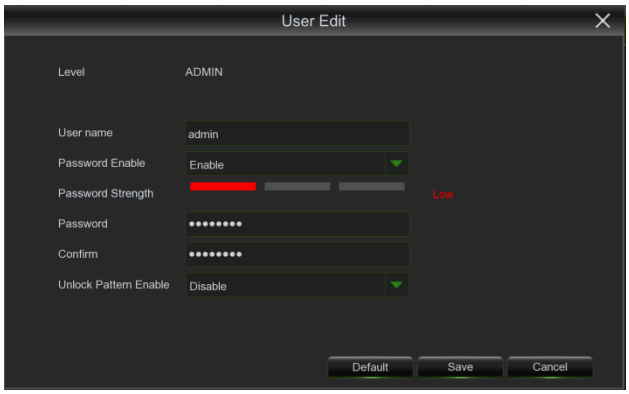


The system supports the following account types:

- **ADMIN - System Administrator**: The administrator has complete control of the system and can change administrator and user(s) passwords and enable/exclude password protection.
- **USER - Normal user**: users can only access the live view, search, playback, etc. functions. You can set up multiple user accounts with different levels of system access.

1. Changing Password

To change the password for administrator or user accounts, click on the User Edit icon . The password consists of at least eight characters and may consist of digits and letters. Enter your new password a second time to confirm it, then click on **Save** to save it. For authentication, you will need to enter your old password.

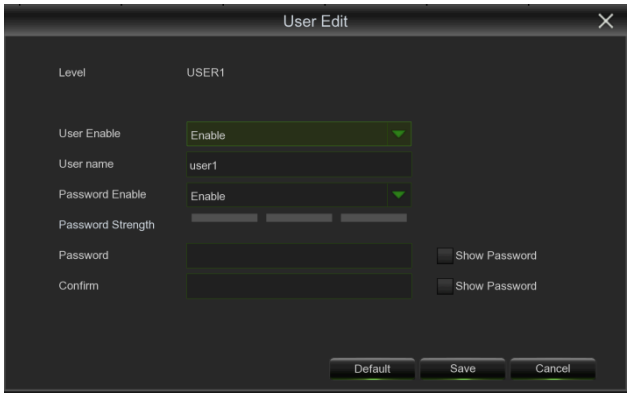


Password Enable: It is strongly recommended that you enable your password to protect your privacy. If you want to disable password protection, make sure the HVR is in a safe place.

2. Add New Users

No.	User Name	Level	User Enable	Password Enable	User Edit	Permission
1	admin	ADMIN	Enable	Enable		
2	user1	USER1	Disable	Disable		
3	user2	USER2	Disable	Disable		
4	user3	USER3	Disable	Disable		
5	user4	USER4	Disable	Disable		
6	user5	USER5	Disable	Disable		
7	user6	USER6	Disable	Disable		

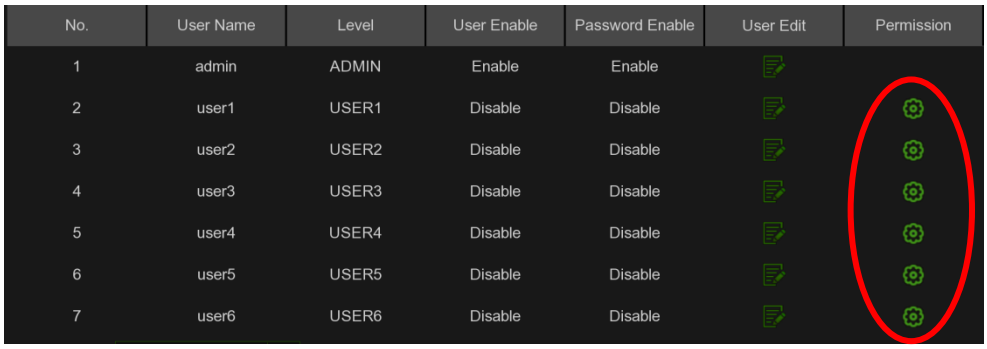
- Select one of the currently disabled user accounts and click on the User Edit icon .



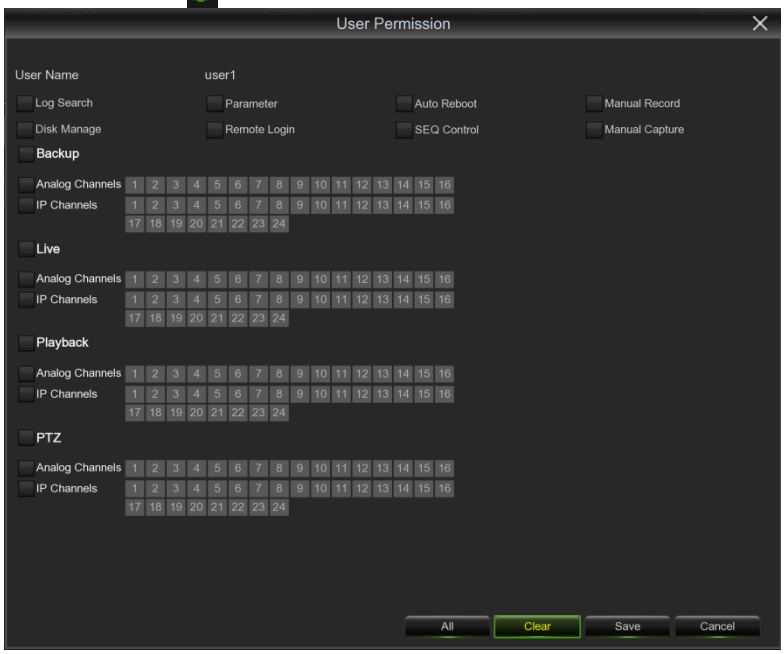
- Select **Enable** from the drop-down menu next to **User Enable**.
- Click on the field next to **User Name** to change the account username.
- Select **Enable** from the drop-down menu next to **Password Enable**.
- Click on the field next to **Password** to enter the desired password.
- Click on the field next to **Confirm** to re-enter the password.
- Click on **Save**. For authentication, you will need to enter the Administrator password.

3. Setting User Permissions

The administrator account is the only one with total control of all system functions. You can enable/exclude access to certain menus and functions for each user account.



- Click on the icon under the Permission tab.



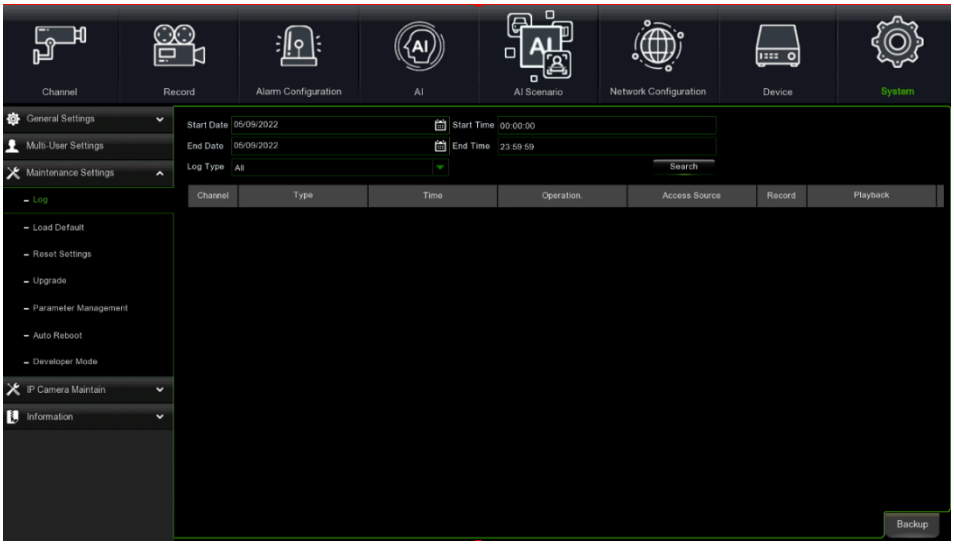
- Check the boxes next to the menus and system capabilities that the user can access. Click on **All** to check all boxes. Click on **Clear** to not check any boxes.
- Click on **Save** to save the changes made.

3.11.3 MAINTENANCE SETTINGS

In this section, you can search and view the system log, load the default settings, update the system, export/import system parameters and manage the automatic system reboot.

3.11.3.1 Log

The *log* systemic contains important system events, such as motion alarms and system signals. You can easily create a backup file of the *log* system for a certain period of time by loading it onto a USB flash drive.

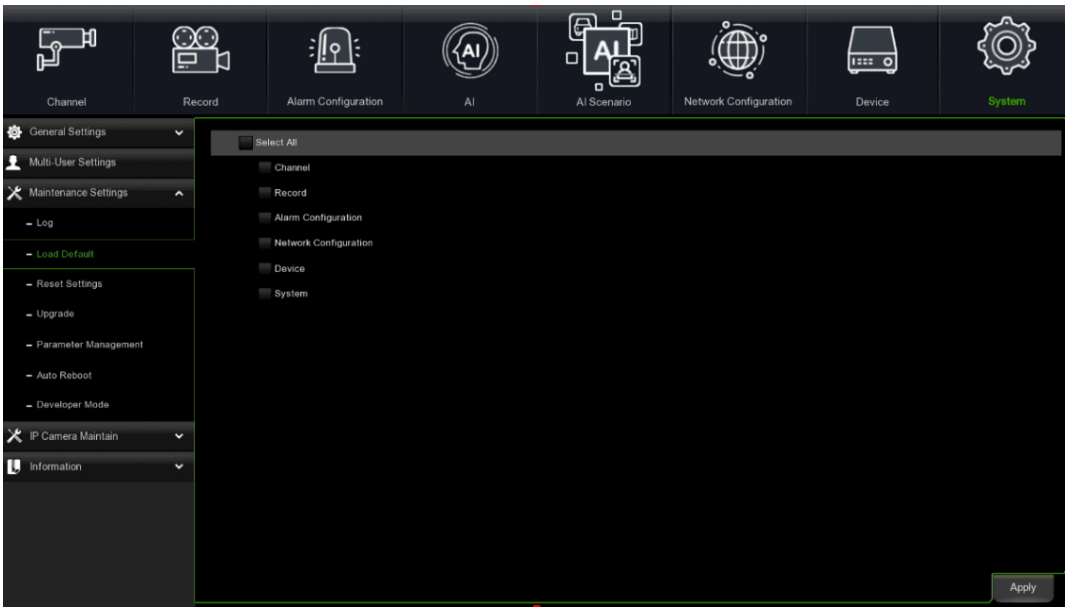


Log Searching and Backing Up:

- Click on the field by the side of **Start Date** & **Start Time** to select the starting date and time of the displayed calendar search.
- Click on the field next to **End Date** & **End Time** to select the end date and time of the search from the displayed calendar.
- Select the type of events you are looking for from the drop-down menu next to **Log Type** or select **All** to view the entire system log for the selected period.
- Click on **Search**.
- Browse system log events by search period:
  - Video events can be played back instantly by clicking the **Playback** column. Right-click to return to the search results.
  - Use the / buttons in the bottom right of the menu to switch between the system event log pages.
- Click on **Backup** to create a backup of the system log for the period you are looking for. Check that the flash drive is connected to the USB port of the HVR.
- The backup drive menu appears. Go to the folder in that to save the backup file and click on **OK** to start the operation.

3.11.3.2 Load Default

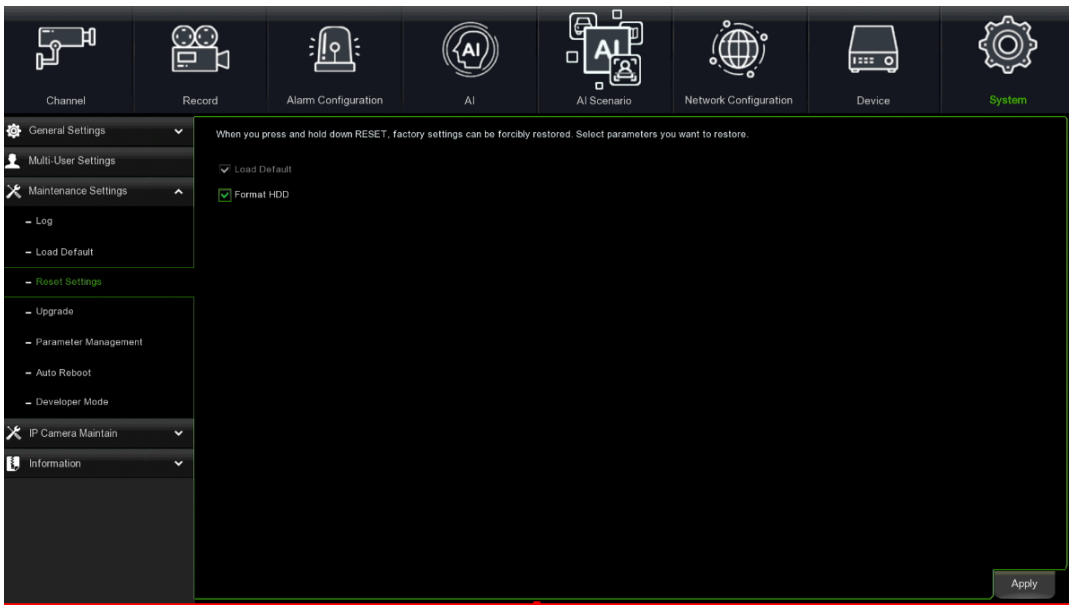
Restore the HVR to factory settings. You can select to reset all settings at once or only the specific menu settings. Restoring the default settings will not erase the recordings and snapshots saved on your hard disk.



Select all items to reset or check **Select All** to select all items. Click on **Apply** to load the default settings for the selected items.

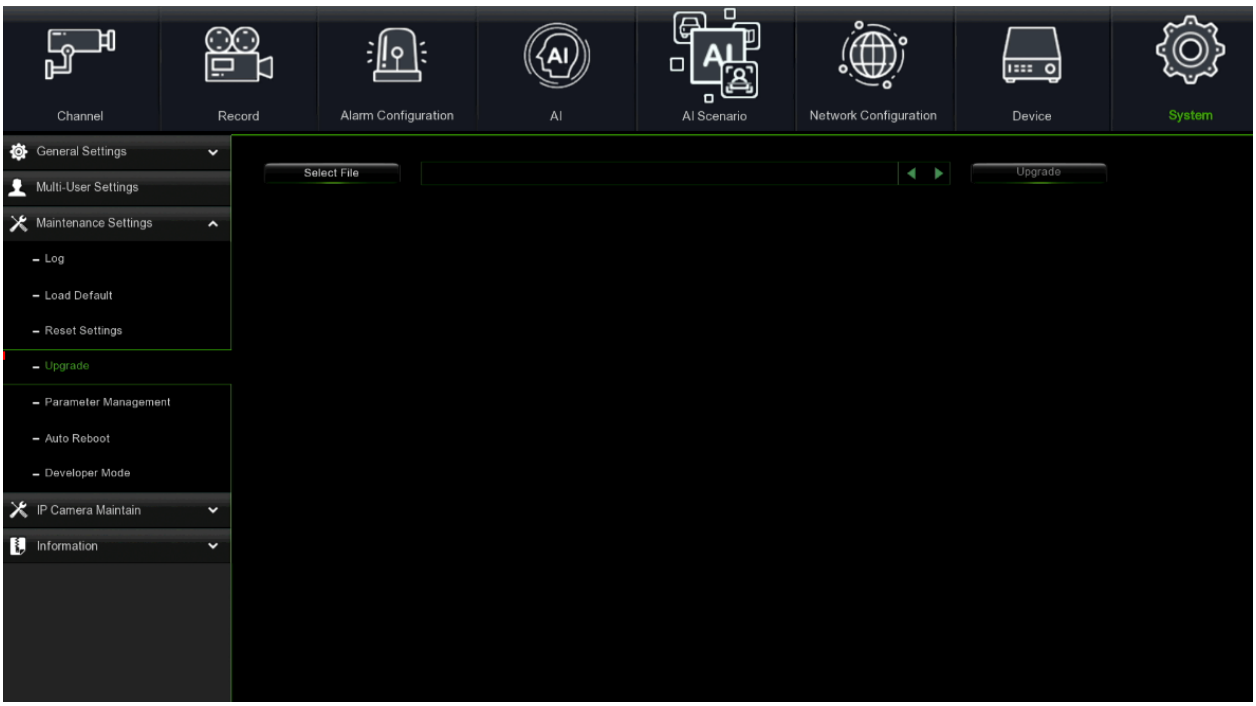
3.11.3.3 Reset Button

Put flag on Format HDD, it is possible to erase the recording when the RESET button is pressed to reset to factory settings (Load Default).



3.11.3.4 **Upgrade**

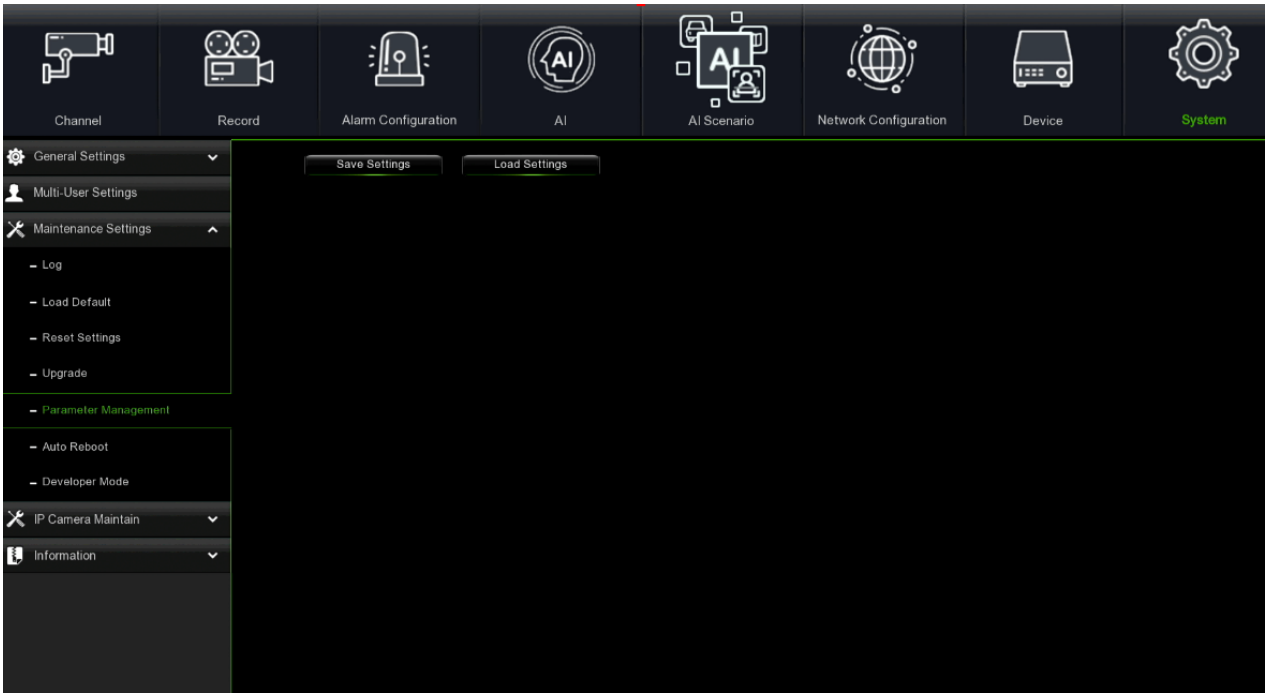
This function can be used to update the HVR firmware.



- Copy the firmware file (.sw file) to the USB flash drive and insert it into the USB port of the HVR.
- Click on the **Select File** button to select the firmware file on the USB flash drive, then click on OK.
- Click on the **Upgrade** button to start the system upgrade. The system update will take about 5-10 minutes: DO NOT turn off the HVR or remove the USB flash drive from the HVR during the firmware update.

3.11.3.5 **Parameter Management**

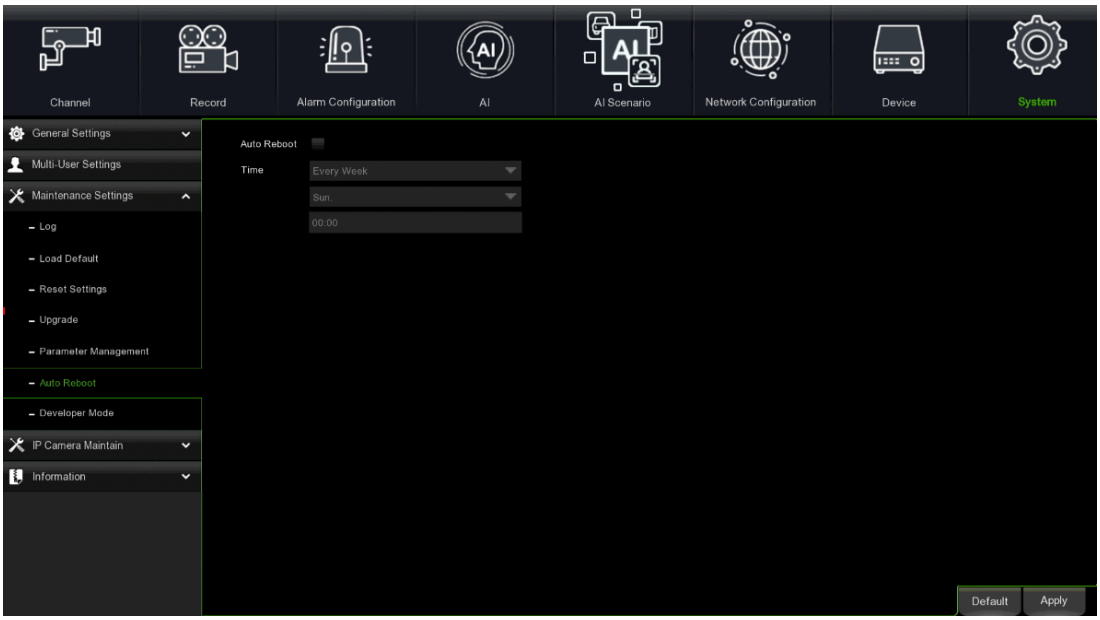
You can *export* and main menu settings on a USB flash drive or import a configuration file exported from a USB flash drive to the HVR.



- **Save Settings**: Click to save the current HVR system settings to the USB flash drive. For authentication, you will need to enter the Administrator password.
- **Load Settings**: Once you have created the system settings export, you can import them to another HVR. Click on the **Load Settings** button to access the system settings file that you want to import from the USB flash drive. For authentication, you will need to enter the Administrator password.

3.11.3.6 **Auto Reboot**

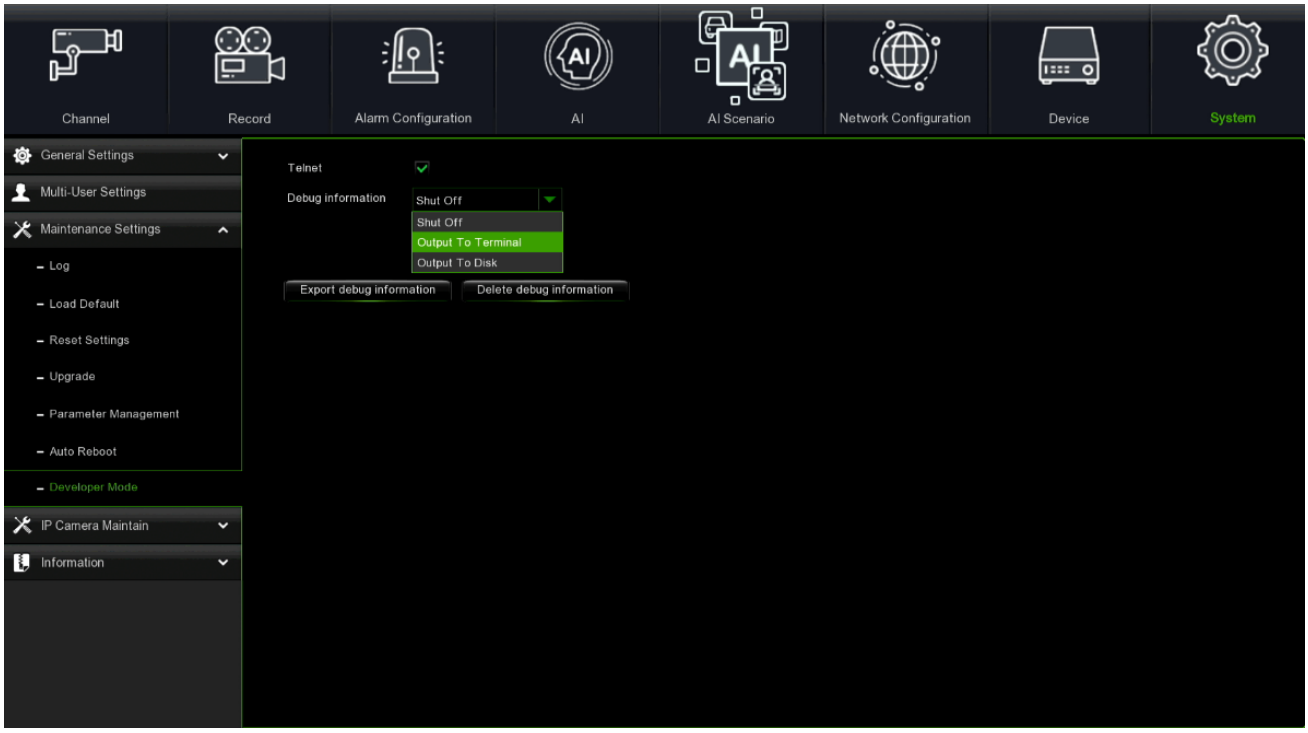
This menu allows the system to automatically reboot the HVR periodically. It is recommended to leave this function enabled, as it preserves the operational integrity of the HVR.



- **Auto Reboot**: Click to enable.
- Choose **SPOT-OUT** from the Video Output drop-down menu.

3.11.3.7 **Developer Mode**

This mode is only supported by some devices. This menu allows the log of the serial port to be saved on a USB stick.

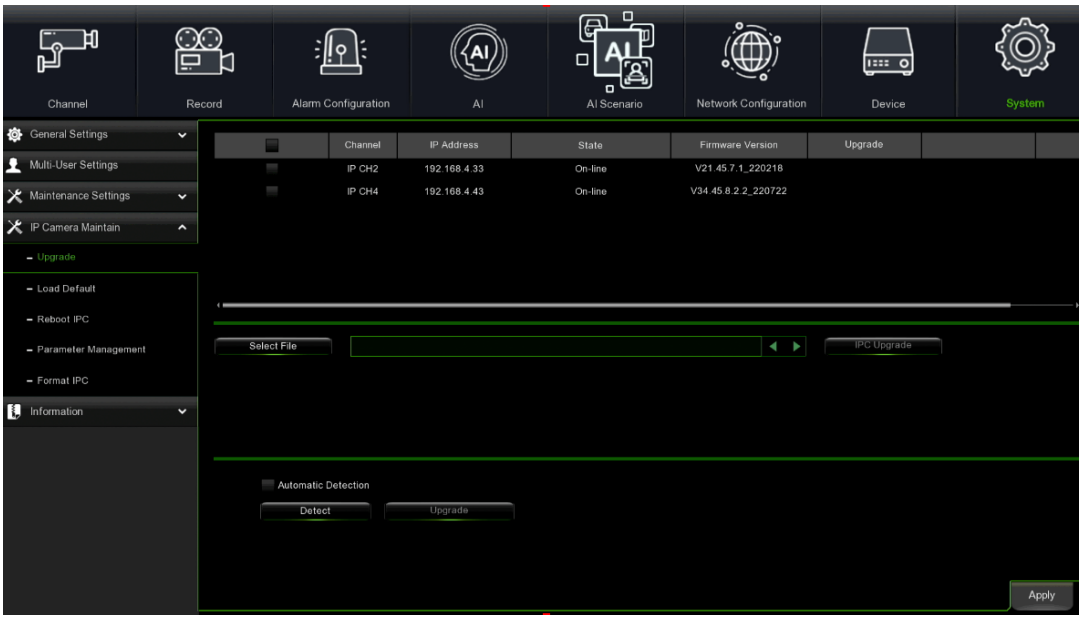


Telnet: Check the box to enable the function. Telnet can be used to access the device.
Debug information: Select the location to save the logs.
- Shut Off: Do not save serial logs.
- Output To Terminal: Exports serial logs to terminal.
- Output To Disk: Exports serial logs to the HDD.
Export debug information: Exports the serial registers to the HDD.
Delete debug information: Deletes the collected serial logs

3.11.4 IP CAMERA MAINTAIN

This menu can be used to update the IP camera firmware and restore its default settings.

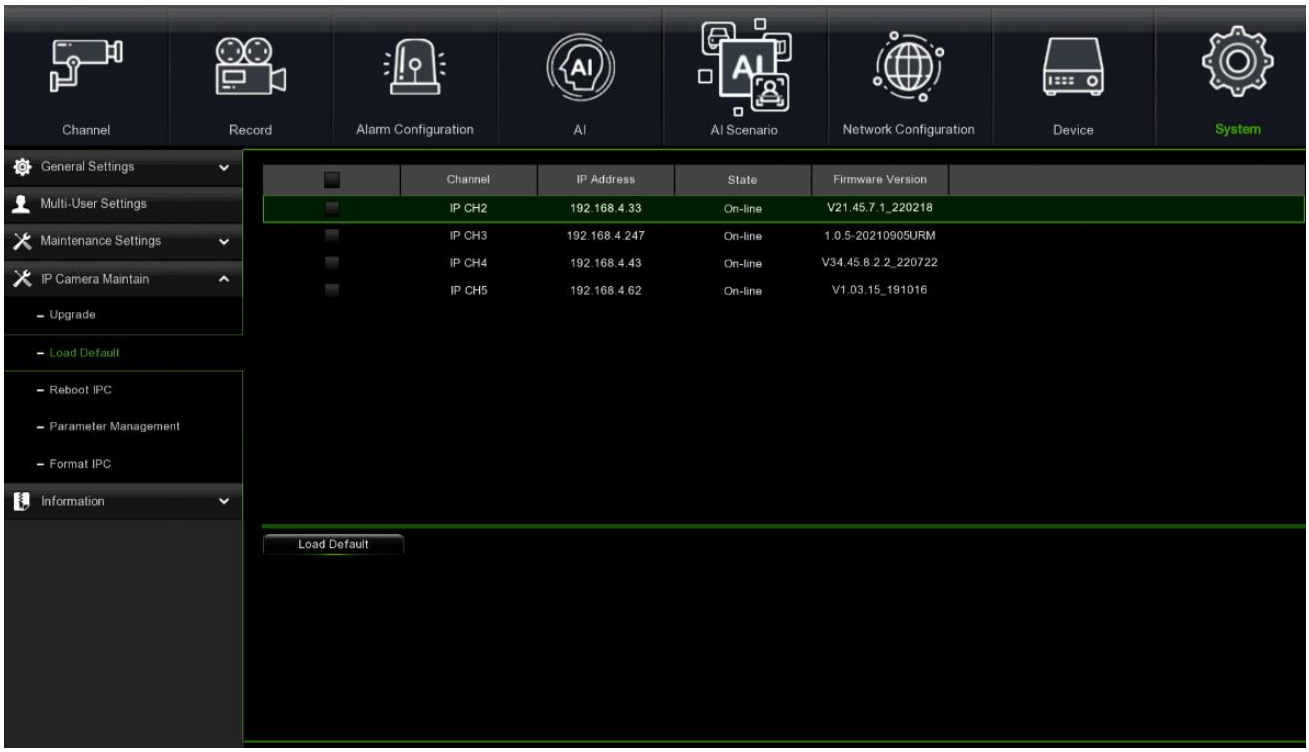
3.11.4.1 Upgrade IP Camera



- Select the IP camera the firmware of that you want to update.
- Click on the **Select File** button to select the file to be loaded on the USB flash drive, then click on **OK**.
- Click on the IPC Upgrade button to start the upgrade. For authentication, you will need to enter the Administrator password. DO NOT turn off the HVR and IP camera or remove the USB flash drive during the update.

3.11.4.2 Load Default Settings for IP Camera

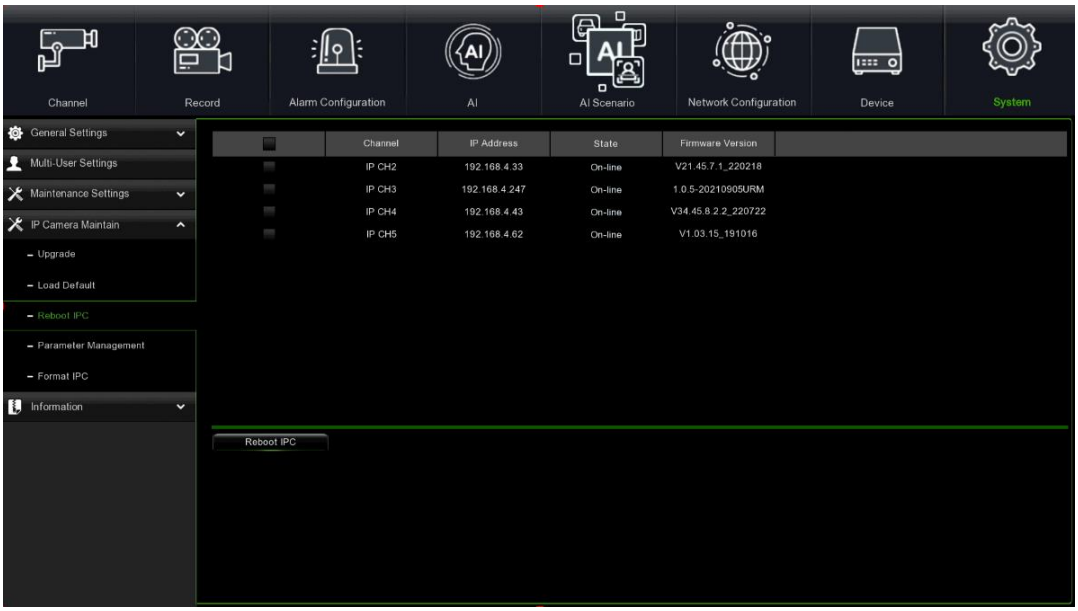
This function can be used to restore the default settings of the IP camera.



- Select the IP camera the default settings of that you want to update.
- Click on **Load Default** to restore the settings. For authentication, you will need to enter the Administrator password.

3.11.4.3 Reboot IPC

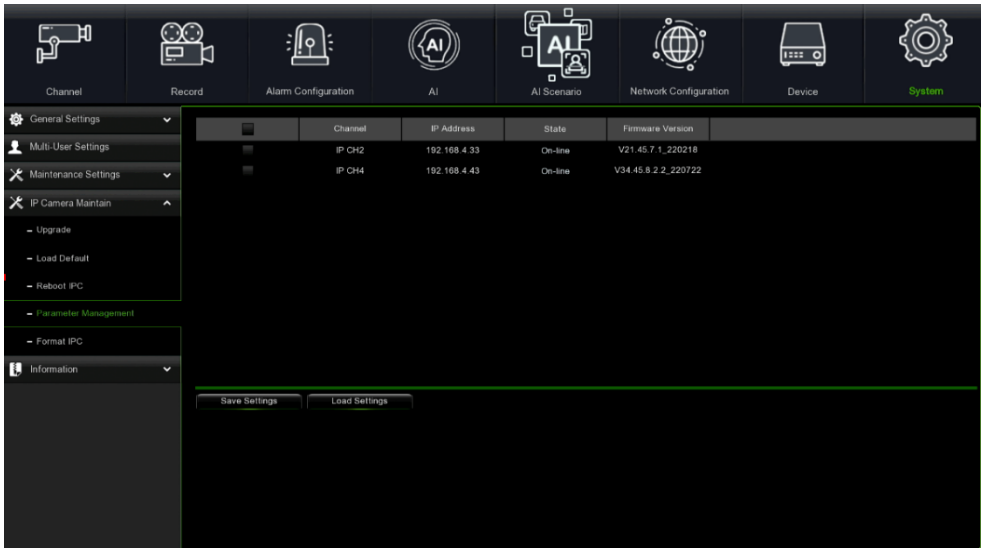
This function allows you to reboot the IP camera.



- Select the IP camera to reboot and click on Reboot IPC; a message will prompt you to enter your password.
- Enter the password and click on the "**Authenticate**" button to reboot the IPC.

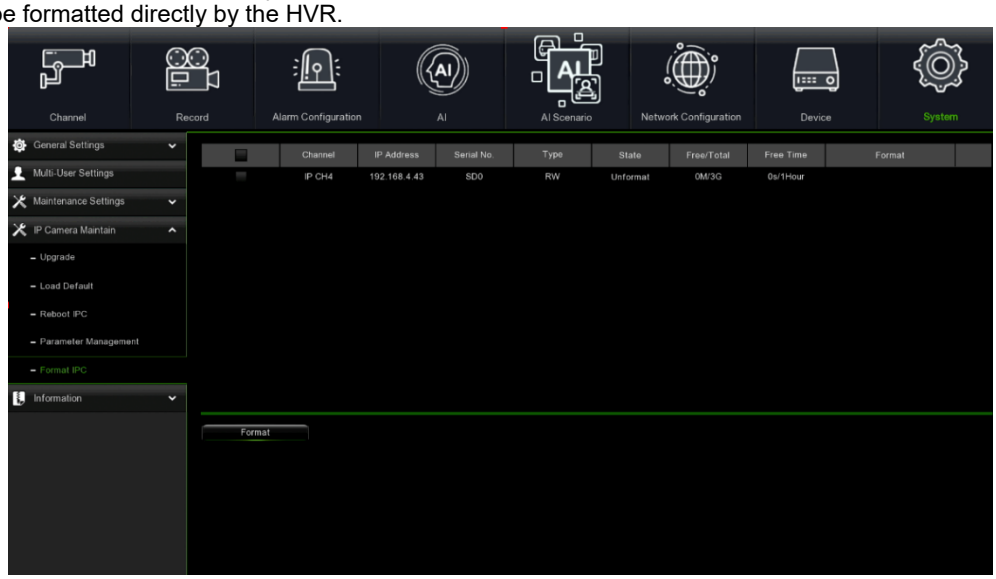
3.11.4.4 **Parameter Management**

This function can be used to save/load camera parameters.



3.11.4.5 **Format IPC**

This function can detect the SD memory card installed inside an IP camera with API protocol, and if the box is checked, the card can be formatted directly by the HVR.



Note: Both the HVR and the IP camera must have firmware version 8.2.2 or further.

3.11.5 INFORMATION

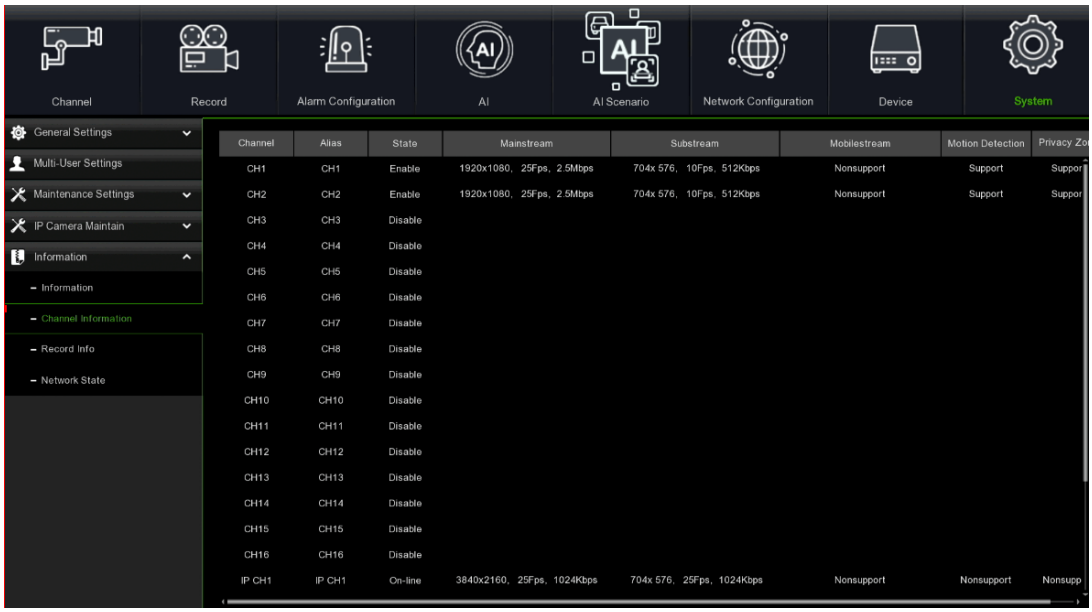
This menu can be used to view system information, channel information, logging information and network status.

3.11.5.1 Information

This menu can be used to view system information, such as device ID, device model name, IP address, MAC address, firmware version and more.
If the HVR supports P2P function, the P2P ID and QR code will appear on the information page. Scan this QR code with a mobile app to view the HVR remotely.

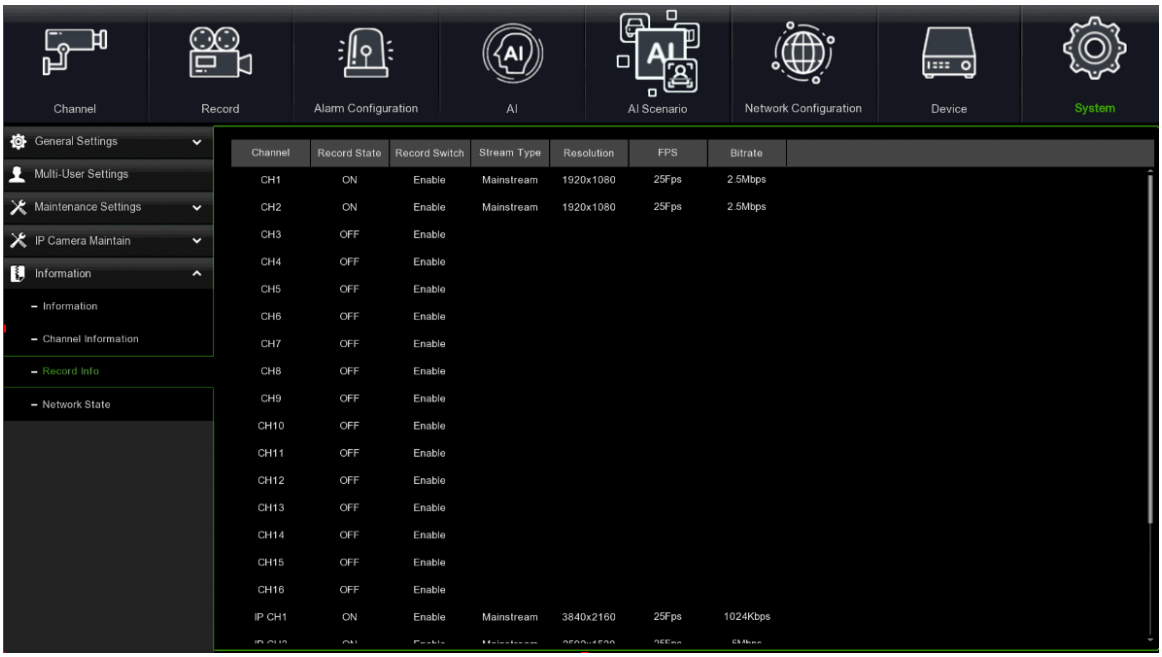
3.11.5.2 Channel Information

The administrator has full control of the system and can change both administrator and user passwords and enable/disable password protection.



3.11.5.3 **Record Information**

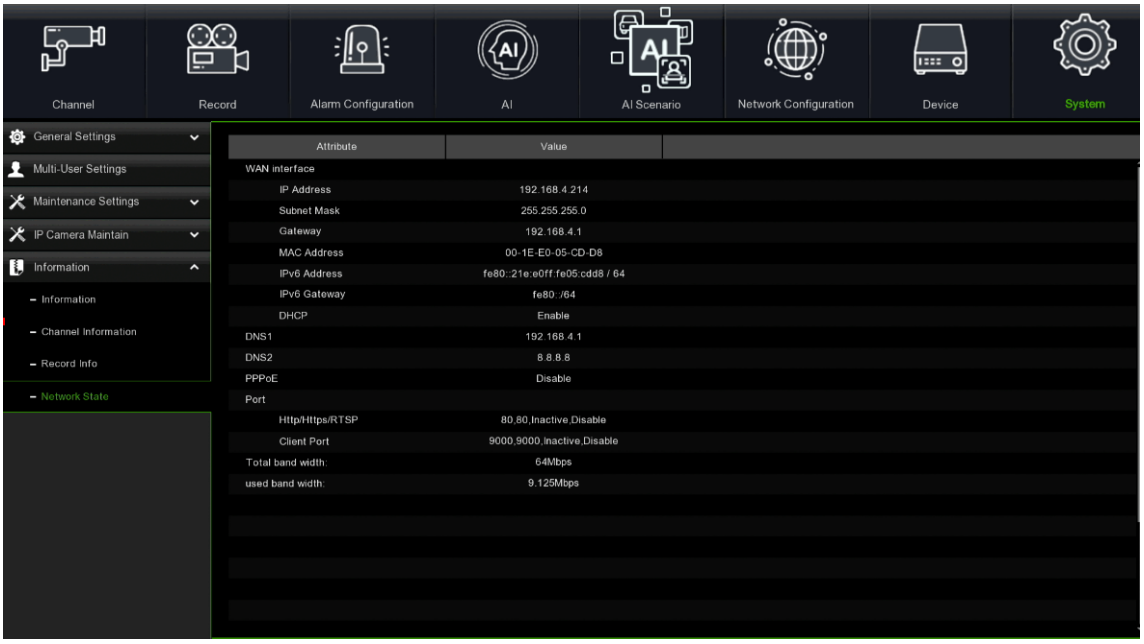
This can be used to view the recording *information* for each connected camera, such as bitrate, flow type, recording resolution and frame rate (FPS).



3.11.5.4 **Network State**

This can be used to view the network *information*.

- **Total Band Width:** This shows the total bandwidth of the HVR for the IP cameras.
- **Used Band Width:** This shows the bandwidth used by the IP cameras.

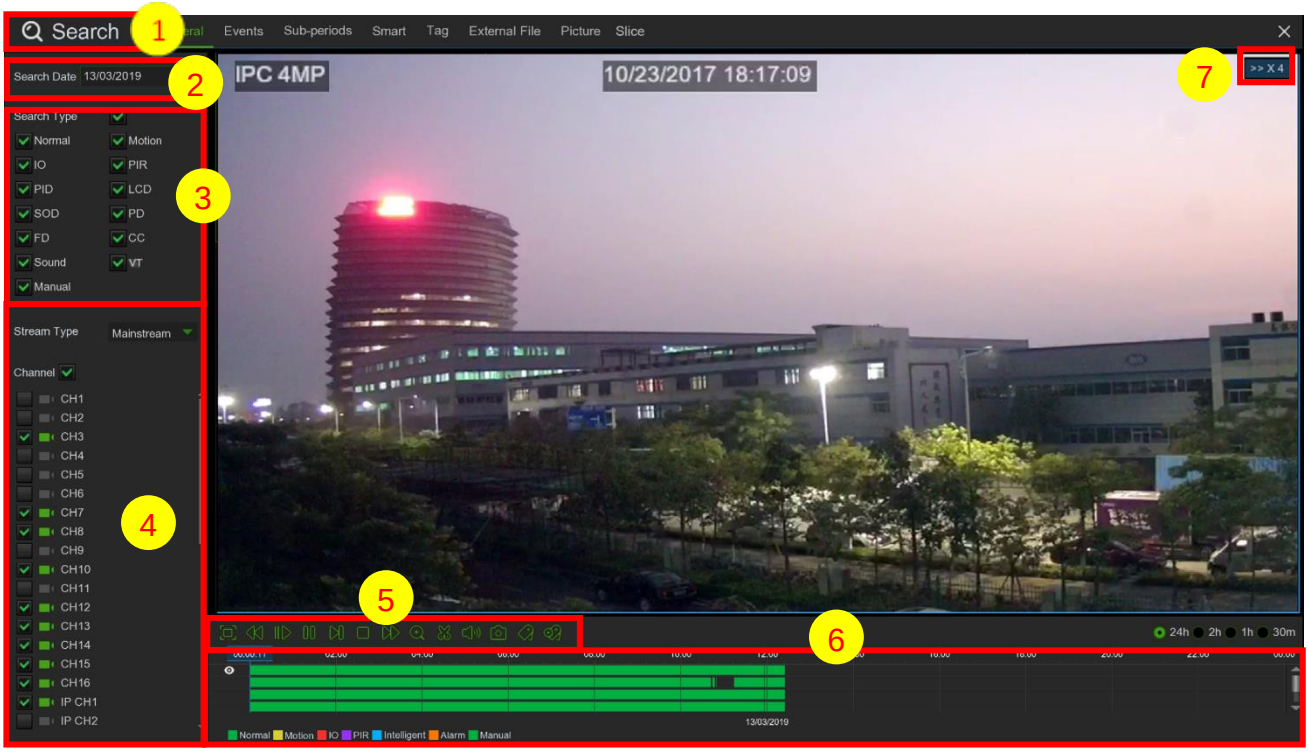


3.12 PLAYBACK & BACKUP

The Search function can be used to search and play back previously recorded videos and snapshots stored on the HVR hard disk. You can select to play back videos that match the recording program, manual recordings or motion events only. The Backup function allows you to save important events (both video and snapshots) to a USB flash drive.

3.12.1 USING THE SEARCH FUNCTION

Click on the **Search** button in the Start menu to access the search section.



1. **Search Options**: The system offers various search and playback methods: General, Events, Sub-periods, Smart and Pictures.
2. **Search Date**: Search for a playback by date.
3. **Search Type**: The system offers various types to restrict the search.
4. Click the field next to **Confirm** to enter the password again.
5. **Video Playback Controls**: To control the video playback.

Enlarge video playback full screen

Rewinding, x2, x4, x8 and x16

Slow motion playback, 1/2, 1/4 and 1/8, 1/16 speed

Playback

Pause

Play one frame at a time. Click once to play a frame of the video

Stop

Fast forward x2, x4, x8 and x16

Digital Zoom: Click to zoom out, then click and scroll through a camera image during playback to zoom out on the selected area. Right-click to go back to normal playback.

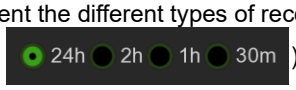
Video Clip. Quickly save part of the video to a USB flash drive. For more information, see 3.12.2.1 Video Clip Backup

Save Video Clip.

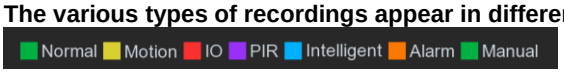
Volume Control: Slide the slider bar to increase or decrease the volume.

Snapshot: Capture a snapshot image on the USB flash drive. If video playback is in split-screen mode, move the mouse cursor to the channel to be captured, then click on the icon to save the snapshot.

Default Tag/Add Customized Tag: for more details, see the section 3.2.6 - 3.2.7

6. **Timeline:** Continuous recordings are displayed with coloured bars to represent the different types of recordings (see the key at the bottom right of the screen). Use the Timeframe options () to display a shorter or longer period.

The various types of recordings appear in different colours:

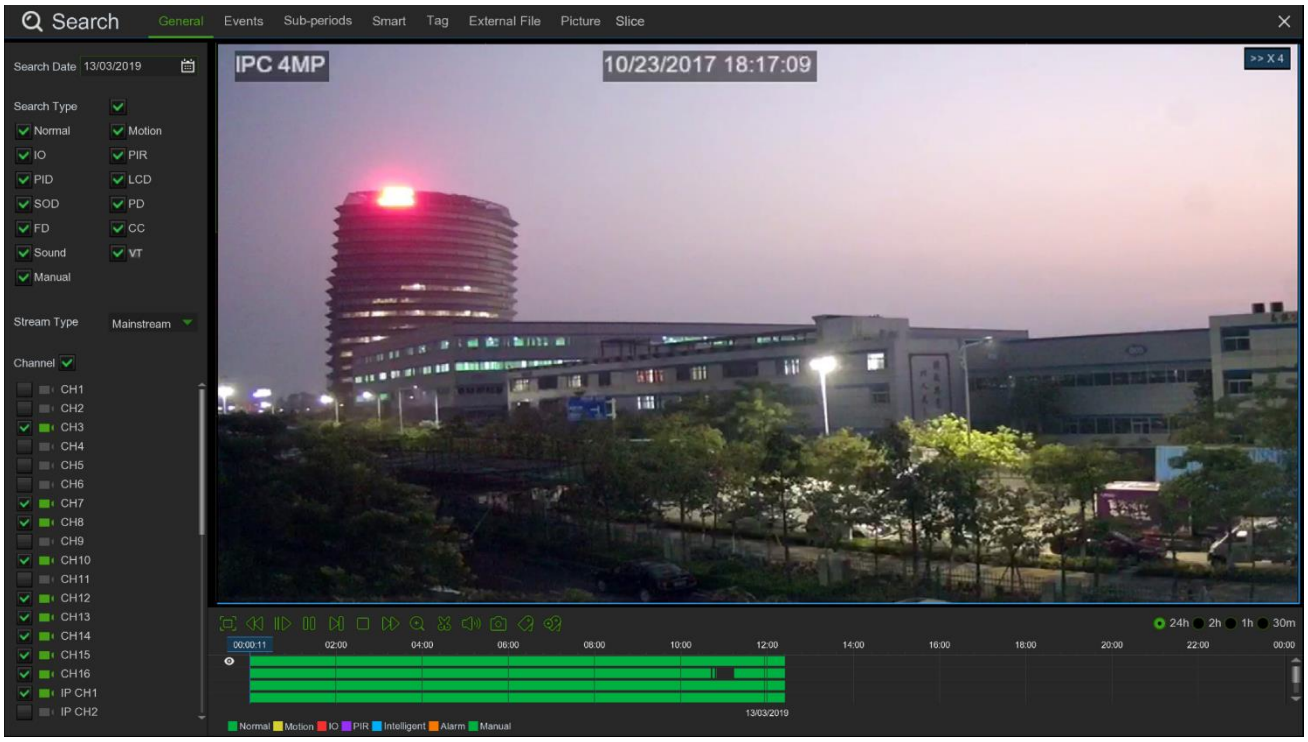


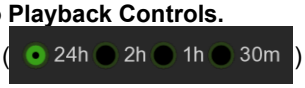
- Continuous recording is **green**.
- Motion recording is **yellow**.
- I/O recording is **red**.
- PIR recording is **purple**.
- Intelligent recording is **blue**.
- Alarm recording is **orange**
- Manual recording is **green**.

7. **Playback Status:** Displays the video playback status.

3.12.2 SEARCH & PLAY VIDEO IN GENERAL

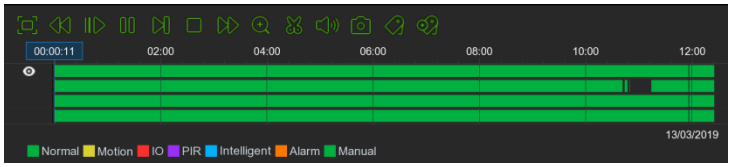
This menu can be used to search and play back recordings based on the selected date.



- Select a date from the calendar to search for video recordings.
- Select a search type.
- Check the channels to be searched or check **Channel** to search for all connected channels.
- The search result will be displayed on the timeline from 00:00 to 24:00.
- Click on the button to start playback.
- Control playback with **Video Playback Controls.**
- Use the Timeframe options () to display a shorter or longer period.

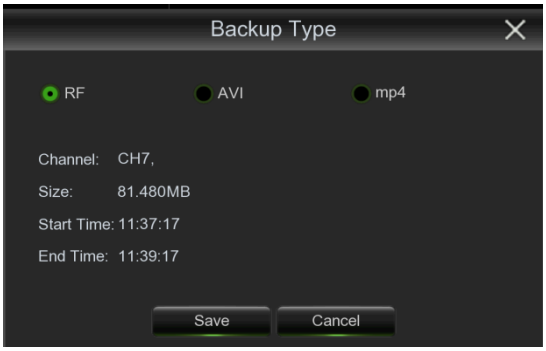
- To quickly save a portion of the video to a USB flash drive during playback, use the backup function. **Video Clip**.

3.12.2.1 Video Clip Backup

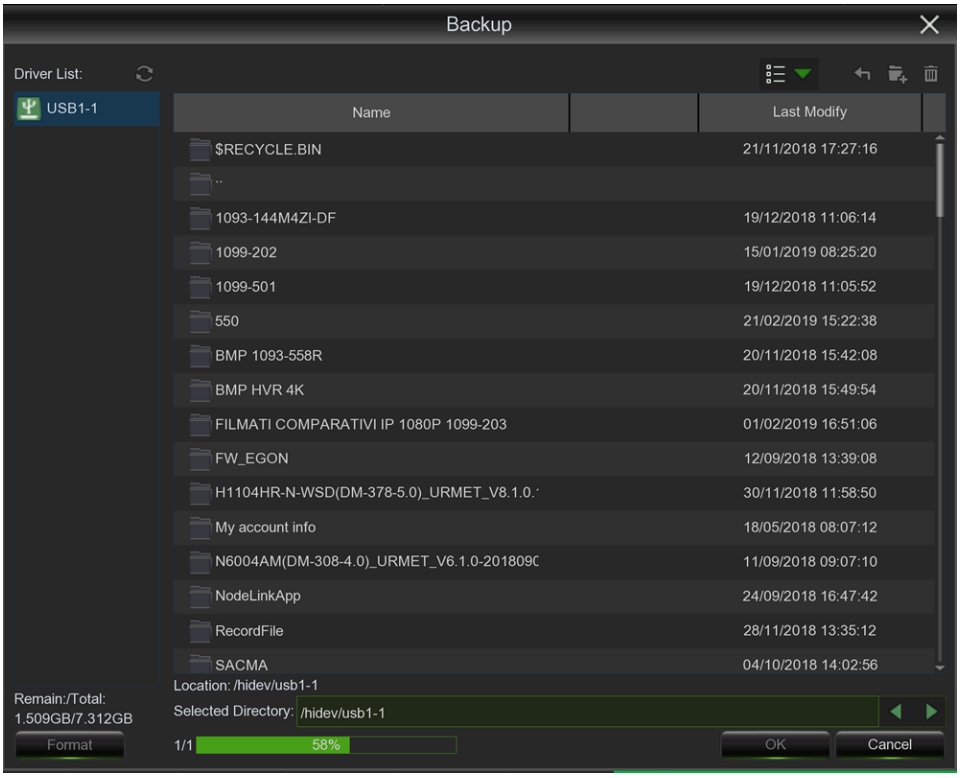


- Insert the USB flash drive or USB DVD Writer USB drive into the HVR.

- Start playback of a video recording.
- Click on the icon .
- Check the channel(s) you want to back up video clips.
- Move the mouse cursor to the timeline at the start point of the video clip.
- Hold down the left mouse button and drag the cursor over the timeline to the end point of the video clip.
- The icon turns into the icon , click on to save the video clip.
- Select a file type for backup and click the **Save** button to save the video clips. Check that the USB flash drive has enough space to save video clips.



- The backup drive menu appears. Go to the folder where you want to save the backup files.
- Click on **OK** to start. The progress bar on the bottom of the window shows the progress status of the backup.



3.12.3 EVENT SEARCH, PLAYBACK & BACKUP

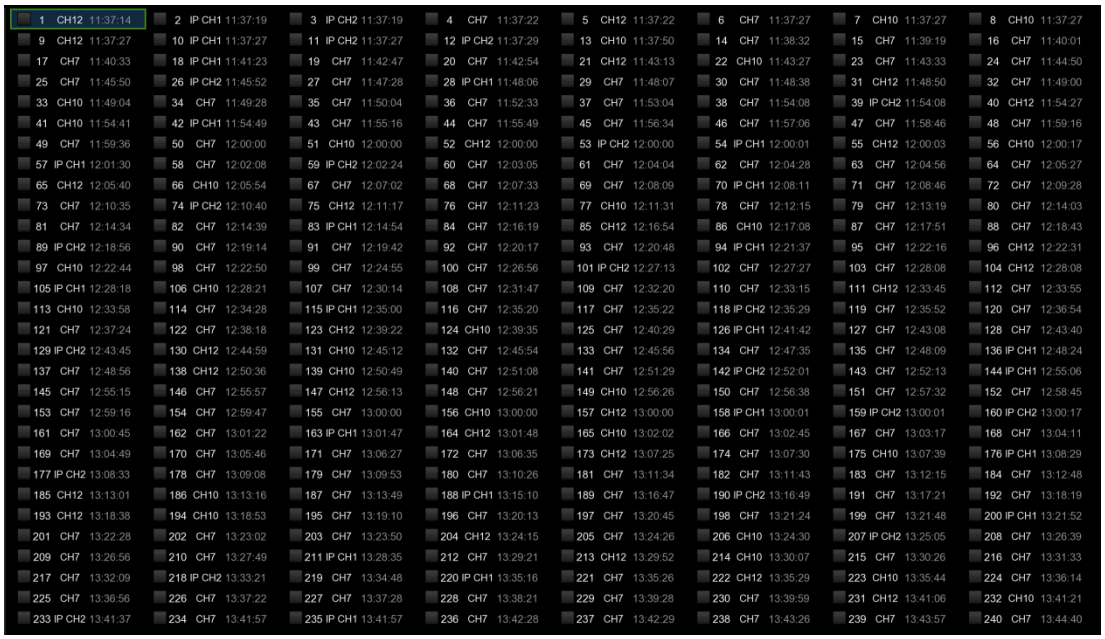
The event search can be used to view a list of video recordings, with the channel, start/end time and type of recording appropriately summarized. You can also quickly save events to a USB flash drive.

Search, playback and backup of events:

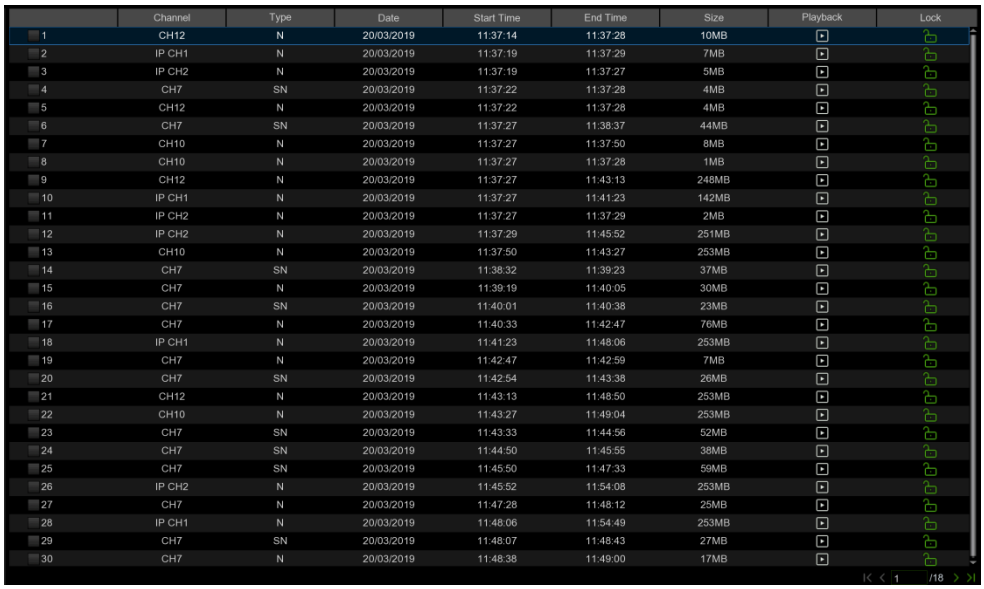
1. Select the date and time to search.
2. Check the types of recordings to be searched for or check **Search Type** to select all of them.
3. Select the channels to search or check **Channel** to select all channels.
4. Click on the icon to start the search.
5. The events that match the search criteria are displayed as a list. Double-left-click on one of the events to play the video immediately.
6. Click on the icons at the bottom right of the menu to browse the event pages or enter the page you wish to consult.
7. You can change the display of the list by clicking the icons below, that are visible at the bottom left of the screen:

Thumbnails view. You can view snapshots of the events.

List view. The events will be displayed in a list.



Detailed view: This can be used to view the details of the events.

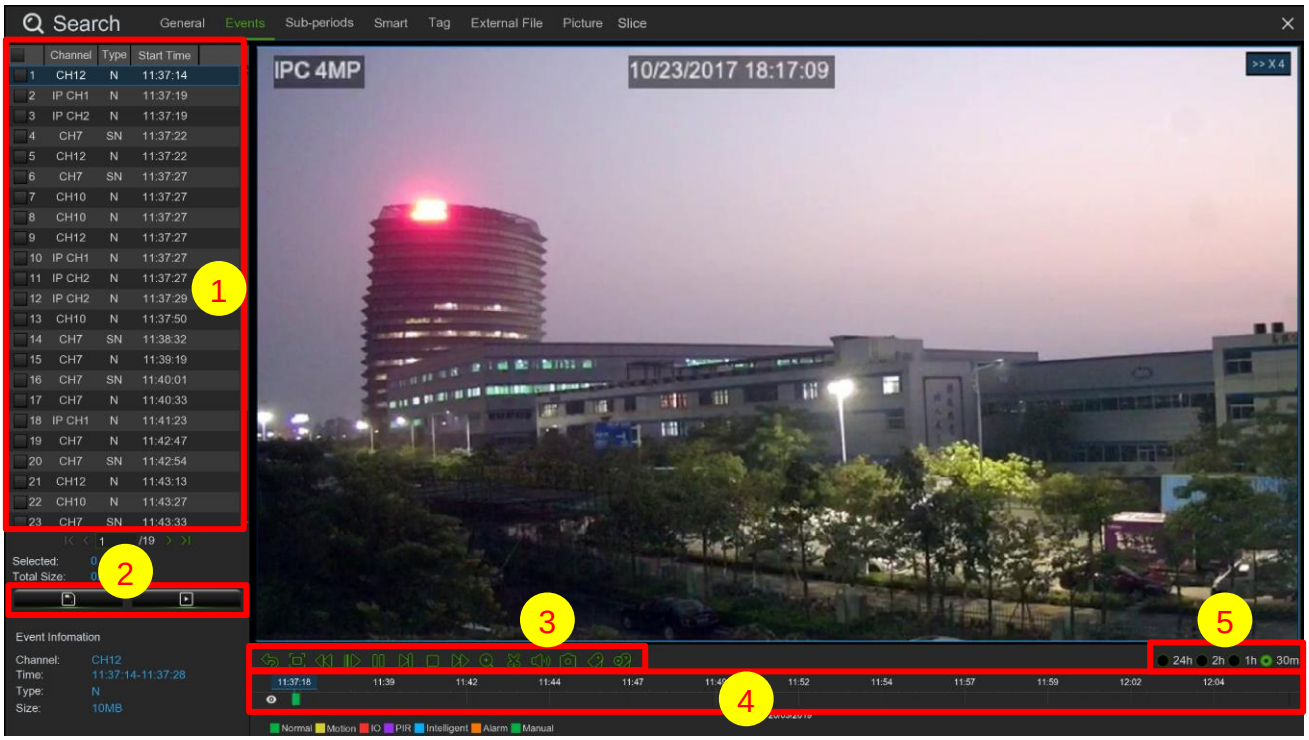


	Channel	Type	Date	Start Time	End Time	Size	Playback	Lock
1	CH12	N	20/03/2019	11:37:14	11:37:28	10MB		
2	IP CH1	N	20/03/2019	11:37:19	11:37:29	7MB		
3	IP CH2	N	20/03/2019	11:37:19	11:37:27	5MB		
4	CH7	SN	20/03/2019	11:37:22	11:37:28	4MB		
5	CH12	N	20/03/2019	11:37:22	11:37:28	4MB		
6	CH7	SN	20/03/2019	11:37:27	11:38:37	44MB		
7	CH10	N	20/03/2019	11:37:27	11:37:50	8MB		
8	CH10	N	20/03/2019	11:37:27	11:37:28	1MB		
9	CH12	N	20/03/2019	11:37:27	11:43:13	248MB		
10	IP CH1	N	20/03/2019	11:37:27	11:41:23	142MB		
11	IP CH2	N	20/03/2019	11:37:27	11:37:29	2MB		
12	IP CH2	N	20/03/2019	11:37:29	11:45:52	251MB		
13	CH10	N	20/03/2019	11:37:50	11:43:27	253MB		
14	CH7	SN	20/03/2019	11:38:32	11:39:23	37MB		
15	CH7	N	20/03/2019	11:39:19	11:40:05	30MB		
16	CH7	SN	20/03/2019	11:40:01	11:40:38	23MB		
17	CH7	N	20/03/2019	11:40:33	11:42:47	76MB		
18	IP CH1	N	20/03/2019	11:41:23	11:48:06	253MB		
19	CH7	N	20/03/2019	11:42:47	11:42:59	7MB		
20	CH7	SN	20/03/2019	11:42:54	11:43:38	26MB		
21	CH12	N	20/03/2019	11:43:13	11:48:50	253MB		
22	CH10	N	20/03/2019	11:43:27	11:49:04	253MB		
23	CH7	SN	20/03/2019	11:43:33	11:44:56	52MB		
24	CH7	SN	20/03/2019	11:44:50	11:45:55	38MB		
25	CH7	SN	20/03/2019	11:45:50	11:47:33	59MB		
26	IP CH2	N	20/03/2019	11:45:52	11:54:08	253MB		
27	CH7	N	20/03/2019	11:47:28	11:48:12	25MB		
28	IP CH1	N	20/03/2019	11:48:06	11:54:49	253MB		
29	CH7	SN	20/03/2019	11:48:07	11:48:43	27MB		
30	CH7	N	20/03/2019	11:48:38	11:49:00	17MB		

In the latter mode, you can block video events so that they are not overwritten on the hard disk. Click on the icon to block events or on the to unblock them.

8. This menu allows you to view the system information, channel information, record information & network status.
9. Check the box next to the event number to select the files or check the box next to **Select** to select all events on the page.
10. The number of selected files and their overall size will be displayed at the bottom right.
11. After selecting a file, click on the icon to save the video to a USB flash drive or USB DVD Writer. Alternatively, click on the icon in the event playback control window to play the video.

3.12.3.1 Event Playback Control



1. Event list: The events can be selected here.
2. Click on the icon to save the video of the selected events to a USB flash drive or USB DVD Writer. Click on the icon to play the video.
3. Control playback using the Video Playback Controls buttons. Click on the or right-click to exit playback and go back to the event search window.
4. The event being played will now be displayed on the timeline.
5. Use the Timeframe options (24h 2h 1h 30m) to display a shorter or longer period.

3.12.4 SUB-PERIODS PLAYBACK

Sub-period playback allows you to play back multiple normal and motion event recordings from a single channel simultaneously. With normal and event recordings, the video is split evenly, depending on the split-screen mode selected. For example, if the video lasts one hour and split-screens x 4 mode has been selected, each split-screen will play for 15 minutes.

Search and play video in subperiods:

1. Select the date and time to search.
2. Select the split screens into that you want to split the video playback.
3. Check the types of recordings to be searched for or check **Search Type** to select all of them.
4. Select the channels to search. Note that this function only supports searching and playing one channel at a time.
5. Click on the Play button ▷ to start playback. Control playback with **Video Playback Controls.**
6. Videos are displayed in split-screen displays.
7. Left-click on a specific split-screen: the time of the video split-screen will be displayed on the timeline. The coloured bar above the timeline indicates the duration of the video split-screen you clicked on. The coloured bar below the timeline indicates the duration of the entire searched video.

8. Use the Timeframe options ( ) to display a shorter or longer period.

3.12.5 SMART PLAYBACK

Sub-period playback allows you to play back multiple normal and motion event recordings from a single channel simultaneously. With normal and event recordings, the video is split evenly, depending on the split-screen mode selected. For example, if the video lasts one hour and split-screens x 4 mode has been selected, each split-screen will play for 15 minutes.

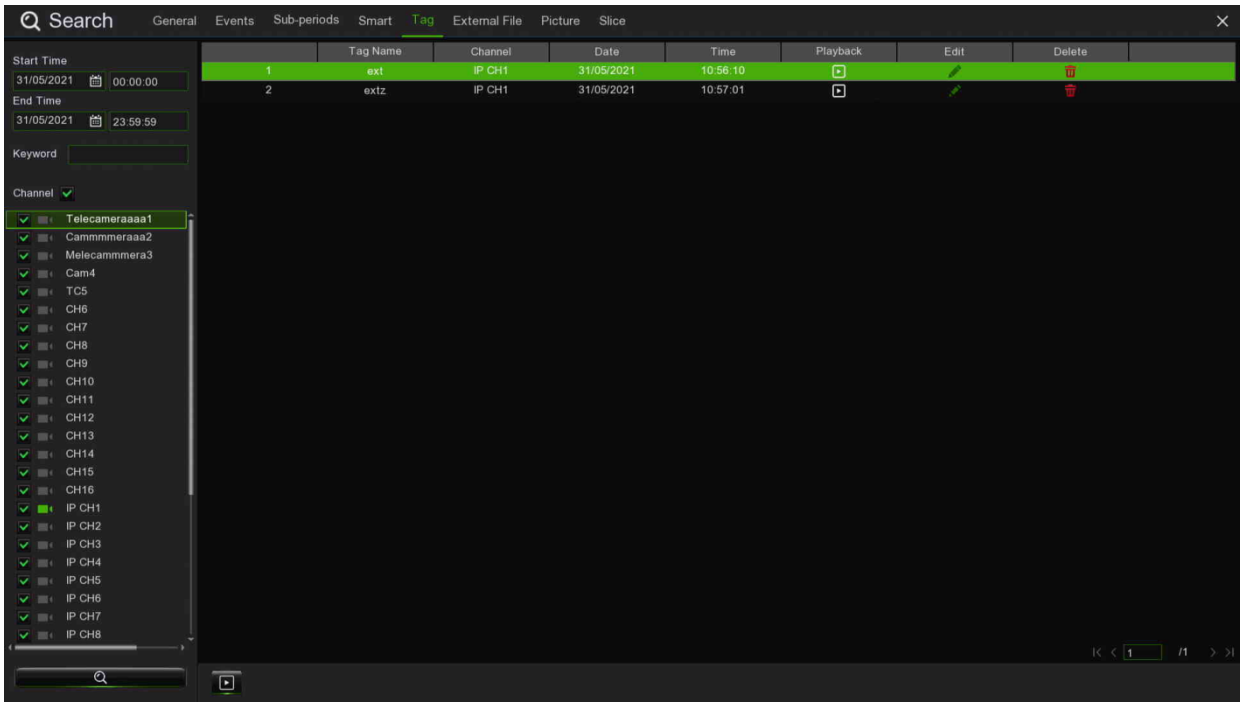
Search and play video in Smart mode:

1. Select the date and time to search.
2. Select the split screens into that you want to split the video playback.
3. Check the types of recordings to be searched for or check **Search Type** to select all of them.
4. Select the channels to search. Note that this function only supports searching and playing one channel at a time.
5. Click on the Play button ▷ to start playback. Control playback with **Video Playback Controls.**
6. Videos are displayed in split-screen displays.
7. Left-click on a specific split-screen: the time of the video split-screen will be displayed on the timeline. The coloured bar over the timeline indicates the duration of the entire searched video. The coloured bar below the timeline indicates the duration of the entire searched video.

8. Use the Timeframe options (24h 2h 1h 30m) to display a shorter or longer period.

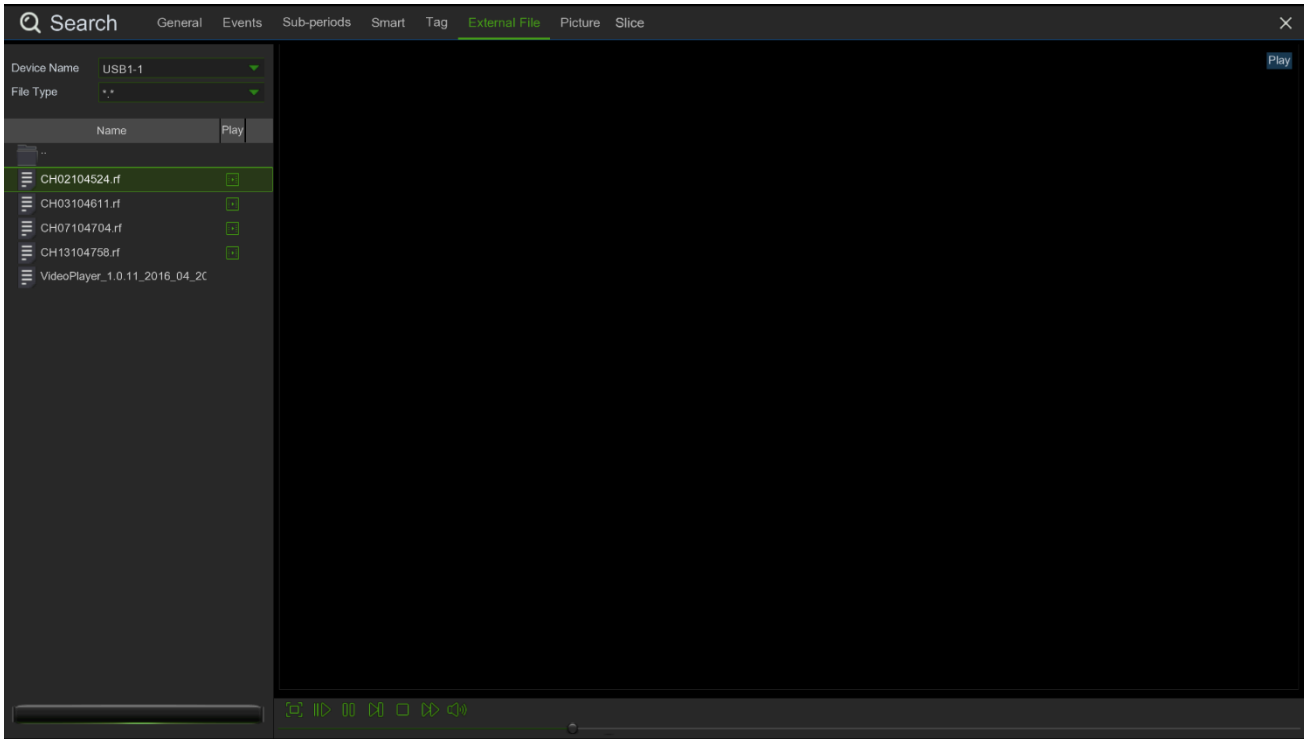
3.12.6 **TAG**

This function can be used to search and play manually stored files using the tag function.
For more information, see section 3.2.6 - 3.2.7



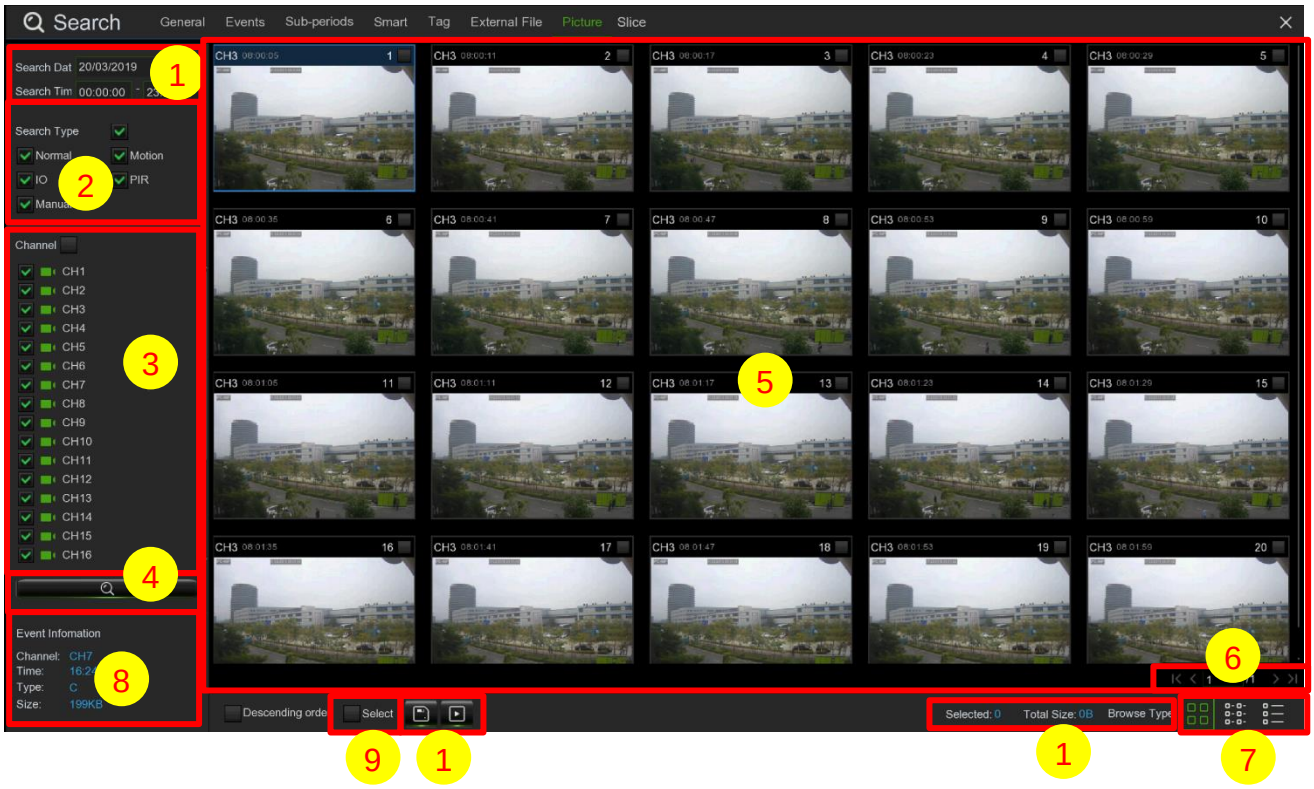
3.12.7 **EXTERNAL FILE**

This function can be used to search and play back external files on a USB flash drive or USB DVD Writer.



3.12.8 **PICTURE SEARCH & VIEW**

This function can be used to search, play back and copy snapshots to a USB flash drive or USB DVD Writer.



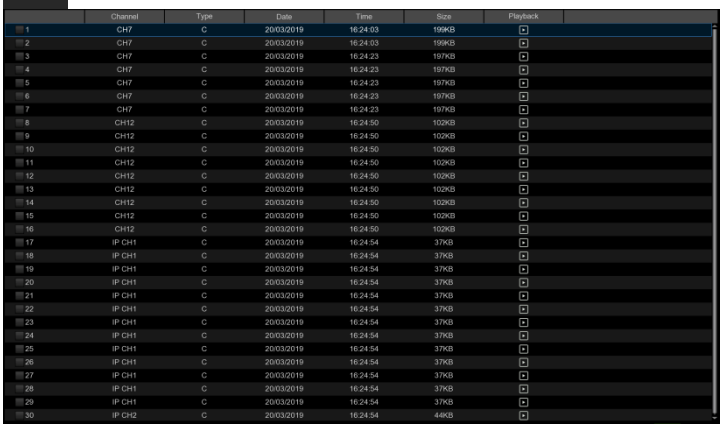
Search, playback and backup of images:

1. Select the date and time to search.
2. Check the types of images to be searched for or check **Search Type** to select all of them.
3. Select the channels to search or check **Channel** to select all channels.
4. Click on the button to start the search.
5. The images that match the search criteria are displayed as a list. You can click on an image to enlarge it.
6. Click on the icons at the bottom right of the menu to browse the image pages or enter the page you wish to consult.
7. You can change the display of the list by clicking the icons below, that are visible at the bottom left of the screen:

Thumbnails view. You can view snapshots of the events.

List view. The events will be displayed in a list.

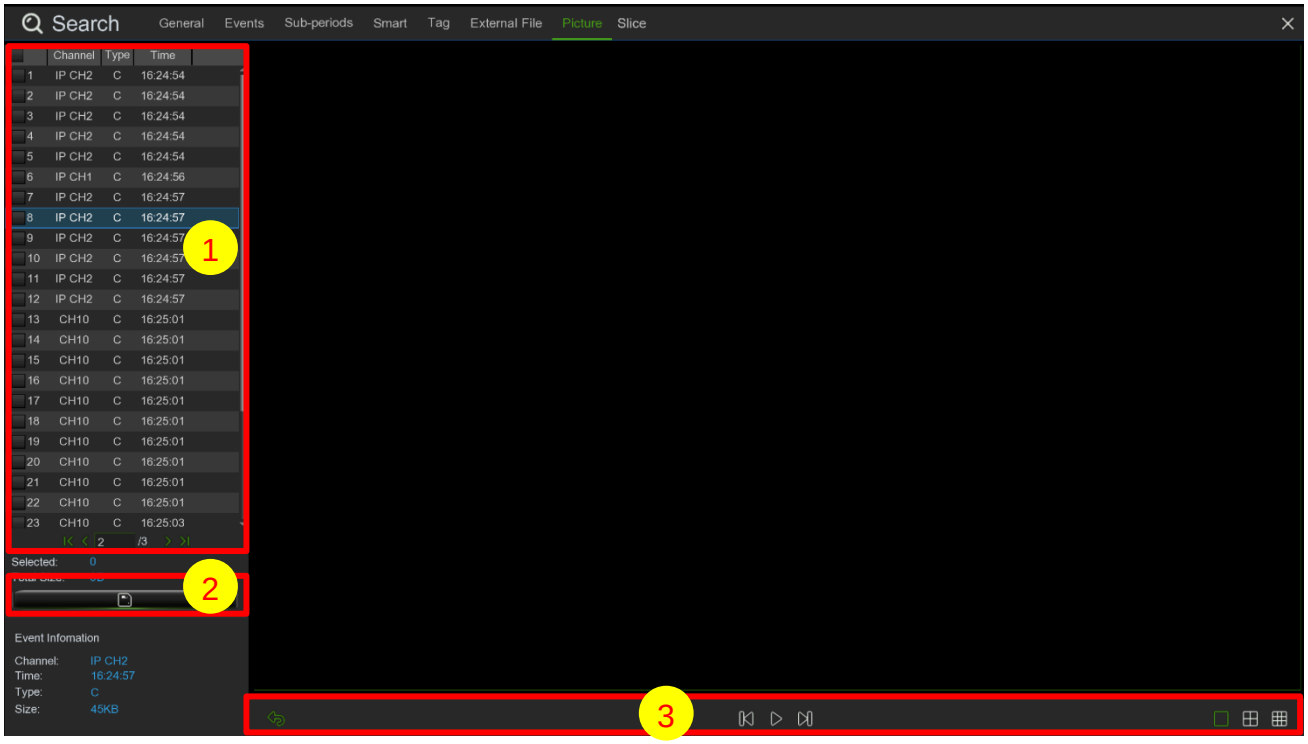
Detailed view. You can view the details of the events.



8. Left-click on one of the images to display the respective information at the bottom left.
9. Check the box next to the image number to select the files or check the box next to **Select** to select all the images on the page.
10. The number of selected files and their overall size will be displayed at the bottom right.

11. After selecting the file, click on the button to save the images on the USB flash drive. Alternatively, click on the button to access the image preview control window.

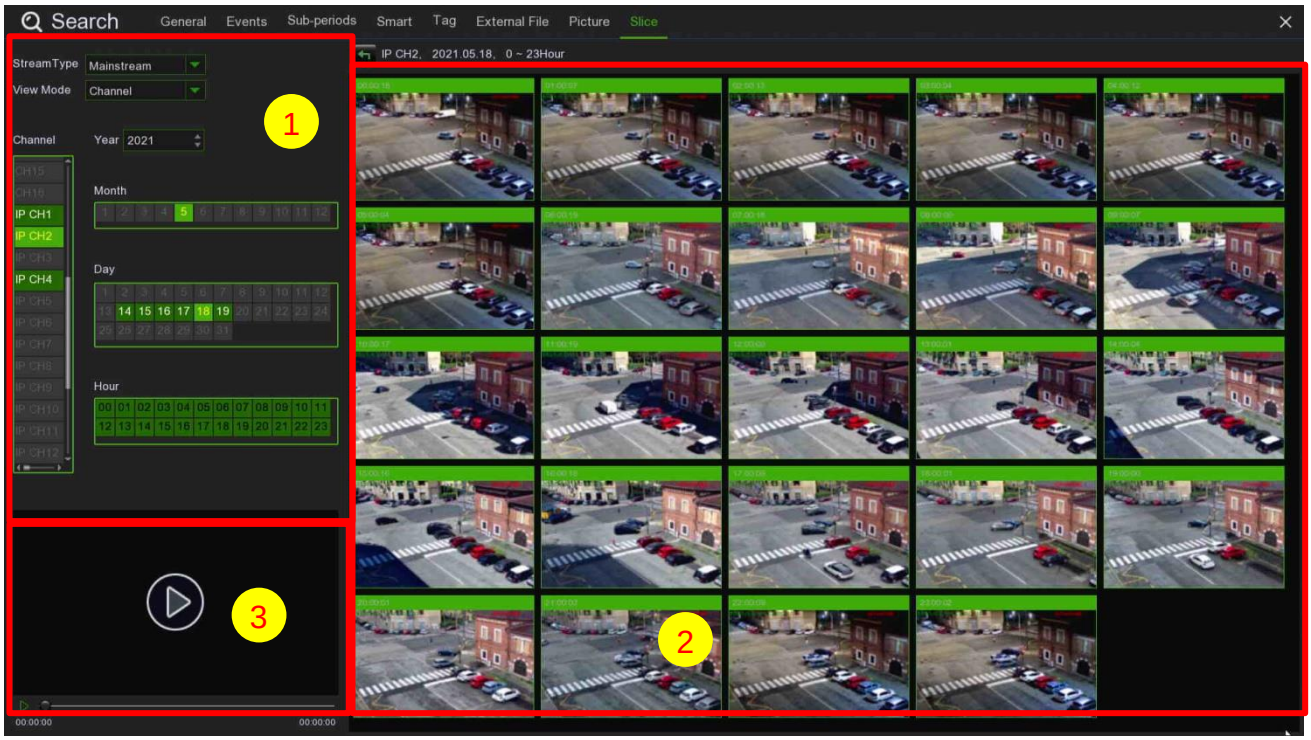
3.12.8.1 Picture Preview Control



1. Image list: The images can be selected here.
2. Click on the button to save the selected images to a USB flash drive or CD/DVD media. Click on the button to see the images in a slideshow.
3. Press the button to exit the preview control window and return to the image search window.
    - Press the button to pause; press to resume the slideshow.
    - Press the button to view a previous snapshot or group of snapshots; press to view the next snapshot or group of snapshots.
    - Click on the button to display only one snapshot at a time; click on the button to display four snapshots at a time.

3.12.9 SLICE

This function can be used to search, play back and copy video by choosing the video duration of the day of shooting, time of shooting.



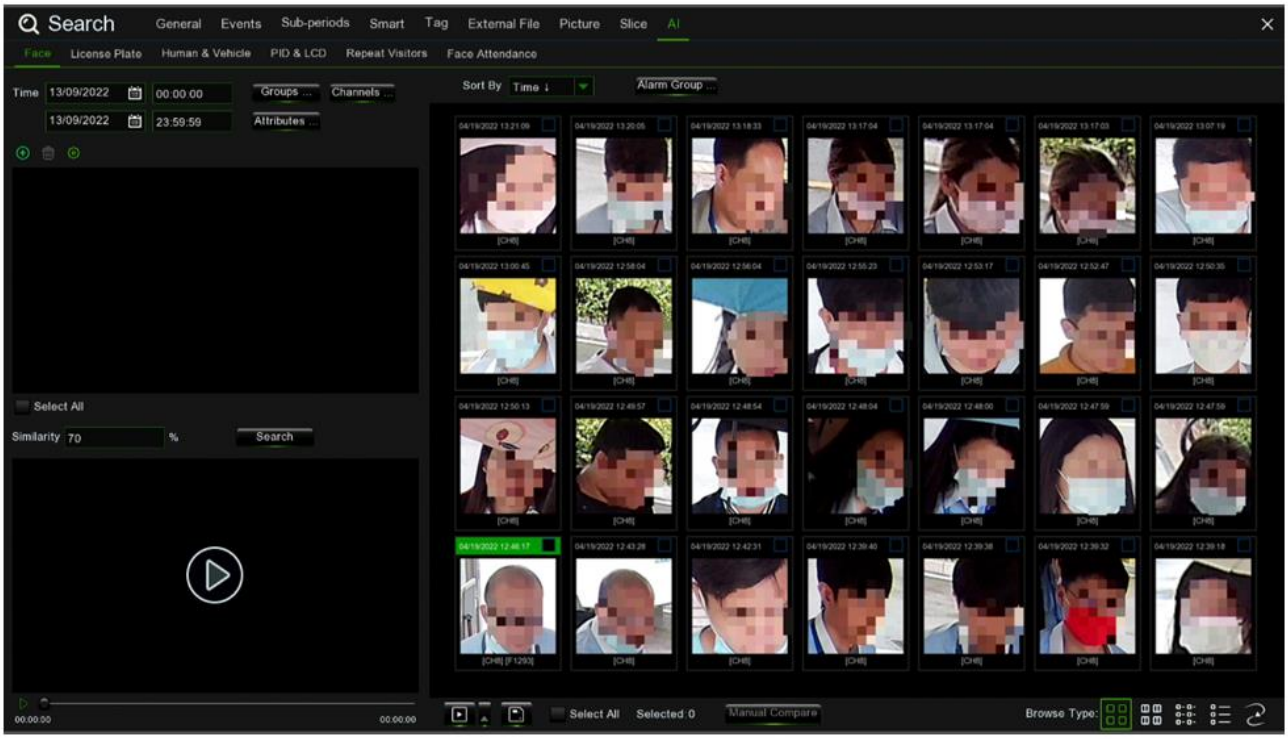
1. Select the channel to search among the active ones, select the Month, Day, Year.
2. The videos that match the search criteria are displayed as a list. You can click on one of the images to enlarge it.
3. Video playback area.

3.12.10 **AI**

This function allows you to search, play and copy video by making your choice based on the desired intelligent analysis function (Faces/License plate/People&Vehicles/PID&LCD/Repeat Visitors/Face Attendance).

3.12.10.1 **Face**

After setting the date, time, channel and face group, press Search to search for the face information of all group members in the desired time period.

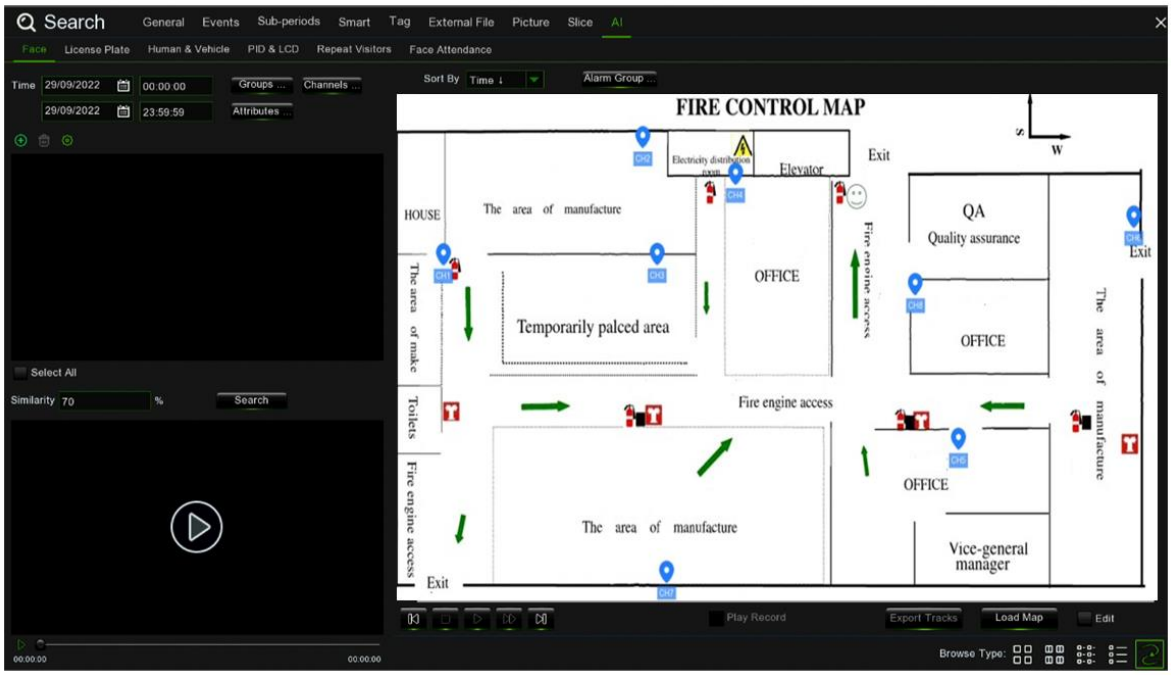


1. Press on ⊕ to add face images. Choose **Groups** to select face images from the entire face database group for comparison search.
2. Press on **Channels** to select the camera for the search.

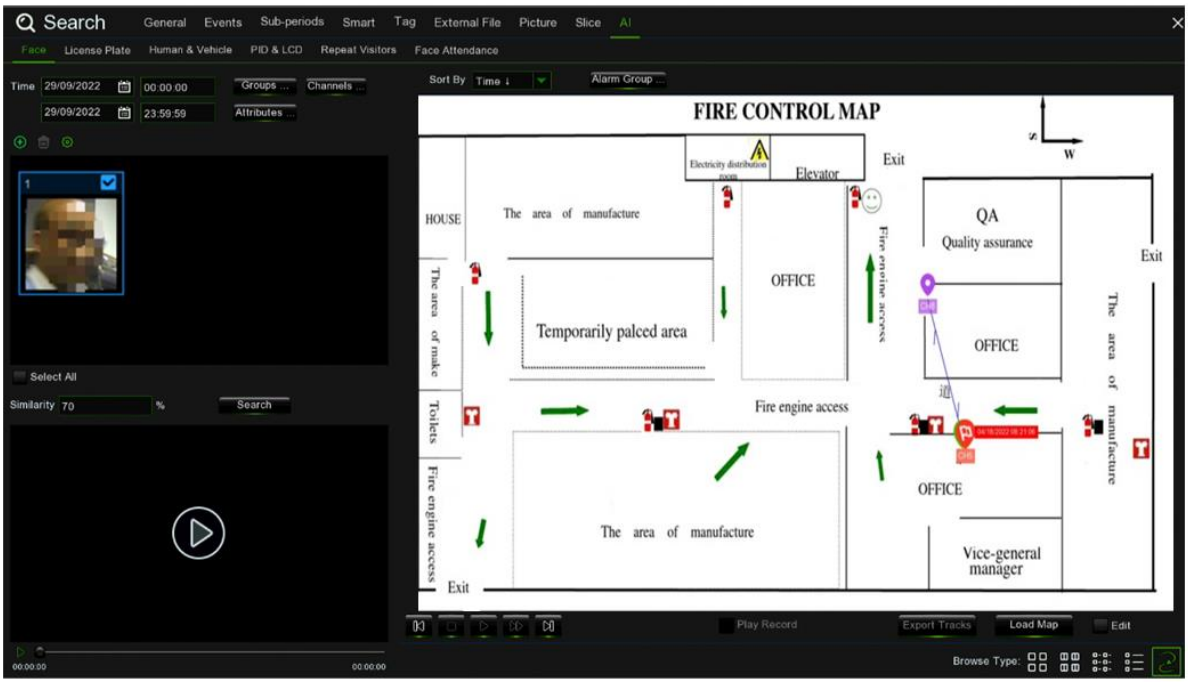
3. Press on **Attributes** to set the face attribute criteria for the search. You can choose between Gender/Age/Mask/Eyes/Expression.
4. Press on **Alarm Groups** to select the face group in which the contrast occurred.
5. Select the image in the search area and press on to delete the image. Press on to access the AI Face Database setting interface.
6. Right-click **Import to** on the search results to import the image into the face database.
7. In the search results, right-click Select **Detail Information** to display the details of the face.
8. Press on **Custom Playback** to enter the time the face is detected for playback.
9. Press on **List/Details** to show the different display methods.

Tracks

Press on in the bottom right corner to access the digital map track menu.



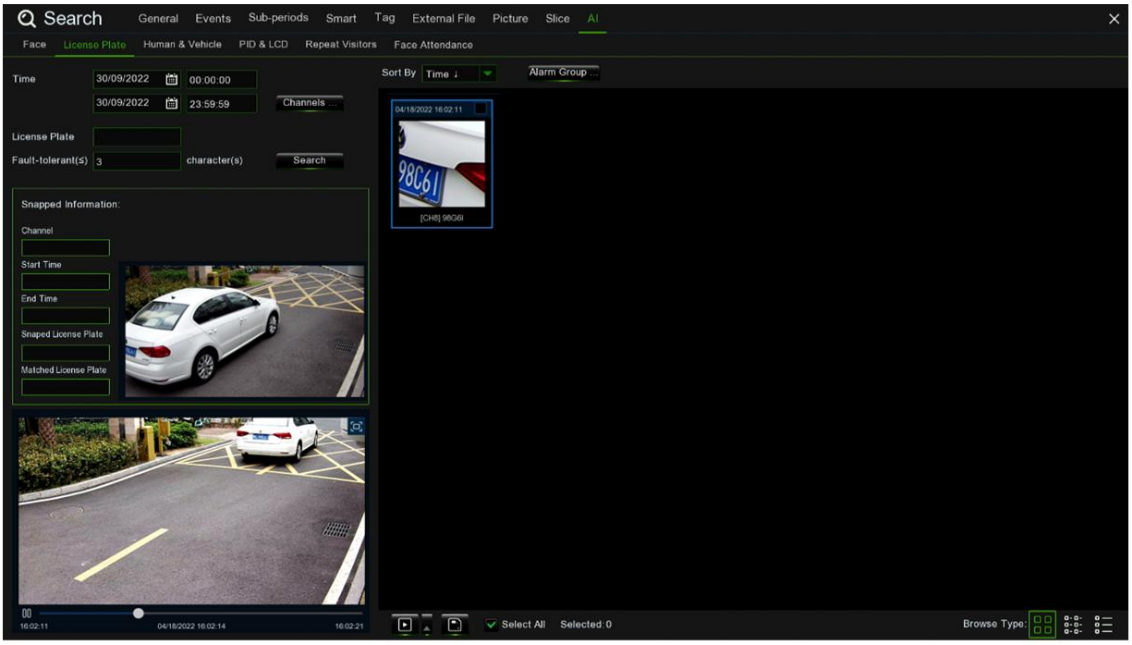
Press on **Load Map** to display the U disk and select the map to be added. Select the **Edit** box to drag the IP camera icon to the desired location. Press on to select the face from the local or U-disk library and press in the search field (only supports searching for a face) to search for the IP camera that has detected the face. A coloured mark will be displayed on the map.



If you press the left button on a camera icon in the bottom right corner, playback will appear. If several cameras detect a face, the playback will automatically follow the movement of the person by introducing an arrow.

3.12.10.2 License Plate

In this section, video details can be viewed and exported once the number plate detection alarm has been activated and the event has been recorded.

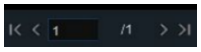


Time: Set the time period for querying the number plate detection event. The date can be set by pressing .
License Plate: Filter and query based on licence plate information.
Fault-Tolerant: Set the number of characters sufficient for licence plate detection. The value can be set from 0 to 5.
Info Snapped: Details of the alarm event including the following data:
- Channel: Channel selection
- Start Time: start time of the event
- End Time: End time of the event
- Snapped License Plate: The licence plate number captured by the camera through a photo
- Matched License Plate: the licence plate number obtained from the database
Sort By: Event videos are sorted by time of day
Channels: licence plate detection events triggered by each channel.
Search: Search based on selected settings.
Alarm Group: Select the different groups in the database to be compared and search the results for display.

This function consists of pressing on the triangle icon in the bottom right corner of the event video when 5s, 10s, 20s, 30s, 1min, 2min, 5min, 10min, custom playback is selected. If 30s is set, the video will be extended by 30 seconds.

Video can be backed up to the U disk, supported video formats are RF, AVI, MP4.

All videos and the selected number of videos are selected.



Press to change pages.

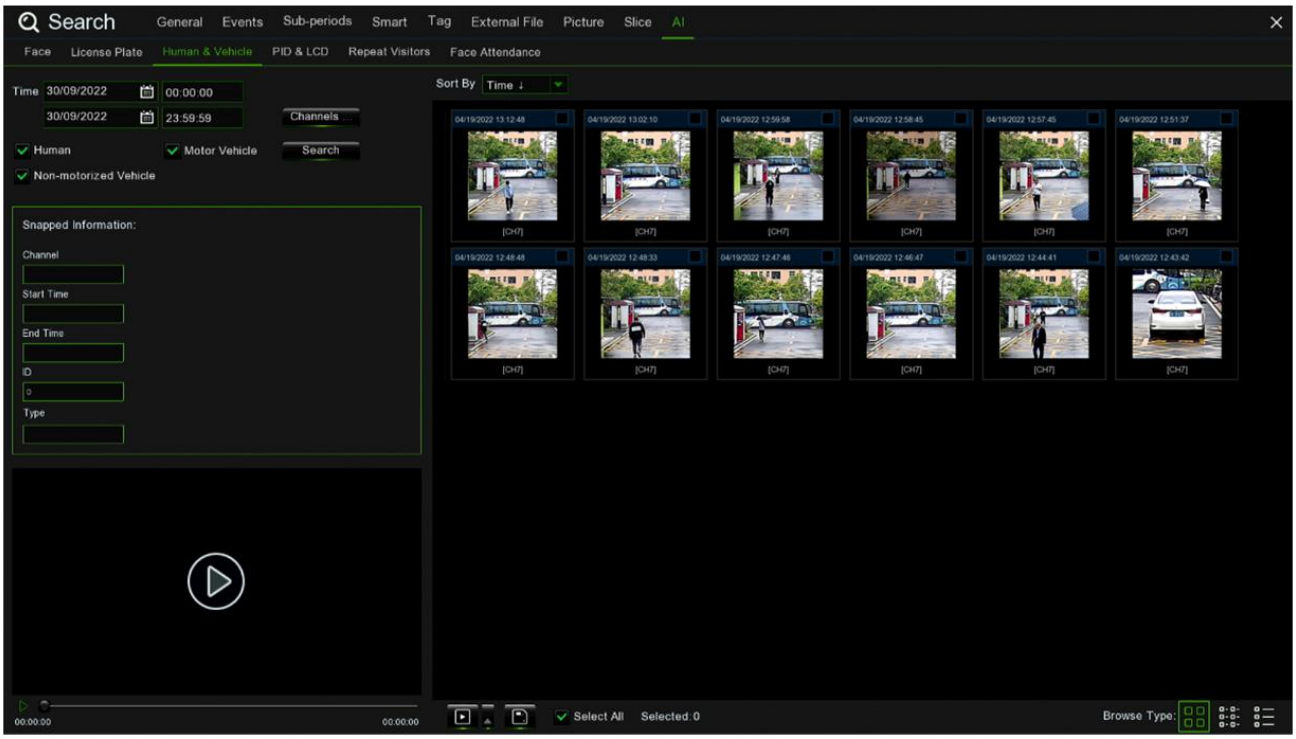
Press to select different types of views.

Choose an event with the right mouse button and two functions can be accessed:
Detail Information: displays the details of the event.

Custom Playback: Press to set the duration of event playback. The maximum limit that can be set is 10 minutes. Press twice or drag in the bottom left corner to play the event video.

3.12.10.3 **Human & Vehicle**

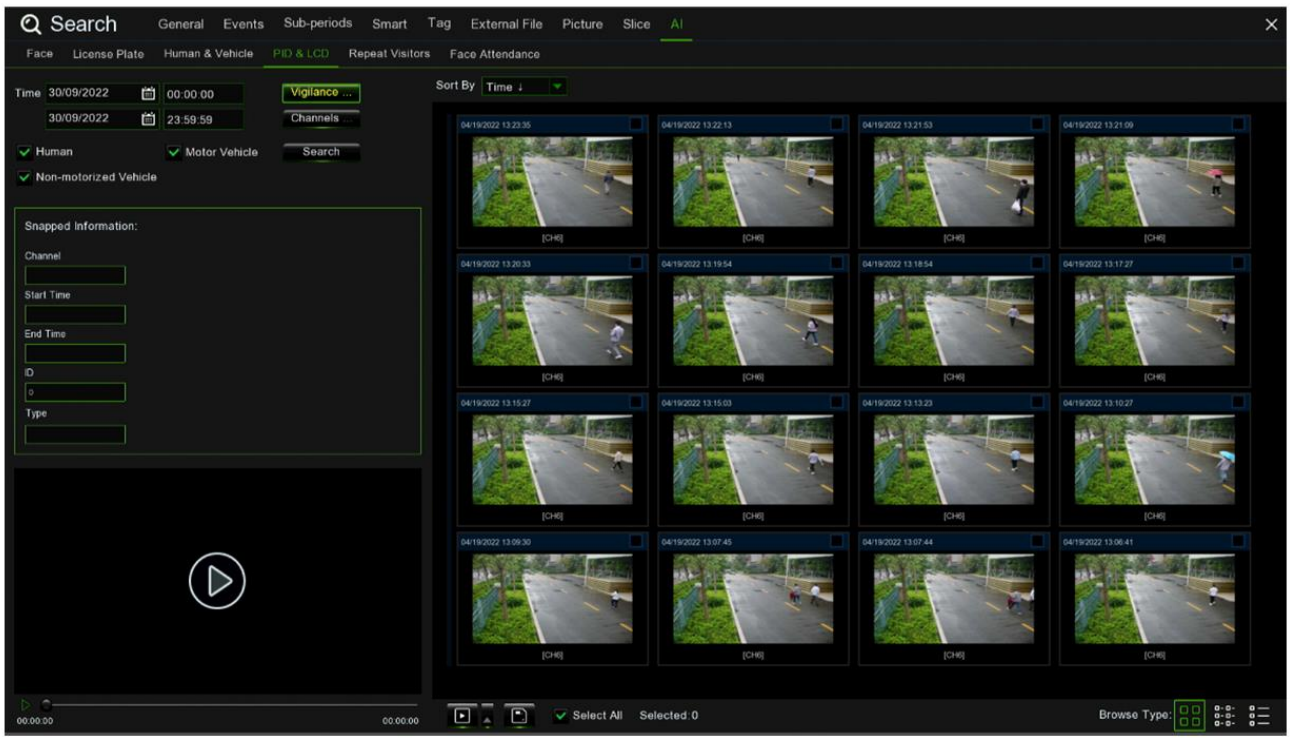
In this section it is possible to search for information on persons and vehicles by setting the date, time, camera and type of detection desired.



Press the left button to get basic information on the left side; press the right button to customise the playback and detail display. Press on the bottom left corner to play; press twice to zoom in and enter normal playback mode.

3.12.10.4 **PID & LCD**

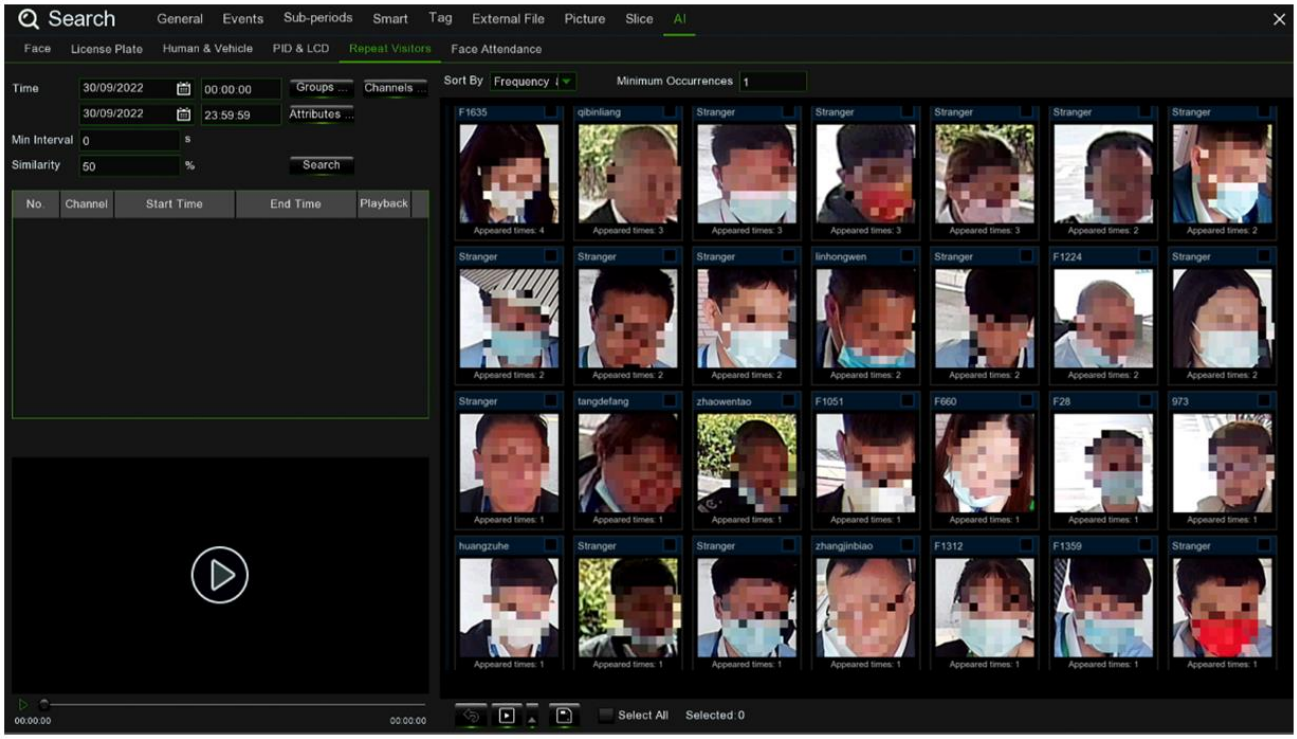
In this section it is possible to search for information on persons and vehicles that have crossed lines or a perimeter by setting the date, time, camera and type of alarm desired.



Pressing with the left button provides basic information on the left side, while pressing with the right button customises the playback and detail display. Press on the bottom left corner to play; press twice to zoom in and enter normal playback mode.

3.12.10.5 **Repeat Visitors**

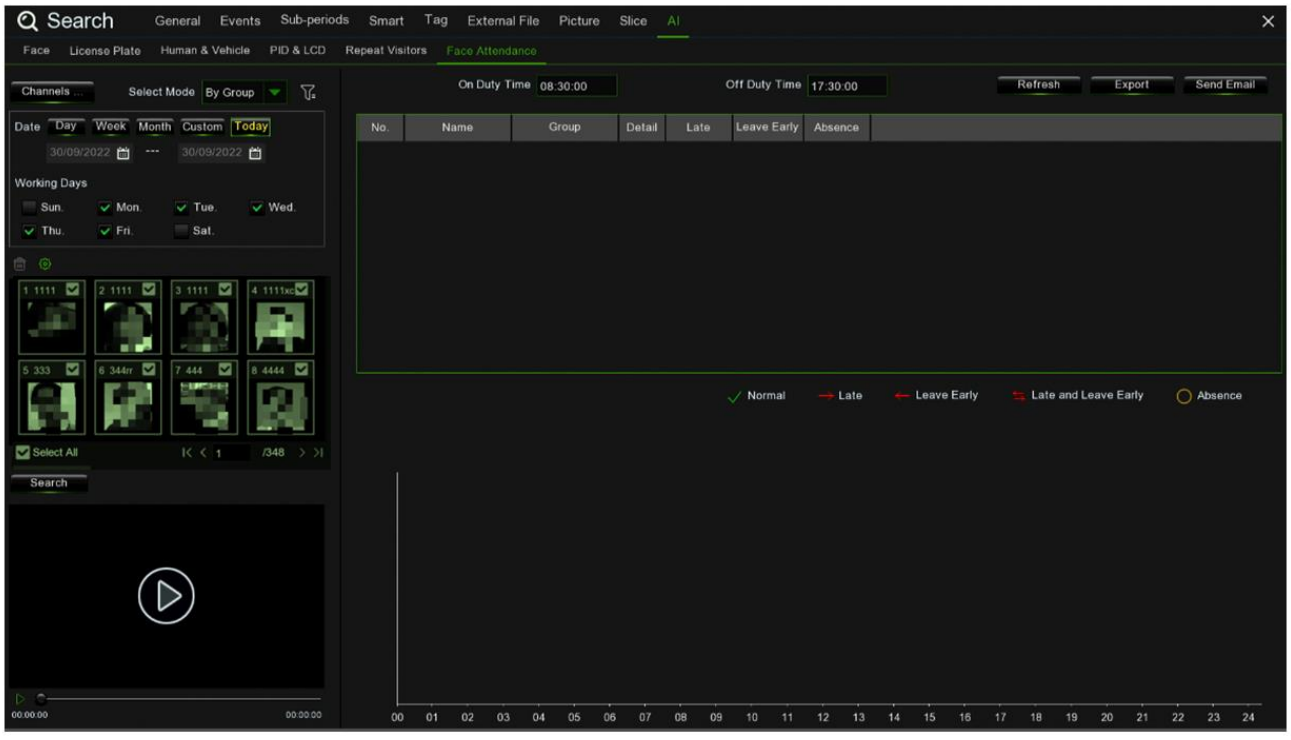
In this section it is possible to search and count the number of times the same face has been detected.



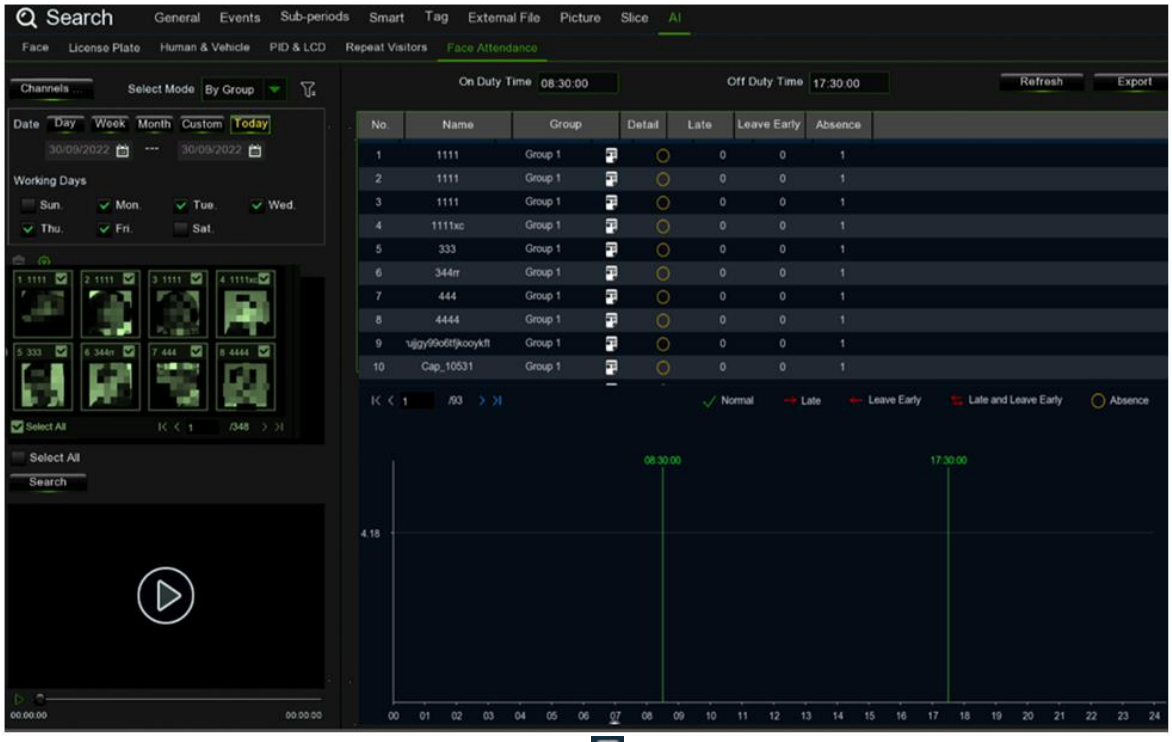
1. Select the desired date and time.
2. Select the group in the face lists to be compared.
3. Select camera.
4. Select the attribute of the face you wish to search for.
5. Enter the minimum number of seconds of the interval.
6. Press the left mouse button on the search results. The reporduction and information details are displayed on the left. Press the right mouse button to import the face library and display the details.
7. Enter the minimum number of face appearances in **Minimum Occurrences**.
8. Press on **Sort By** to sort ascending or descending by time or quantity.
9. Check search results or press on All to select all search results. Press on the icon to customise playback or press to back up images and videos to the external USB drive.

3.12.10.6 **Face Attendance**

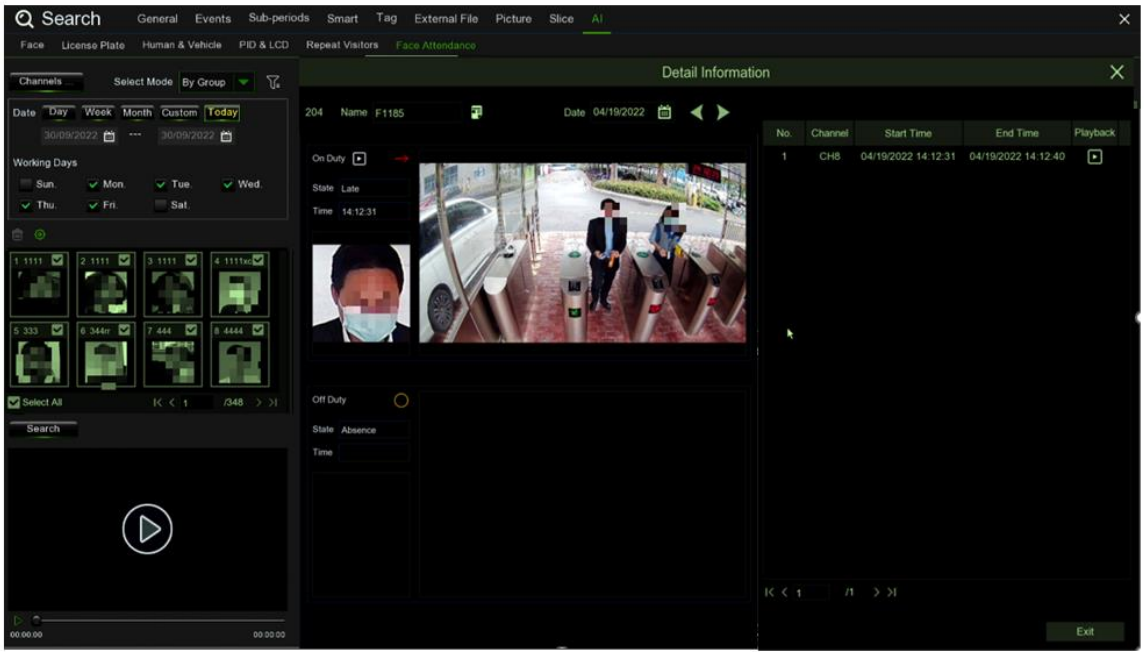
In this section, it is possible to check if a person has turned up at the appointed time and thus determine if they are late or leaving early.



1. **Channels:** Select the camera for face presence.
2. **Select Mode:** Select the face image of presence, By Group or By Person:
   - **By Group:** Select face images through the face group.
   - **By Person:** select face map. Press on the right button to open the face search interface in the selected face library.
3. **Date:** Select the search date. By default Day is set but you can choose from five selection modes: Day, Week, Month, Custom and Today.
4. **Working Days:** Select working days.
5. **On Duty Time:** Set the working time.
6. **Off Duty Time:** Set the closing time.
7. Press on **Search** to search for results.



Pressing on the result displays all survey data. Press on the icon to access the details interface.



Here are the attendance details, including the first and last appearance. Press on to perform playback in the bottom left corner.
Press on **Export** to save the record file of the searched attendance information to the U-disk.
Press on **Send Email** to send the searched attendance information file to the mail address set in the device menu.

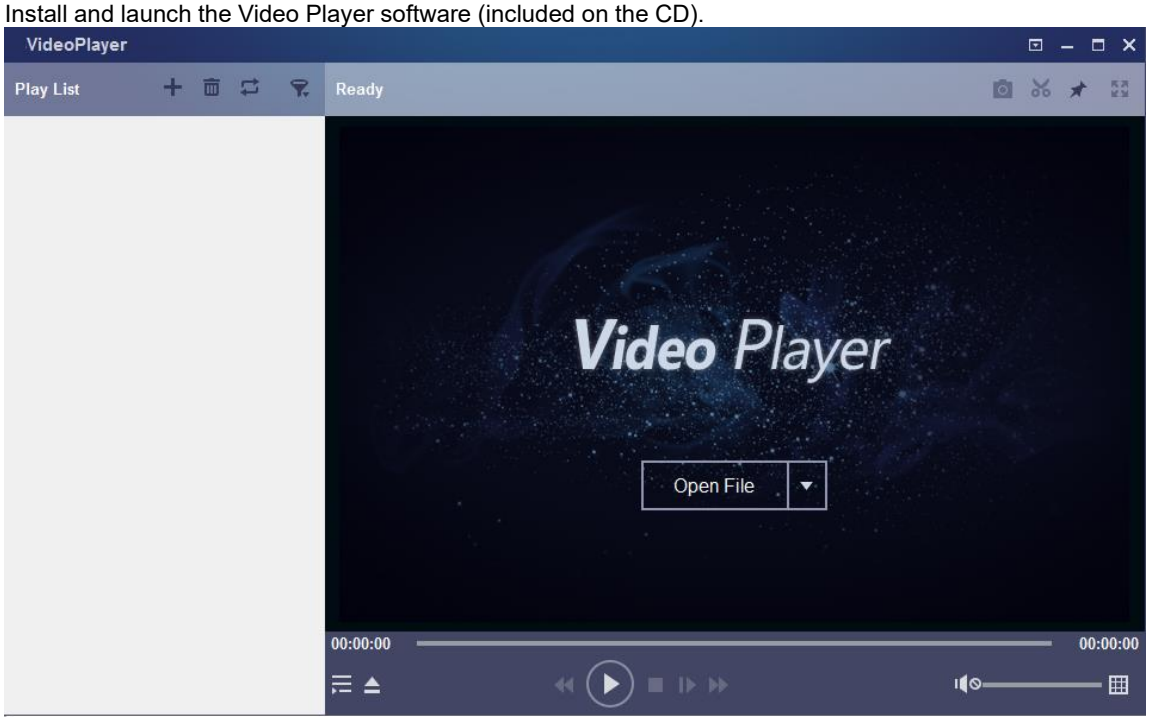
4 VIDEO PLAYER TO VIEW BACKUP VIDEOS ON PC

This section allows you to play the backup files using a powerful video player included on the CD.
PC users must install the software “VideoPlayer_x.x.xx_xx_xx_xx.exe”.

Minimum system requirements:

- Intel Pentium 4 or higher
- Microsoft Windows XP / Vista / 7 / 8 / 10
- 256MB RAM
- 16MB of video memory

1. Install and launch the Video Player software (included on the CD).



2. Copy a backup file to the computer.
3. Click on the **Open File** button or click the Play List **+** button to upload one or more video files. This function supports the addition and playback of “.rf”, “.avi”, “.mp4”, “.264” and “.265” files. Click on ▼ to load a folder containing backup video.

4.1 VIDEO PLAYER CONTROL

1. **Play List**
   Add file
   Delete file
   Select the playback mode: play a single file and stop playback; play all listed files in sequence; repeat one file; repeat multiple files.
   Filter by file name

2. Hide/Show Play List
   Click to open the files or load a folder.

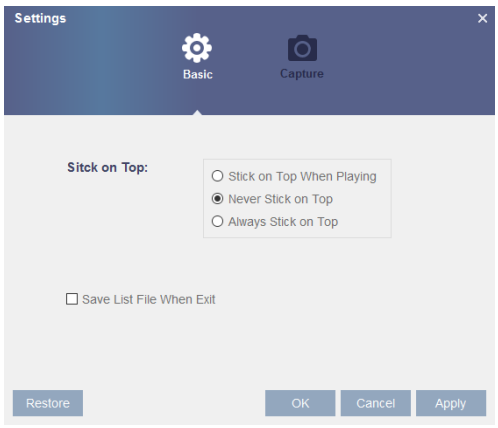
3. **Play Controls**
   Play
   Pause
   Stop
   Play back one frame at a time. Click once to play a frame of the video
   Slow motion playback, 1/2, 1/4 and 1/8, 1/16 speed
   Fast forward x2, x4, x8 and x16

4. Volume control
   Multi-screen playback. This can be used to play multiple videos simultaneously. By selecting multi-screen mode, you can drag the video from the Play List to the playback screen.

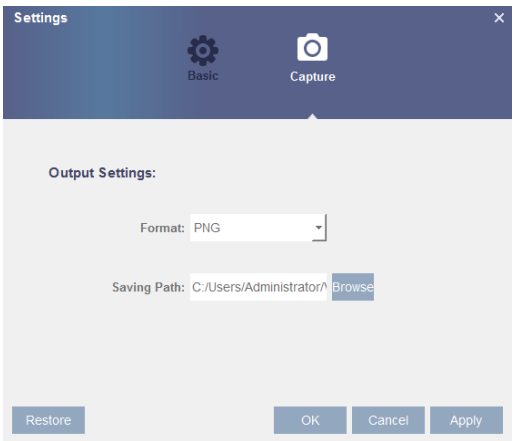
5. Take a snapshot
   Save a video clip on your computer. Press once to start and press again to end the videoclip.
   Keep the Video Player on top
   Enlarge video playback full screen

6. The **Advanced Setup menu** can be used to select the OSD language of the video player and configure its parameters.

The event you are playing now will be displayed on the timeline.



Capture Settings: Set the format and save the path of the snapshots.



5 REMOTE ACCESS VIA WEB CLIENT

The Web Client can be used to remotely access the HVR via PC at any time. Before accessing the Web Client, ensure that the HVR Internet settings are configured correctly.

5.1 BASIC SYSTEM ENVIRONMENT REQUIREMENTS

The minimum hardware and OS requirements for the Web Client are as follows.

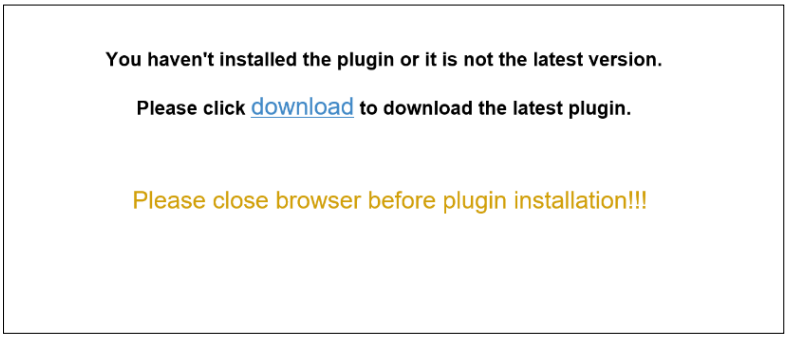
Component	Minimum	Recommended
CPU	Intel® Core™ i5 CPU	Intel® Core™ i5 CPU or higher
RAM	4Gbyte or higher	8Gbyte or higher
Hard Drive	500Gbyte or higher	1000Gbyte or higher
RAM Display	2Gbyte or higher	4Gbyte or higher
Display resolution	1280*1024	1920*1080
OS	Windows 7 or higher version Mac OS X® 10.9 or higher version	
DirectX	DirectX 11	
Direct3D	Acceleration function	
Ethernet adapter	Ethernet adapter 10/100/1000M	
Supported browsers	Microsoft Internet Explorer (Vers. 11), all other browsers only allow programming but not the display of images	

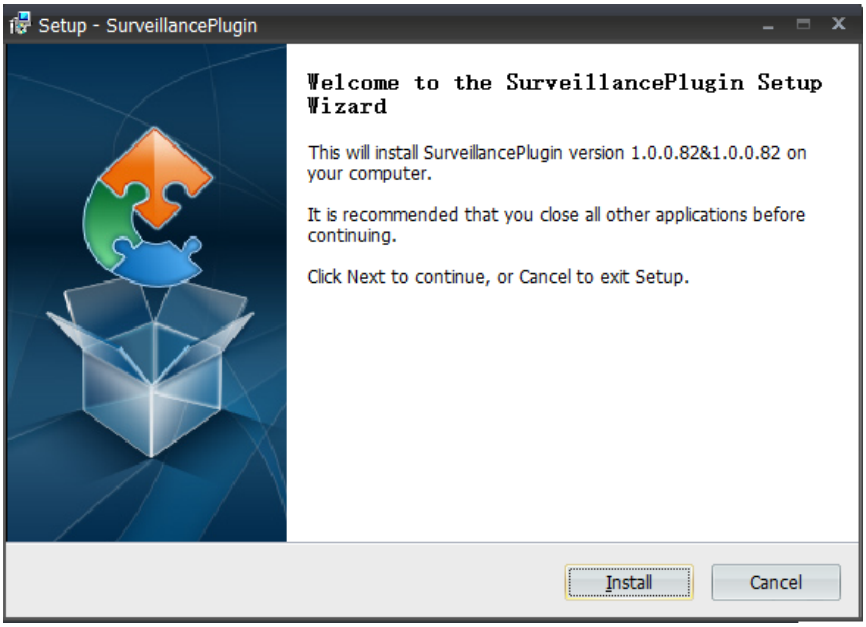
5.2 DOWNLOAD AND INSTALL WEB PLUG-INS

To access the Web Client, proceed as follows:

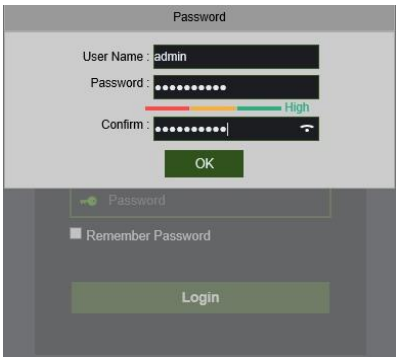
For IE/Chrome/Firefox:

1. Launch the browser on the PC and enter the IP address of the HVR or the DDNS (Host Name) domain name set on the HVR in the URL bar.
2. The first time you use the Web Client, the system will prompt you to install the respective plug-in. Click on **download** to download the plug-in and install it on your computer.





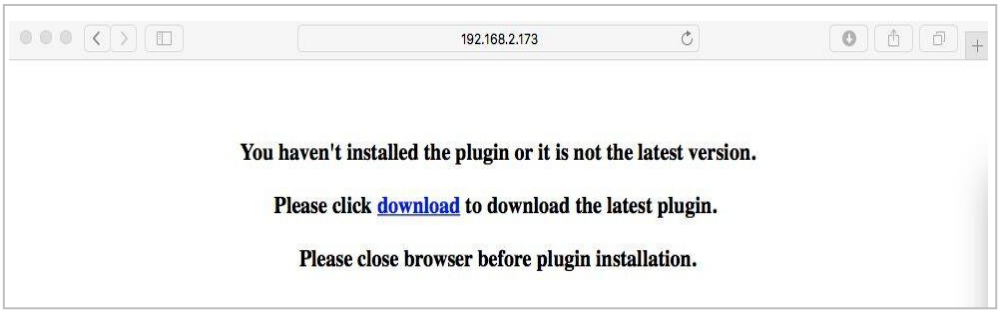
3. After the first login of the HVR from the Web interface, enter your custom Password and confirm.



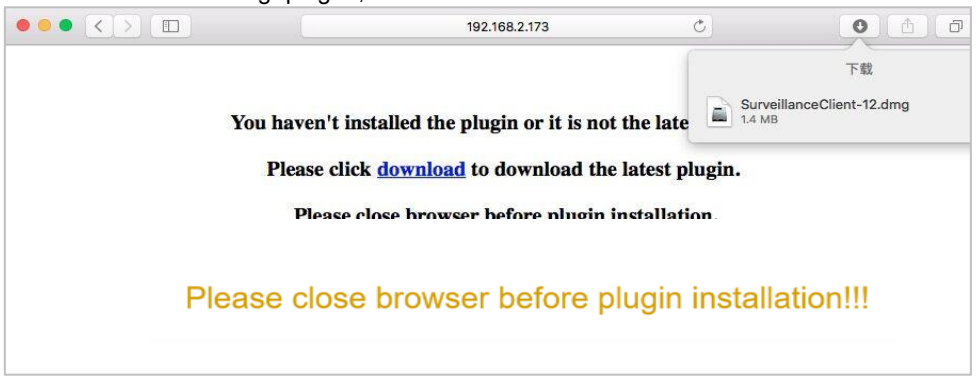
4. After installing the plug-in, close and launch the browser again, then repeat step 1 to open the login page. Enter your username and password to access the Web Client.

Note: For Google Chrome, use version V41 or lower. If you are using versions V42 to V44, you must enable NPAPI plug-ins. Enter chrome://flags/#enable-npapi on the URL bar to find and enable NPAPI. For now, V45 or higher is not supported.

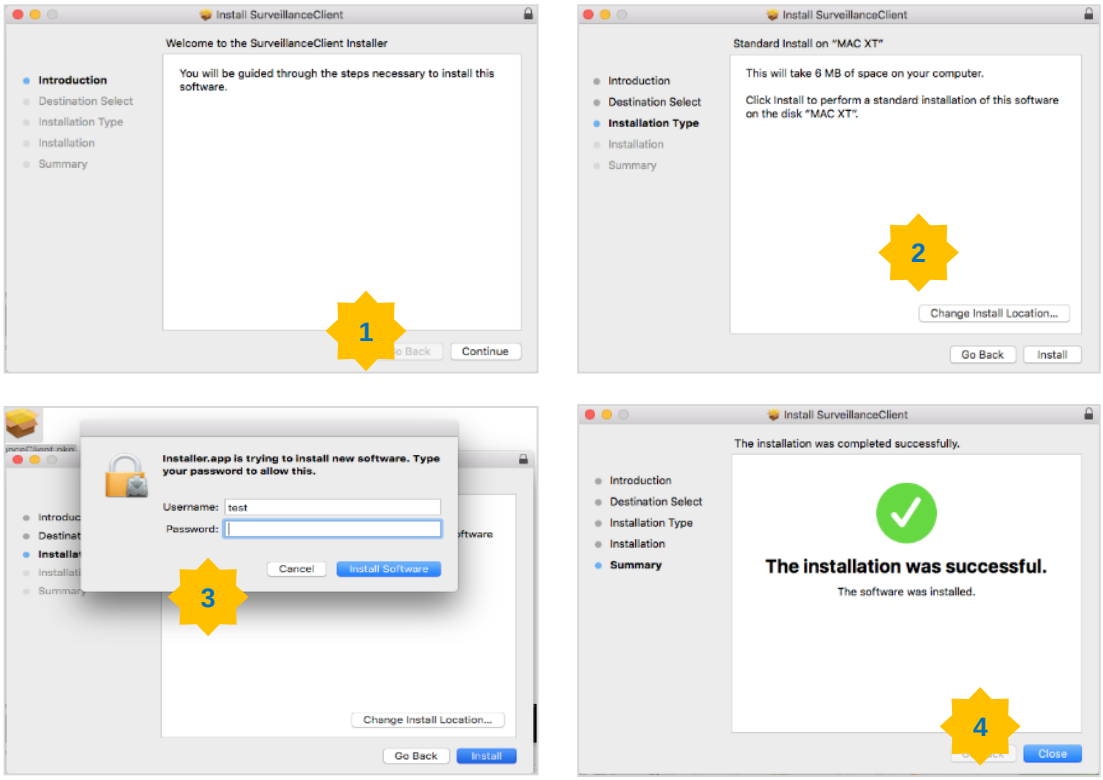
For Mac Safari:
1. Launch the Safari on the Mac and enter the IP address of the HVR or the DDNS (Host Name) domain name set on the HVR in the URL bar.



2. Download the “SurveillanceClient.dmg” plug-in, locate the downloaded file and double click on it.



3. Click on “Continue” --> “Install”. Enter the user name and the password for the Mac.
Click on “Install Software” --> “Close” to finish the installation.



4. Close and re-open Safari, then repeat step 1 to open the Web Client login page.

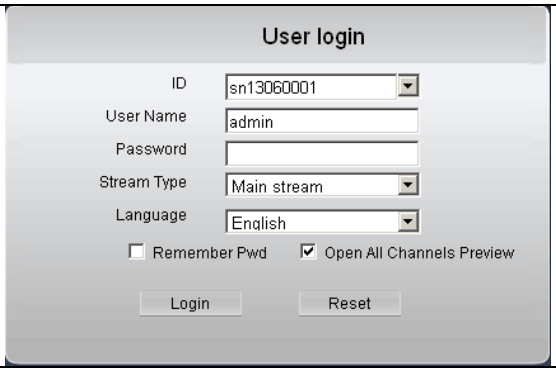
5.3 WEB CLIENT MANAGER

The Web Client supports full control of the HVR with the administrator account. Protect your username and password against any illegal access.

5.4 ACCESS TO THE HVR WEB INTERFACE VIA IP ADDRESS, URL

Follow the instructions for configuring and accessing the web pages of the device on Internet Explorer. The web can be accessed in three ways:

- Direct access via LAN: start Internet Explorer and type the IP address and the HTTP port of the HVR on the address bar, as follows: http://IP Address:HTTP Port (e.g. http://192.168.36.40:85). If the HTTP port of the HVR is 80, simply enter the IP address of the HVR, as follows: http://IP Address (e.g http://192.168.36.40).
- Direct access via the Internet with URL of other DDNS account: start Internet Explorer and type the URL and the HTTP port associated to the HVR on the address bar (e.g. http://urmetvcc.no-ip.org:81). If the HTTP port of the HVR is 80, it is sufficient to enter the URL of the HVR, as follows: http://IP Address (e.g. http://urmetvcc.no-ip.org).
  See the appendix for how to install Active X.
  One of the two pages will appear below after having installed Active X according to the type of access:

	
Direct access to the device	**Access via URMET DDNS portal**

Fill in the required fields in both cases: User Name, Password and Client Port. Then select the language and the stream type.
For access via the URMET DDNS portal only, enter the HVR ID previously created in the HVR menu.
Remember that the default access parameters are:

- User Name: **admin**
- Password: **this must be entered at the first access (** from web page or OSD menu**).**

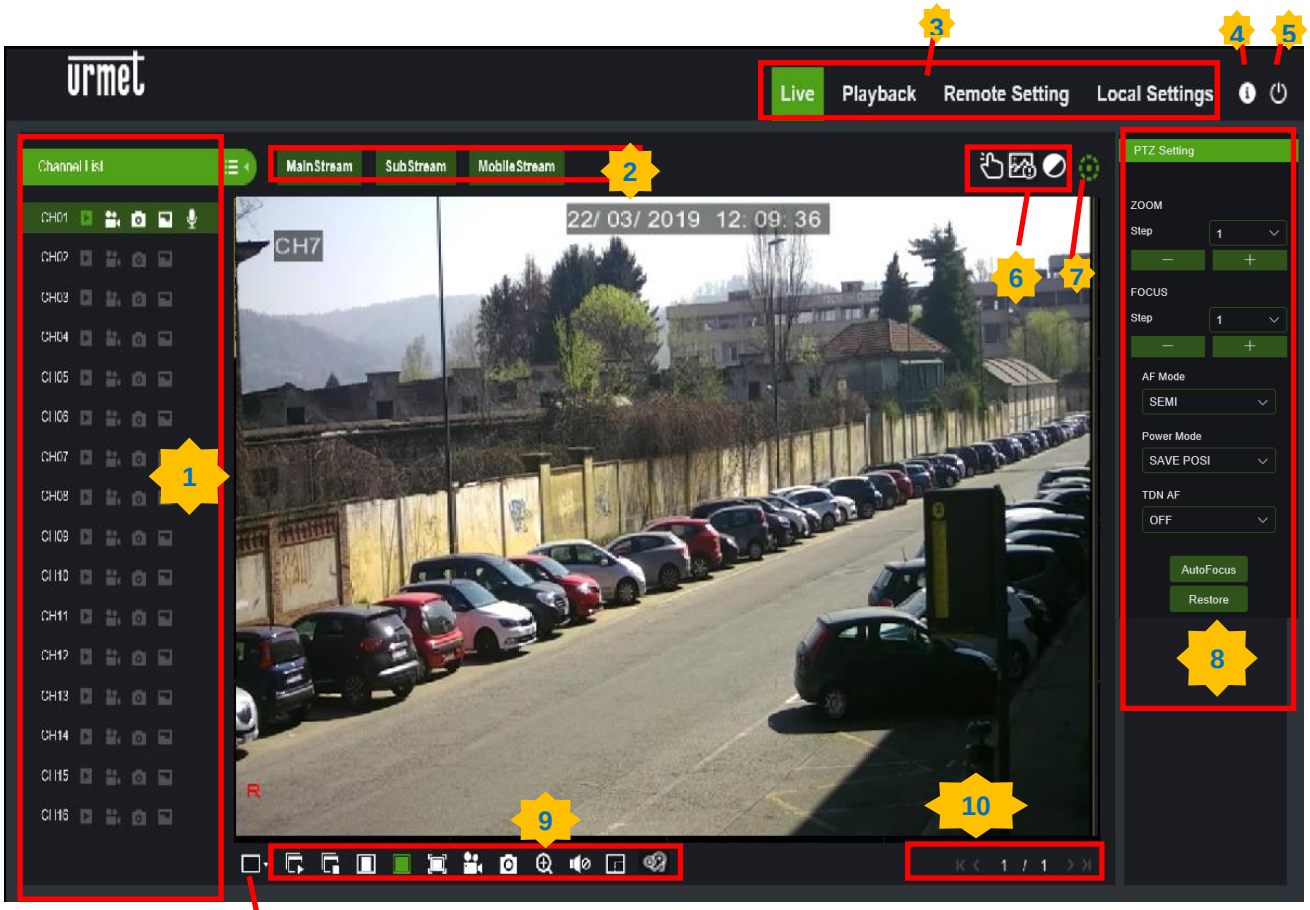
This section will help you to play the backup files with the powerful video player that is attached to the CD

Select [Login] to access the Web interface of the device, as shown in the lower left screen.

Note:
The default password is empty if the HVR password is not enabled. The system can be used by the administrator to enable and set a new password; for instructions, see section 3.3 – [Main Menu→ System→Users].

5.5 LIVE INTERFACE

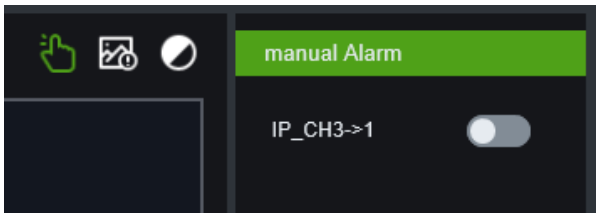
This is the first screen that opens after the Web Client access procedure. Here you can open/close the live preview, manually record video on the local computer, take screen snapshots, perform PTZ control, adjust the colours, etc.



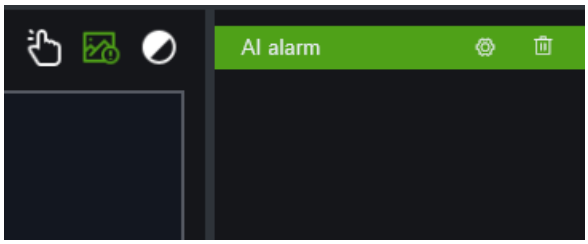
1. **Channel List:** This can be used to open the channel list for the quick camera function.
   Click on to see the list of channels.
   Click on to hide the list of channels.

   Hide/Show Playlist. If the Live video stream is activated, the button is blue.
   Manual Recording button. Click to start recording the Live video stream manually. Click again to stop recording. Manual recordings are saved on the computer.
   Manual snapshot button. Click to save a snapshot of the current Live view on your computer.
   Stream button. Set the camera to use Mainstream, Substream or Mobile Stream settings. Mobile Stream is only available for IP channels.
2. **Live Video Stream options:**
   - **Mainstream:** This can be used to view all live video using high quality mainstream video settings.
   - **Substream:** This can be used to view all live video using medium quality video substream settings.
   - When you choose multi-screen, you can drag the video in Play List to the play screen. Available only for IP channels.
3. **Main Menus**
   - Press once to start, press again to end the video clip.
   - **Playback:** This can be used to view videos recorded and saved on the NVR hard disk.
   - **Remote Setting:** This can be used to access the NVR setup menu functions.
   - **Local Settings:** Set the download destinations of the recordings and snapshots obtained through the Web Client and select the type of video file.
4. **Information:** Hover over it with the cursor to view the system data.
5. **Exit.**
6. **Controls:** Click to display or hide the colour controls.

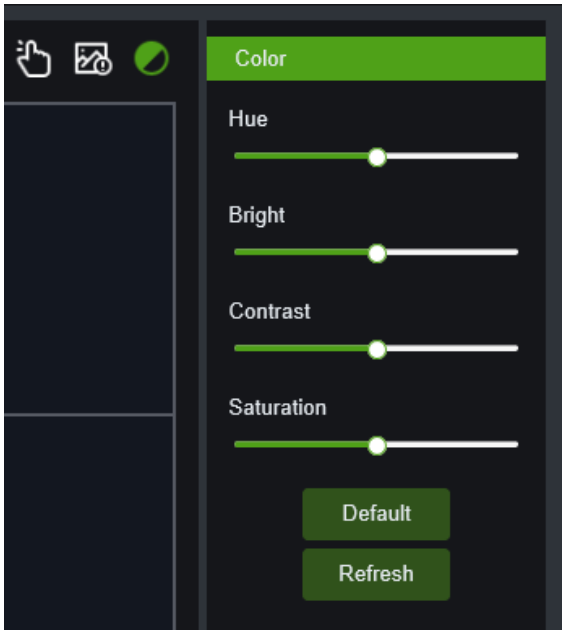
- **Manual Alarm**



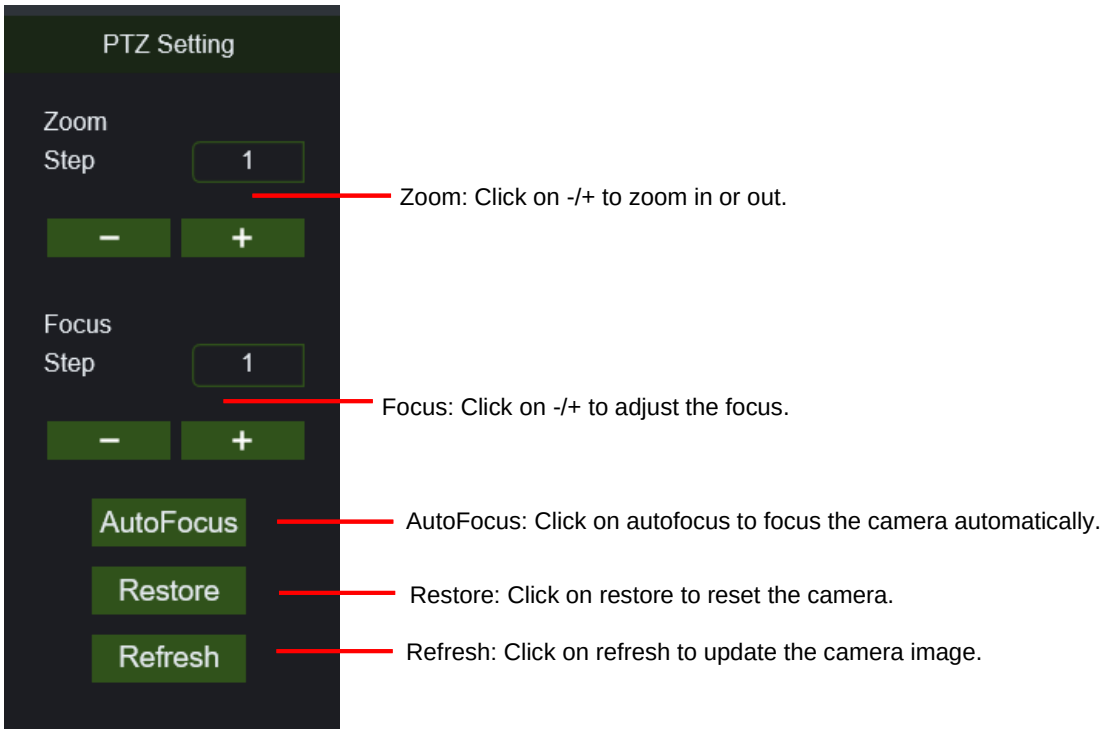
- **AI Alarm**



- **Color**



7. **PTZ Controls:** Click to display or hide PTZ controls for using PTZ cameras.
8. **PTZ Interface:**



9. **Live display control buttons:**

To view the Layout page.

To open the images in the Live window.

To close all Live channels.

Original Proportions: To show the Live video playing in its original proportions.

Stretch: To stretch the Live video feed to fit the full area of each channel on the screen.

To enlarge the Web Client full screen.

Manual Recording: Click to start manual recording for all displayed channels. Click again to stop recording. Manual recordings are saved on the computer.

Snapshot: Click to save snapshots of all channels currently displayed on your computer.

Digital Zoom: Click on a live image, then click and scroll through an area of the live image to enlarge it. Right-click to go back to normal view.

Volume control.

Volume level.

Two-way audio.

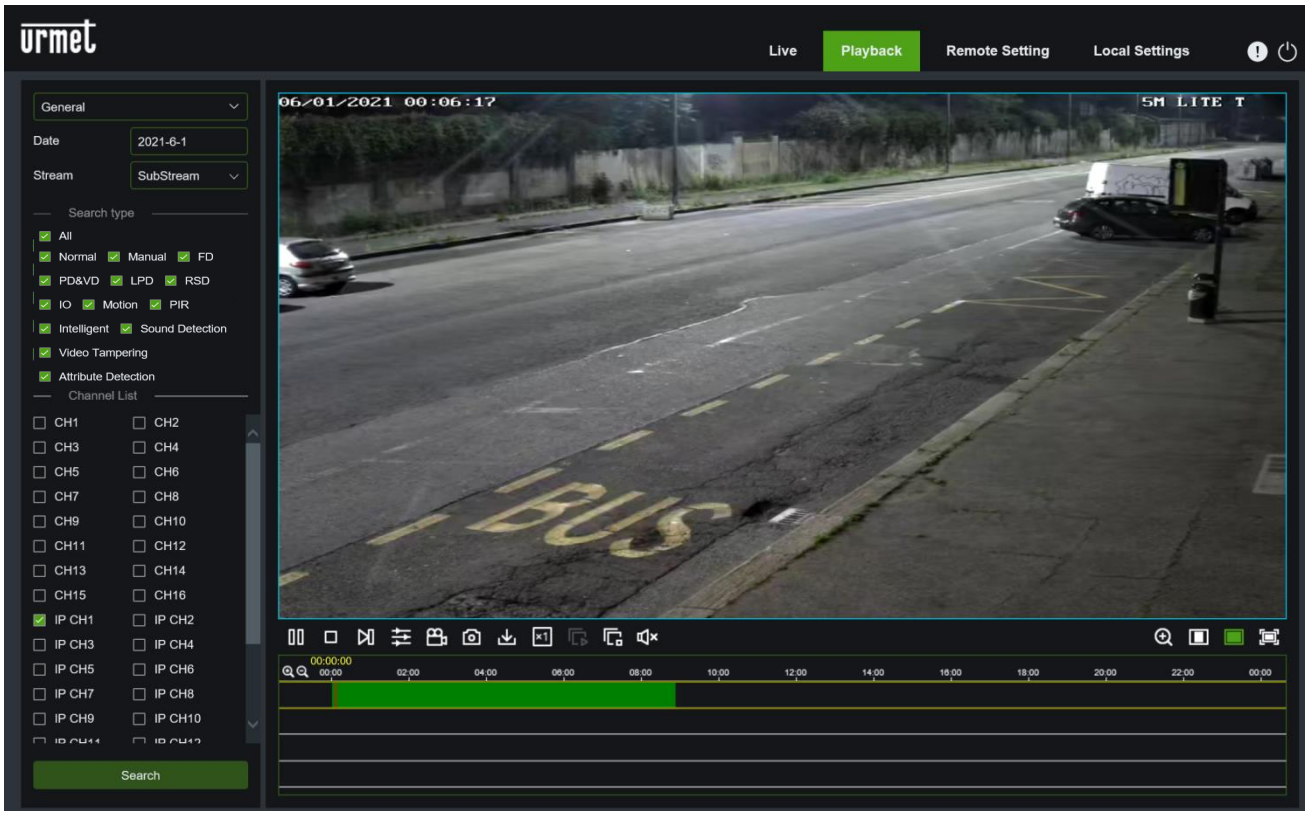
Pixel counter.

Add Tag

10. **Navigation: To display the current page number for the channels displayed on the screen. Use the arrow keys to switch between pages.**
11. **Page View: Click to select the number of channels to be displayed on the screen at the same time.**

5.6 PLAYBACK

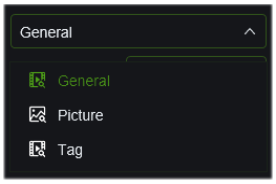
You can search and play back videos recorded and stored on the hard disk in the HVR and download them to your computer.



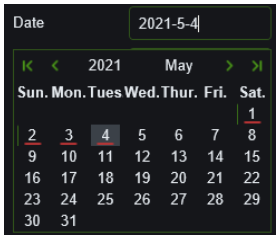
To search the recordings:

Click on **Playback** at the top right of the window.

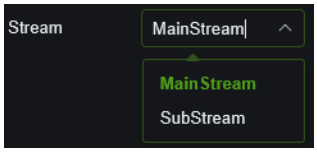
Select search mode for video recordings or images, default is **General**:



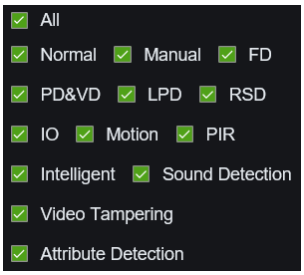
Select the day on that to search for recordings on the calendar. The days with the recordings will be underlined in red.



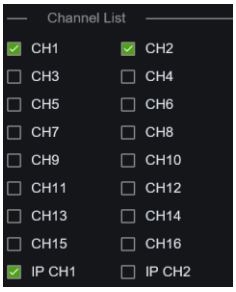
Select the video stream you want to search and play. When playing back Substream recordings, make sure that you have set the NVR for Dualstream recording, as shown in 3.5“



Select the type of record to be searched or select **All** to search all records:

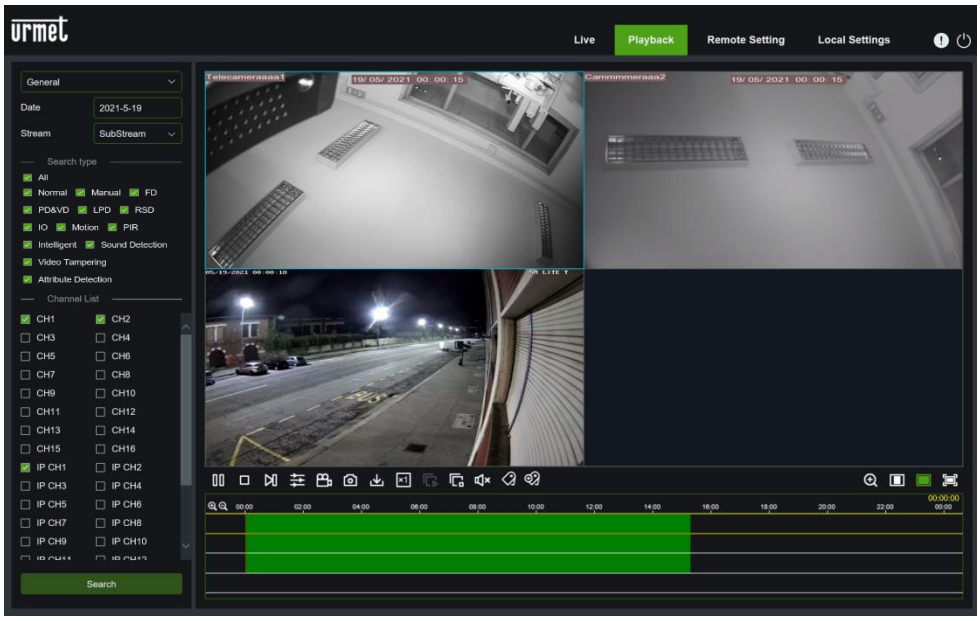


Check the channels to search for recordings.



Click on **Search**.
The records that match the search criteria will be displayed in the timeline. Click on a section of the video from that to begin playback and click on the play button.

5.6.1 PLAYBACK CONTROL BUTTONS



Play the recordings

Pause

Stop

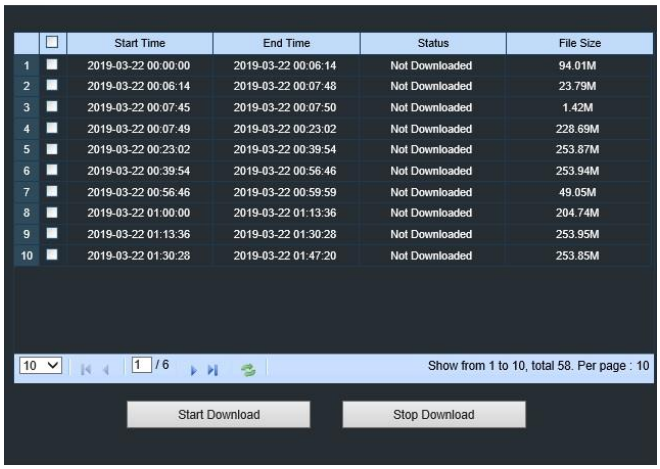
Go Forward One Frame: Move one frame at a time through playback. Only available if **Synchronous playback** has not been checked.

Click on one of the channels playing, then click the Record button to record the current video on your computer. Click again to stop recording.

Synchronous channel replay

Click on one of the channels playing, then click on the Capture button to take a snapshot and save it to your computer.

Web Interface HVR Accessing via IP Address, URL or Urmet DDNS Account.



Select the files to download and press the Start Download button to begin; the download progress will appear. Press the Stop Download button to stop downloading.

Playback Speed: Click to select the playback speed.

Play All Channels: Click to play all channels selected for the search. Only available if Synchronous playback has not been checked.

Stop All Channels: Click to stop all channels. Only available if Synchronous playback has not been checked.

Open/close the speaker and adjust the sound volume.

Digital Zoom: Click on a video that is playing, then click and scroll through an area of the video to enlarge it. Right-click to go back to normal view.

Original Proportions: This shows the video being played back in its original proportions.

Stretch: To stretch the video being played to fit the full area of each channel on the screen.

To enlarge the Web Client full screen.

Digital Zoom: Click on a video that is playing, then click and scroll through an area of the video to enlarge it. Right-click to go back to normal view.

Original Proportions: This shows the video being played back in its original proportions.

Stretch: To stretch the video being played to fit the full area of each channel on the screen.

To enlarge the Web Client full screen.

Default Tag/ Add Customized Tag: for more details, see the section “Errore. L'origine riferimento non è stata trovata. - Errore. L'origine riferimento non è stata trovata.”

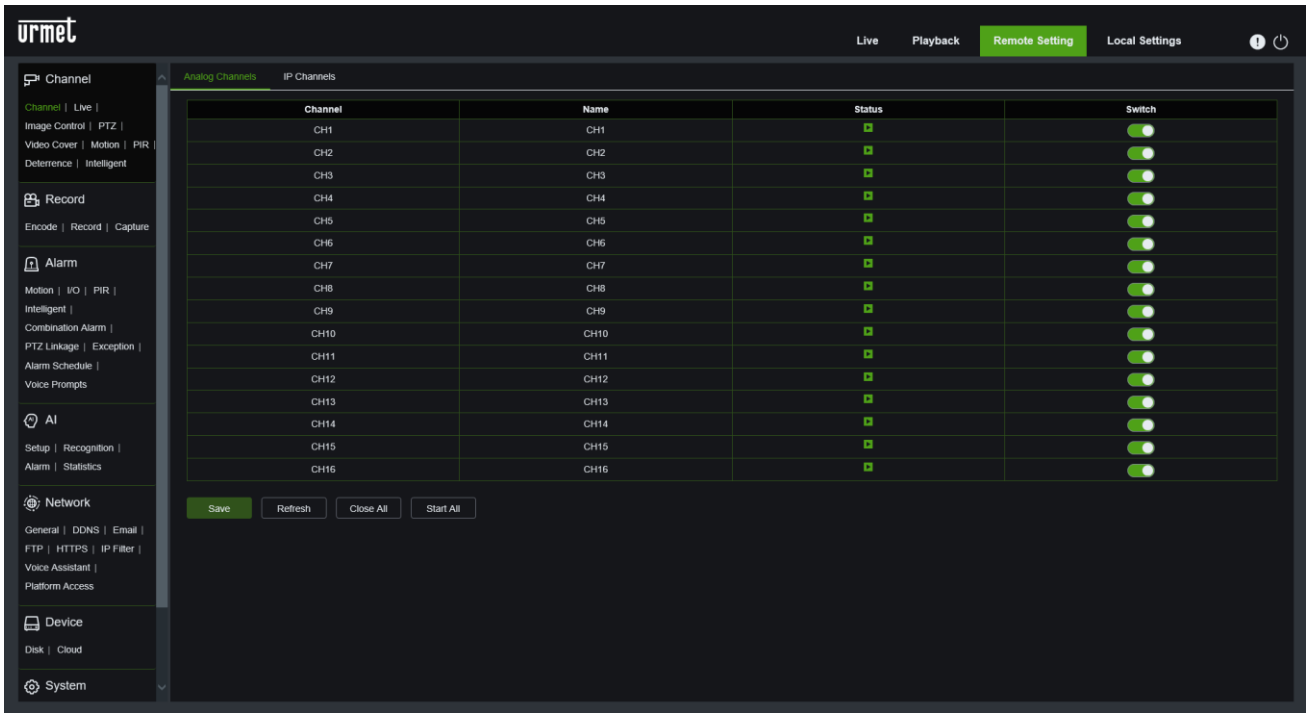
5.7 REMOTE SETTINGS

Click on the [Remote Settings] option to access the interface [Channel], shown below and for the menus for setting the configurations and the parameters for Record, Alarm, Network, Device and System, according to actual needs.

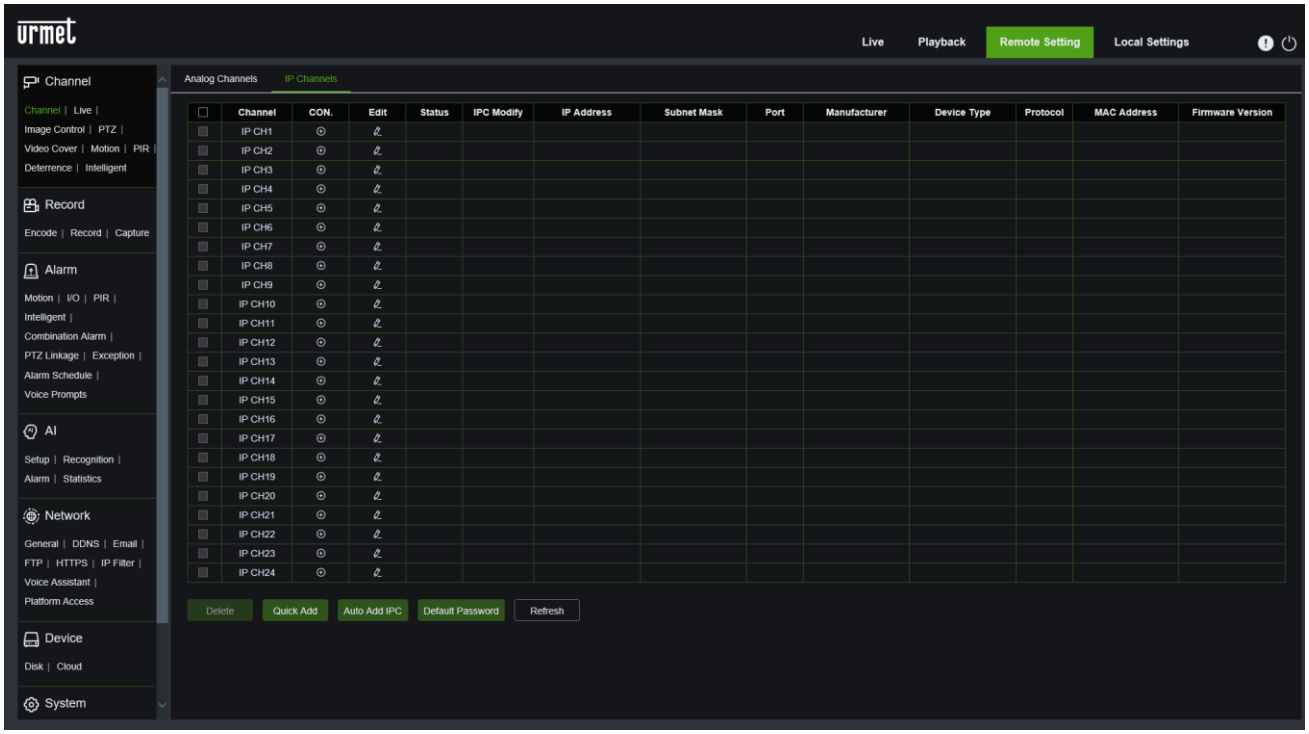
5.7.1 CHANNEL

Open the [Channel] option to find the respective sub-options: Analog Channels, IP Channels, Protocol Manage.

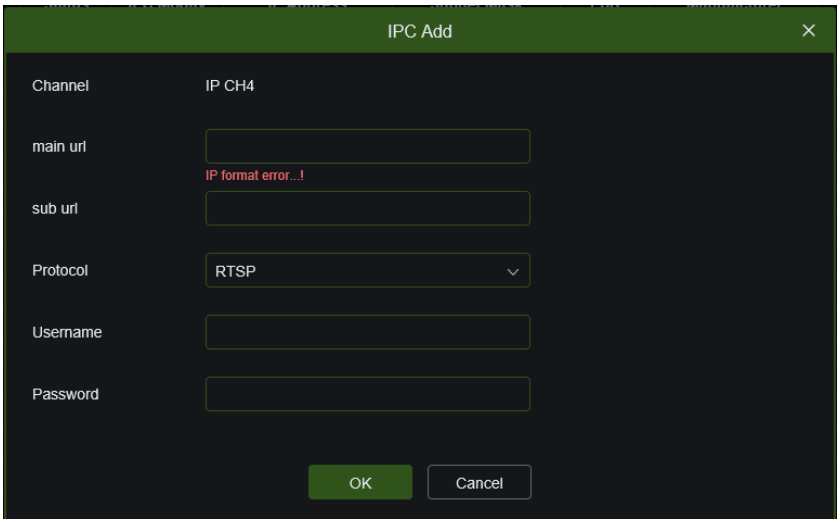
Analog Channels: It is possible to enable/exclude the AHD/analog channels and increase/reduce the number of IP channels.



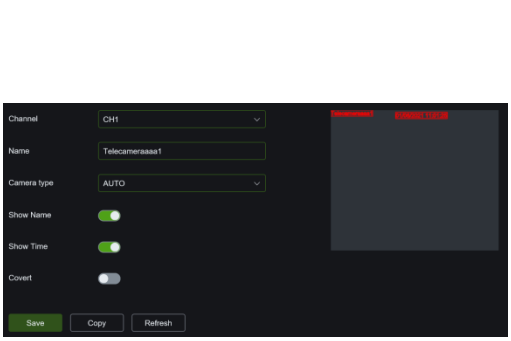
IP Channels: This displays the information on additional IPCs. It can be used to add the IPC rapidly online and to eliminate the added one, as shown in the figure below. The Cloud camera connected to the LAN can be quickly added using the [Quick Add] button and choosing the cameras you want to add from the suggested one, or by adding as many cameras as are found using the [Auto add IPC] button.
The [Refresh] and [Delete] buttons are used to refresh the camera status or delete cameras that are selected, respectively



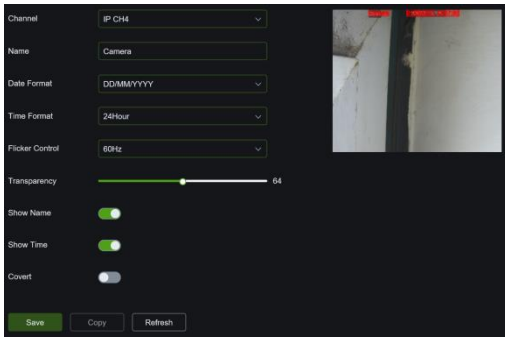
Press on ⊕ to add IP cameras with the RTSP protocol. This function allows you to connect and control the IP Live Preview camera via the RTSP port.



Live: The name, channel position and related parameters can be changed according to the analogue or IP channel type, see figure below. If the Show Time parameter is disabled, the current time of the HVR system will not be shown in Live mode.

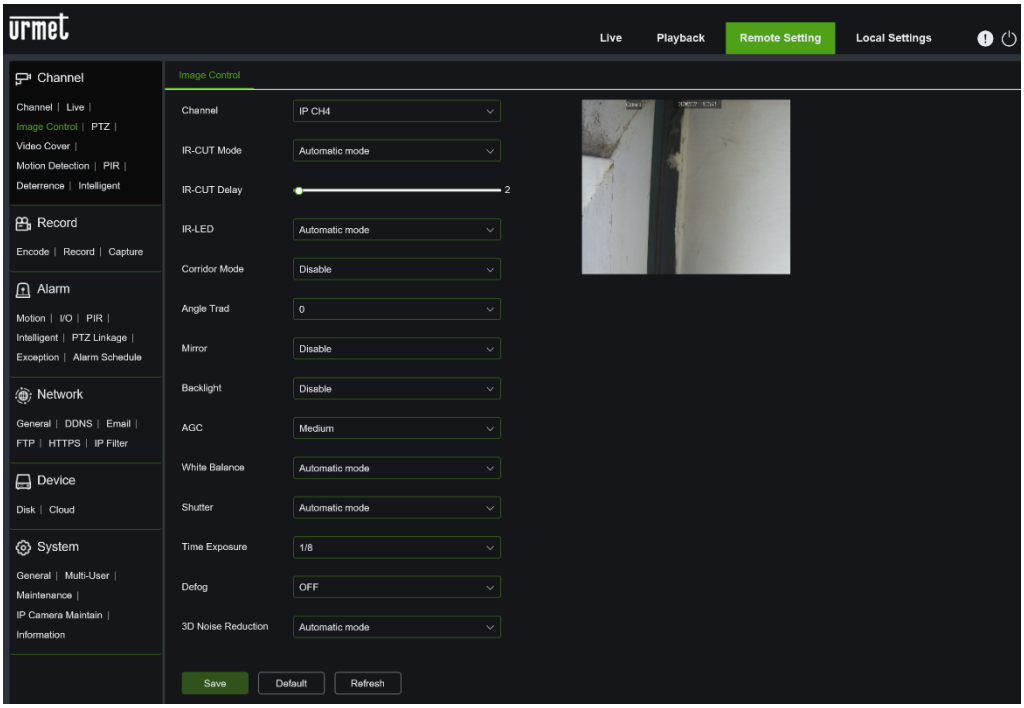


Analog camera

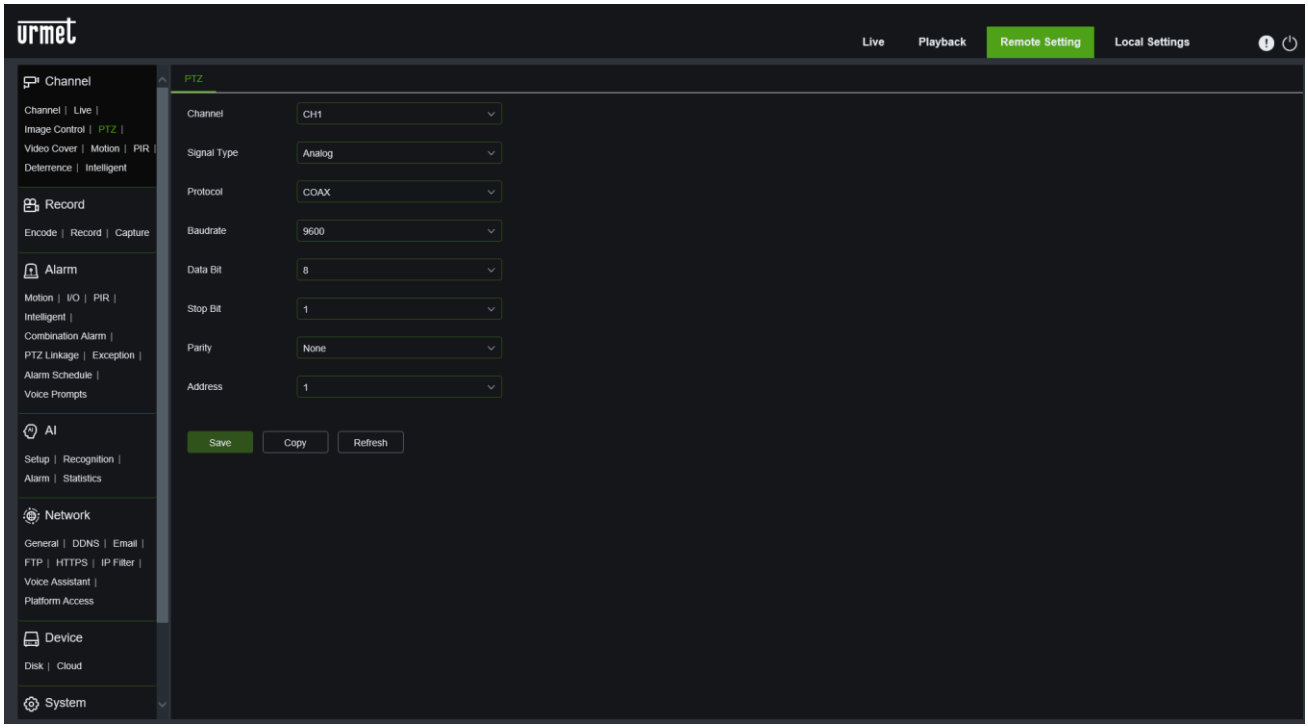


IP Camera

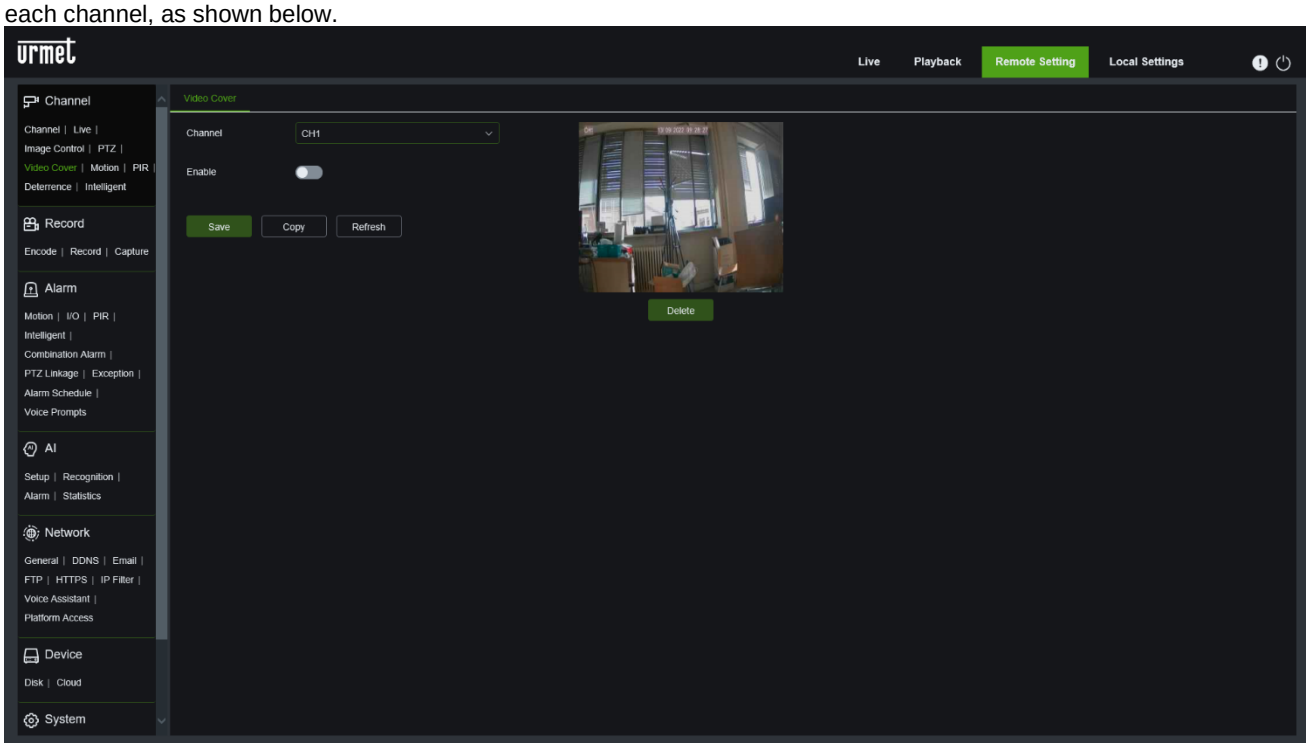
Image Control (if supported by the IP model): Refer to the concerned camera if the IP camera parameters can be set.



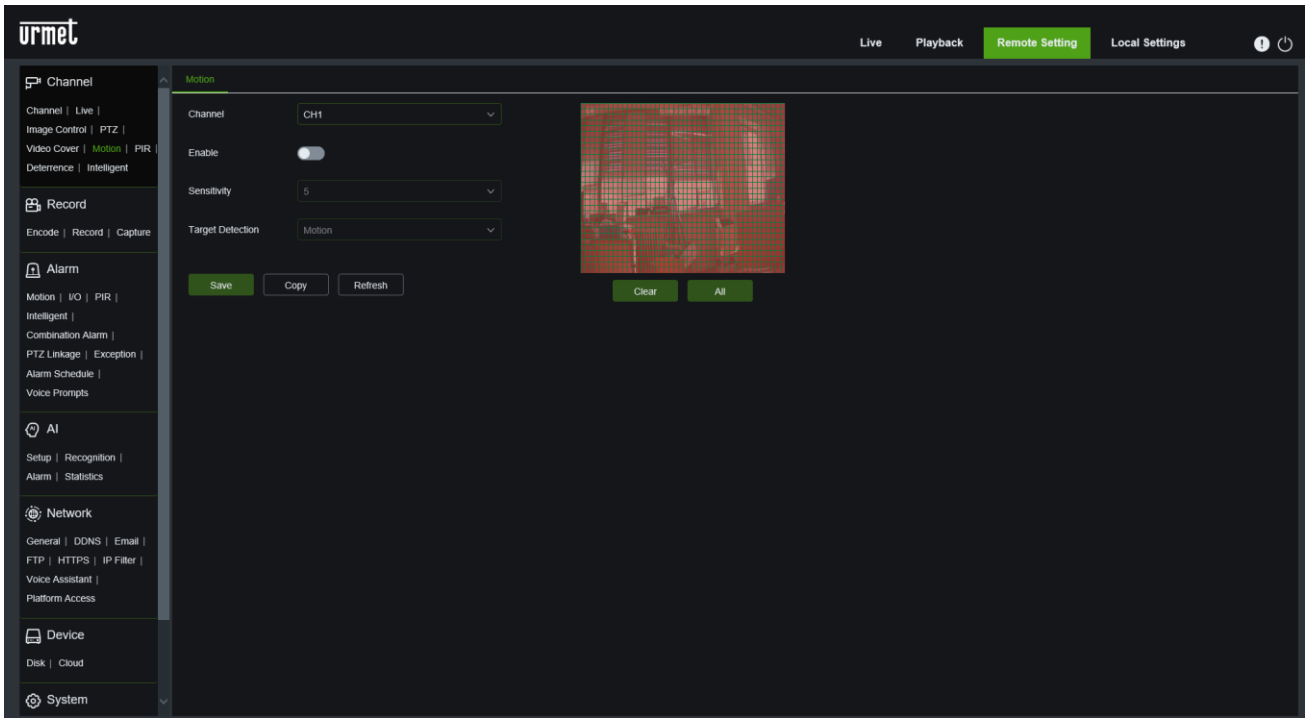
PTZ: The correct PTZ settings for PTZ control can be configured.



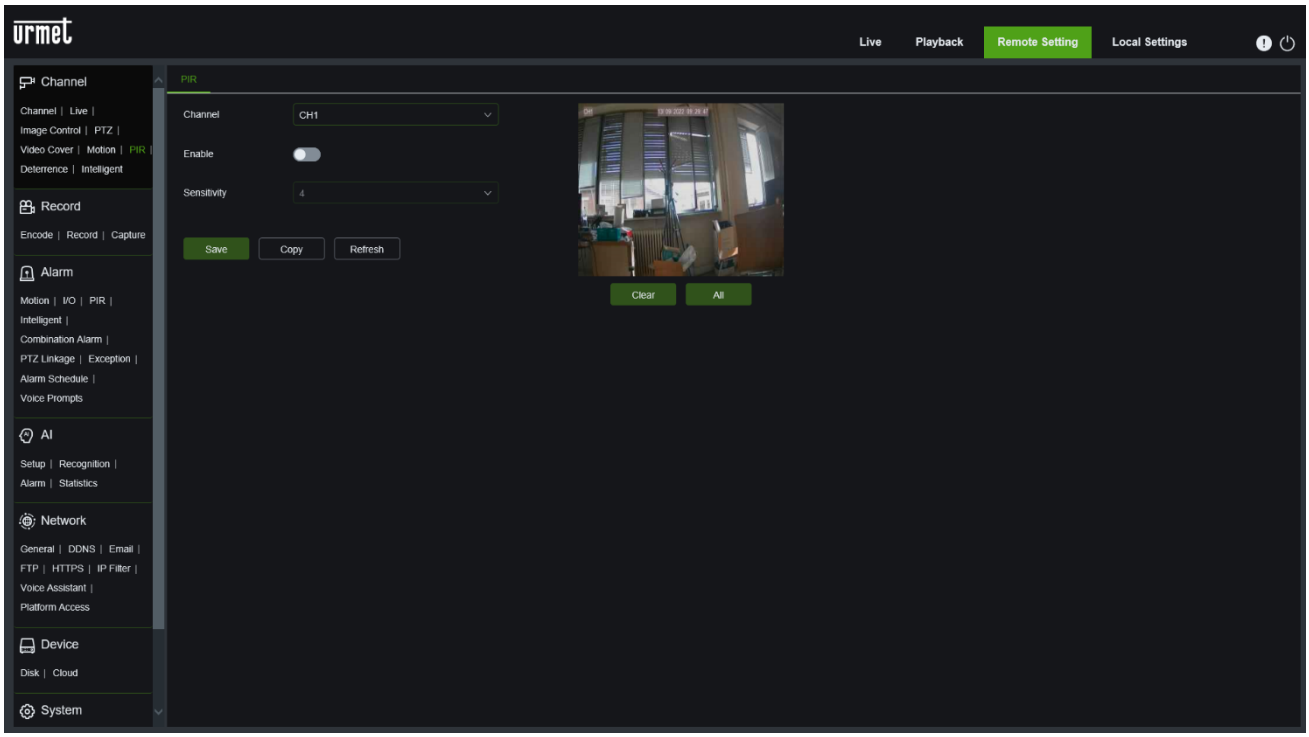
Video Cover: This corresponds to the setting of privacy areas on the video. Up to four privacy zones can be selected for each channel, as shown below.



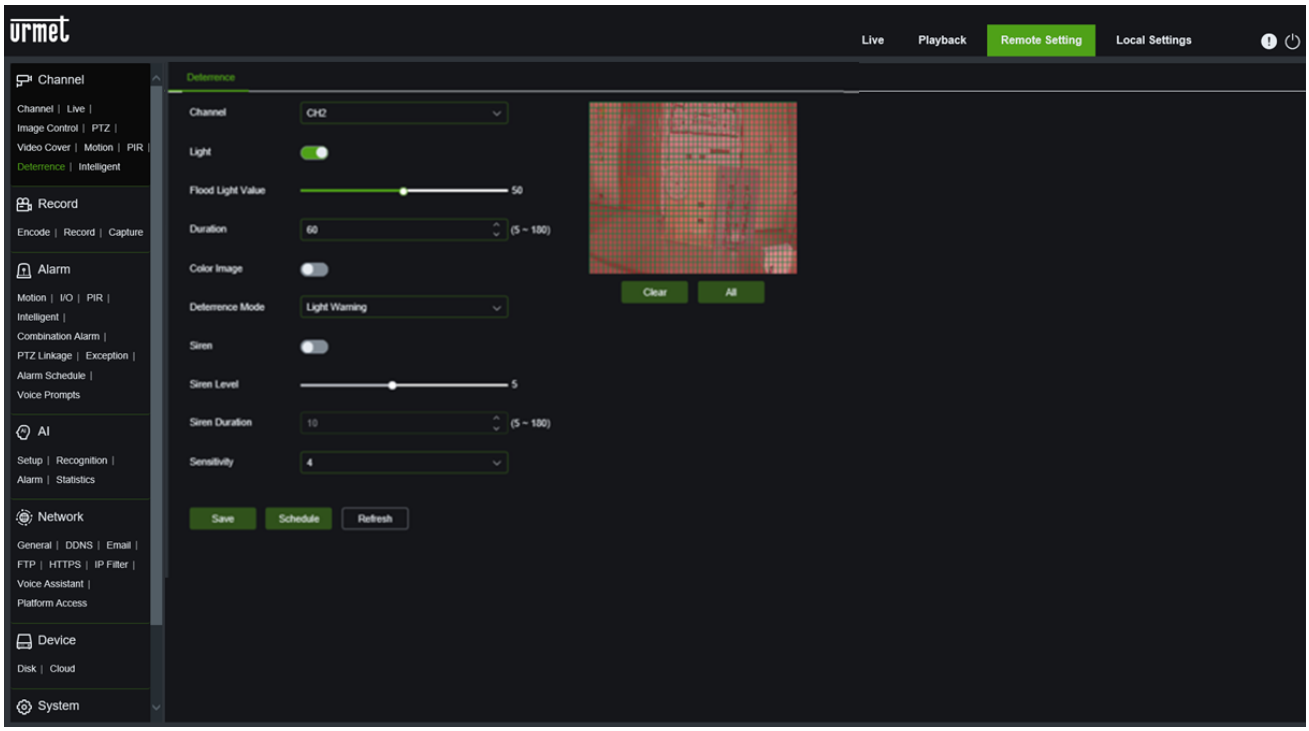
Motion detection: This can be used to configure the sensitivity and set the area. The detailed parameters must be coherent with the local setting of the HVR.



PIR: This can be used to configure the sensitivity and set the area for PIR detection. The detailed parameters must be coherent with the local setting of the HVR. This function is only supported by cameras with PIR.



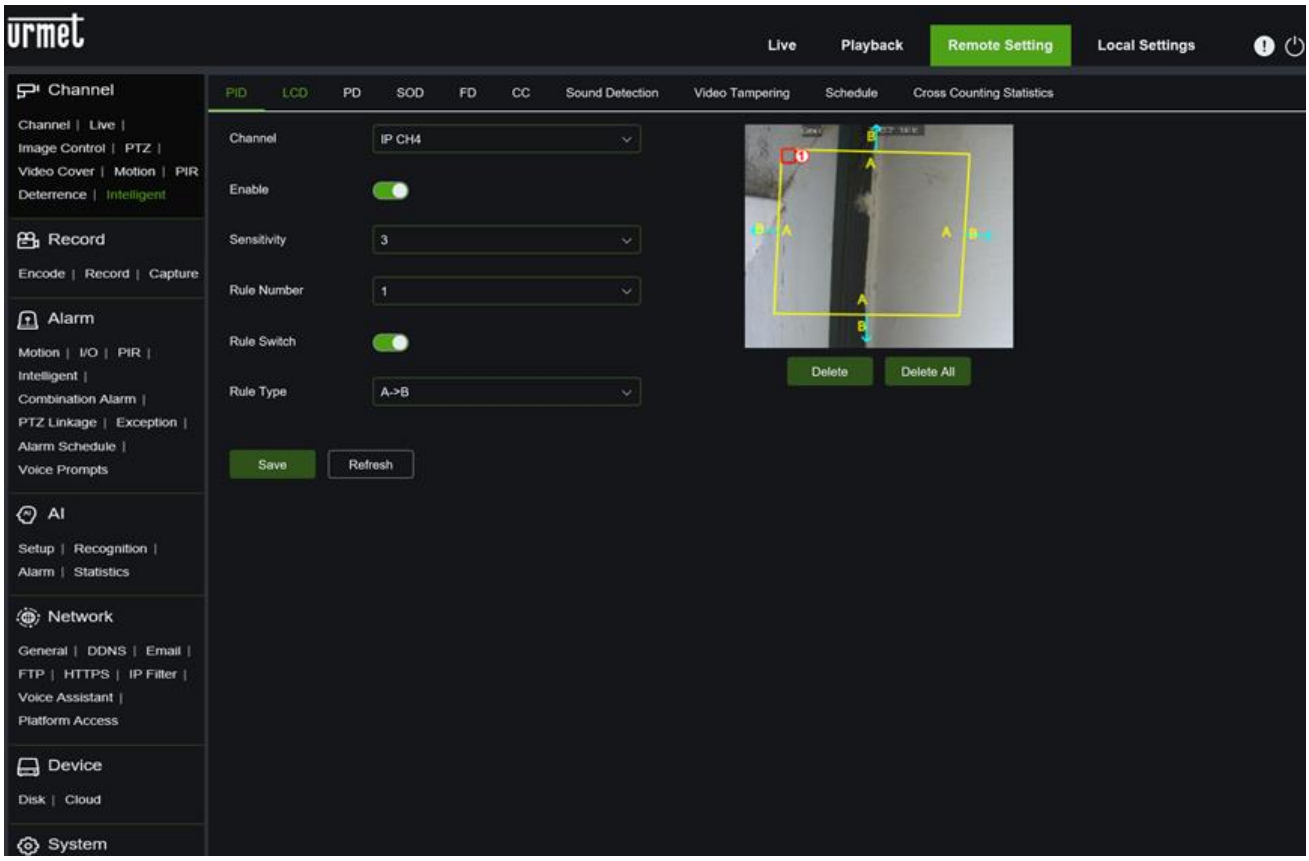
Deterrence: The deterrence function can be used to configure some actions to deter and report abnormal behaviour detected by the camera.
This function is only supported by Deterrence Cameras.



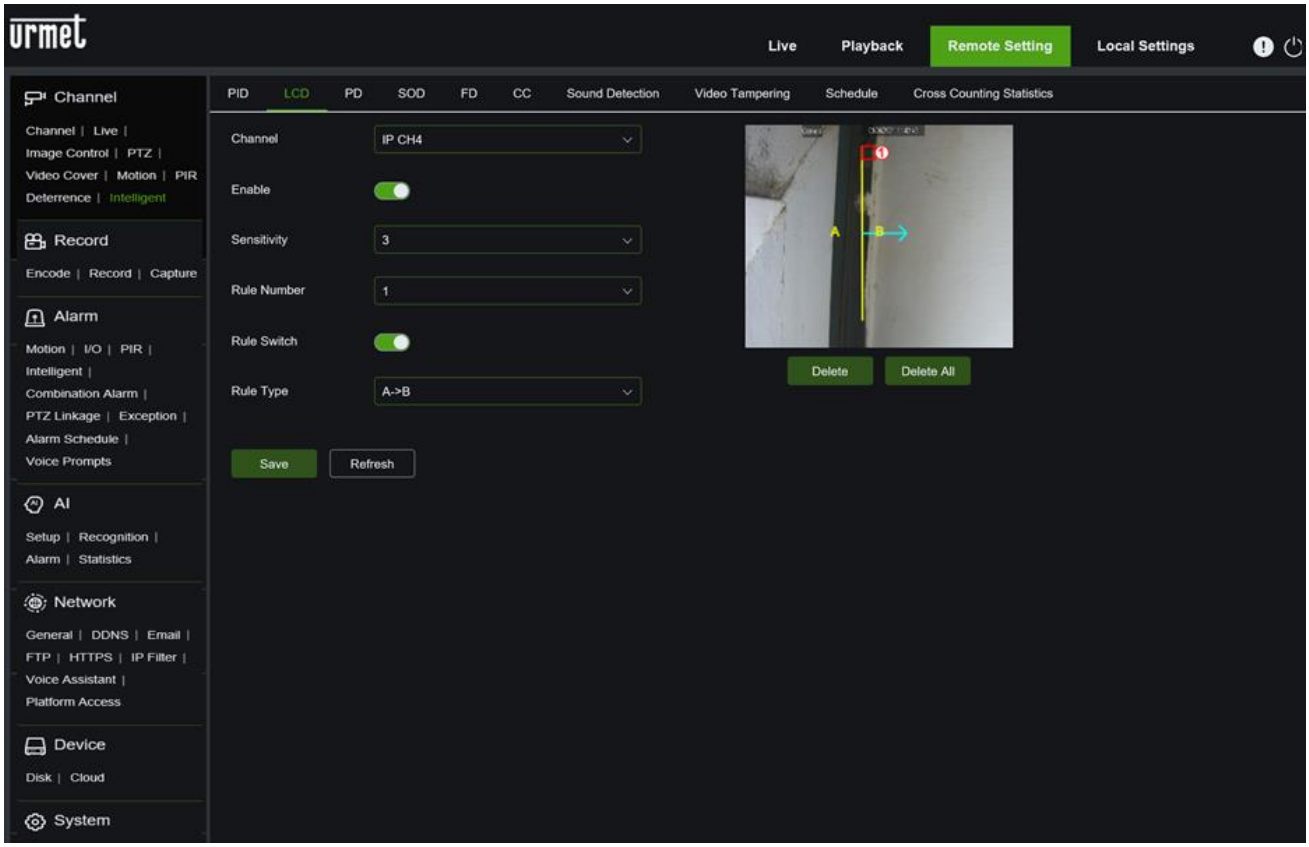
Intelligent: This can be used to set the Intelligent video analysis functions as well as the corresponding recording Schedule. **IMPORTANT:** The intelligent video analysis functions must be supported by the camera.

For more information on the use and settings of intelligent video analysis functions, see the URMET website on http://www.urmet.com where it is also possible to check series or part numbers, availability of related additional material, such as **DS1093-576 Addendum Intelligent Video Analysis** and any firmware updates containing improvements made to intelligent video analysis algorithms.

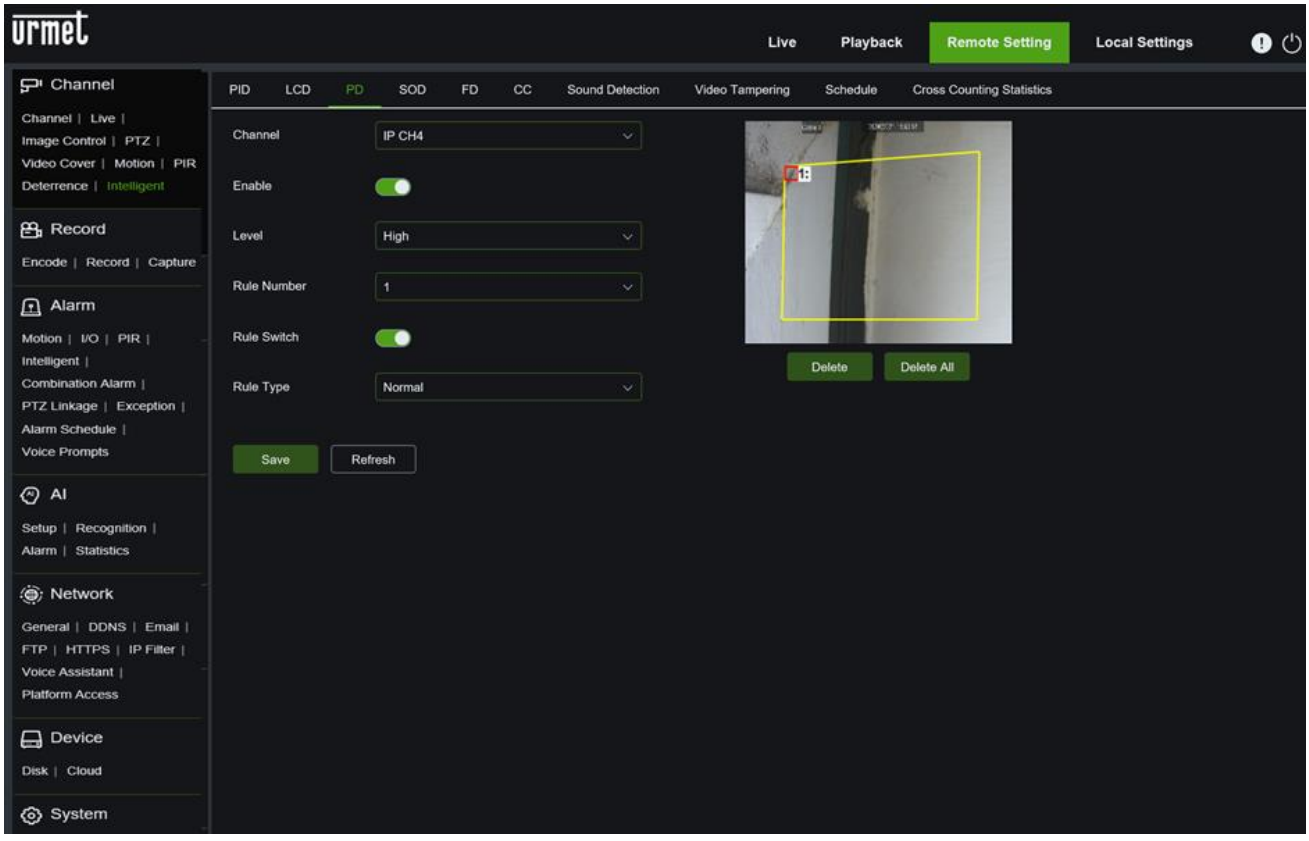
PID (Perimeter Intrusion Detection): Perimeter intrusion detection. For a detailed description of the parameters, refer to section 3.4.9.1 in this manual.



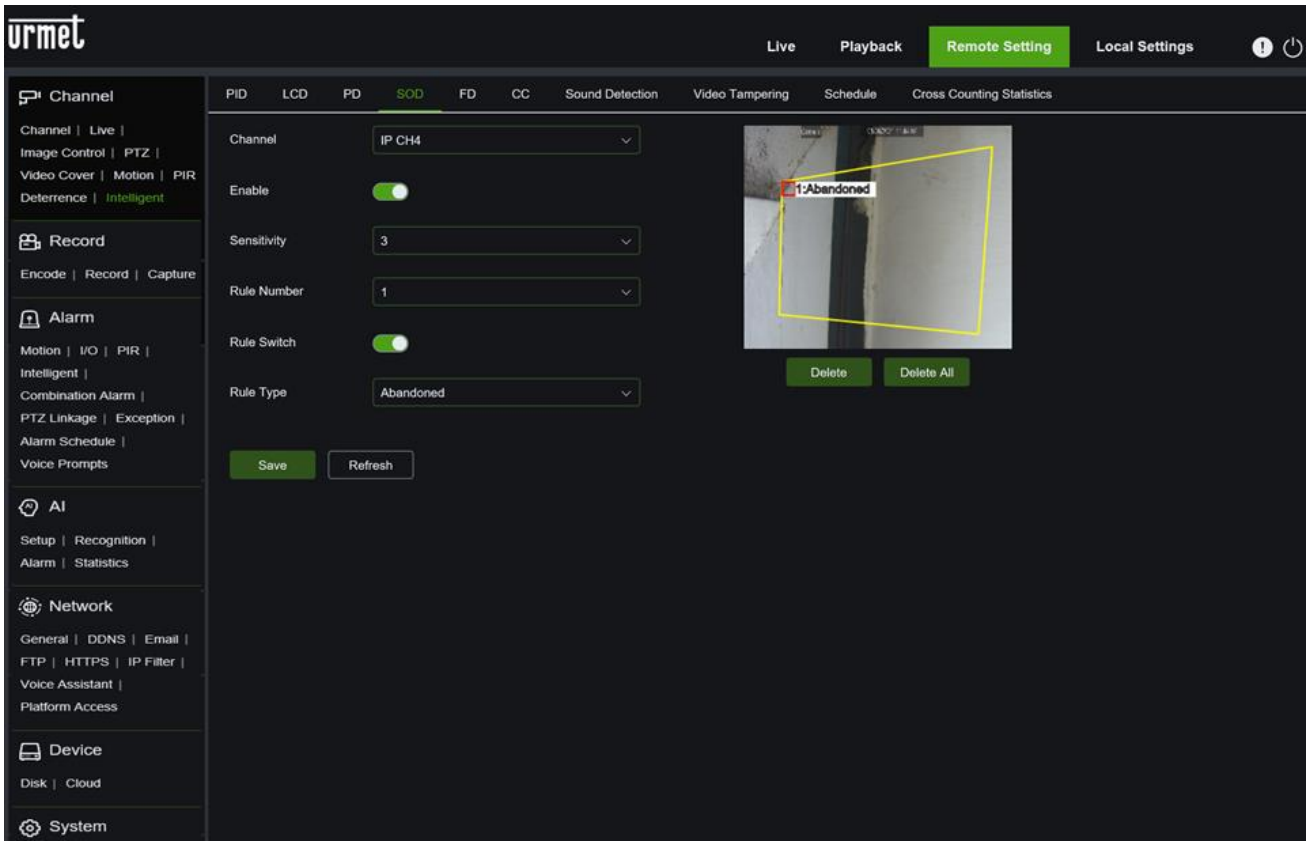
LCD (Line Crossing Detection): Line crossing detection. For a detailed description of the parameters, refer to section 3.4.9.2 in this manual.



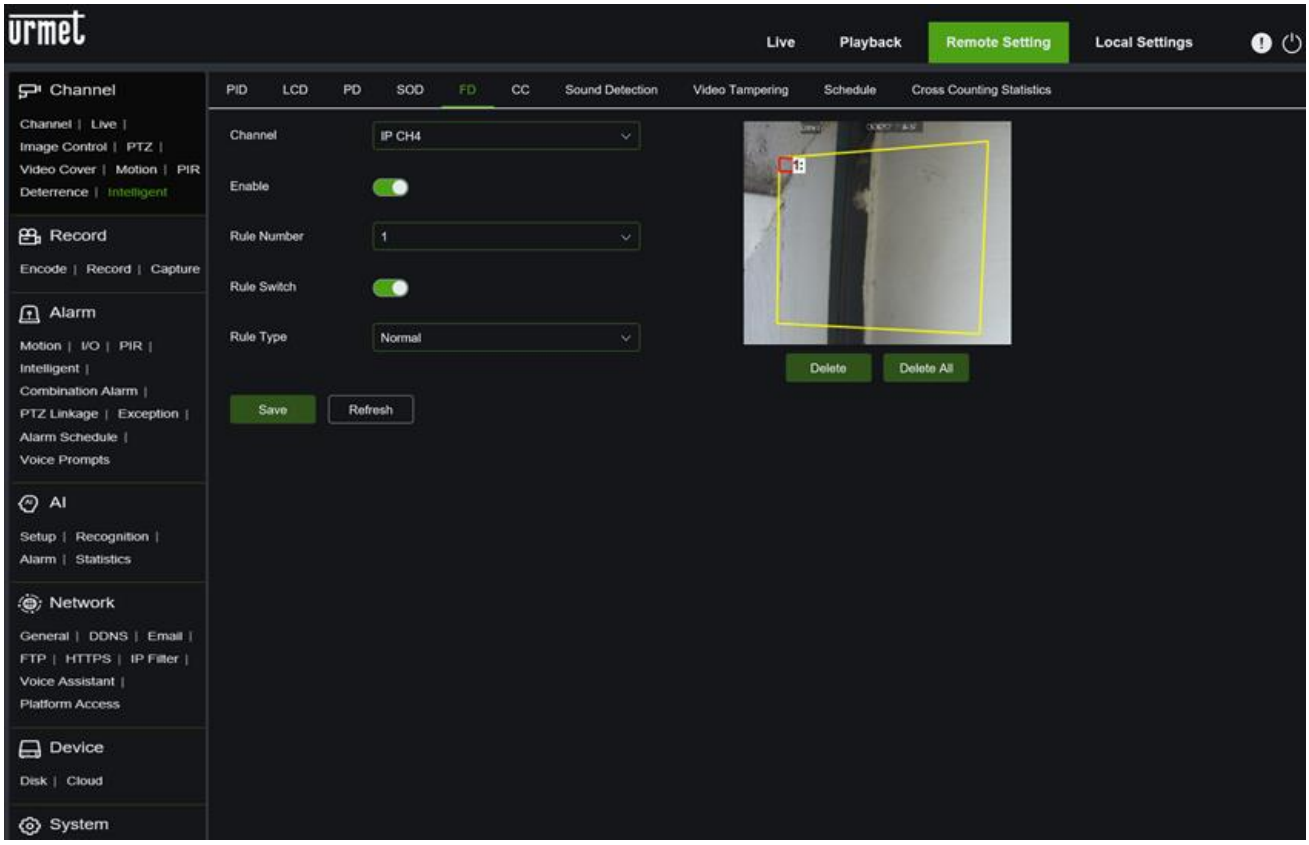
PD & VD (Pedestrian & Vehicle Detection): Human or pedestrian and vehicle detection. For a detailed description of the parameters, refer to section 3.4.9.4 in this manual.



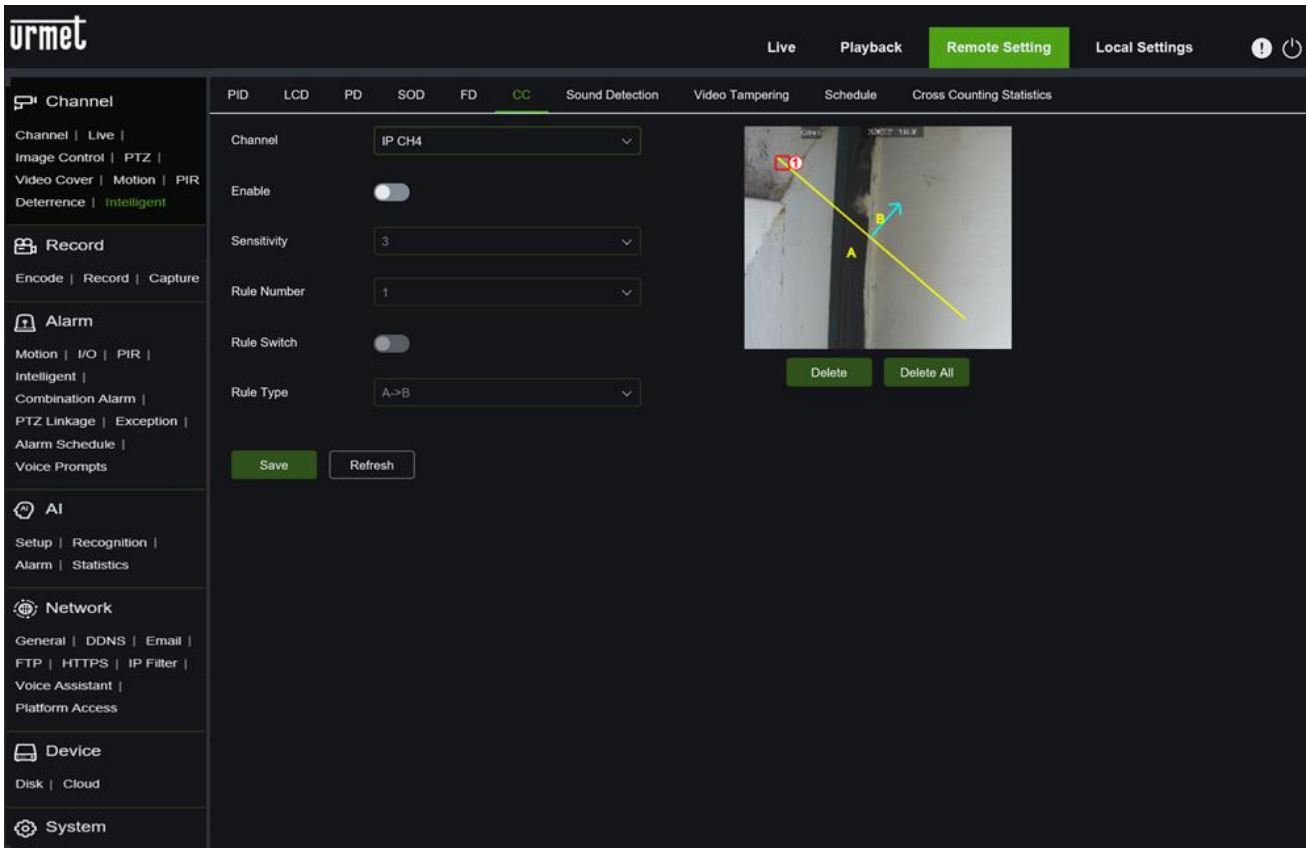
SOD (Subtracted Object Detection): Removal or addition object detection. For a detailed description of the parameters, refer to section 3.4.9.3 in this manual.



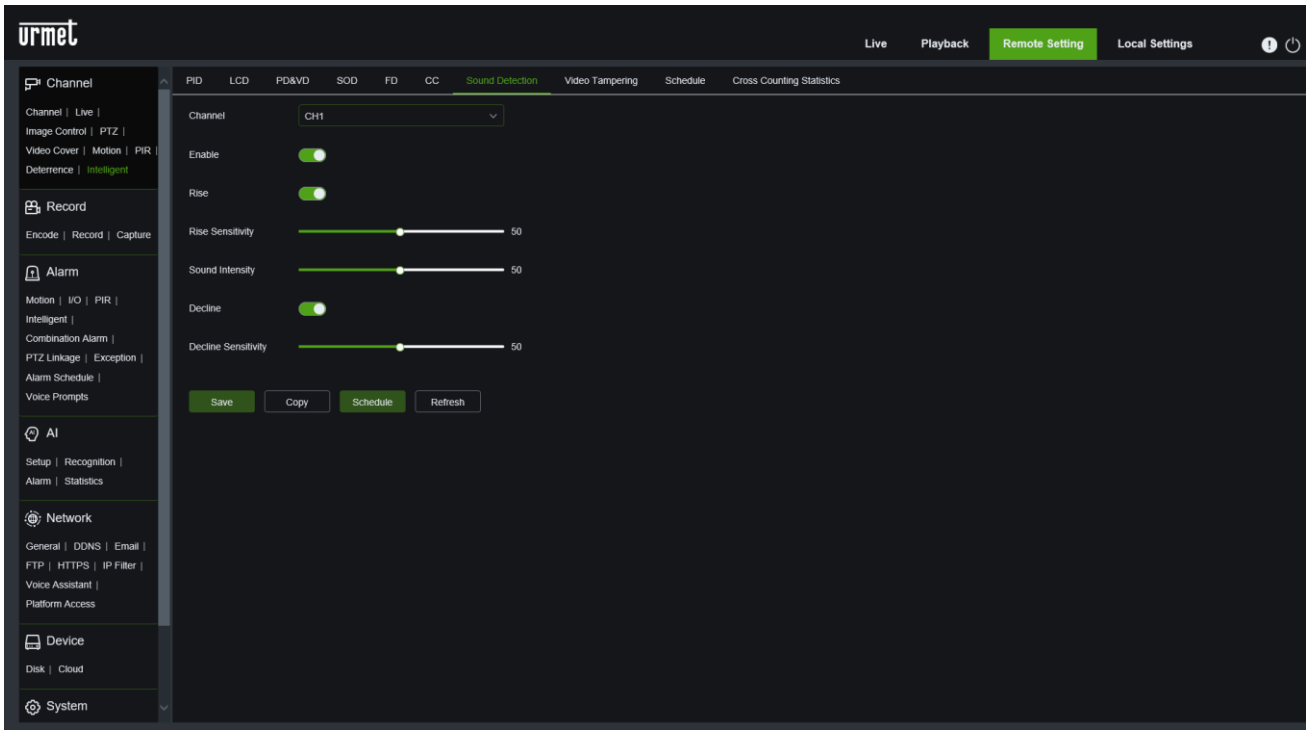
FD (Face Detection): Face detection. For a detailed description of the parameters, refer to section 3.4.9.5 in this manual.



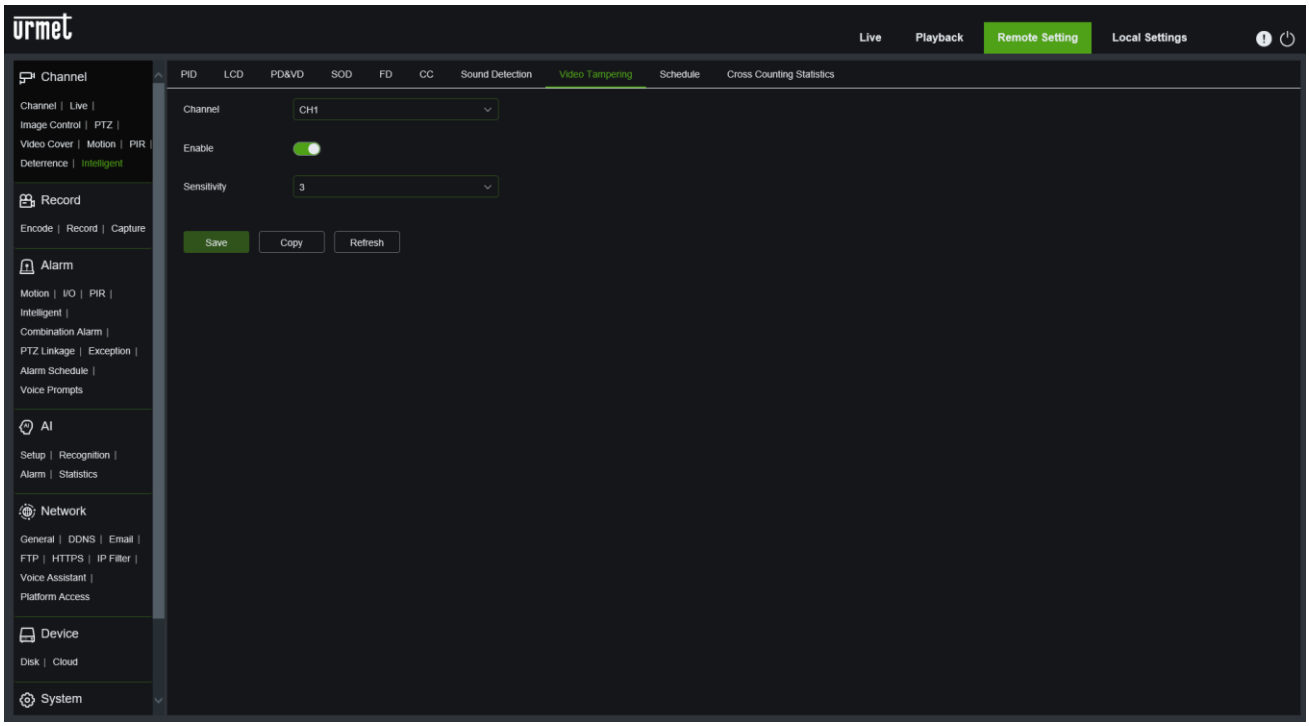
CC (Cross Counting): Cross counting. For a detailed description of the parameters, refer to section 3.4.9.6 in this manual.



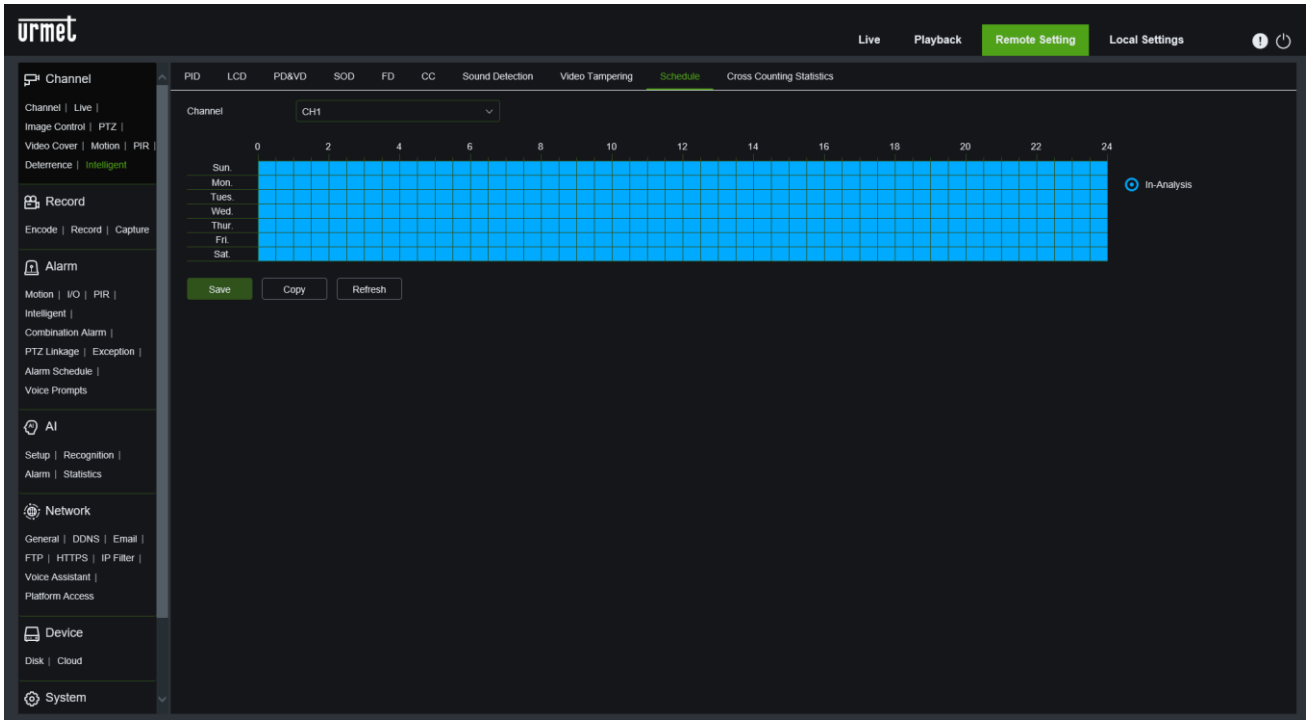
Sound Detection: Sound detection.
Note: This function depends on the camera model and must be supported by the camera to be set.



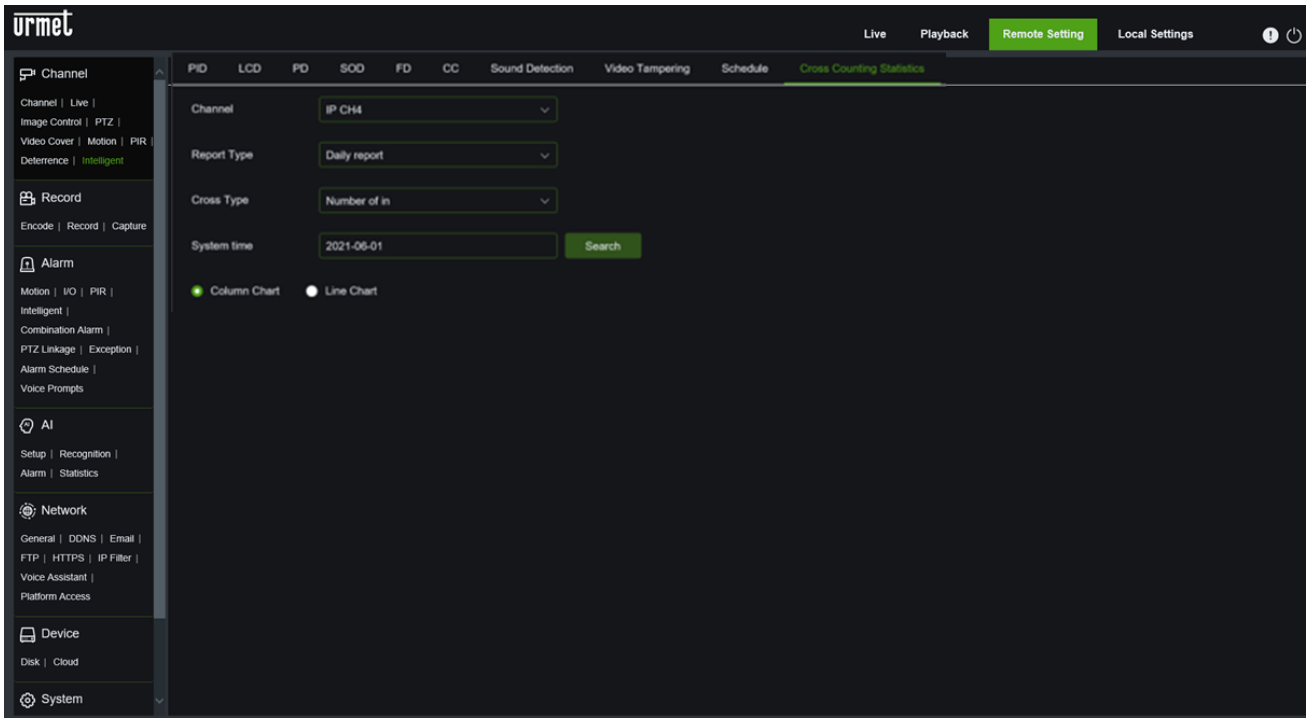
Video Tampering: Video camera tampering detection.
Note: This function depends on the camera model and must be supported by the camera to be set.



Schedule: Scheduling of recording on events in the Intelligent Menu.



Cross counting statistics: Cross counting statistics (see algorithm **CC**).



Note:

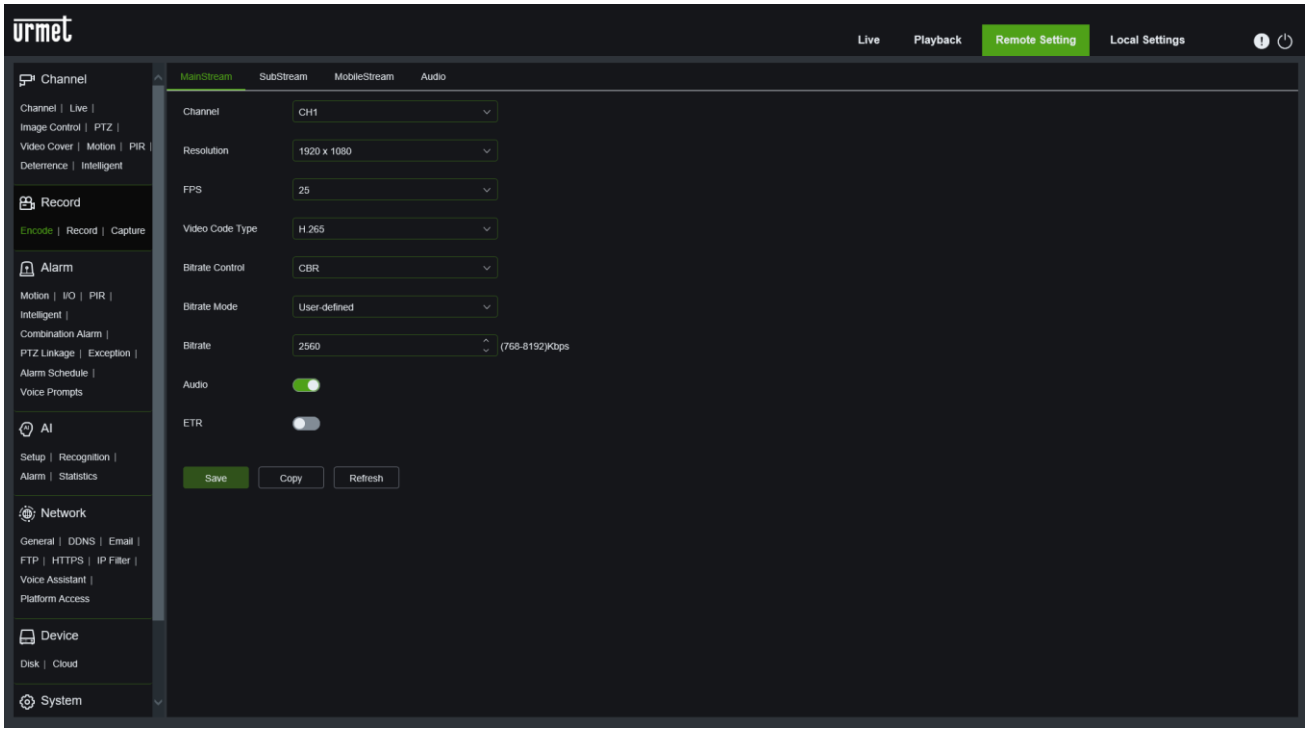
- The Sound Detection function is not ALWAYS available. This function depends on the camera model and must be supported by the camera to be set.

5.7.2 RECORD

The <Record> page provides access to the options: Encode, Record and Capture.

5.7.2.1 Encode

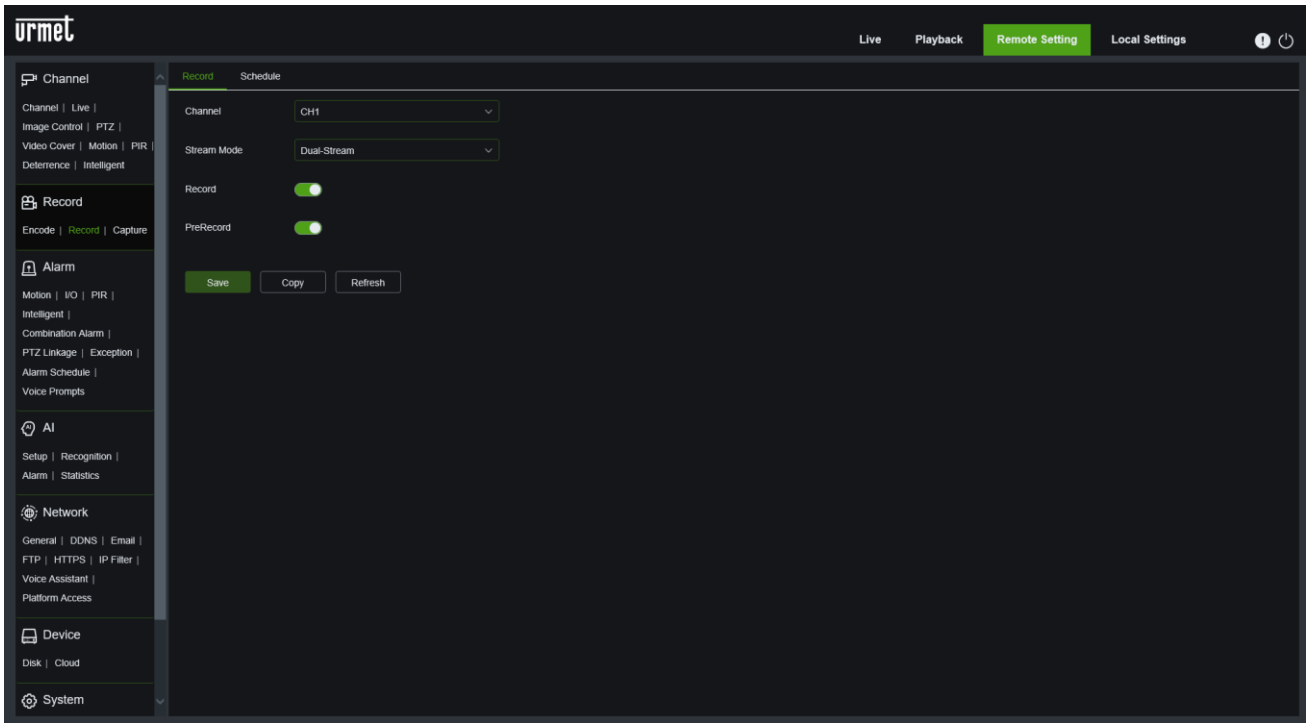
This can be used to set the Mainstream, Substream, Mobile Stream and Audio parameters as shown in the following figures:



5.7.2.2 Record

and its sub-options:

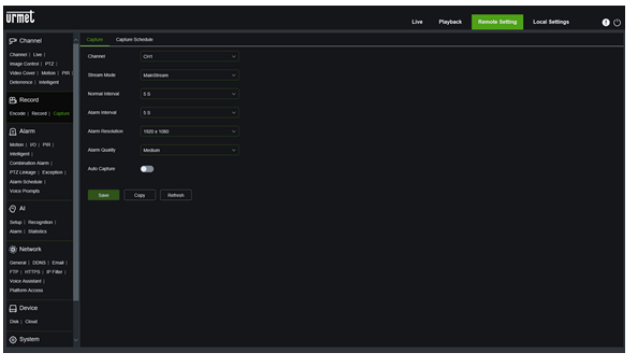
Record: Channel, Record, Stream mode and Pre-record can be set.

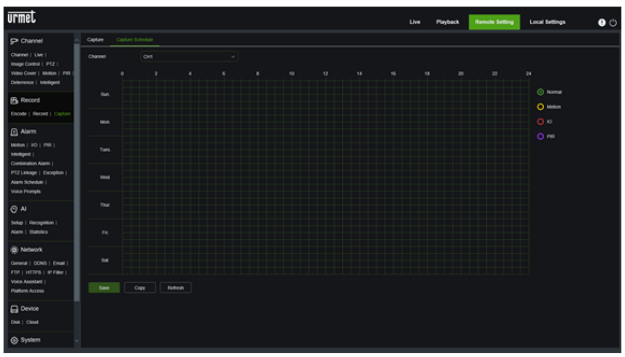


Schedule: The recordings can be scheduled: Green indicates Normal record; yellow indicates Motion detection; red indicates I/O triggered record and purple indicates PIR Detection.

5.7.2.3 Capture: Submenu.

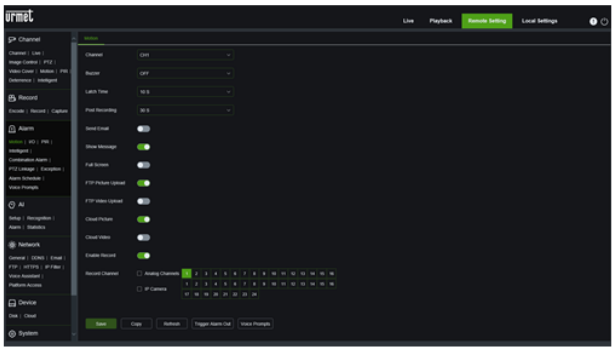
Capture: This can be used to automatically acquire the images according to the program or set the parameters manually. In [Capture Schedule] it is possible to program the capture type. Green indicates 24 H Capture; yellow indicates Motion detection, red indicates I/O triggered record and purple indicates PIR Detection.

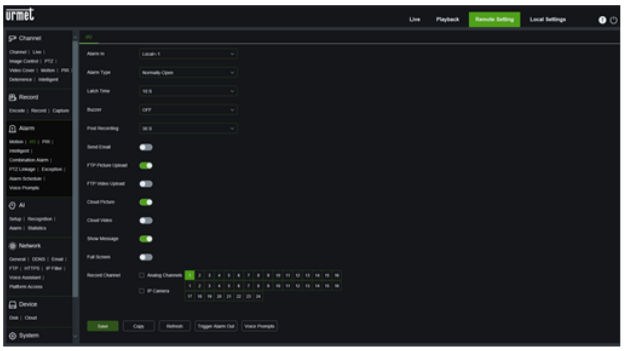


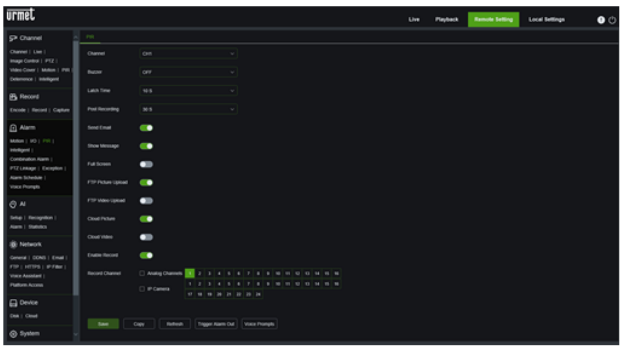


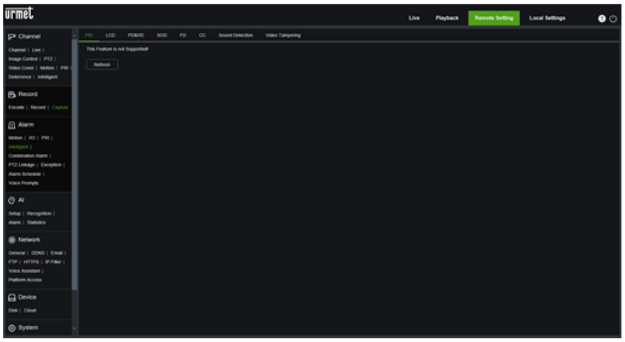
5.7.3 **ALARM**

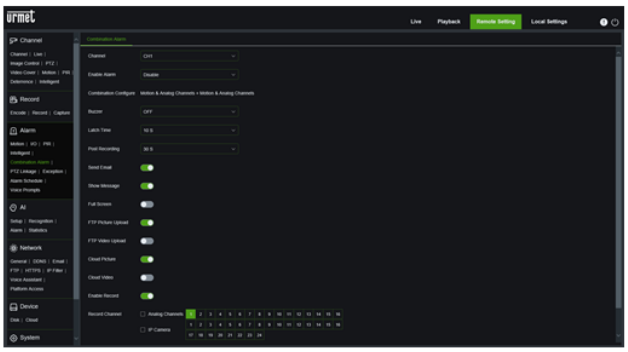
The notifications can be set (e.g. Buzzer, Latch Time, Post Recording, Send Email, Show Message, Full Screen, FTP Picture/Video Upload, Cloud Picture/Video Upload, Record Channel) for events such as Motion, PIR, IO Alarm, Intelligent, PTZ Linkage, Exception, Alarm Schedule. The detailed parameters must be coherent with the local setting of the HVR.

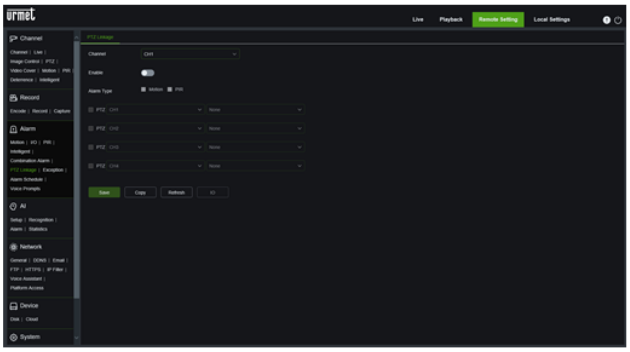


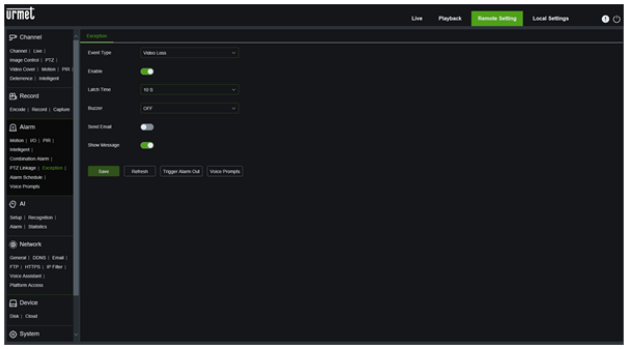


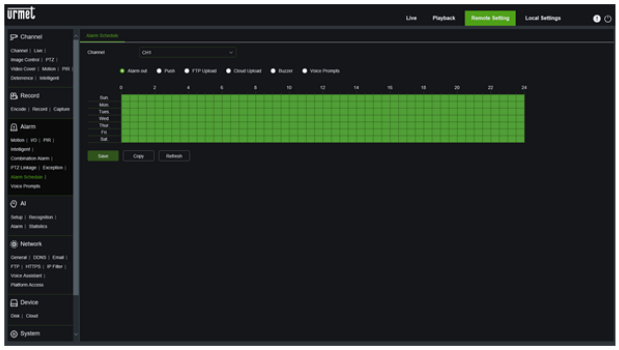


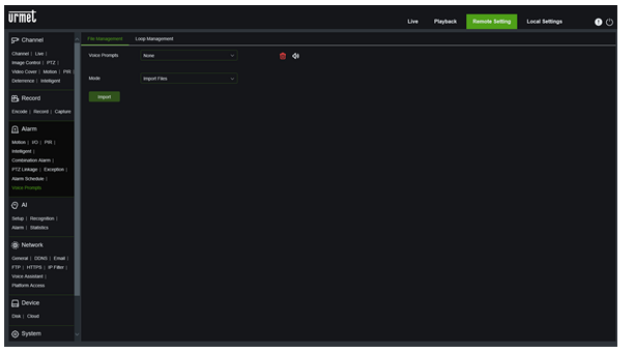


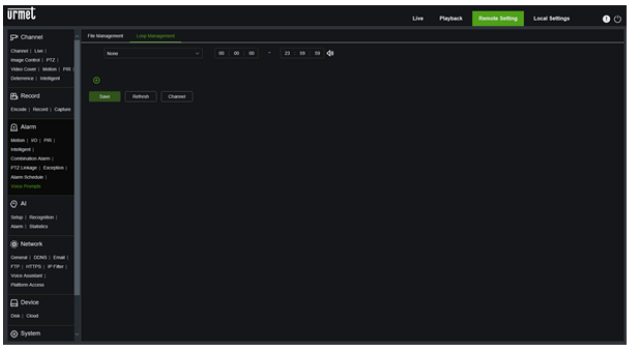










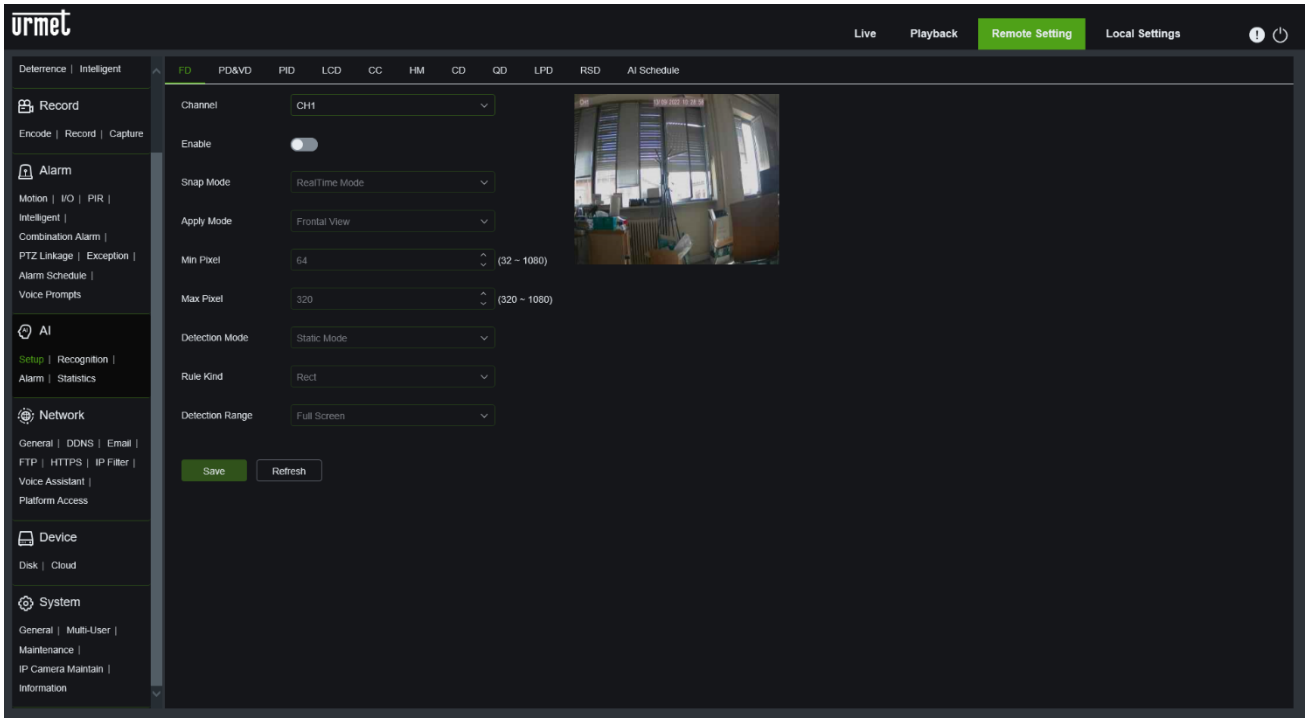


5.7.4 AI

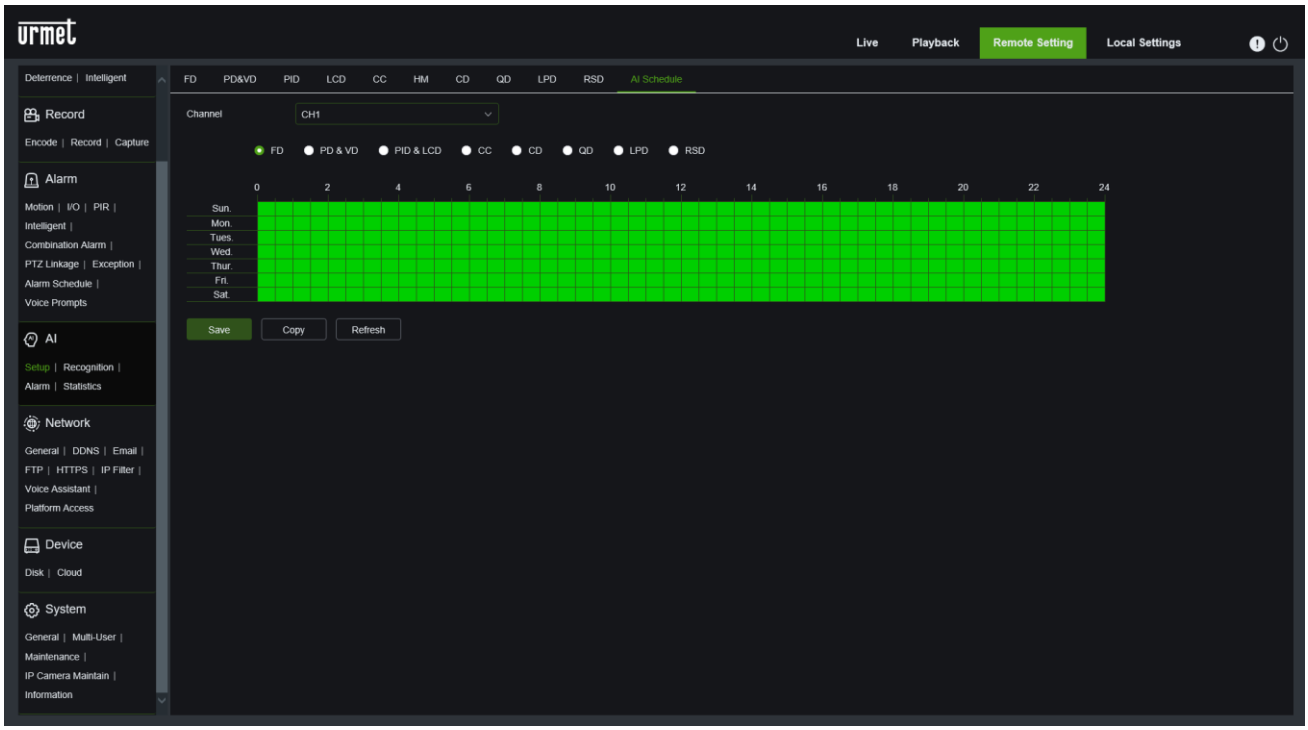
Open the <AI> (AI) option to access its sub-options: Setup, Recognition, Alarm and Statistics. and <AI> (AI) to access its sub-options: Setup, Recognition, Alarm and Statistics.

5.7.4.1 Setup

The following intelligent analysis functions can be set up: PID (Perimeter Intrusion Detection), LCD (Line Crossing Detection), SOD (Stationary Object Detection), PD & VD (Pedestrian and Vehicle Detection), FD (Face Detection), and CC (Cross Counting), HM (Heat Map), CD (Crowd Detection), QD (Queue Detection), LPD (Lincense Plate Detection), RSD (Rare Sound Detection) and their scheduling on time slots (AI Schedule).



For details of the individual parameters in the **Setup** / **Recognition** / **Alarm** / **Statistics** sections of the AI, please refer to Chapter **3.7 AI** and Section **3.4.9 Intelligent** in this manual.



5.7.5 NETWORK PARAMETERS

Open the <Network> option to access its sub-options: Network, DDNS, Email, FTP, HTTPS, IP Filter, Voice Assistant and Platform.

.

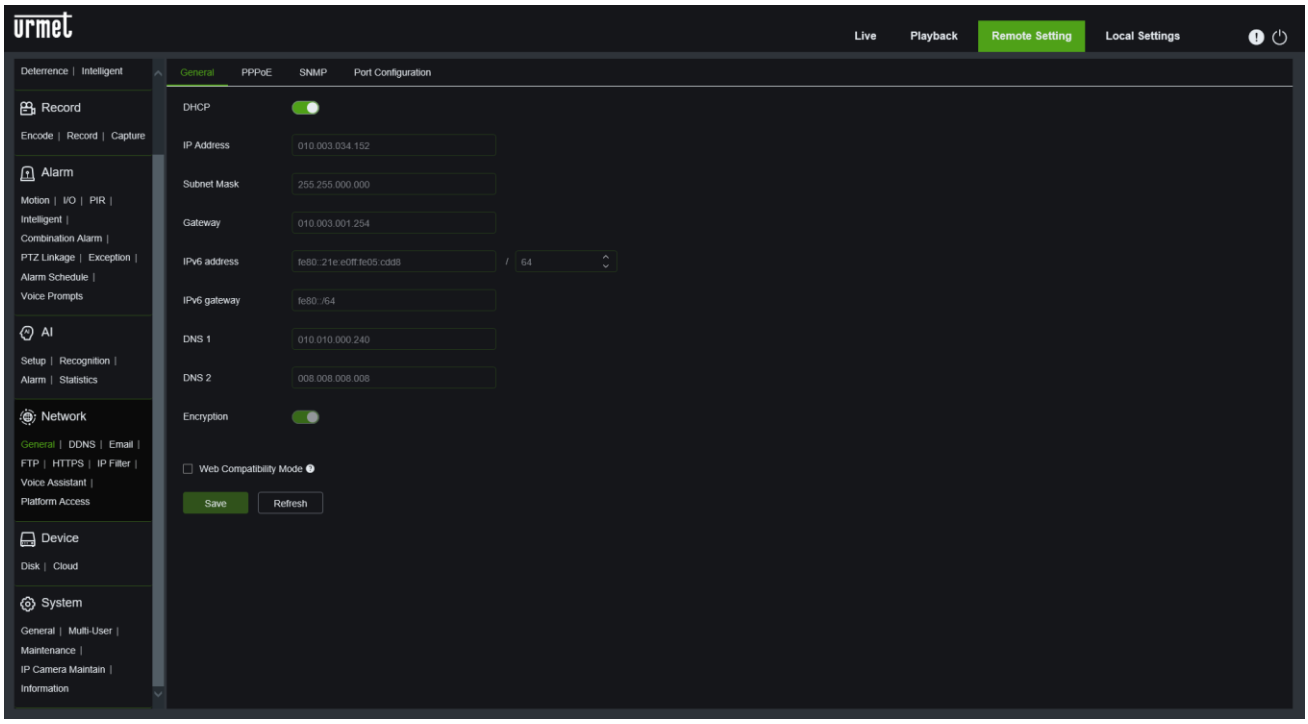
5.7.5.1 General

The model supports three types of networks: Static, DHCP and PPPoE.

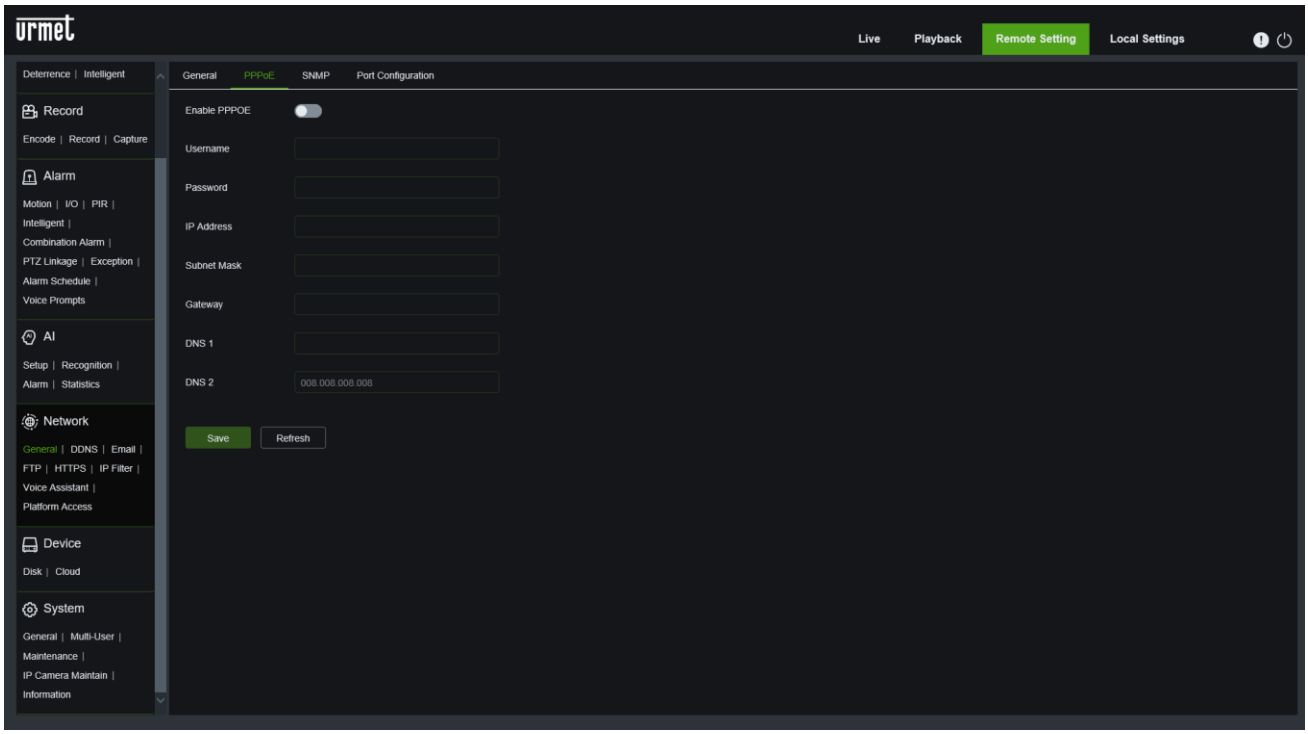
Static: The user can assign the IP and port-forward the HVR according to the various routers. If <UPNP> is set to “On”, the user does not need to set port-forwarding. Access functions of the HVR setting menus.

DHCP: Check the DHCP box if you connect to a router to use DHCP. The router will automatically assign all network parameters for the HVR. The parameters are as follows unless the network address is set manually:

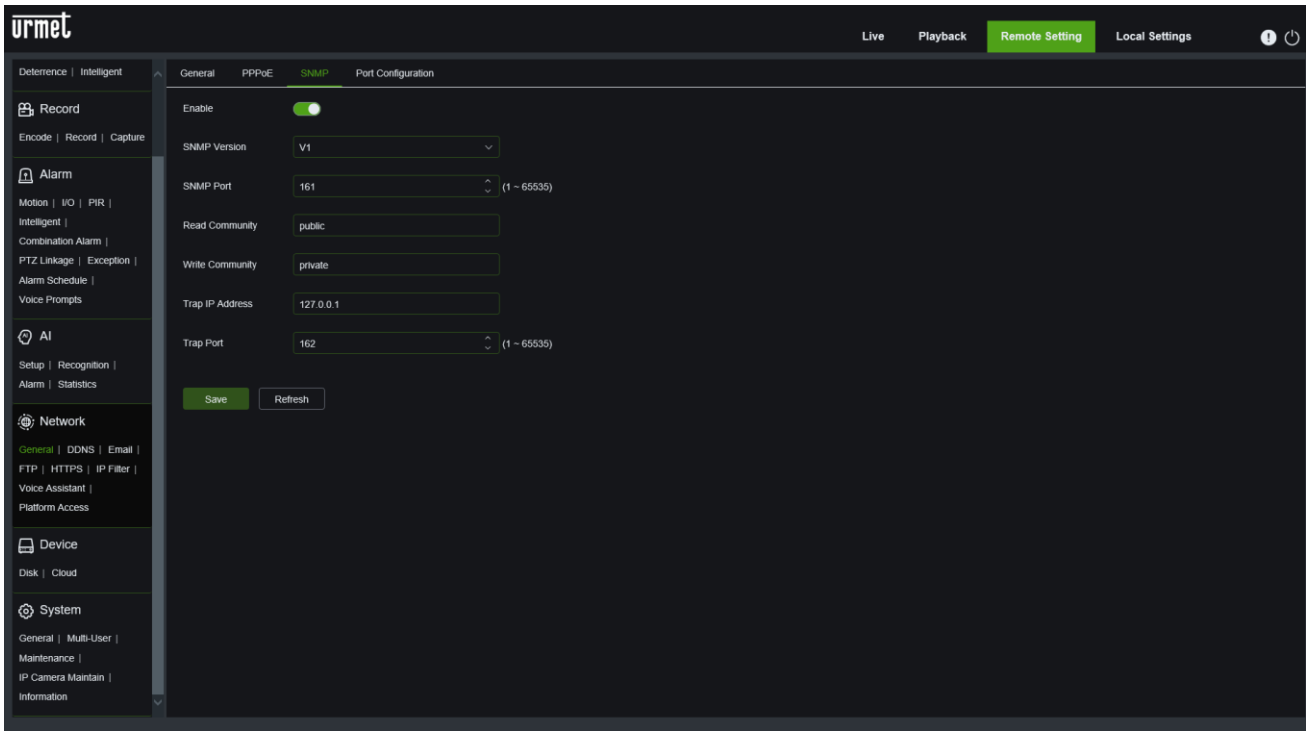
- **IP Address**: The IP address identifies the HVR on the network. It consists of four groups of digits between 0 and 255, separated by dots. For example “192.168.001.100”.
- **Subnet Mask**: This is a network parameter that defines a range of IP addresses that can be used in a network. Assuming the IP address is the street on that you live, the subnet mask is your neighbourhood. The subnetwork address also consists of four groups of digits, separated by dots. For example “255.255.000.000”.
- **Gateway**: This address allows the HVR to access the Internet. The format of the Gateway address is the same as the IP address. For example “192.168.001.001”.
- **IPv6 Address**: The IPv6 address identifies the HVR on the network.
- **IPv6 Gateway**: This address allows the HVR to access the Internet with an IPv6 address.
- **DNS1/DNS2**: DNS1 is the main DNS server, while DNS2 is the backup DNS server. As a rule, simply enter the address of the DNS1 server.
- **Encryption:** This can be used to set the security encryption protocol.
- **Web Compatibility mode:** Web compatibility can be enabled if you cannot open the web page of the device at the expense of security. Use with caution.



PPPoE:
This is an advanced protocol that allows the NVR to connect to the network more directly, via a DSL modem. The user name and password must be consistent with the local setting of the HVR.
Enable the “Enable PPPOE” function by moving the bar, then enter the username and password for the PPPoE.
Click on Save; the system will reboot to activate the PPPoE setting.

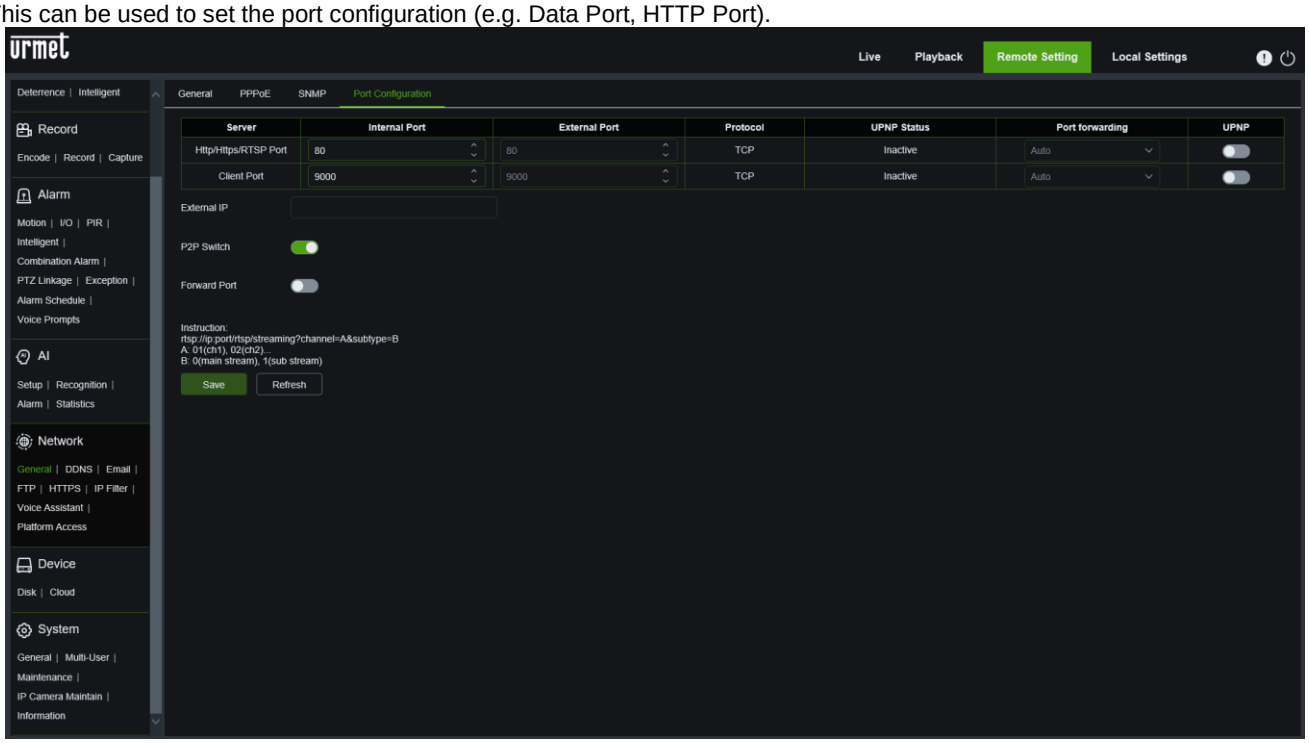


SNMP:
(For future use) SNMP: Simple Network Manage Protocol, open-source. SNMP can verify the basic parameters of the device, such as IP, hardware information and software information.



Port Configuration

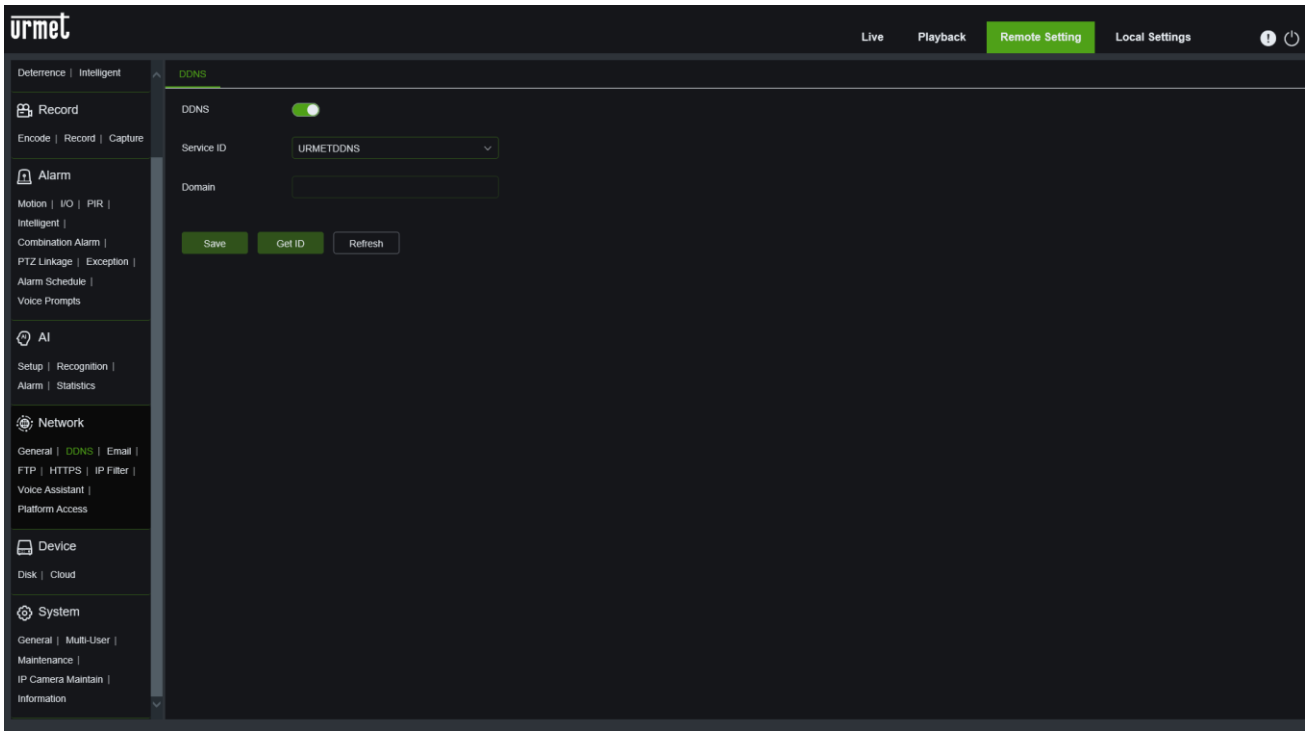
This can be used to set the port configuration (e.g. Data Port, HTTP Port).



- **Web Port**: This is the port that will be used to connect remotely to the HVR (i.e., via the Web Client). If the default port 80 is already used by other applications, you must change it.
- **Client Port**: This is the port that the HVR will use to send information. If the default port 9000 is already used by other applications, you must change it.
- **RTSP Port:** The default port is 554; if the default port 554 is already used by other applications, you must change it.
- **Https Port:** This is the port that will be used to connect remotely with the NVR in encrypted mode (i.e., via the Web Client).
- **UPNP**: Port-forwarding must be completed to connect remotely to the HVR via the Web Client. Enable this option if your router supports UPnP. It is necessary to enable UPnP both on the HVR on the router. In this case, it will not be necessary to configure port-forwarding manually on the router. If your router does not support UPnP, complete the port-forwarding manually.
- **Forward Port**: if selected, allows port mapping on the router of the port range chosen by the HVR using a single IP address (that it will be the HVR address).

5.7.5.2 **DDNS**

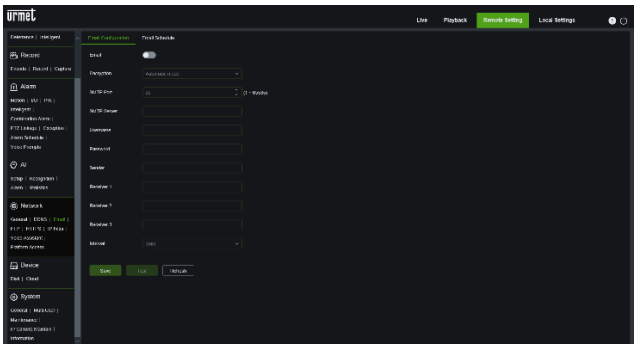
After having the DDNS service (see below), it is possible to enable the <DDNS> function in any network type (Static, DHCP and PPPoE). At this point it is possible to access the HVR via the domain name (http://domain: port No). The detailed parameters must be coherent with the local setting of the HVR.



For more details, refer to the section on 3.9.2 DDNS

5.7.5.3 **Email**

Click on the [Email setting] option to set the alarm email configuration parameters, as shown below. In [Email Schedule], you can schedule E-mail sending: Green indicates Motion; yellow indicates IO Alarm Detection; red indicates Exception; blue indicates Intelligent Video Analysis; purple indicates PIR Detection.



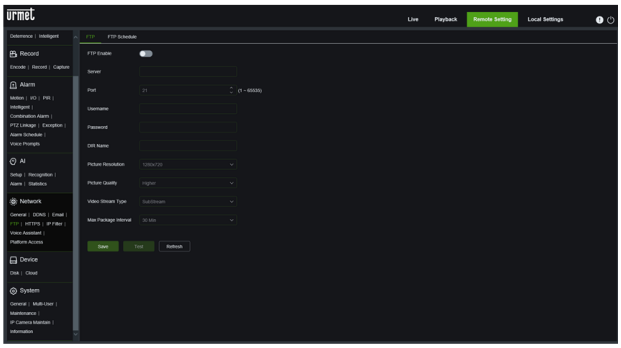
For more details, refer to the section on emails 3.9.3

5.7.5.4 **(FTP)**

This menu can be used to enable the FTP function to view and upload snapshots captured by the HVR to the FTP storage device.

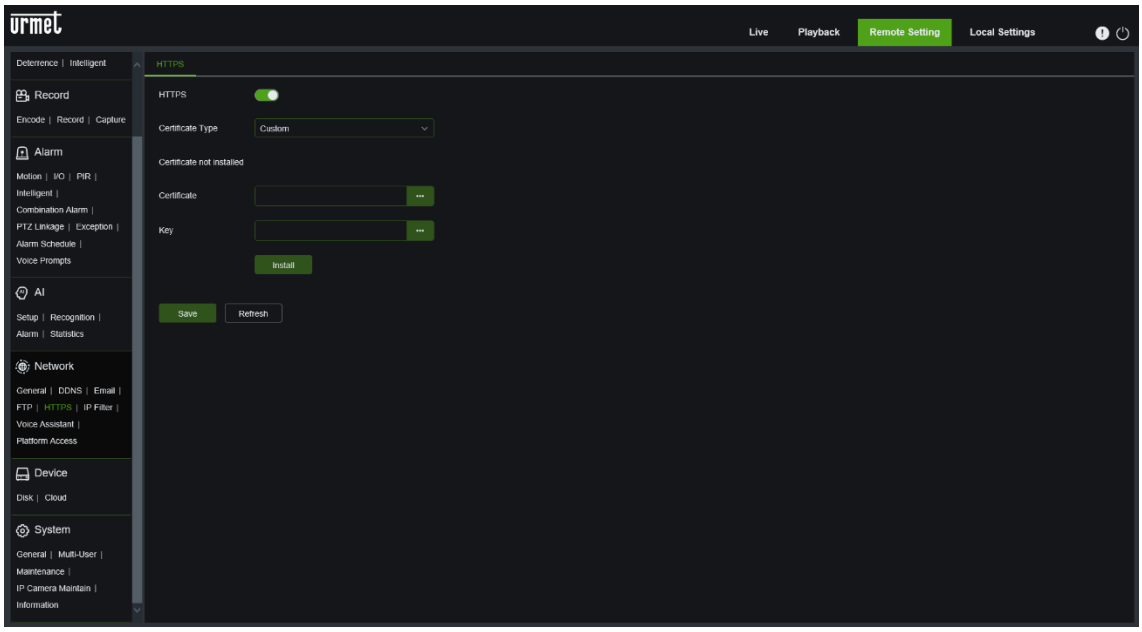
In [FTP Schedule] you can program the sending of emails: Green indicates Motion; yellow indicates IO Alarm Detection; red indicates Exception; blue indicates Intelligent Video Analysis; purple indicates PIR Detection.

For more details, refer to the FTP section 3.9.4



5.7.5.5 **HTTPS**

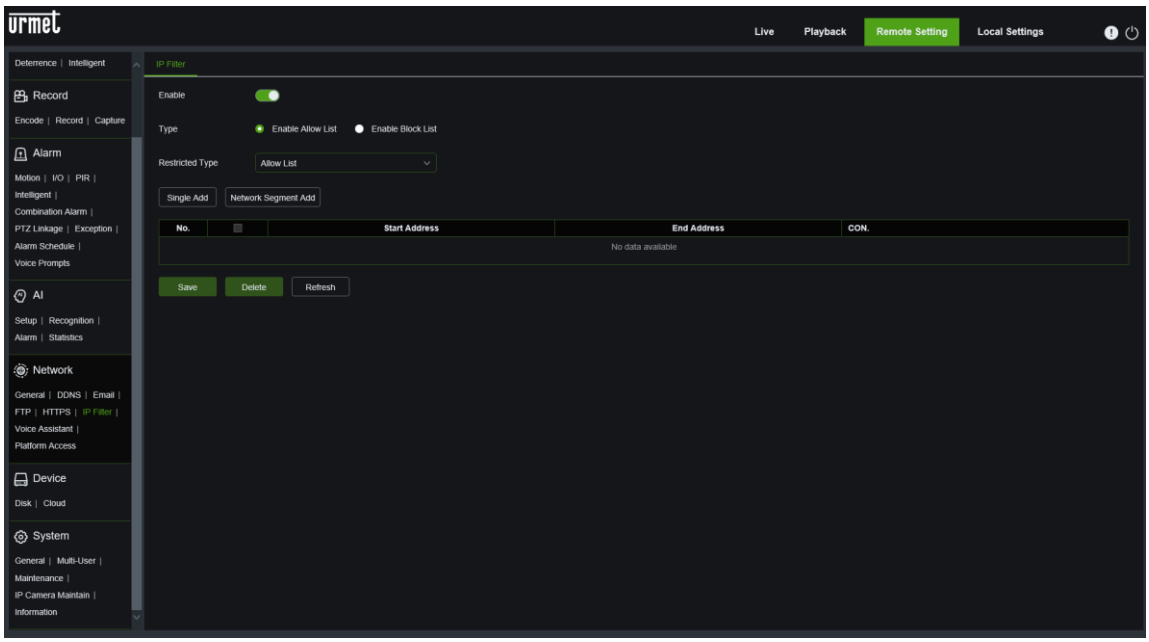
The security encryption protocol can be set.



For more details, refer to the HTTPS section 3.9.1.4

5.7.5.6 **IP Filter**

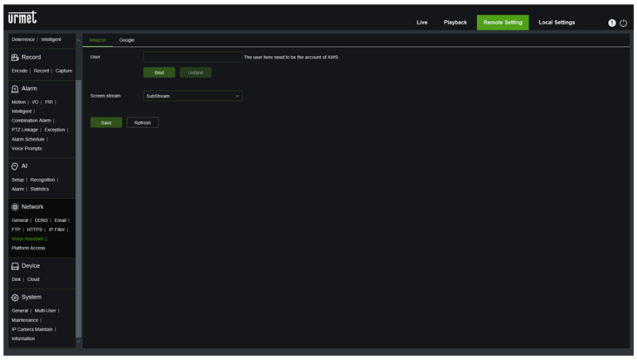
This can be used to set the IP Filter function. The detailed parameters must be coherent with the local setting of the HVR.

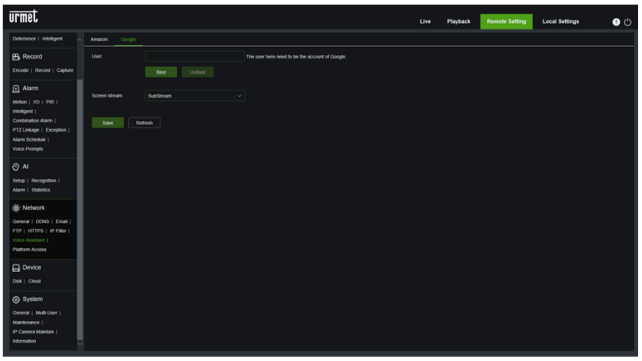


For more details, refer to the IP FILTER section 3.9.5.1

5.7.5.7 **Voice Assistant**

Press on the <Voice Assistant> option to access its sub-options: Amazon and Google.

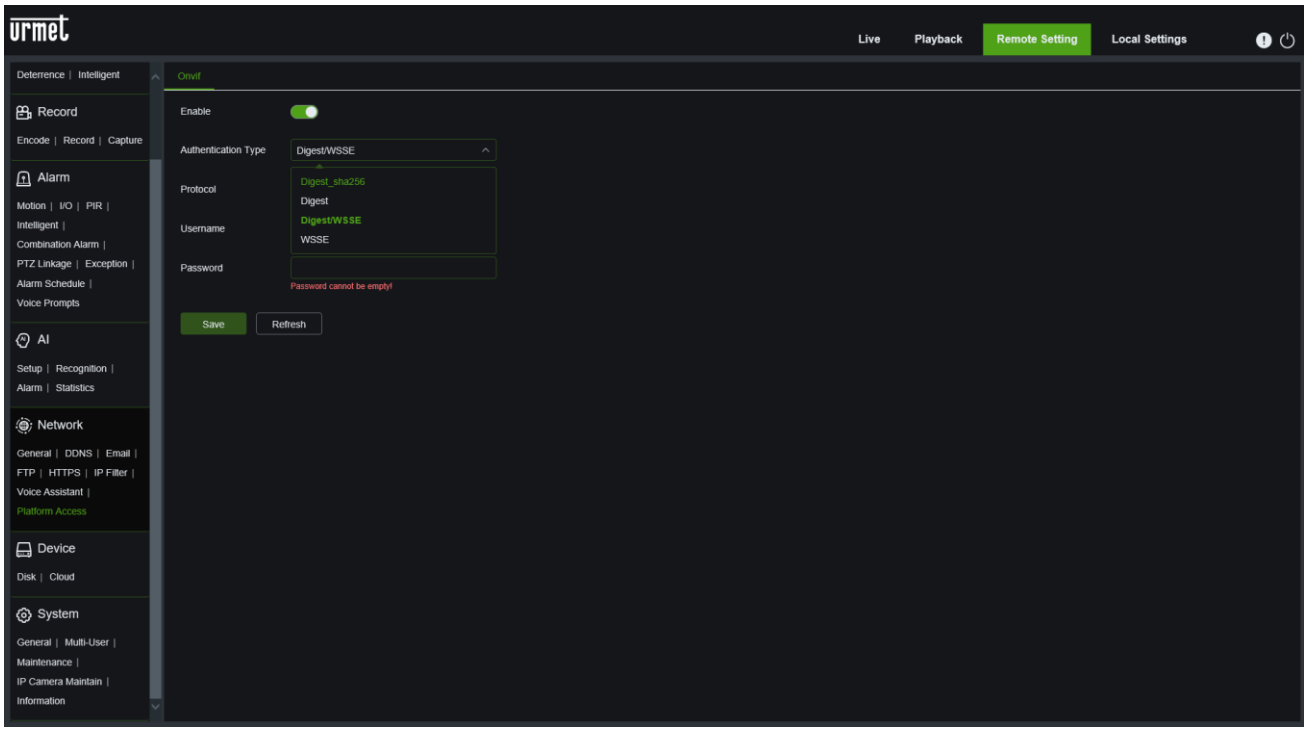




Please refer to section 3.9.6 on Voice Assistant for more details.

5.7.5.8 **Platform Access**

Press on the <Platform Access> option to access the Onvif sub-option.



Please refer to section 3.9.7 on Platform Access Onvif for more details.

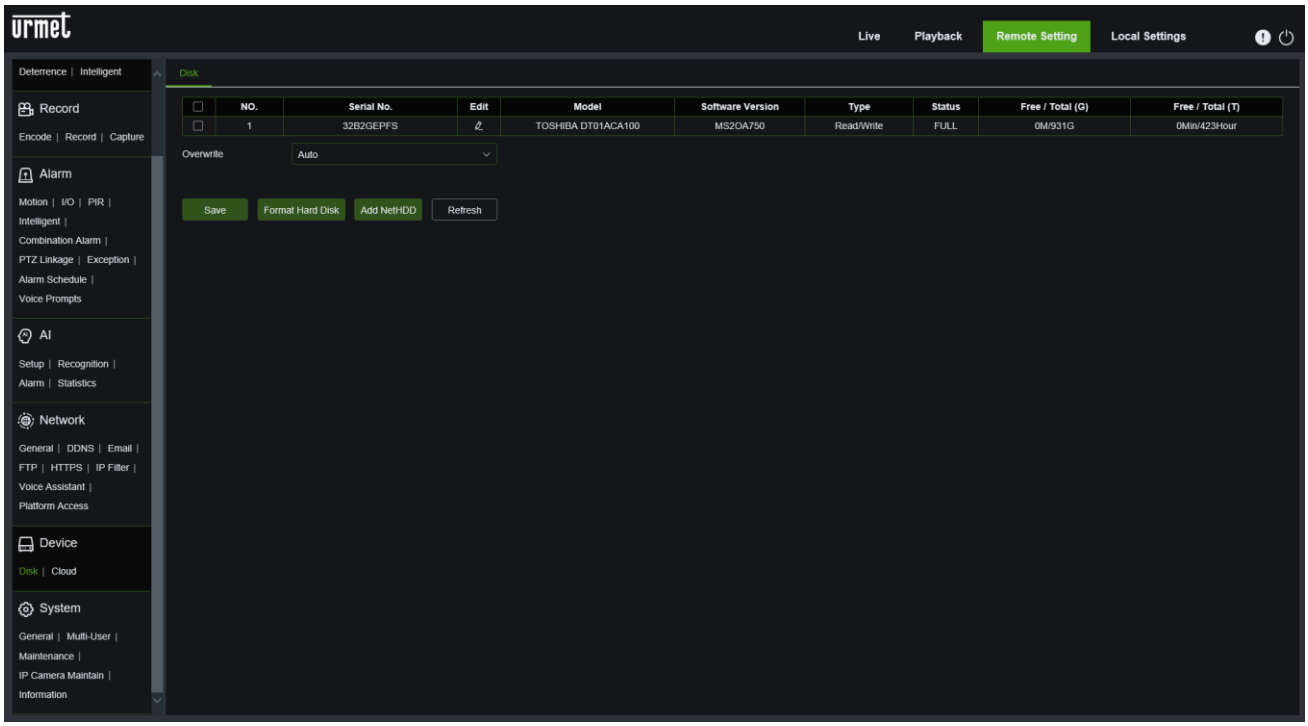
5.7.6 **DEVICE**

Click on the <Device> option to access its sub-options: DISK and Cloud.

5.7.6.1 DISK

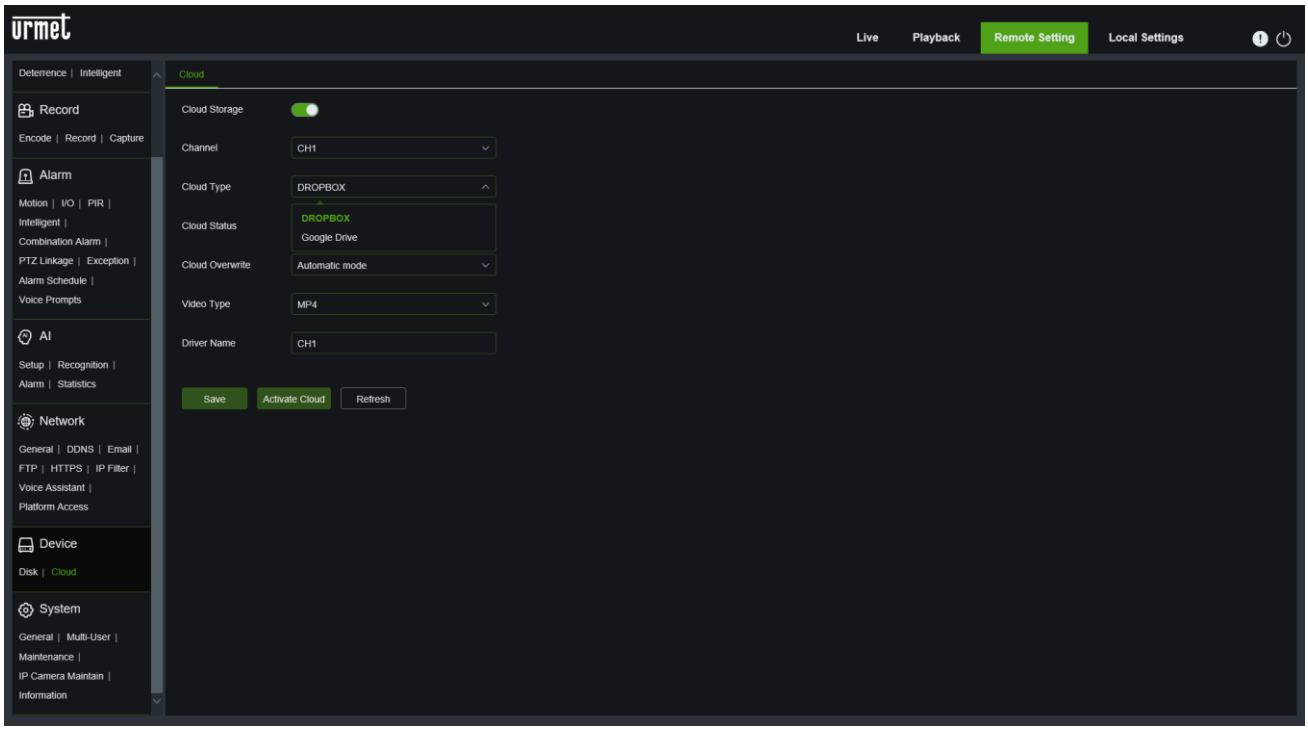
This can be used to check the HDD status, overwrite time and enable recording on the ESATA interface and the addition of a network HDD (Add NetHDD), as shown below. The detailed parameters must be coherent with the local setting of the HVR.

For more details, refer to the DEVICE Disk Management section 3.10.1



5.7.6.2 Cloud

This can be used to set the Cloud Storage parameters for your Dropbox and Google Drive account. The detailed parameters must be coherent with the local setting of the HVR.

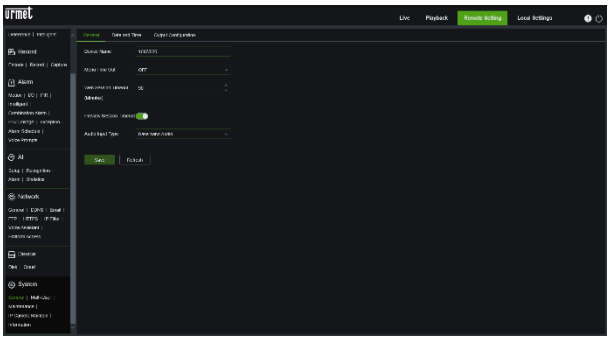


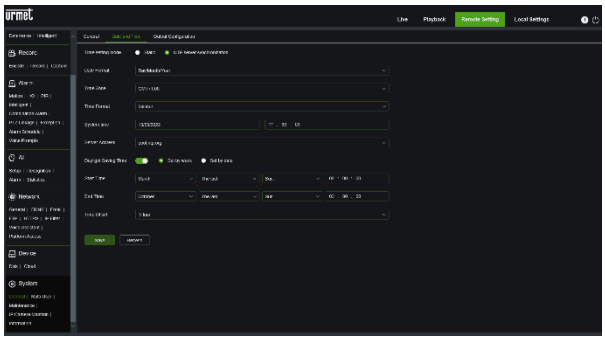
For more details, refer to the DEVICE Cloud section 3.10.2.

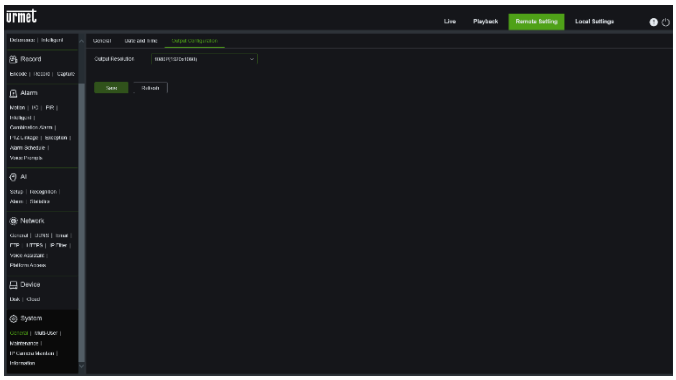
5.7.7 **SYSTEM**

Click on the <System> option to access its sub-options: General, Users and Information.

General: This can be used to edit the HVR name and the web page entry and/or log-off times as well as the system time, the data format, DST and NTP, as shown below. You can also set the resolution of the output monitor. The detailed parameters must be coherent with the local setting of the HVR.

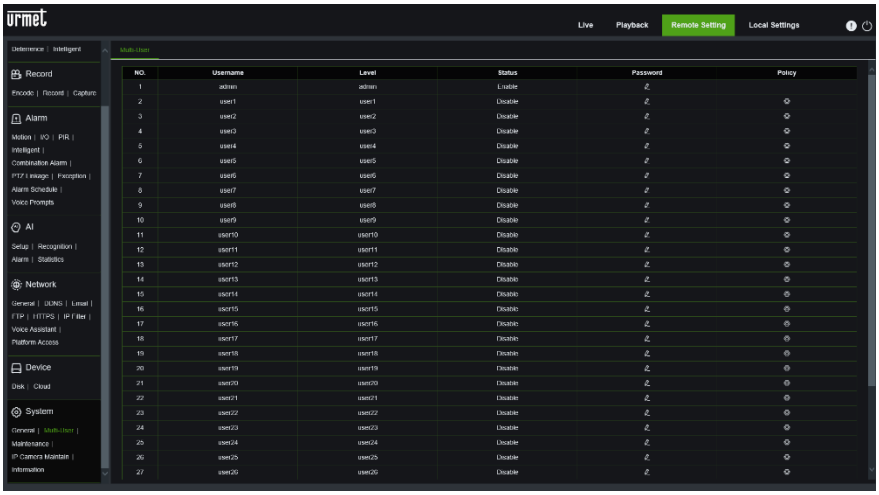


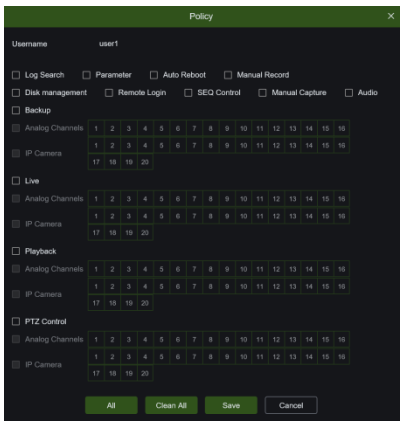




For more details, see the GENERAL SYSTEM section 3.11.1

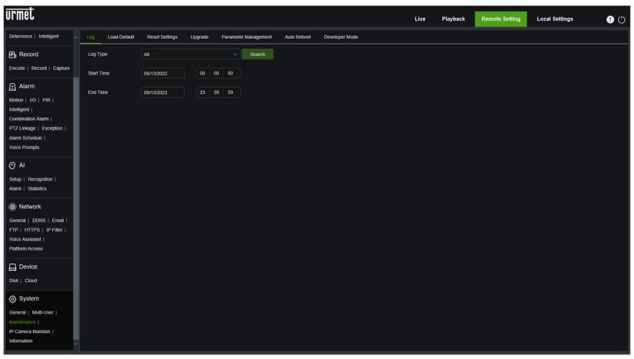
1. **Multi-Users:** This is used to configure username, password and respective policies, as shown below. The detailed parameters must be coherent with the local setting of the HVR.

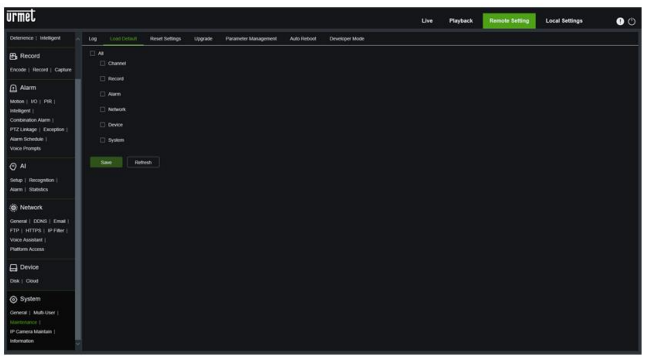


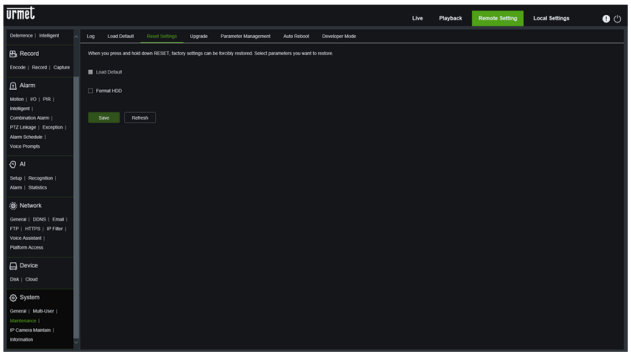


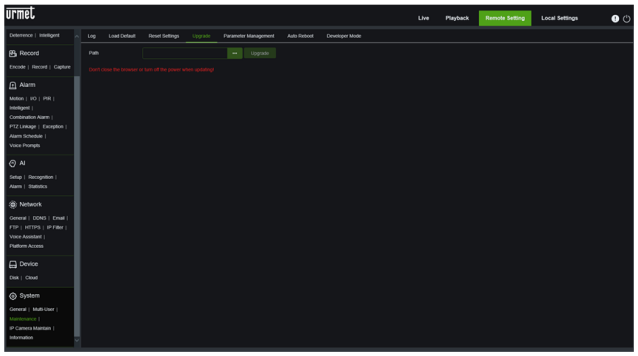
For more details, refer to the SYSTEM USERS section 3.11.2

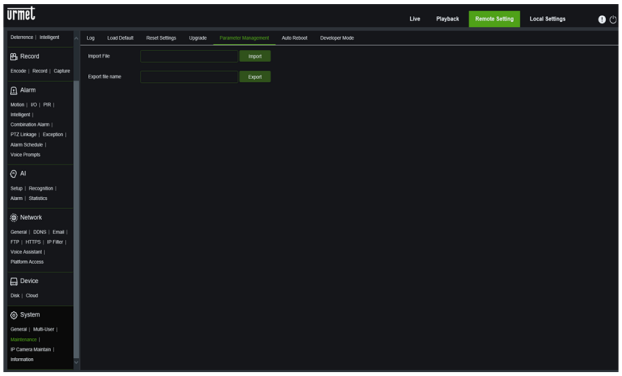
2. **Maintenance**: This can be used to set the Log, Load Default, Upgrade, Parameter Management, Auto Reboot and Developer Mode functions of the HVR. The detailed parameters must be coherent with the local setting of the HVR.

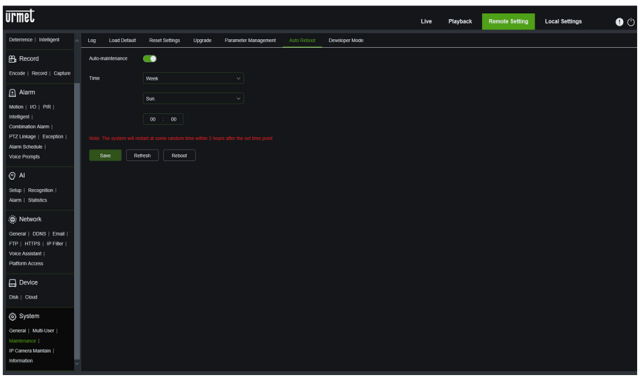


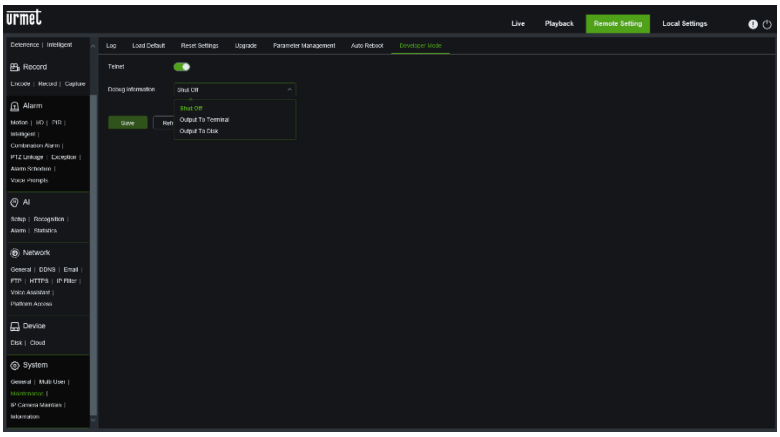






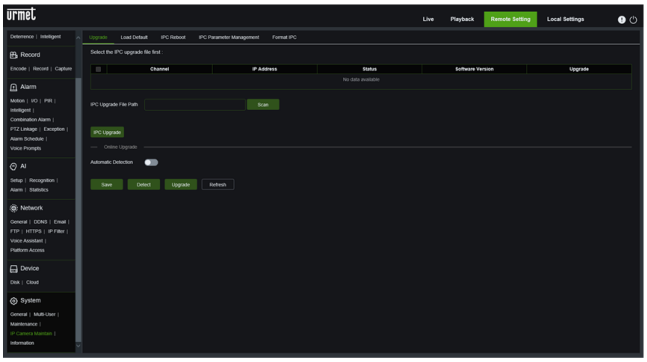


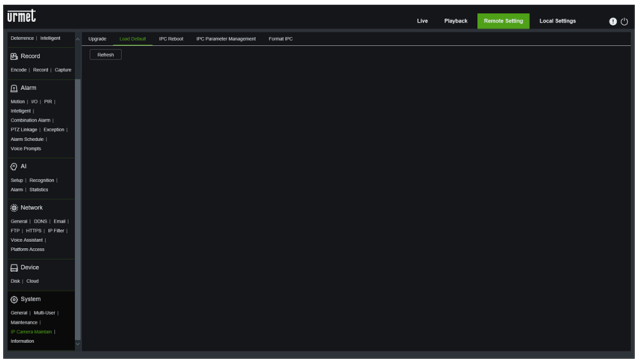


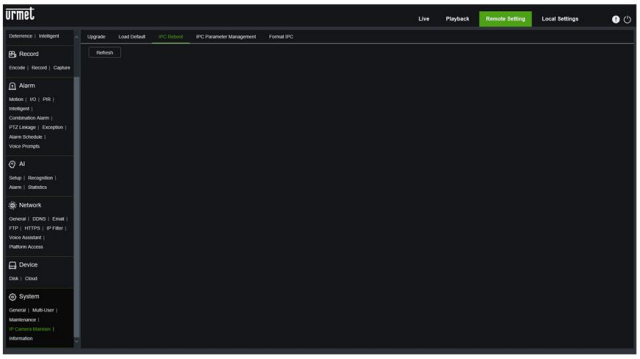


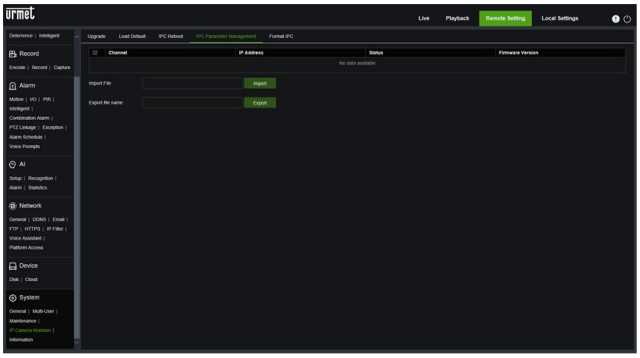
For more details, refer to the MAINTENANCE SYSTEM section 3.11.3

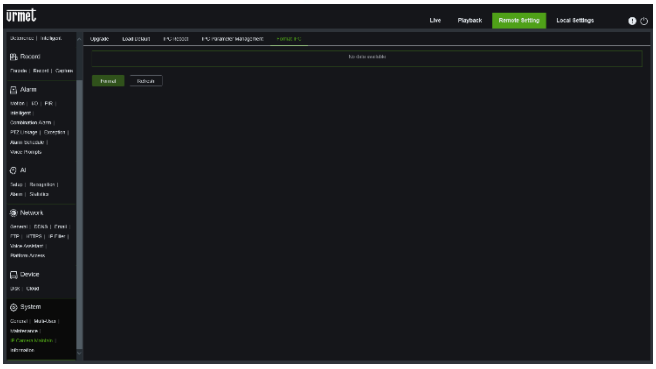
3. **IP Camera Maintain:** This can be used to set the upgrade, Load Default, IPC Reboot, IPC Parameter Management and Format SD IPC functions. Firmware update not available for IP cameras with ONVIF protocol. The detailed parameters must be coherent with the local setting of the HVR.
4.





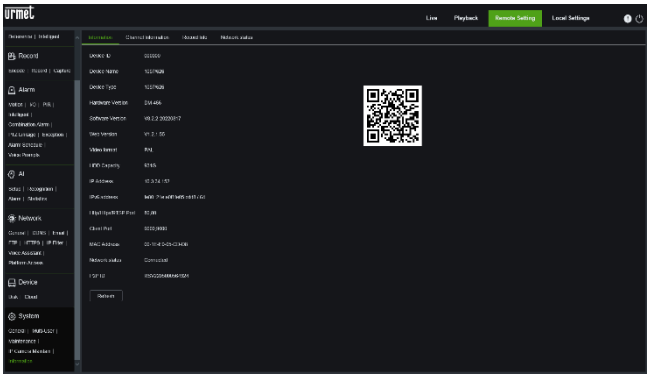


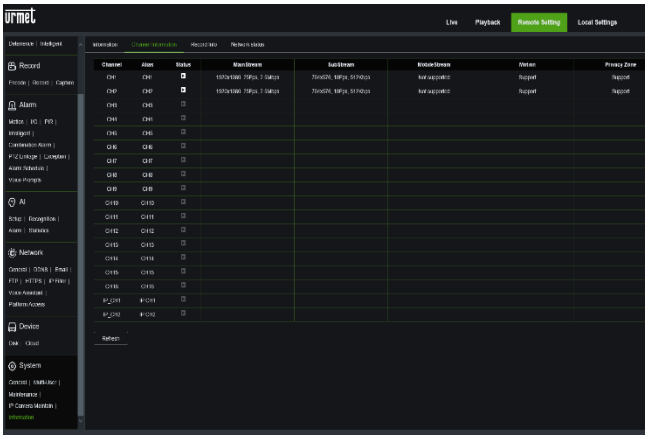




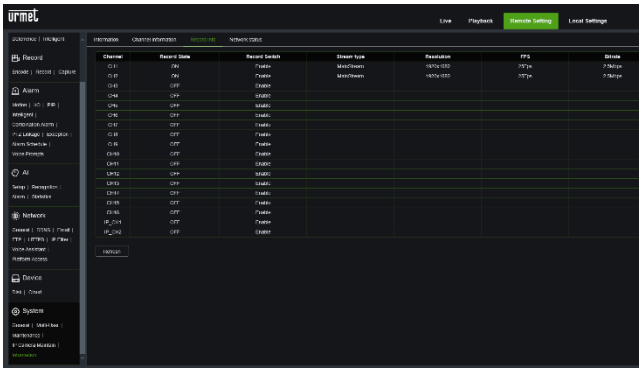
For more details, refer to the section on IP Channel Management SYSTEM 3.11.4

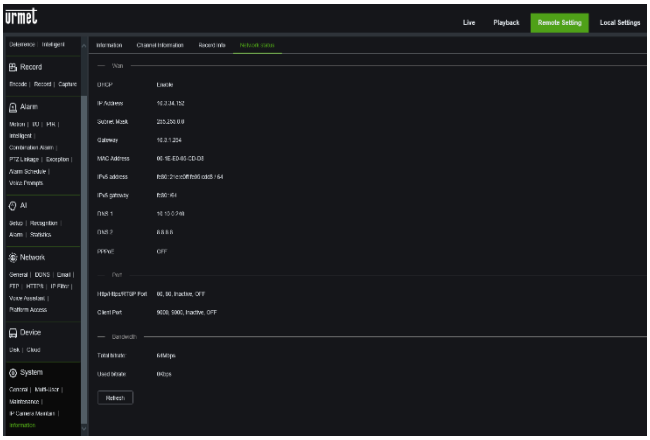
5. **Information:** This is used to check the device name, number and type, the MAC address, the software version, the IE version and the hardware version, as shown below. You can also read all channel information: Set Stream, Enable or Disable Status, Motion Supported, etc.





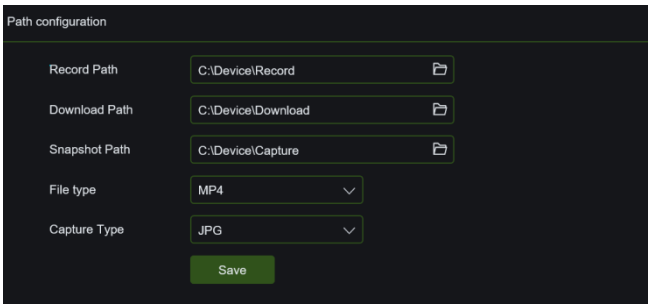
It is also possible to display information about the camera recording (stream type, resolution, FPS and bitrate) and the network status.





5.8 LOCAL SETTING

Set the download destinations of the recordings and snapshots obtained through the Web Client and select the type of video file.



- **Record Path:** Click on to scroll through and select the folder where you want to save your manual video recordings on your computer.
- **Download Path:** Click on to scroll through and select the folder where you want to save the download of your video recordings to your computer.
- **Snapshot Path:** Click on to scroll through and select the folder where you want to save the manual snapshots on your computer.
- **File Type:** Select your preferred file type for manual recording.
- **Save:** Click to save the changes.

5.9 LOGOUT

Click on icon to go back to the login interface.

6 1097/574 1097/578 AND 1097/576 SPECIFICATIONS (PAL FORMAT)

Function	Features		
	1097/574	1097/578	1097/576
Compression formats:	Video: H.265 / H.264 Audio: G.711a		
Video inputs	4-CH with BNC video input / 2-CH with IP video input (up to 6-CH with IP video input) (up to 6-CH with mixed video input: Analog + IP)	8-CH with BNC video input / 4-CH with IP video input (up to 12-CH with IP video input) (up to 12-CH with mixed video input: Analog + IP)	16-CH with BNC video input / 4-CH with IP video input (up to 20-CH with IP video input) (up to 20-CH with mixed video input: Analog + IP)
Audio inputs/outputs	4-CH RCA input / 1-CH RCA output	8-CH RCA input / 1-CH RCA output	4-CH RCA input / 1-CH RCA output
Display resolution/Frame frequency	**Analog**: 5MP-Lite:20fps 4MP-Lite:30 fps 1080P/720P/960H:30fps **IP:** 5MP/4MP/1080P/720P Single channel IP preview up to 2MP 30 fps multichannel preview Substream only		
Recording resolution	5M Lite (1280x1944) 4M Lite (1280x1440) 1080P (1920x1080) 720P (1280x720) WD1(960x576)		
Frame recording resolution	**Main Stream Analog:** 5MP-Lite:12fps (each ch) 4MP-Lite:16fps (each ch) 1080P:15fps (each ch) 720P:PAL:25fps (each ch) / NTSC:30fps (each ch) **IP:** PAL:25fps (each ch) / NTSC: 30fps (each ch) **Sub-stream Analog Max** PAL:704*576:10fps (each ch) NTSC:704*480:10fps (each ch)	**Mainstream Analog:** 5MP-Lite:15fps (each ch) 4MP-Lite:18fps (each ch) 1080P:15fps (each ch) 720P:PAL:25fps (each ch) / NTSC:30fps (each ch) **IP:** PAL:25fps (each ch) /NTSC: 30fps (each ch) **Sub-stream Analog Max** PAL：704*576:10fps (each ch) NTSC:704*480:10fps (each ch)	**Mainstream Analog:** 5MP-Lite:12fps (each ch) 4MP-Lite:16fps (each ch) 3MP-Lite:19fps (each ch) 1080P:15fps (each ch) 720P:PAL:25fps (each ch) / NTSC:30fps (each ch) **IP**: PAL:25fps (each ch)/NTSC: 30fps (each ch) **Sub-stream Analog Max** PAL：704*576:10fps (each ch) NTSC704*480:10fps (each ch)
Recording modes	Always / Timed / Manual / Motion Detection / Sensor / External alarm / Video analysis		
IP recording bandwidth (Maximum input bandwidth)	8Mbps ~24Mbps (default 8Mbps, for each excluded analog channel, the bandwidth is increased about 4Mbps)	16Mbps ~48Mbps (default 16Mbps; for each excluded analog channel, the bandwidth increases by approximately 4Mbps) (excluding an analog channel can increase 1080P 7fps)	16Mbps ~48Mbps (default 16Mbps; for each excluded analog channel, the bandwidth increases by approximately 4Mbps) (excluding an analog channel can increase 1080P 7fps)
Maximum output bandwidth	48Mbps	64Mbps	96Mbps
Maximum playback decoding	5MPlite:48fps 4MPlite: 64fps 1080P: 60fps (Max 4CH playback) 720P:120fps (Max 4CH playback)	5MPlite: 90fps (Max 6CH playback) 4MPlite: 126fps (Max 7CH playback) 1080P: 120fps (Max 8CH playback) 720P: 240fps (Max 8CH playback)	5MPlite: 96fps (Max 8CH playback) 4MPlite: 128fps (Max 8CH playback) 1080P: 120fps (Max 8CH playback) 720P: 240fps (Max 8CH playback)
Hard disk interface	Max. 1 HDD Sata (Max 8T)		
Storage spaces	1000 GB hard disk (default)		
	External device USB / e-SATA / Network		
Playback modes	PLAY / SLOW / FWD / one frame at a time		
Power consumption	4 channels	8 channels	16 channels
Web software / Multilingual client	Internet Explorer 10/11 / UVS pro		
Intelligent Video Analysis (for coaxial inputs)	PID / LCD / PD / SOUND DETECTION / VIDEO TAMPERING		NO
Intelligent Video Analysis (* depending on IP camera model)	Perimeter Intrusion Detection (PID), Line Crossing Detection (LCD), Stationary Object Detection (SOD), Pedestrian Detection (PD) *Face Detection (FC), *Cross Detection (CC), Sound Detection, Video Tampering		
I/O alarm	4 channel alarm inputs 1 channel alarm output	8 channels alarm inputs 1 channel alarm output	4 channel alarm inputs 1 channel alarm output
Alarm types	Motion / External alarms / Input alarms / Video loss / HD space / HD fault / External alarms on camera		
Maximum number of PCs connectible at the same time	According to maximum output bandwidth		
PDA Software Mobile	Urmet iUVS PRO (iOS, Android)		
PTZ control	Via RS485 with COAX, PELCO-D and PELCO-P protocol / AF lens control		
USB ports	N°2 2.0	N°1 2.0 + N°1 3.0	N°1 2.0 + N°1 3.0
Ethernet	RJ-45 10M/100MB self-adaptive interface		RJ-45 100/1000MB Self-adaptive interface
Network protocols	TCP/IP, DHCP, UDP, Urmet DDNS / UrmetDDNS2 with ID, P2P, PPPOE Cloud storage , SMTP , HTTPS , PPPPoE , FTP , RTSP , UPNP , SNMP		
BNC outputs	1 (704*576) Only for SPOT function[5] for analogue channels		NO
VGA outputs	1 (1024*768, 1280*720, 1280*1024, 1440*900, 1920*1080)		
HDMI outputs	1 (1024*768, 1280*720, 1280*1024, 1440*900, 1920*1080, 2560*1440(2K), 3840*2160(4)		
Power consumption	8.1W (3.6W without HD)	10.9W (6.4W without HD)	18.3W (13.8 without HD)
Hardware Reset Button	YES (3 sec PW / 10 sec factory default) *From firmware version 8.2.2 and later only Factory Reset Default 10 sec. available		
Power	12V / 2A		
Operating temperature range	0°C~+40°C / lower than 90%RH		
Cooling fans	NO		YES
Dimensions (width x height x depth)	300X53X227 mm		
Weight	~3 kg		

[5] Enabling the spot output disables intelligent analysis on analogue channels and vice versa.

7 1097/624 1097/628 AND 1097/626 SPECIFICATIONS (PAL FORMAT)

Function	Features		
	1097/624	1097/628	1097/626
Compression formats:	Video: H.265 / H.264 Audio: ADPCM 8kHz*16bit		
Video inputs	4-CH with BNC video input / 2-CH with IP video input (up to 6-CH with IP video input) (up to 6-CH with mixed video input: Analog + IP)	8-CH with BNC video input / 4-CH with IP video input (up to 12-CH with IP video input) (up to 12-CH with mixed video input: Analog + IP)	16-CH with BNC video input / 8-CH with IP video input (up to 24-CH with IP video input) (up to 24-CH with mixed video input: Analog + IP)
Audio inputs/outputs	4-CH RCA input / 1-CH RCA output	8-CH RCA input / 1-CH RCA output	16-CH RCA input / 1-CH RCA output
Display resolution/Frame frequency	**Analog**: 8MP (15fps) 5MP (20fps) 4MP/1080P/720P/960H (30fps) **IP** : 4K/4MP/1080P/720P Single channel IP preview up to 4K 30 fps multichannel preview Substream only		
Recording resolution	4K(3840x2160) / 5M(2560x1944) / 4M (2560x1440) / 3M (2048x1520) / 1080P (1920x1080) / 720P (1280x720) / WD1(960x576)		
Frame recording resolution	**Main-stream** **Analog** :8Mp:7fps (each ch) 5Mp:12fps (each ch) 4Mp:15fps (each ch) 1080P: PAL:25fps (each ch) / NTSC: 30fps (each ch) **IP**: PAL:25fps (each ch) /NTSC: 30fps (each ch) **Sub-stream Analog Max** ●PAL：704*576:10fps (each ch) /NTSC：704*480:10fps (each ch)	**Main-stream** **Analog** :8Mp:7fps (each ch) 5Mp:12fps (each ch) 4Mp:15fps (each ch) 1080P: PAL:25fps (each ch) / NTSC: 30fps (each ch) **IP**: PAL:25fps (each ch) /NTSC: 30fps (each ch) **Sub-stream Analog Max** ●PAL：704*576:10fps (each ch) /NTSC：704*480:10fps (each ch)	**Main-stream** **Analog** :8Mp:10fps (each ch) 5Mp:15fps (each ch) 4Mp:20fps (each ch) 1080P: PAL:25fps (each ch) / NTSC: 30fps (each ch) **IP**: PAL:25fps (each ch)/NTSC: 30fps (each ch) **Sub-stream Analog Max** ●PAL：704*576:10fps (each ch) /NTSC：704*480:10fps (each ch)
Recording modes	Always / Timed / Manual / Motion Detection / Sensor / External alarm / Video analysis		
IP recording bandwidth (Maximum input bandwidth)	12Mbps ~36Mbps (default 12Mbps; for each excluded analog channel, the bandwidth increases by approximately 6Mbps, to a maximum of 36Mbps)	24Mbps ~72Mbps (default 24Mbps; for each excluded analog channel, the bandwidth increases by approximately 6Mbps, to a maximum of 72Mbps)	64Mbps ~192Mbps (default 64Mbps; for each excluded analog channel, the bandwidth increases by approximately 8Mbps, to a maximum of 192Mbps)
Maximum output bandwidth	48Mbps	72Mbps	192Mbps
Maximum playback decoding	8MP: 28fps 5MP: 48ps 4MP: 60fps 1080P: 120fps	8MP: 60fps (Max 4CH playback) 5MP: 96fps（Max 8CH playback) 4MP:120fps（Max 8 CH playback） 1080P:240fps(Max 8 CH playback）	8MP: 160fps （Max 16CH playback） 5MP: 240fps（Max 16CH playback） 4MP: 320fps （Max 16CH playback） 1080P: 480fps （Max 16CH playback）
Hard disk interface	Max. 1 HDD Sata (Max 8T)		Max. 2HDD (Max. 10T)
Storage spaces	1000 GB hard disk (default)		
	External USB device / e-SATA / Network	External USB device / Network	External USB device / e-SATA / Network
Playback modes	PLAY / SLOW / FWD / one frame at a time		
Power consumption	4 channels	8 channels	16 channels
Web software / Multilingual client	Internet Explorer 10/11 / Edge / Crome / Opera / Firefox / UVS pro		
Intelligent Video Analysis (for coaxial inputs)	PID / LCD / PD&VD / SOUND DETECTION / VIDEO TAMPERING	PID / LCD / PD & VD / SOUND DETECTION / VIDEO TAMPERING	PID / LCD / PD&VD / SOUND DETECTION / VIDEO TAMPERING / FD / FR
Intelligent Video Analysis (* depending on IP camera model)	Perimeter Intrusion Detection (PID), Line Crossing Detection (LCD), Stationary Object Detection (SOD), Pedestrian/Vehicle Detection (PD&VD) *Face Detection (FC), *Cross Detection (CC), Sound Detection, Video Tampering		Perimeter Intrusion Detection (PID), Line Crossing Detection (LCD), Stationary Object Detection (SOD), Pedestrian/Vehicle Detection (PD&VD) *Face Detection (FC), *Cross Detection (CC), Sound Detection, Video Tampering , Video , LPD (License plate detection) , RSD (Rare sound detection)
I/O alarm	4-CH alarm input 1-CH alarm output	8-CH alarm input 1-CH alarm output	16-CH alarm input 1-CH alarm output
Alarm types	Motion / External alarms / Input alarms / Video loss / HD space / HD fault / External alarms on camera		
Max. number of PCs that can be connected at the same time	According to maximum output bandwidth		
PDA Software Mobile	Urmet iUVS PRO (iOS, Android)		
PTZ control	Via RS485 with COAX, PELCO-D and PELCO-P protocol / AF lens control		
USB ports	N°2 2.0	N°1 2.0 + N°1 3.0	
Ethernet	1 RJ45 10/100 Base-T	1 RJ45 100/1000 Base-T	
Network protocols	TCP/IP, DHCP, UDP, Urmet DDNS / UrmetDDNS2 with ID, P2P, PPPOE Cloud storage , SMTP , HTTPS , PPPPoE , FTP , RTSP , UPNP , SNMP		
BNC outputs	1 (704*576) Only for SPOT function[6] for analogue channels		
VGA outputs	1 (1024*768, 1280*720, 1280*1024, 1440*900, 1920*1080)		
HDMI outputs	1 (1024*768, 1280*720, 1280*1024, 1440*900, 1920*1080, 2560*1440(2K), 3840*2160(4)		
Power consumption	9.2W (4.7W without HD)	15.5W (11W without HD)	20W
Hardware Reset Button	YES (3 sec PW / 10 sec factory default) *From firmware version 8.2.2 and later only Factory Reset Default 10 sec. available		
Power	12V / 2A		12V / 5A

[6] Enabling the spot output disables intelligent analysis on analogue channels and vice versa.

Operating temperature range	0°C~+40°C / lower than 90%RH		
Cooling fans	NO	YES	
Dimensions (LXHXP)	300X53X227 mm		380X340X50 mm
Weight	~3 kg		

IMPORTANT NOTES

- **(*)** For LIVE display of IP channels, the HVR automatically uses the Mainstream or Substream of the IP cameras according to available resources. If you want to manually force the LIVE display of the Mainstream, you may need to disable one or more analog channels of the HVR or decrease the Mainstream frame rate of the IP camera.
- Product specifications may be subject to change without prior notice.
- After replacing/adding an HDD, the operations must be performed by qualified personnel or by contacting the closest technical centre.
- The hard disk may have a maximum capacity of 8TB. Contact the closest technical centre to see the complete list of compatible HDDs.

8 MAXIMUM RECORDING TIME WITH 1000GB HARD DISK

8.1 REF. 1097/574 - 1097/578 - 1097/576 - 1097/624 - 1097/628 - 1097/626

The following resolution options can be set on the Urmet Hybrid 4M HVR series:

- "**4K**", "**5M**", "**5M-Lite**", "**4M**", "**4M-Lite**", "**3M**", "***1080P***", "**720P**" e "***WD1***" on 1/4/8/16 analog channels.
- "**5M**", "**4M**", "**3.5M**", "**3M**", "**1080P**", "**960P**" and "**720P**" on 1/4/8/16 IP channels

IMPORTANT NOTES

- The bandwidth and HDD time may vary considerably according to the recorded scene.
- The following tables indicate the approximate time needed to fill the HDD with the 1/4/8/16 channel HVR recording only video (no audio) with the selected resolution and frame frequency.
- To estimate the HDD time (before overwriting) in case of 2 or 3 channels, the user may divide the values of the table related to one channel (hours and days) by the actual number of recorded channels. More recorded channels mean that a shorter interval must elapse before the HDD starts overwriting.

Days of recording for 1 Terabyte of HDD				
Bitrate per single channel (kbps)	**Channels being recorded**			
	1	4	8	16
10240	8.75	2.19	1.09	0.55
8192	10.94	2.74	1.37	0.68
7168	12.51	3.13	1.56	0.78
6144	14.59	3.65	1.82	0.91
5376	16.68	4.17	2.08	1.04
5120	17.51	4.38	2.19	1.09
4608	19.45	4.86	2.43	1.22
4096	21.89	5.47	2.74	1.37
3840	23.35	5.84	2.92	1.46
3328	26.94	6.73	3.37	1.68
3072	29.18	7.30	3.65	1.82
2560	35.02	8.75	4.38	2.19
2304	38.91	9.73	4.86	2.43
2048	43.77	10.94	5.47	2.74
1792	50.03	12.51	6.25	3.13
1664	53.87	13.47	6.73	3.37
1536	58.36	14.59	7.30	3.65
1280	70.04	17.51	8.75	4.38
1024	87.55	21.89	10.94	5.47
896	100.05	25.01	12.51	6.25
768	116.73	29.18	14.59	7.30
640	140.07	35.02	17.51	8.75
512	175.09	43.77	21.89	10.94

384	233.45	58.36	29.18	14.59
256	350.18	87.55	43.77	21.89
192	466.91	116.73	58.36	29.18
96	933.82	233.45	116.73	58.36

Suggested frame rate/bit rate per AHD/ Analog channel:

Technology	Resolution	Frame rate (in fps)	H.264 bitrate (in kbps)	H.265 Bitrate (in Kbps)
AHD / CVBS	4K (3840×2160)	6-8	5120	3328
		4-5	4096	2560
		1-3	3072	2048
	5M (2560x1944)	12-15	6144	4096
		9-11	5120	3328
		6-8	4096	2560
		4-5	3072	2048
		1-3	2048	1536
	5M-Lite (1280x1944)	12-15	2560	1536
		9-11	2048	1280
		6-8	1536	1024
		4-5	1280	768
		1-3	1024	512
	4M (2560x1440)	16-19	6144	3328
		12-15	5120	2560
		9-11	4096	2048
		6-8	3072	1536
		4-5	2048	1024
		1-3	1024	768
	4M-Lite (1280x1440)	16-19	2560	1664
		12-15	2048	1280
		9-11	1536	1024
		6-8	1280	768
		4-5	1024	512
		1-3	768	384
	3Mpx (2048×1520)	20-23	5376	3072
		16-19	4608	2560
		12-15	3840	1792
		9-11	3072	1536
		6-8	2304	1280
		4-5	1536	768
		1-3	768	512
	1080P (1920×1080)	24-25	4096	2560
		20-23	3072	2048
		16-19	2560	1664
		12-15	2048	1280
		9-11	1536	1024
		6-8	1280	768
		4-5	1024	512
		1-3	768	384
	1080N (960x1080), 720P (1280x720) and WD1 (960x576)	24-25	2048	1792
		20-23	1792	1536
		16-19	1536	1280
		12-15	1280	1024
		9-11	1024	768
		6-8	768	512

		4-5	512	384
		1-3	256	256

Suggested frame rate/bit rate per IP channel with Private, U-IPCy and ONVIF protocol:

Technology	Resolution	Frame rate (in fps)	H.264 bitrate (in kbps)	H.265 Bitrate (in Kbps)
Private, U-IPCy and ONVIF IP protocol	4K (3840×2160)	6-8	5120	3328
		4-5	4096	2560
		1-3	3072	2048
	5M (2560x1944)	24-25	10240	7168
		20-23	8192	6144
		16-19	7168	5120
		12-15	6144	4096
		9-11	5120	3328
		6-8	4096	2560
		4-5	3072	2048
		1-3	2048	1536
	4M (2560x1440)	24-25	8192	5120
		20-23	7168	4096
		16-19	6144	3328
		12-15	5120	2560
		9-11	4096	2048
		6-8	3072	1536
		4-5	2048	1024
		1-3	1024	768
	3.5M (2304 × 1296)	24-25	6144	3584
		20-23	5376	3072
		16-19	4608	2560
		12-15	3840	1792
		9-11	3072	1536
		6-8	2304	1280
		4-5	1536	768
		1-3	768	512
	3Mpx (2048×1520)	24-25	6144	3584
		20-23	5376	3072
		16-19	4608	2560
		12-15	3840	1792
		9-11	3072	1536
		6-8	2304	1280
		4-5	1536	768
		1-3	768	512
	1080P (1920×1080)	24-25	4096	2560
		20-23	3072	2048
		16-19	2560	1664
		12-15	2048	1280
		9-11	1536	1024
		6-8	1280	768
		4-5	1024	512
		1-3	768	384
	960 P (1280 × 960) and 720P (1280 x 720)	24-25	1792	2048
		20-23	1536	1792
		16-19	1280	1536
		12-15	1024	1280
		9-11	768	1024
		6-8	512	768
		4-5	384	512
		1-3	256	256

IP channels with Urmet protocol

Technology	Resolution	Frame rate (in fps)	H.264 bitrate (in kbps)
URMET IP protocol	720P (1280×720)	23-25	2048
		20-22	1792
		17-19	1536
		14-16	1280
		11-13	1024
		10	896
		8-9	768
		6-7	640
		5	512
		4	384
		3	256
		2	192
		1	96

9 TROUBLESHOOTING

1. Q: What can I do if the system does not detect the HDD?
   A: Check that the power supply is connected correctly, that the data and electric cables and wires are appropriately connected and that everything is in order on the HDD interface. Alternatively, check that the HDD is compatible referring to the specifications or descriptions.
2. Q: I have changed the password and forgotten the new one. How can I access the system?
   A: Contact our technical personnel to recover the system password. You are strongly advised to set passwords that are easy to remember and relatively secure. In case of particular security requirements, avoid excessively obvious passwords, like 000000.
3. Q: Can I add an IP camera with different protocols?
   A: Yes it is. The HVR can automatically recognize the right protocol.
4. Q: Is it possible to control AHD cameras through UTC or UTC-Z function?
   A: Yes. An OSD is displayed pressing [Iris] or [Central Enter] buttons, the arrows key can be used to navigate the menu.
5. Q: We see abnormal video signal or even no video signal by connecting the HVR and camera together. Both devices are powered correctly. What is wrong?
   A: Check network cable at HVR side to see if the cable is firmly connected and if it is worn out and needs to be replaced, or to check if NTSC or PAL is selected consistently.
6. Q: How can I prevent the HVR from overheating?
   A: The HVR must cool down during operation. Arrange the HVR in a well-ventilated place away from sources of heat to guarantee stability and long-lasting operation of the device.
7. Q: The remote control of the HVR is not working but the screen and control panel buttons are all working properly. Why?
   A: Try again pointing the remote control towards the IR receiver on the front panel. Check that the batteries are not flat if it still does not work. Otherwise, the remote control may be faulty.
8. Q: I want to remove the HDD from my PC and install it on the HVR. Can I do this?
   A: All the HDDs supported by the system can be used. However, it is important to remember that all data stored on the HDD will be lost when the HVR is started.
9. Q: Can I playback while recording?
   A: Yes. The system supports the playback function while recording.
10. Q: Can I delete some records from the HVR HDD?
    A: It may not be possible to delete part of the recordings for file security reasons. The HDD can be formatted to delete all recordings.

11. Q: I cannot access the HVR Client. Why?
    A: Check that the network connection settings are correct and that the RJ-45 port contact is efficient. Check that the account and the password have been entered correctly.
12. Q: I cannot find any recordings during playback. Why?
    A: Check that the HDD data line is connected correctly and that the system time is correctly set. Try a few times and reboot it. Check whether the HDD is faulty if the problem persists.
13. Q: The HVR is not controlling the PTZ function. Why?
    A: Check that:
    1. the front PTZ is working correctly
    2. Setting, connection and installation of PTZ decoder are not correct.
    3. The PTZ of the HVR is correct
    4. The protocol of the PTZ decoder does not match that of HVR.
    5. The address of the PTZ decoder does not match that of HVR.
    6. If multiple decoders are connected, a 120Ω resistor must be installed on the most distant side of the AB line of the PTZ decoder to suppress reflection and impedance correspondence. Otherwise, the PTZ control will be unstable.
14. Q: Dynamic detection is not working. Why?
    A: Check that the motion detection time and the local motion detection settings are correct and that sensitivity is not set to an excessively low value.
15. Q: The alarm is not working. Why?
    A: Please check if the alarm setting, alarm connection and alarm input signals are correct.
16. Q: Why is the buzzer still sounding the alarm?
    A: Please check the alarm setting, check if the motion detection function is enabled and object motion is detected all the time and if the I/O alarm is set as Always Off. Furthermore, refer to the respective setting of the HDD alarm.
17. Q: I cannot stop the recording by pressing the “STOP” button or clicking on “Stop Recording” in the shortcut menu. Why?
    A: Only manual recordings can be stopped by pressing Stop or Stop Recording. To stop a Scheduled recording after a certain time, change the setting to No Record. To stop a Startup recording, change the recording mode to scheduled or manual. In this way, you should be able to stop the recording in the illustrated manners. Another way to stop the recording consists in configuring the channel to Off in the recording settings.

10 MAINTENANCE

1. To switch off the HVR, firstly switch off the system and then disconnect the electric power supply. Do not disconnect the electric power supply directly, because this could cause loss of data or damage to the HDD data.
2. Keep the HVR away from sources of heat or hot places.
3. Periodically eliminate the dust that accumulates inside. Provide good ventilation of the HVR to ensure adequate heat dispersion.
4. Do not connect/disconnect the audio or video cable or the cables connected to the RS-232 or RS-485 while the device is working. The devices could be damaged.
5. Periodically check that the HDD cable and the data cable are not worn.
6. Take action to prevent the audio and video signals of the HVR from being subject to interference from other electronic devices and prevent the HDD from being damaged by static electricity and induced voltage.

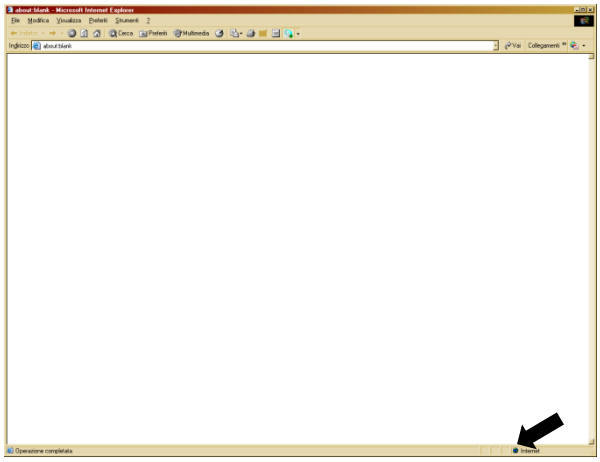
   If the network cable is plugged in often, it is advisable to replace the connection line periodically to prevent signal instability.
7. This is a class A product that could cause wireless interference. Take the necessary actions in this case.

APPENDIX: ACTIVEX INSTALLATION

If the installation of an ActiveX component is required, follow the procedure below.
Before performing the connection to the PC, activate IE protection configuration, following the procedure below:

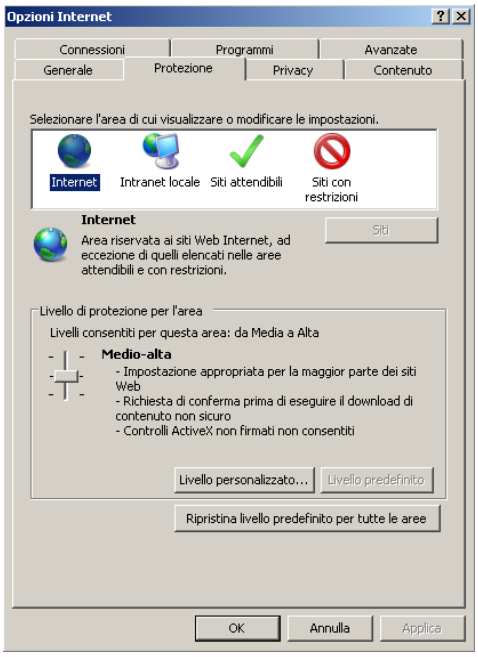
Double click on the icon to open Internet Explorer browser.

- The following display will appear (or, however, the default page).



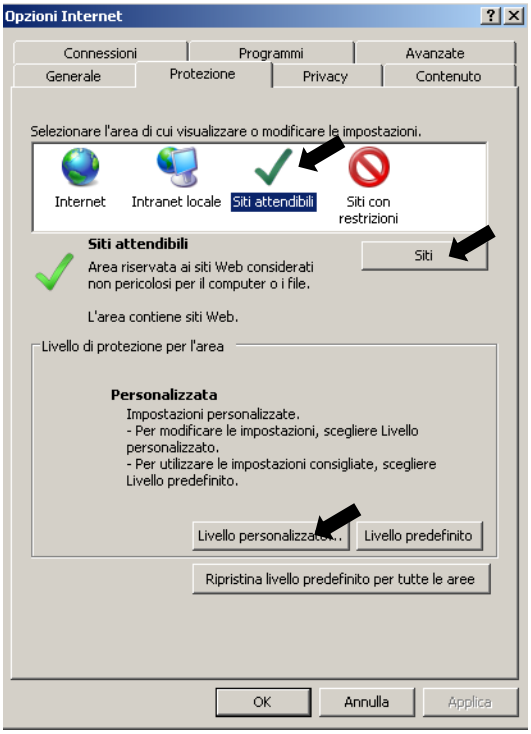
- Double click the on icon

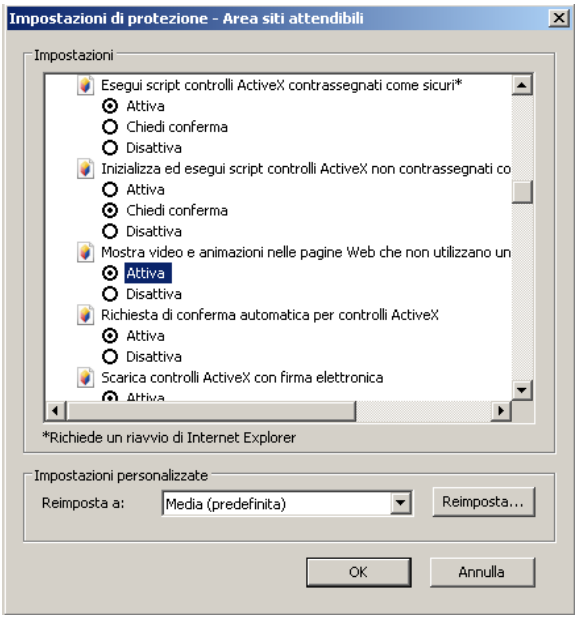
to open Internet Explorer browser.
- The screen “Internet Properties” will appear.

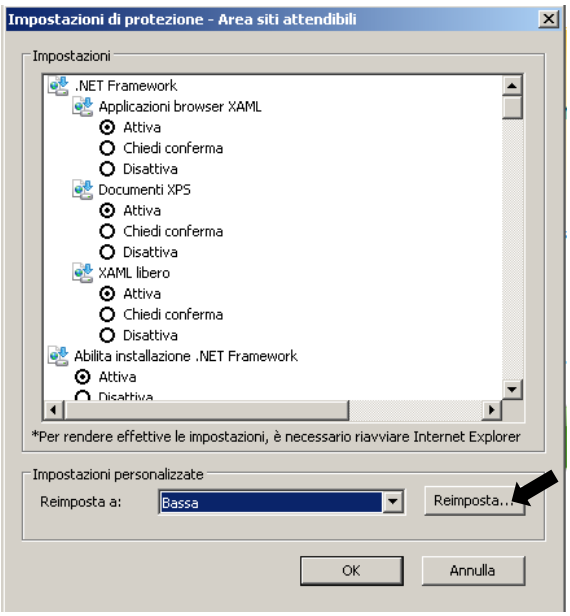


- Select the area “**Trusted sites**”.
- Click on “**Custom Level**” and check if the following items:
  - “Initialize and script Active X controls not marked as safe” is selected as “Enable” or “ Prompt”
  - “Download unsigned Active X controls” is selected as “Enable” or “Prompt”

Make sure that the Protection Level is set as “**Low**”. If the Protection Level is not set, set it as Low and click on “Re-Set”. Select OK to confirm.

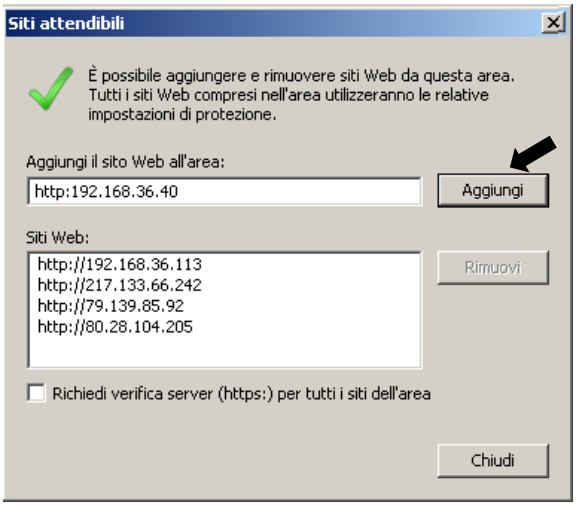






- Click the item “**Sites**”.

- The following screen will appear. The IP address of the device is needed (e.g. http://192.168.36.40) in the field "*Add this web site to the zone*".



- Add the device IP address in the field click on "**Add**".

※ NOTE

Do not select the item: "Require server verification (https:) for all sites in the zone".

- Close the window selecting "**Exit**"
- Confirm clicking on "**Apply**" and "**OK**"
- Close Internet Explorer Interface and launch again the Browser to install the New Active X.

GLOSSARY

ADPCM	Acronym of Adaptive Delta Pulse Code Modulation, a digital audio compression technique.
AGC	Automatic Gain Control is a function to improve viewing in poor light conditions.
AHD	Acronym of Analog High Definition, a protocol used for high-resolution transmissions on video coaxial cable.
AMR	Automatic Motion Recording is the capability of starting a video recording when the system identifies motion in the image framed by the camera.
CBR	Constant Bit Rate means digital video transmission at constant speed.
DDNS	Dynamic Domain Name System is the technology that allows an Internet DNS name to be always associated with an IP address of the same device, even if the address changes over time.
DHCP:	Dynamic Host Configuration Protocol is used by Internet servers (belonging to DHCO server functions) to automatically assign an IP address to a device that requires it.
DNS	Domain Name System - This is a decentralized hierarchic system used on the Internet to associate a name of a device with its IP address.
DST	Acronym of Daylight Saving Time.
HVR	Digital Video Recorder.
e-SATA	External SATA (acronym of External Serial Advanced Technology) is a standard interface used for connecting external devices to a computer, such as for example an HDD.
FPS	Frame per Second - This indicates the number of frames with that a video stream is played/recorded. A higher number means a smoother film.
FTP	File Transfer Protocol is a standard used for transmitting data between hosts (generally computer), based on TCP.
H.264	H.264/MPEG-4 AVC (Advanced Video Coding) is a standard digital video compression standard.

H.265	High Efficiency Video Coding (HEVC or H.265) is a video compression standard that is the development of H.264/MPEG-4 AVC (Advanced Video Coding). This improves video quality, doubles the data compression ratio compared to H.264 and supports 8k high definition and resolutions higher than 8192×4320.
HDD	Acronym of Hard Disk Drive, i.e. a magnetic mass storage device that uses one or more magnetized disks for storing data.
HDMI	Acronym of High-Definition Multimedia Interface, it is an audio/video interface used for transferring non-compressed video data and compressed or non-compressed video data from a compatible HDMI source, such as for example a PC or a digital video recorder.
IPC	This code identifies a camera capable of transmitting video stream in digital format on IP network.
MAC address	A MAC address (MAC stands for Media Access Control), also known as physical address, Ethernet address or LAN address, is a 48 bit (6 byte) code assigned univocally by the manufacturer of each Ethernet or wireless card made in the world.
NTP	Network Time Protocol is used to synchronize the computer clocks in a Local Area Network (LAN) or more generically on the Internet.
NVR	Acronym of Network Video Recorder is a digital device capable of storing audio/video streams from digital cameras connected to the IP network.
OSD	On-Screen Display is an image superimposed on the image on the display frequently used on modern television sets, video recorders and DVD players to record information such as volume, channel, time and other information.
Port Forwarding	In IT networks, port forwarding is the operation for transferring (forwarding) data from one computer to another via a specific communication port. This technique may be used to allow an external user to reach a host with a private IP address (in a LAN) by means of a port of the public IP of the same. A router capable of automatically translating network addresses is needed to perform this operation.
PPPOE	PPPoE (Point-to-Point Protocol over Ethernet) indicates a network protocol that makes it possible to encapsulate PPP frames in Ethernet frames providing the typical features of a PPP protocol as the authentication functions, encryption and compression.
PTZ	Acronym of Pan Tilt Zoom this is used to indicate a PTZ camera.
RTSP	Real Time Streaming Protocol is used to establish and manage streaming sessions between server and client. The clients send controls similar to those of a video recorder to the media server, such as play or pause, to control the playback of the audio/video files distributed by the server in real time.
S.M.A.R.T.	Acronym of Self-Monitoring, Analysis and Reporting Technology. This is a system for monitoring hard disks and SSD solid state devices to detect faults and provide various reliability indicators.
SMTP	Simple Mail Transfer Protocol (SMTP) is the standard protocol for transmitting via emails on the Internet.
TCP - TCP/IP	The code TCP/IP has two meanings in computer science. It is used to indicate the two fundamental Internet protocols (TCP and IP) and in a broader sense it indicates the whole of the protocols used on the Internet.
UPnP	Universal Plug and Play (UPnP) is a network protocol the objective of that is to allow various terminals to connect to each other and to drastically simplify the use of home and company networks. It indicates the possibility of using a device as soon as it is connected to the computer or network.
UTC/UTC-Z	Function available on the HVR for controlling AHD cameras. These functions are used to navigate in the camera configuration menu and adjust its settings.
VBR	Variable Bit Rate means digital video transmission at variable speed.
VGA	Video Graphics Array is an analog standard related to connect a computer to a monitor.

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