



LABS

λ | C O R T E X
NVR

λ | Cortex
Max/Lite/AI/
Hibernate
Quick Users Guide

Version 1.2

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WELCOME

The λ | Cortex Max/Lite/AI/Hibernator NVRs combine the very best of traditional surveillance functionality with state-of-the-art technologies to create a video solution with integrated video management.

The intuitive user interface provides an efficient work flow so that you can monitor your property or person(s) effectively. All recorded footage can easily be scrutinized in high detail using the range of digital tools provided.

This “Quick User Guide” briefly describes many of the Qvis NVR’s features and how to use them, to make sure that you optimise and configure to your best advantage.

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QR (Quick Response) codes are similar to barcodes but incorporate a matrix style pattern to store information. They are a quick way to obtain information with the use of a smart phone (Apple, Android) with a QR code scanner app.

If you wish to download the λ|CortexGo mobile app for Android/IOS, please scan the code below to be linked to the app downloads. Using λ|CortexGo app you can view and download the recorded videos from the λ|Cortex NVRs and also get alarm notifications.



QR code for Android device



QR code for Apple device

Or alternatively please visit

<https://qvis.co.uk/lamda-cortex>

Hardware Requirements

Before you are able to fully use the NVR, you need to make sure you have the correct peripheral hardware connected.

Below is a list of devices you will need to connect to the NVR before camera footage monitoring is enabled. You will need to connect them before powering up the NVR.

Monitor - any computer monitors with a VGA or HDMI connection.

Mouse - USB connection.

Keyboard (optional) - only for CMAX/Clite/Hibernator NVRs. CMAX-AI doesn't support external keyboard.



USB Flash memory storage device - To store and transfer selected video clips.

USB Hard drive - If you require more storage than the USB flash device.

Startup Procedure

- 1** Connect surveillance cameras to PoE port of the back of the λ|CORTEX NVRs. In Hibernator, connect surveillance cameras to PoE Switch.
- 2** Before powering on the NVR, ensure that the display, network cable, mouse and keyboard (optional) are all properly connected to the NVR.
- 3** Power on display/monitor.
- 4** Power on the NVR and wait about 60 seconds for NVR to boot up.
- 5** When the NVR has fully booted, the first image displayed on the monitor will be multi-tiled video monitor window (as shown in next page). This will display the video feeds from all the cameras you currently have connected to the NVR. This window is called Video Wall of the NVR.

Startup Procedure (Continued)



Note: In order to view one camera video feed at a time at full screen size, use the mouse to hover over the video feed you would like to view in full screen, double click the left mouse button and the tile will expand to the size of the screen (as shown below). To return to the multi-tiled video monitor window, double click the left button, once again.



When the NVR has fully booted, NVR Setting wizard popup window will appear on monitor. Click on '**OK**' to launch NVR Setting wizard, '**Do not Show Again**' to stop displaying this popup wizard in the next reboot, '**Cancel**' to discard it.



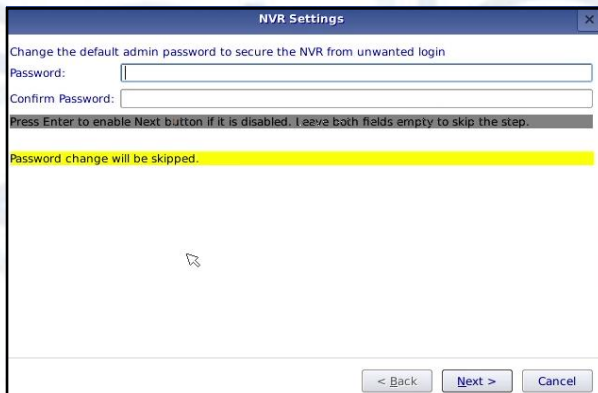
Startup Procedure (Continued)

After clicking on **'OK'**, authentication is required to open NVR Settings. Enter User name and Password, then click on **'OK'** to continue.

For the first time you can use default User name and Password given below.

User Name: admin Password: ad^min for CMAX-AI Password: ad@min20
--

It is recommended that you change the password for the admin user account to protect against unauthorised login access to top level administration permissions by following option. It can also be changed at any time. To do this please see the **'User'** Chapter on Page 68-71. NVR Settings details are explained in different subsection under **'Settings'** in this manual.



The screenshot shows a window titled "NVR Settings". Inside, there is a text prompt: "Change the default admin password to secure the NVR from unwanted login". Below this are two input fields: "Password:" and "Confirm Password:". A grey instruction bar says "Press Enter to enable Next button if it is disabled. Leave both fields empty to skip the step." Below that, a yellow message bar states "Password change will be skipped." At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

'Date and Time and NTP server' details are available in Page 66 (Date and Time) and Page 61 (NTP Server/Time Server).

'NVR Public IP and DNS Settings' details are explained in Page 56.

'Network Port Settings' explained in Page 57.

'DDNS Settings' information is available in Page 59 and Page 60.

'QR Code' information is available in Page 5.

Shutdown Procedure

You can shut down the NVR at any point during use, as long as you have completed using the interface and/or you understand that your CCTV security system will be fully shutdown and offline once you have instructed the NVR to switch off. This includes any recording of the video feeds from the cameras attached to the device/NVR.

Shutdown Procedure

In order to Shutdown you need to firstly right click anywhere on the camera monitoring screen. This will bring up the options as shown to the right.

Click on '**Shutdown**', then a popup window will appear, asking your account information. Enter Username and Password, then click on '**OK**' to Shut down. Click on '**Cancel**' to discard.



In case if you Forgot password click on '**Forgot Password**' button and follow the instruction.

If you are a user of the NVR, please contact your NVR admin for a new password. If you are the NVR admin, please contact Qvis Lab(support@qvislabs.com) with the SYSID and TID of NVR given in this window. A temporary password will be assigned to that will be valid for 24 hours from the time of issue. Login with the temporary password and immediately set a new password.

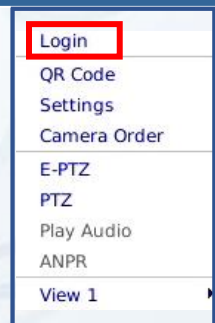
The λ|Cortex NVRs are an embedded Linux computer running complex video software. As with all computers, their integrity is maintained better if they are formally shut down, rather than having their power abruptly removed. In addition to allowing the operating system to clean up, the recorded video streams can be properly closed, among other activities.

Logging In

This section shows how to successfully login to access the different interfaces, like Settings, Playback, Instant Playback, Sequence etc.

In order to Login you need to firstly right click anywhere on the camera monitoring screen. This will bring up the options as shown below.

Select '**Login**' (highlighted by the red box) and you will then be



Logging In (continued)

asked to input your login details.

Type in your 'User Name' & 'Password' when the login screen and keyboard appear.

If you forgot password, click on '**Forgot Password**' button, a pop-up window will appear with necessary details to get the new password from NVR Admin or Qvis Labs depending on whether you are a new user or NVR admin.



A dialog box titled "Please Enter Account Information" with a close button (X) in the top right corner. It contains two input fields: "User Name:" and "Password:". Below the fields are three buttons: "Forgot Password" (highlighted with a dashed border), "OK", and "Cancel". A mouse cursor is pointing at the "OK" button.

Once you have successfully logged in, you should be able to use all the features of Video Wall right click menu as shown below, except '**Shutdown**' and '**Restart**'. These two options require another Login for authentication.

Video Wall Right Click Menu

After NVR has fully booted, you will get multi tiled video monitor in the display. Right clicking anywhere on the camera monitoring screen will bring up right click menu with several options.

In these options **QR Code**, **Login** and **Shutdown** features are already explained in the previous pages. **Settings**:

The NVR '**Settings**' is where you can modify the NVR and camera configuration and parameters. Please turn to **page 36** to see full explanation on how to use this.

Camera Order:

We can change camera order in the video wall by swapping camera tiles. To propagate it to Video Control Panel (VCP) and remote clients you have to check the box in the '**Camera Order Setting**' dialogue box.



A dialog box titled "Camera Order Setting" with a help icon (?) and a close button (X) in the top right corner. It contains a checkbox labeled "Propagate to VCP and remote clients:" which is checked. Below the checkbox is a message: "Re-login of VCP, restarting of remote client needed to reflect the camera order changed by swapping of camera tiles in video wall." At the bottom are two buttons: "OK" and "Cancel".

Login	
QR Code	
Settings	
Camera Order	
E-PTZ	
PTZ	
Play Audio	
ANPR	
View 1	▶
View 2	▶
View 4	▶
View 4 Featured	▶
View 6 Featured	▶
View 8 Featured	▶
View 9	▶
View 13 Featured	▶
View 16	▶
View 17 Featured	▶
View 25	▶
View 32	
View 33 Featured	
* View Connected	
Sequence	
Sequence Interval	▶
Playback	
Instant Playback	▶
Restart	
Shutdown	

Video Wall Right Click Menu

E-PTZ:

This feature allows you to digitally zoom and focus on the specific areas of the footage using the **EPTZ** (Electronic Pan Tilt Zoom). **Page 34** gives full details of this feature.

PTZ:

This allows you to control connected **PTZ** (Pan Tilt Zoom) Camera. Please visit **Pages 31-33** for further details.

View:

View live feedback of IP Cameras on your NVR. By checking the box, you can select IP Camera to be displayed. Maximum 32 cameras can be viewed.

In addition to view with equal sized tiles - i.e View 1, View 2 (1x1), View 4 (2x2), View 9 (3x3), View 16 (4x4), View 25 (5x5) and View 32 (6x6), λ |Cortex NVRs have new feature called **Featured Layout**.

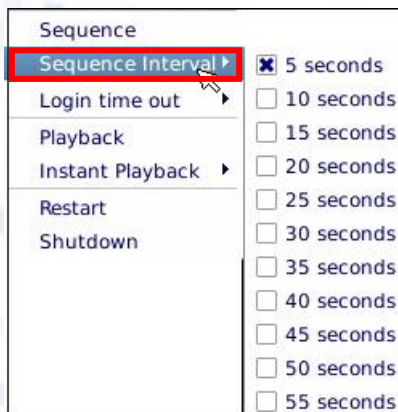
Featured Layout: It is a different kind of layout that is introduced on λ |Cortex NVRs. These are non-standard layouts where they don't contain NxN tiles in it, or some of the tiles are merged to form one big tile in a NxN layout. Right-clicking on the video wall will show a menu containing Featured layouts. Examples are 'View 4 Featured' which shows 1+3 kind of layout where it contains 1 big and 3 small tiles; and 'View 13 Featured' where it is a 4x4 layout, but 4 tiles at the centre of the screen are merged into one. Screenshot of 'View 13 Featured' layout is shown below.



Video Wall Right Click Menu

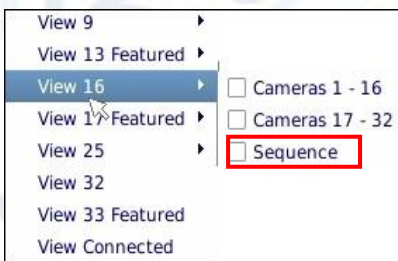
Sequence:

Sequence option allows you to play live video channels in a selected layout one after another. Each set of channels will play for a short period of time set by '**Sequence Interval**' before switching to the next set in the sequence. Once the channels are displayed in the selected sequence layout, all the channels will be displayed in the view connected layout and the sequence repeats. This option is ideal for automated monitoring..



By default '**Sequence**' option will play in 2x2 layout. For 'Sequence' mode in any other layout, you can select 'Sequence' checkbox under corresponding View.

Ex: For sequence mode in 'View 16', check Sequence checkbox which appears under 'View 16' submenu.



Login time out:

Here you can set time for automatic Logout. After specified time, the user who has previously logged in to the NVR will be automatically logged out. If '**Don't auto logout**' box is checked, then no auto logout will take place.



Playback:

This option will lead you to process of playing back recorded footage and then to examine it for motion incidents. For detailed explanation please visit **Page 14**.

Instant Playback:

This method allows you to efficiently and quickly playback footage from a particular camera.

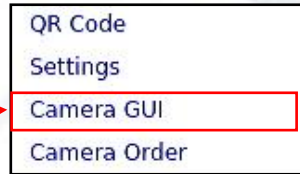
Restart:

To Restart the NVR, you need to enter Username and Password.

Video Wall Right Click Menu

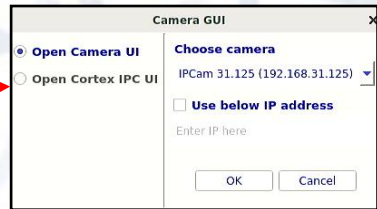
Camera GUI:

This option is used to open Camera Web GUI. This option is available only on Hibernator.



Click on Camera GUI. It will show a popup to choose camera as shown in figure.

Choose the camera and click on OK button. It will open Camera Web GUI.



Note: All the cameras browser GUI cannot be opened as some required windows plugin and some may not display video.

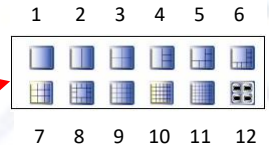
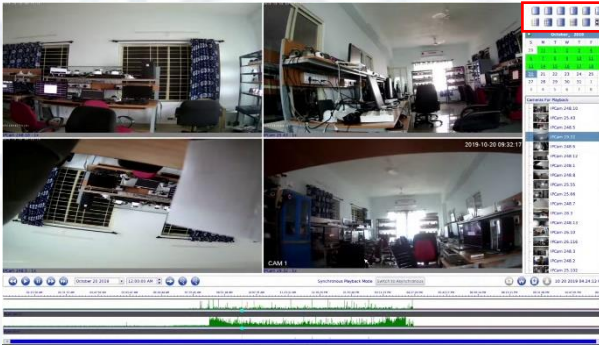
Video Playback Interface

Breakdown & Explanation

This chapter will explain step by step process of playing back recorded footage and then to examine it for motion incidents. To do this, right click on the screen and select 'Playback'.

1. Select tiling view for playback

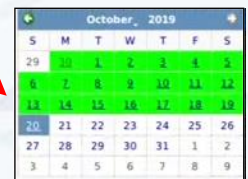
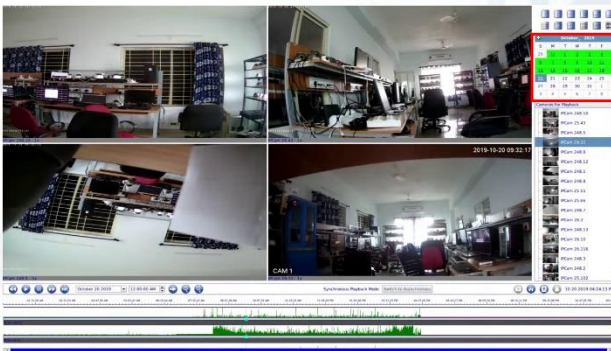
View all IP cameras on your NVR (Up to 32 Cameras).



- 1 = Full screen
- 2 = 1x2 tiling
- 3 = 2x2 tiling
- 4 = 4 featured
- 5 = 6 featured
- 6 = 8 featured
- 7 = 3x3 tiling
- 8 = 13 featured
- 9 = 4x4 tiling
- 10 = 5x5 tiling
- 11 = 6x6 tiling
- 12 = Playback all cameras (Maximum of 36 tiles)

2. Calendar

Select which month and day you would like to playback footage from. Your HDD size will determine how far back in the past you can go. Dates highlighted in green represent recorded footage is available for that day, blue date indicates the day you have selected, white date indicates no footage recorded.

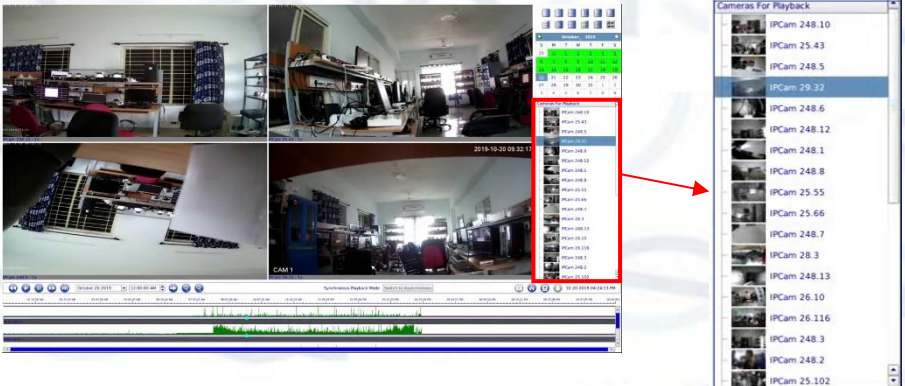


Video Playback Interface

Breakdown & Explanation (Continued)

3. Select Camera for Playback

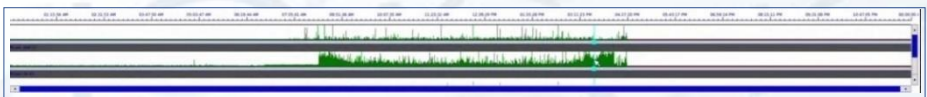
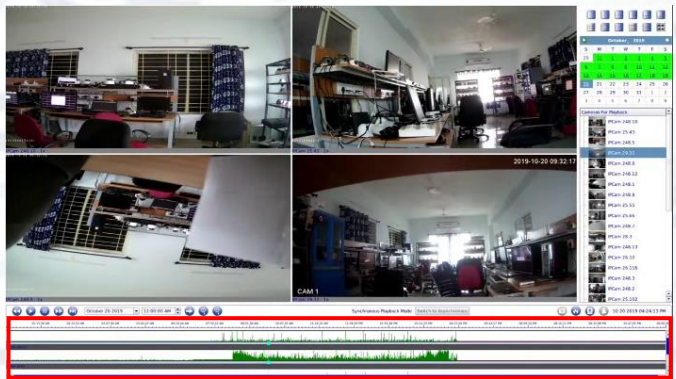
This will show thumbnails of all cameras which are connected to the NVR. You can drag and drop these into the tiles to view.



4. Activity Timeline

This will show each camera's (currently displaying on one of the tiles above) levels of motion activity during a set time frame.

Please turn to **Page 21-23** to see full explanation on how to use this.



In CMAX-AI, activity data for approved camera other than dahua cameras are generated after setting 'Enable Motion Alarm' checkbox in the motion alarm settings window.

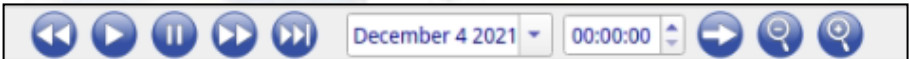
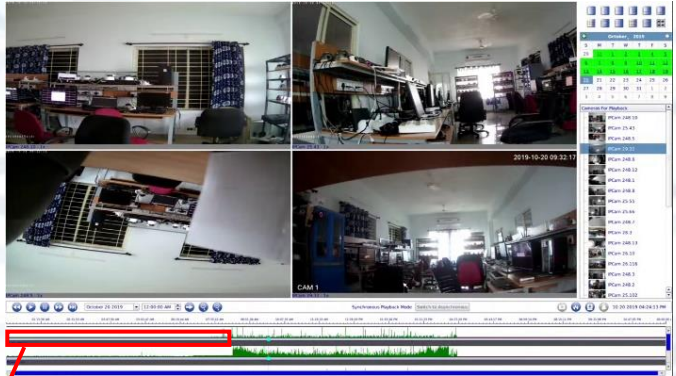
Video Playback Interface

Breakdown & Explanation (Continued)

5. Using the Playback Controls and Time & Date Selection

Highlight the camera shown on the tiles by clicking on it. Use the playback controls to rewind, play, pause, fast-forward and single step fast forward video footage.

You can also select the precise time and date of the footage you wish to view.

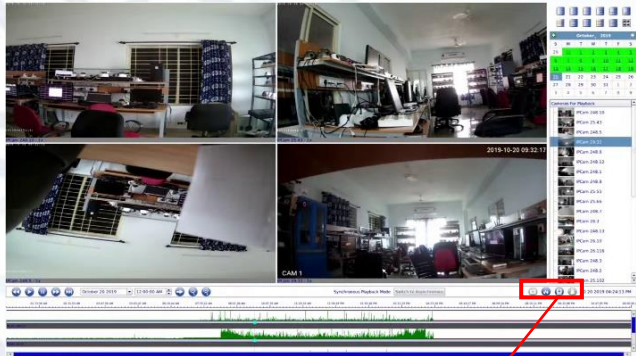


6. Snapshots, Incidents Records and Incident Records Backup

By clicking on Snapshot button, you can take snapshot of 1x1 window. Visit **Page 20** for detailed explanation.

With the help of Incident button, you will be able to create an incident record list, so you can refer back to it when you want to re-examine recorded footage. Please go to **Pages 23-26** for a full explanation.

The button next to it will allow you to backup recorded video for the incidents created using incident window. Please go to **Pages 26-27** for a full explanation.



Snapshot
Button

Incidents
Button

Backup
Video

View new
alarms in
live view

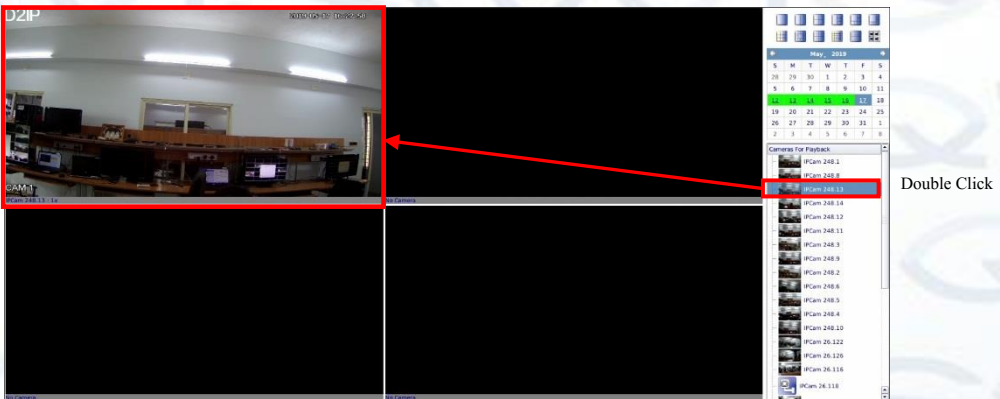
Video Playback Interface

Selecting and arranging cameras

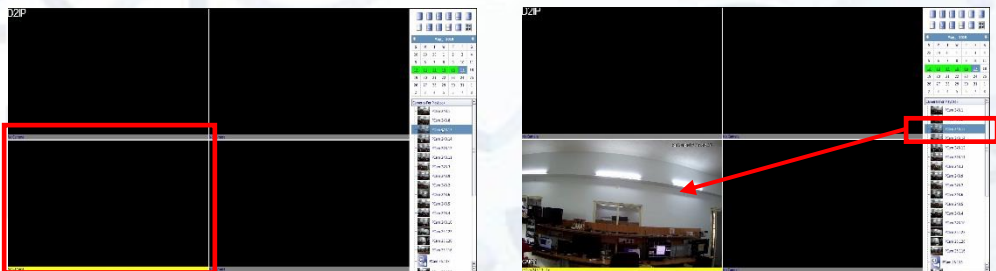
View their recorded footage within the playback interface, there are numerous ways to select and arrange the connected cameras. Giving you this flexibility will allow you to setup and tailor the interface towards your preferred way of viewing the recorded video footage.

Below is a list of ways to view video in the playback monitor:

METHOD 1: Double click on thumbnail to automatically place in the first empty tile.



METHOD 2: Select a tile with a left click and then double click on thumbnail.



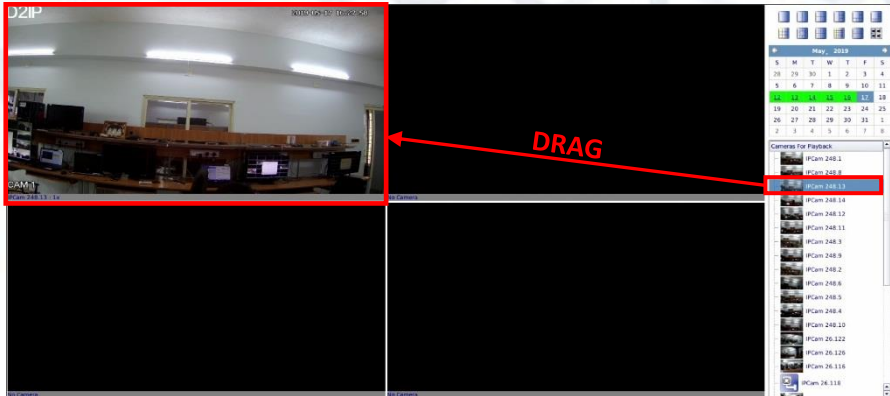
1. Select Tile

2. Double click camera thumbnail

Video Playback Interface

Selecting and arranging cameras

METHOD 3: Drag a thumbnail onto a specific tile, by holding down the left mouse button over the thumbnail, moving it to the tile, and then releasing the left mouse button.



METHOD 4: Rearrange a camera by dragging to the desired tile.

1. Hold down left mouse button over camera tile you wish to move to a new tile.



This icon should appear when you are moving the camera over to the new tile.

2. Release mouse button when the cursor is above the tile you are moving the camera to.

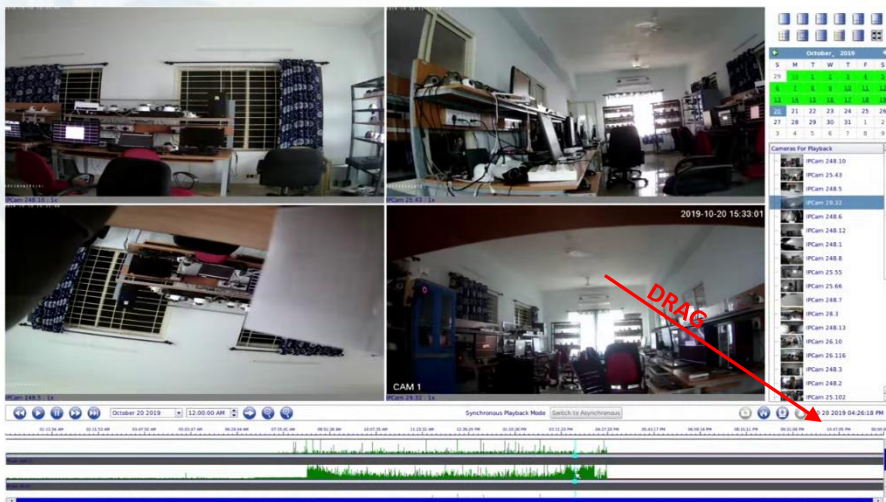
The camera footage should now appear in the new tile.



Video Playback Interface

Selecting and arranging cameras

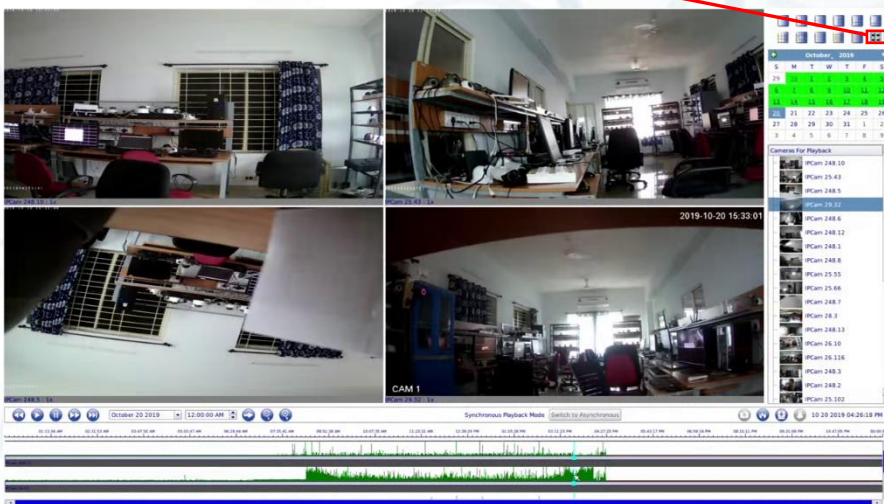
METHOD 5: Remove a camera by dragging it outside the video monitoring area.



METHOD 6: Click lower right icon



display all cameras.

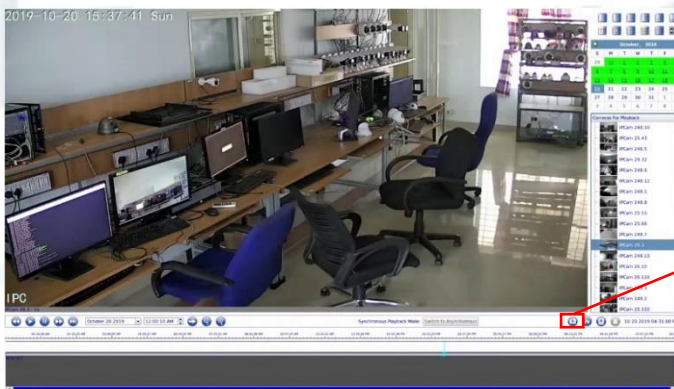


Video Playback Interface

Video Snapshot Function

On the λ|Cortex NVR there is a Snapshot feature that allows you to take a single frame snapshot from a camera's recorded video footage and save it to a USB storage device. There is also an option to send it as an email attachment to a stipulated email address. This feature allows you to store and distribute the snapshot to external data storage mediums away from the NVR. The snapshot feature is part of the Playback Interface.

Before you are able to email the snapshot, please see **Page 58 'Email Settings'** for instructions on where and how to register an email server & recipient email address on the NVR.



Locate and select the Snapshot icon on the playback interface, see icon below:



The Snapshot window appears (see right). Insert your USB storage device into one of the USB ports on the NVR. Select the **'Find Drive'** button to locate the USB storage device and select it from the drop-down list.

Rename the snapshot in the **'File Name'** field if required and select **'Save'**. Select **'Send Email'** if you wish to send snapshot image to the registered email address account. Select **'Close'** to close window.

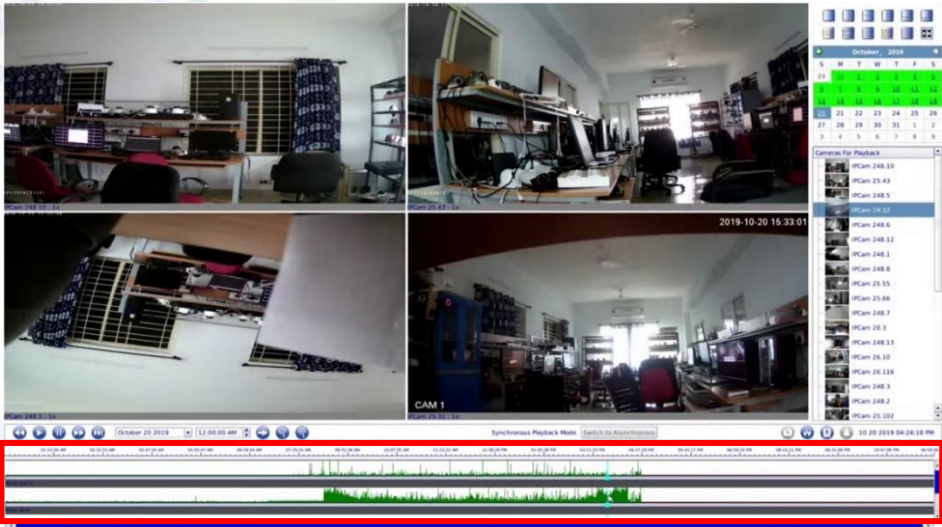


Video Playback Interface

Playback Timeline

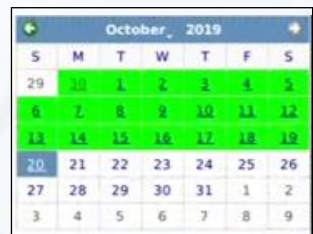
As part of the newly updated intuitive playback interface is the incident timeline. This is found at the bottom of the playback interface and allows you to search for specific incidents within a specific time frame. The timeline will display detected movements as green level bars and pink colour for analytics event during a 24-hour period. This chapter will show you how to use it.

Timeline is highlighted by the red box below:



For each camera displayed within each video tile, an incident timeline will appear in the section at the bottom of the playback interface. Use the scroll bar to find the camera footage timeline you want.

Firstly, select the day on the calendar you wish to view the video footage from. The timeline(s) will then display any motion activity.



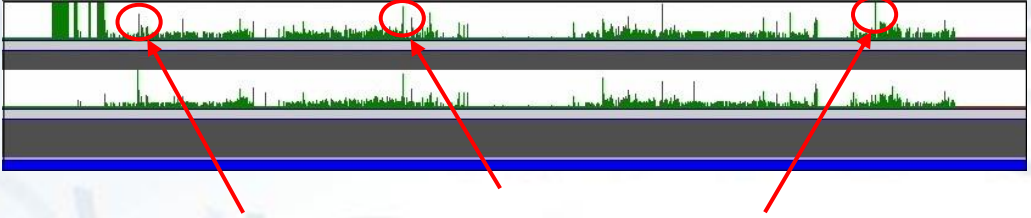
The timeline(s) can be zoomed into by using the Zoom buttons  in the timeline or mouse wheel

so that you are able to view a more decisive time period of incident activity. You need to have the mouse cursor over the timeline section in order to zoom in.

You can also start playback from a particular camera at a particular time by clicking on the timeline and then the timeline will be automatically updated.

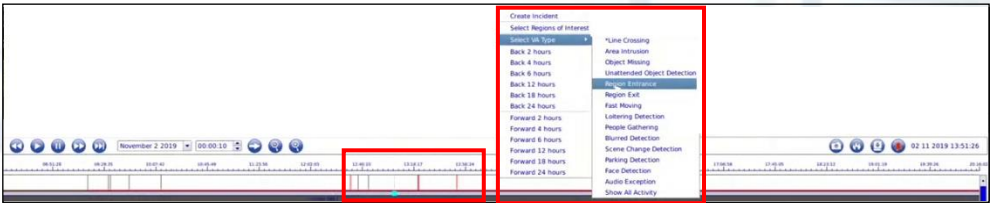
Video Playback Interface

Playback Timeline



Each green column represents a level of motion activity. Tall and numerous columns represent a high level of motion caught by the camera(s).

If camera supports analytics, playback activity timeline will show analytic events as part of timeline. By default, all analytics activities are clubbed together and shown using pink colour bars, along with green coloured motion activity bars. To bring up individual analytics activity timeline, right click on activity timeline and select analytic type.



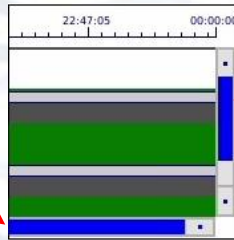
Analytic activity timeline with each column showing the time when analytics event happened. Clicking on individual column will bring up video of event.

Video Playback Interface

Playback Timeline

By using the settings to change the time periods for the timeline, you will be able to scrutinize footage data in greater detail and efficiency.

Use the scroll bar on the bottom to pan left/right in the timeline.



Use the scroll bar on the right to move between cameras.

You can also use the mouse scroll wheel to zoom in/out of the timeline, when you have the cursor hovering over it.

**Varying motion levels and analytics events are only displayed and recorded when using selected QVIS cameras. Otherwise the timeline will only show when video was recorded, and not columns depicting different levels of motion.*

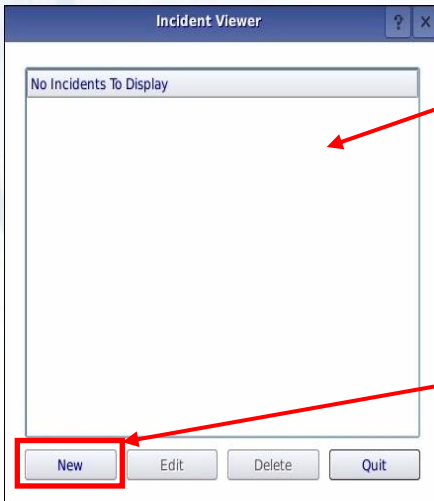
Incident Records: Records List Menu

This chapter will explain how to create an incident record list. The next chapter will show you how to back up this list's video footage to an external data storage device.

Following on from 'Incidents Records and Incident Records Backup' on Page 16; when you click on the 'Incidents' button (located just above the camera footage timeline viewer) the 'Incident Viewer' window will appear:

Video Playback Interface

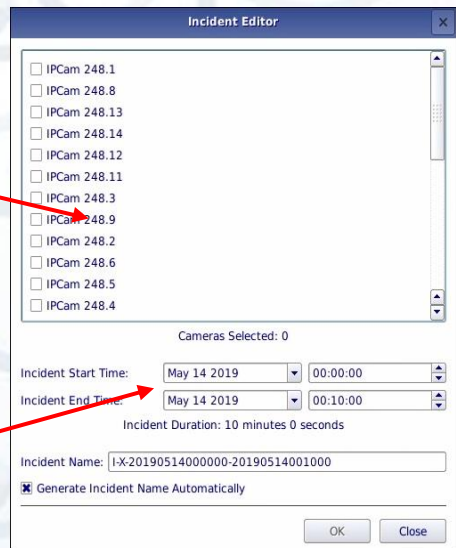
Incident Records: Records List Menu



1. The incident viewer will allow you to index particular incidents caught on one or more cameras. It will display the start & end times of each recorded incident and which camera captured the footage. You can also give the incident a unique reference name to help you to distinguish between each of them.

2. Click on the '**New**' button at the bottom of the window (shown in the red box to the left) to add a new incident to the list.

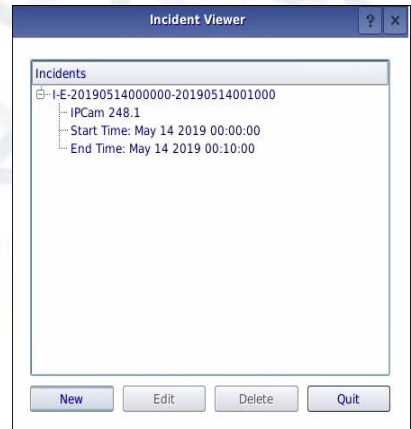
3. The window, shown on the right, will appear after clicking on the '**New**' button.
4. To index or edit an incident record, select which camera the incident was caught on.
5. Then input the precise date and time of the incident in to the '**Incident Start Time**' and '**Incident End Time**' input tabs. You will need to refer to the timeline bar to find the precise time & date of incident.
6. To give the indexed incident a name, you can either allow the interface to automatically create a unique one or you can manually create a desired name.



Video Playback Interface

Incident Records: Records List Menu

7. Once you have filled in all the fields click on '**OK**' button and you will now be able to see the indexed incident on the incident viewer.
8. You will also be able to amend any details of each indexed incident by selecting the particular incident name and then clicking on the '**Edit**' button at the bottom of the window.



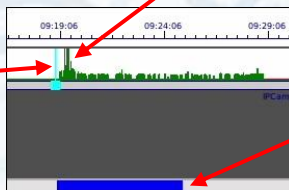
Incident Records: Auto Setup

To further increase the efficiency of recording 'Incidents', we have designed extra functionality to the interface so that it can automatically setup the details of the incident for you.

1. To get the interface to do this you must add the cameras, which caught the incident you wish to add to your records, to the tiles in the video playback section.
2. Then on the timeline find the incident by using the mouse wheel to zoom into the timeline and centre the left and right scroll bar on the incident.



4. Move the timeline's blue before the incident.



3. Use the mouse wheel to zoom into the incident.

5. Centre the left and right scroll bar on to the incident.

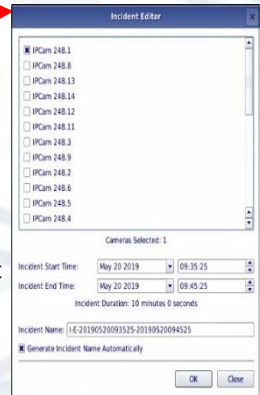
Video Playback Interface

Incident Records: Auto Setup

6. Next right click either on the timeline section or the camera's tile in the video playback section. An option list will appear, select '**Create Incident**' (highlighted by the red box.)



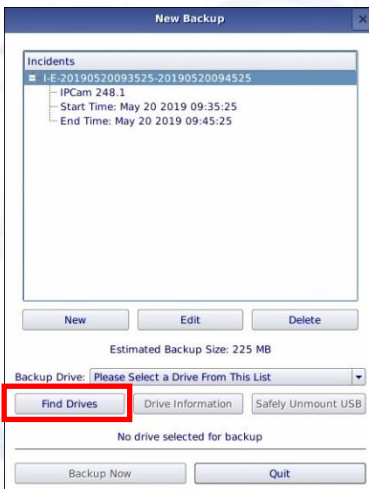
7. The incident editor will appear with all the incident details already setup. It will automatically set the incident start and end times for a 10-minute period (you can adjust this time frame).



Incident Records: Backup

This chapter will show you how to back up your incident list's video footage to an external data storage device.

Next to the '**Incidents**' button on the Playback interface there is another button  which when clicked upon, will bring up the '**New Backup**' menu window as shown below:



The 'New Backup' menu will allow you to create an external backup copy of the selected indexed incident. This will allow you to either transfer the video footage of the incident to another playback device or to keep as a backup archive just in case the master copy is destroyed.

1. To backup incident footage; firstly, connect your external backup storage device to the NVR unit's USB port.
2. When the NVR has recognised and mounted the external backup storage device, click on the '**Find Drives**' Button on the menu window (highlighted by the red box).
3. Click on drop down menu of '**Backup Drive**'. This will provide you a list of backup devices connected to the NVR.

Video Playback Interface

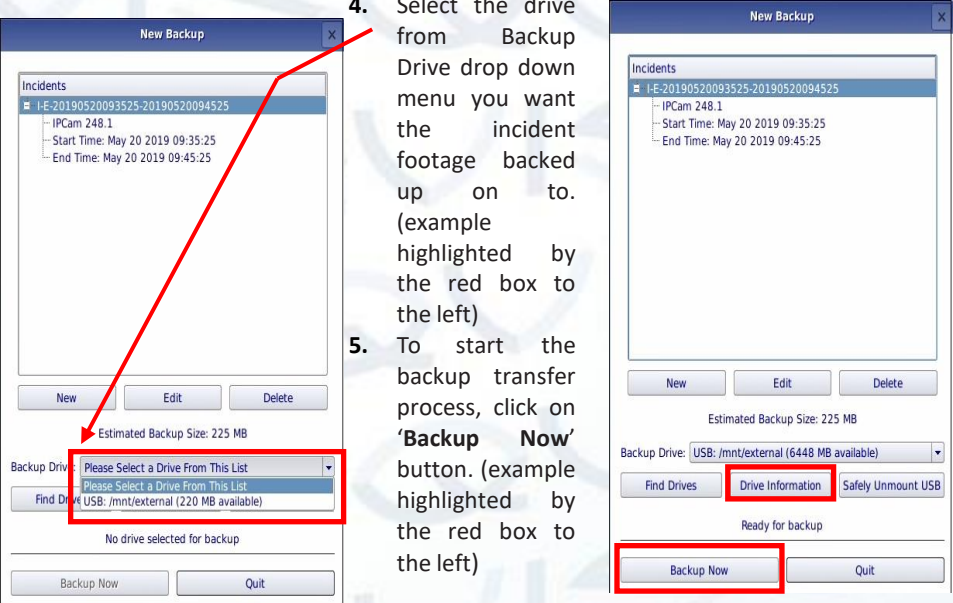
Incident Records: Backup

IMPORTANT:

Please make sure you have enough space on the external backup storage device before you backup your incident footage.

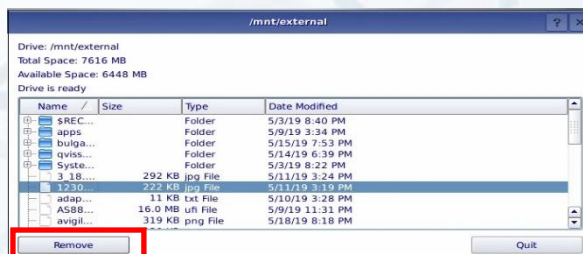
4. Select the drive from Backup Drive drop down menu you want the incident footage backed up on to. (example highlighted by the red box to the left)

5. To start the backup transfer process, click on 'Backup Now' button. (example highlighted by the red box to the left)



Once the backup transfer process is complete you should see a notification box appear notifying you that back up was a success.

You can use 'Drive Information' button to manage external device connected for Backup. New popup window will give information of Total space and Available space in the external device. Select file in the device and click on 'Remove' button to delete the files from the device.



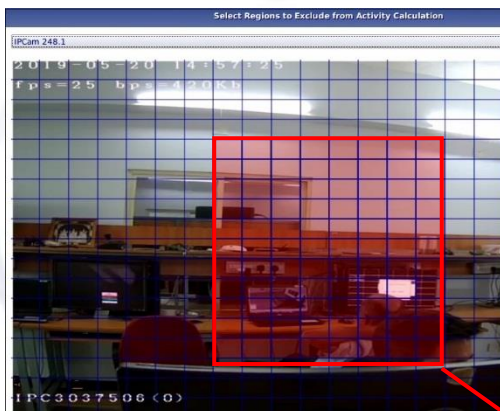
Video Playback Interface

Motion Exclusion Search on Playback

In order to pinpoint incidents of activity on the camera's video footage, with even greater efficiency, we have included a motion exclusion tool.

This tool allows you to select areas of the video footage, from each individual camera, to exclude any motion detection pickup to be displayed on the timeline.

To set the motion exclusion sectors on each camera; click on the right mouse button when the cursor is above the timeline section of the playback interface. The option panel will appear, and you will need to select '**Select Regions of Interest**' as shown to the right in the red box.



This panel will then appear. If you click on a square tile it will highlight in red.

The selected red tiles are used to mark the area that you would like to be excluded from motion detection.

You can bring down a list of all the connected cameras from the dropdown menu at the top of this window.

When you have completed creating your exclusion areas, click on '**Apply**' and then click on '**Close**' to switch back to the main playback interface.

Red = Excluded motion area

Example of how 'Motion Exclusion' can be used:

In a retail setting there is a lot of movement as many customers walk around. A particularly valuable item was found missing later in the day. Exclude all areas except those around where the valuable item was. The Activity graph will then be recalculated to show only the amount of motion within the remaining area. It will then be clear when this portion, and only this portion, of the entire camera view changed.

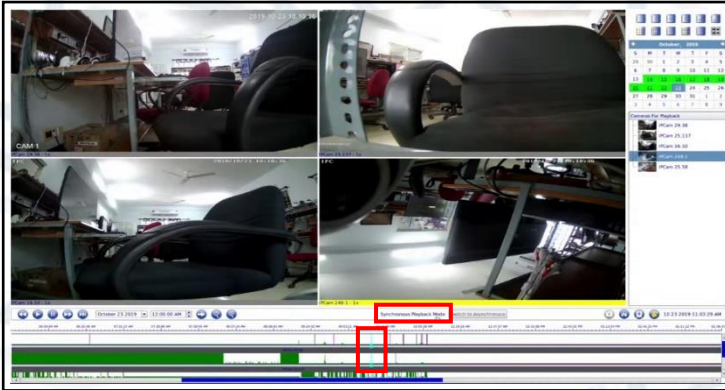
View Alarms on Playback

In order to view Video alarm in the Playback section, click on  Button. It is available only if Video Alarm is enabled in either Sensor Alarm or Motion Alarm under **Settings->Alarm**.

Video Playback Interface

Synchronous Playback Mode

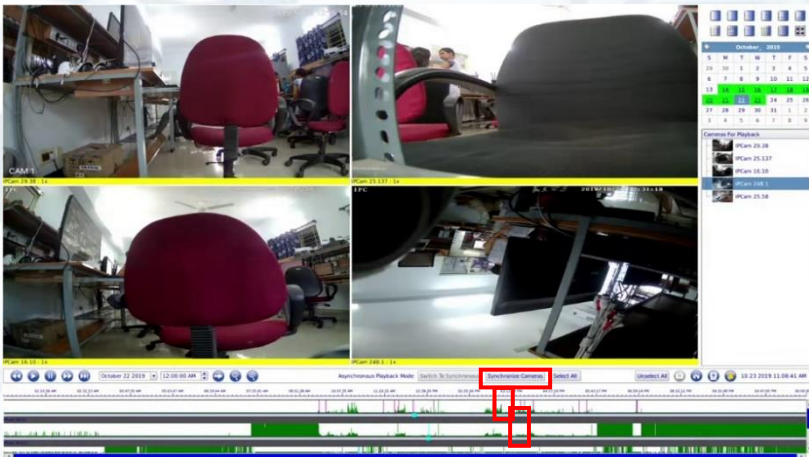
By default, all tiles in Video Playback Interface are in Synchronous Playback mode except for CMAX-AI. In this mode all videos in the tiles are playing at same time occurrences. Any action like changing the speed of a tile will reflect in all the tiles. CMAX-AI, by default, all tiles in Video Playback Interface are in Asynchronous Playback mode.



Here timelines blue marker is playing at same time occurrences.

Switch to Asynchronous

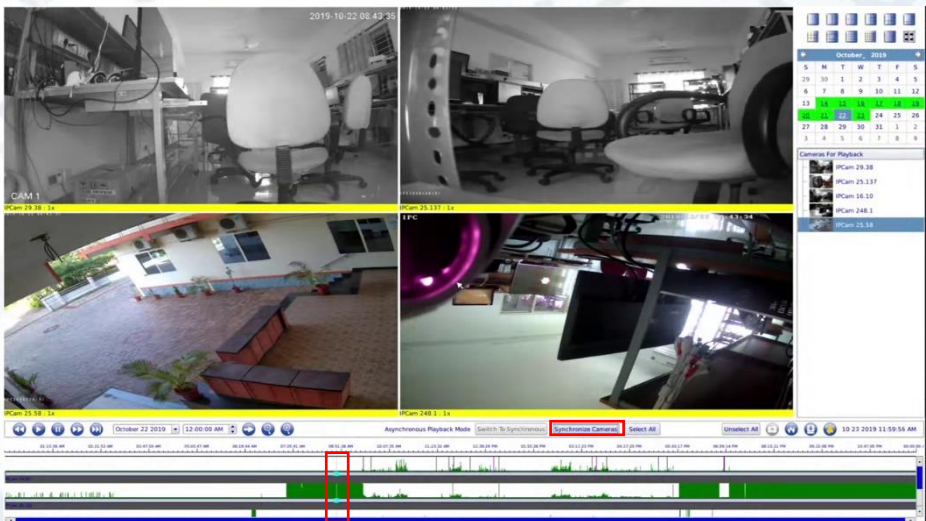
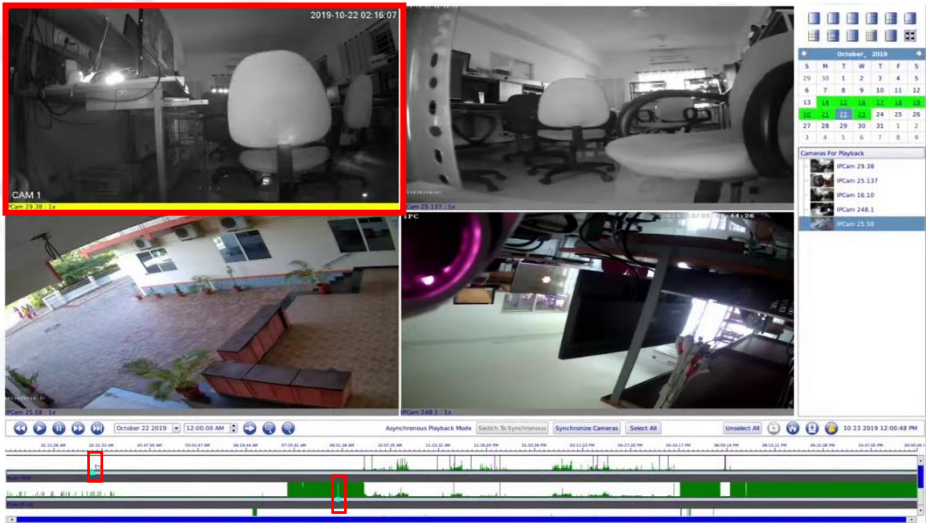
To switch to Asynchronous mode, first make sure to empty video tile either by removing existing camera from video tile or creating new empty layout. Then click on **'Switch to Asynchronous'** and then add cameras to tiles. In this mode only selected tiles will respond to any action such as Rewind, Fast-forward, Play etc.



Video Playback Interface

Switch to Synchronous

To synchronize Video Playback of remaining cameras to selected camera in the tile, select one tile and click on **'Synchronize Cameras'** button. Which leads to synchronization of other video playback tiles to selected camera video playback tile.



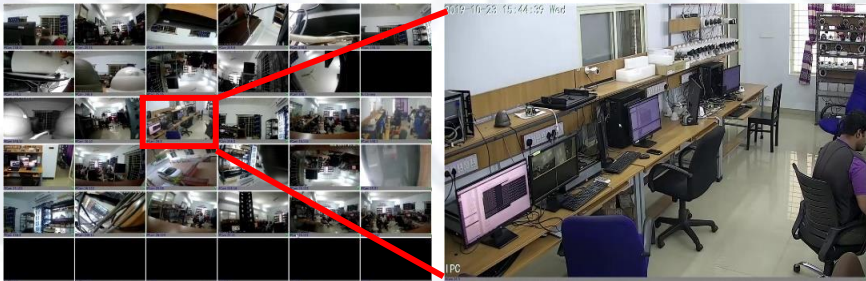
Once to bring all the channels in sync and then onwards they will be playing asynchronously.

PTZ

This feature allows you to control several connected **PTZ** cameras of current NVR. You will have the ability to physically rotate the camera head to its functional extremities and zoom the focus in and out, remotely, using the PTZ option when you click on the camera tile that has PTZ capability.

To select and operate a specific PTZ camera for it to capture a new focus point:

1. Find the camera you wish to control within the tiled 'video wall' and double click on left mouse button upon it to increase the tile size to full screen.

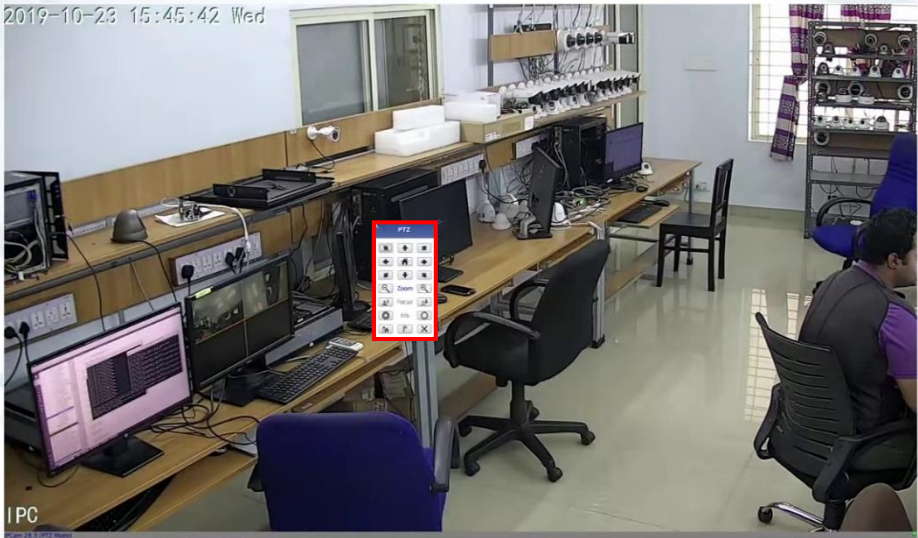


2. Once the video fills the entire screen, click on right mouse button on the video footage and select '**PTZ**' on the options list that appears (highlighted by the red box below).



Login
QR Code
Settings
Camera Order
E-PTZ
PTZ
Play Audio
ANPR
View 1 ▶
View 2 ▶
View 4 ▶
View 4 Featured ▶
View 6 Featured ▶
View 8 Featured ▶
View 9 ▶
View 13 Featured ▶
View 16 ▶
View 17 Featured ▶
View 25 ▶
View 32 ▶
View 33 Featured ▶
* View Connected
Sequence
Sequence Interval ▶
Playback
Instant Playback ▶
Restart
Shutdown

3. The PTZ controls will then appear in new popup window (highlighted below). Using the mouse click on the individual control buttons to manoeuvre camera.



Arrow Keys: Each arrow will make the camera rotate in that direction.

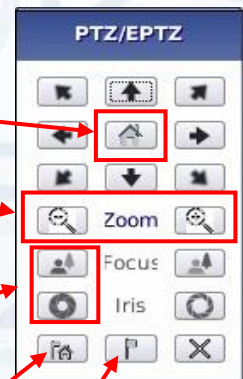
Home Key: This button makes camera to pre-set Home scene. It is set using 'Set Home' button.

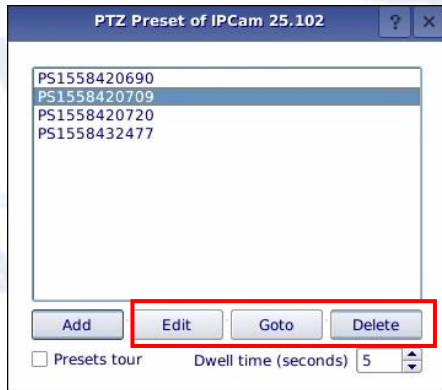
Zoom Keys: These two buttons will allow you simulate movement to and from the scene in front of the camera.

Focus, Iris Keys: If the PTZ camera you are controlling has these capabilities, you can adjust the lens **Focus** (Near or Far) if the image is blurred, or you can adjust the **Iris** (Close or Open) if the image is too light or dark.

Set Home: This button allows you to set home scene for the camera. A confirmation window will appear, click on 'OK' to set current scene appearing in the video tile as Home Scene.

Pre-set: This button allows you to set different pre-set scenes for PTZ camera. New window will appear, click on 'Add' and enter name for new Preset. By checking Preset tour box, you can view added Preset scene location in PTZ camera. Time interval is set at "Dwell time".



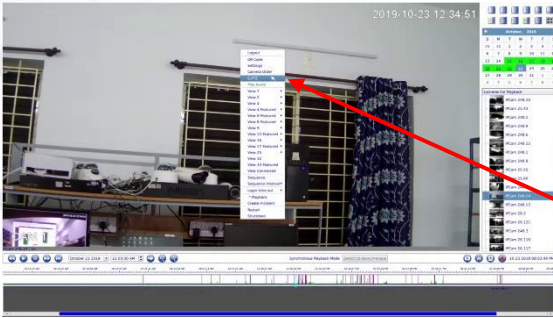


‘**Edit**’ option allows you to edit selected Preset name. ‘**Goto**’ option will shift camera to selected Preset scene. ‘**Delete**’ will delete selected Preset.

- Once you have finished using the PTZ controls, you can get rid of them off the screen by clicking on the ‘**Exit PTZ**’ button. You will return to normal full screen of the chosen camera. Double click on the screen to return to the multi-tile mode.



Another feature of this NVR is that you can digitally zoom and focus on specific areas of the footage using the **EPTZ**. This is an exceptionally useful function when using the High Definition footage quality of the static IP cameras, because of the amount you can digitally zoom into the image before it becomes too pixelated.



You can also use the EPTZ function on playback, to zoom in and out and move in any direction on a selected camera channel.

Simply right click on selected live camera channel and select 'EPTZ'.

EPTZ is also available in full screen mode. Double click on any camera during playback to go full screen. Double click again to revert. The below area has been zoomed in using the EPTZ function.



EPTZ CONTROL BAR

The EPTZ control bar will appear at the bottom of the screen. You can easily Zoom in and Out and move in any direction.

You can use the arrow buttons to move about once you have zoomed in to the video image.

Click on 'Exit EPTZ' button, to exit EPTZ.

PTZ Cameras and Accessories

If you wish to find out more about our range of QVIS PTZ Cameras and all the Accessories available then please scan the QR codes below with your phone, so you can be linked straight to the pages on our website which display all the details:



VCP Settings

The NVR **'Settings'** is where you can modify the NVR and camera configuration and parameters and set them to run your CCTV security system.

You can find the **'Settings'** option by clicking on right mouse button anywhere within the tiled live monitoring screen. In case you are not already logged in, you have to Login here with your username and password.

It will open up the **'VCP Settings'** window. It will display 8 menu headings. These 8 menu headings are highlighted below by the red box.

The 8 menus of VCP Settings are:

Login
QR Code
Settings
Camera Order
E-PTZ
PTZ
Play Audio
ANPR
View 1
View 2

VCP Settings							
IP Camera	Analytics	Network Settings	NVR Settings	User	Alarm	Info	Support
IP Camera Management	IP Camera Settings	Recording Schedule					

IP Camera

Analytics

Network Settings

NVR Settings

User

Alarm

Info

Support

IP Camera

The **IP Camera** Menu has 3 sub menus:

IP Camera Management

IP Camera Settings

Recording Schedule

VCP Settings							
IP Camera	Analytics	Network Settings	NVR Settings	User	Alarm	Info	Support
IP Camera Management	IP Camera Settings	Recording Schedule					

VCP Settings

IP Camera (Continued)

IP Camera Management

This menu will deal with Search, Add and Remove of IP cameras.

Camera Name	IP Address	Port	User Name	Status	Add
☐ IPCam 31.31	192.168.31.31	Default		✓	+
☐ IPCam 31.26	192.168.31.26	Default		✓	+
☐ IPCam 31.22	192.168.31.22	Default		✓	+
☐ IPCam 31.16	192.168.31.16	Default		✓	+
☐ IPCam 31.15	192.168.31.15	Default		✓	+
☐ IPCam 31.14	192.168.31.14	Default		✓	+

Discover Manual Add Add All Add Selected

Camera Name	IP Address	Status	Preview	Info	Edit	Remove
☐ IPCam 248.15	192.168.248.15	✓				
☐ IPCam 28.3	192.168.28.3	✓				
☐ IPCam 25.26	192.168.25.26	✓				
☐ IPCam 248.2	192.168.248.2	✓				

Remove All Remove Selected

Finished searching the IP Cameras in the network.

Close

List of IP Cameras added to NVR

Discover:

Will search for the IP Cameras in the network. Discovered IP Cameras are shown in the upper list.

Add All:

All discovered IP Cameras will be added to the NVR.

Add Selected:

One or more selected cameras will be added to the NVR. Selection can be done by ticking white box in the Camera Name column.

VCP Settings

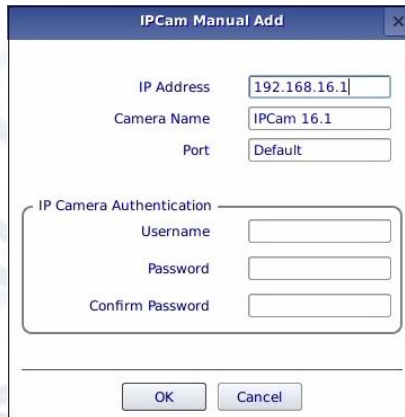
IP Camera (Continued)

Manual Add:

You can add IP cameras manually by clicking **on** this button. This leads to new pop-up window, where you must fill IP Camera address, Camera Name and Port.

Also need to fill IP camera authentication Username and Password.

Click on **'OK'** to continue, **'Cancel'** to discard changes.



Remove All:

Removes all added IP Cameras from the NVR. For PnP cameras you need to disconnect the cameras first then try to remove.

Remove Selected:

Selected Cameras will be removed from NVR.

Add:

By clicking on this icon, you can add discovered IP cameras to the NVR. In CMAX-AI, this leads to new pop-up window, where you must fill IP Camera authentication Username and Password. If incorrect username or password provided, camera does get added but will not stream. Use Edit camera option for input the correct username/password later.

Status:

This symbol shows status of the IP Camera, whether it is connected to the NVR or Not. Green tick means it is connected to the NVR and Red X means it is disconnected.

VCP Settings

IP Camera (Continued)

Edit:

When you click on this button an IP Camera Edit Dialog box will open. IP Camera name can be edited here. Also User password can be edited or updated. It needs IP Camera Authentication. Click on 'Save' to update changes.



The IP Camera Edit Dialog box contains the following fields:

- IP Address: 192.168.248.2
- Camera Name: IPCam 248.2
- Port: Default
- IP Camera Authentication section:
 - Username: admin
 - Password: (masked with dots)
 - Confirm Password: (masked with dots)

Buttons: Save, Cancel

Info:

When you click on this button, Camera Information dialogue box will open. Every detail of selected IP camera will be available here.

Camera Information	
Name:	IPCam 248.2
IP Address:	192.168.248.2
Serial No.:	3037927
Subnet Mask:	255.255.255.0
Gateway:	192.168.248.254
DHCP:	Static
Model:	HDIPC
Manufacturer:	Network Digital Video
Mac Address:	18:D9:49:40:B2:C2
Firmware Version:	8.5.74.61
Video Encoder:	H265

Remove:

By clicking on this Icon, you can remove IP camera from the NVR.

VCP Settings

IP Camera (Continued)

Preview:

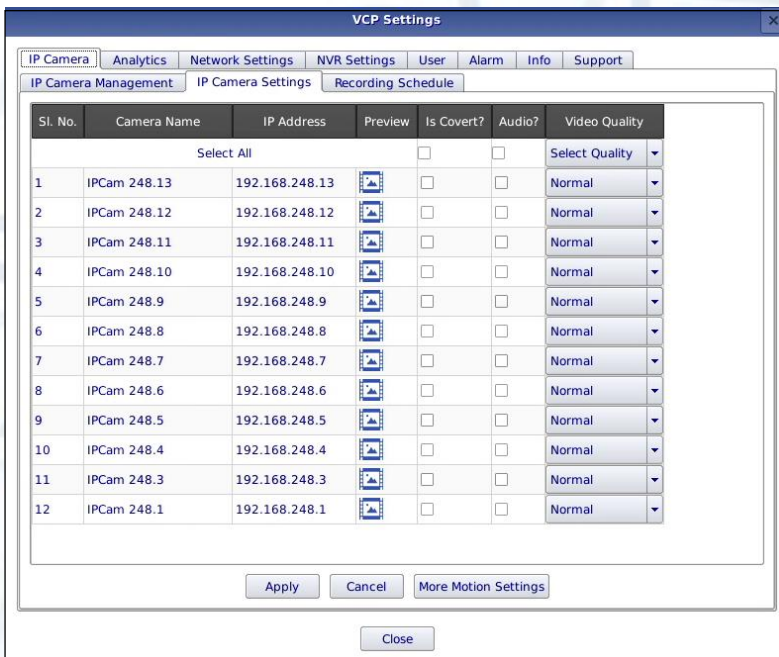
IP Camera Preview window will open when you click on this icon, it will show a preview of the camera channel.



IP Camera Settings

IP Camera settings can be modified here.

If you would like to change the video quality of your IP camera so that less data storage on your hard drive is used, then you can adjust the levels within this menu section. At the same time, you can also set the motion sensitivity settings for each IP camera.

A screenshot of the 'VCP Settings' window, specifically the 'IP Camera Management' tab. The window has a title bar 'VCP Settings' and a close button. Below the title bar are several tabs: 'IP Camera', 'Analytics', 'Network Settings', 'NVR Settings', 'User', 'Alarm', 'Info', and 'Support'. The 'IP Camera' tab is selected, and within it, the 'IP Camera Management' sub-tab is active. The main area contains a table with columns: 'Sl. No.', 'Camera Name', 'IP Address', 'Preview', 'Is Covert?', 'Audio?', and 'Video Quality'. There are 12 rows of camera data, each with a camera icon in the 'Preview' column and a 'Normal' video quality dropdown. A 'Select All' button is at the top of the table. Below the table are 'Apply', 'Cancel', and 'More Motion Settings' buttons. A 'Close' button is at the bottom of the window.

Sl. No.	Camera Name	IP Address	Preview	Is Covert?	Audio?	Video Quality
Select All				☐	☐	Select Quality
1	IPCam 248.13	192.168.248.13		☐	☐	Normal
2	IPCam 248.12	192.168.248.12		☐	☐	Normal
3	IPCam 248.11	192.168.248.11		☐	☐	Normal
4	IPCam 248.10	192.168.248.10		☐	☐	Normal
5	IPCam 248.9	192.168.248.9		☐	☐	Normal
6	IPCam 248.8	192.168.248.8		☐	☐	Normal
7	IPCam 248.7	192.168.248.7		☐	☐	Normal
8	IPCam 248.6	192.168.248.6		☐	☐	Normal
9	IPCam 248.5	192.168.248.5		☐	☐	Normal
10	IPCam 248.4	192.168.248.4		☐	☐	Normal
11	IPCam 248.3	192.168.248.3		☐	☐	Normal
12	IPCam 248.1	192.168.248.1		☐	☐	Normal

If you wish to set all cameras to the same video quality and motion settings, you can click on the **'Select All'** button.

VCP Settings

IP Camera (Continued)

The '**Sl. No.**', '**Camera Name**' and '**IP Address**' columns will list the details of each IP camera configured to work with the NVR.

Preview

Provides preview window for each IP Camera.

Is Covert? :

Check this box if you want to make the particular camera covert. Only users with enough privilege will be able to view such cameras. (See Settings - User).

Audio:

Check this box if you want to enable the Audio on audio supported cameras. After saving this, if you right click on video wall, you can see the 'Play Audio' option.

Video Quality:

You can set the quality as either **BEST, BETTER, NORMAL, GOOD, FAIR & CUSTOM.**

CUSTOM:

To make Custom changes of video quality, you have to login to IP camera GUI and modify settings.

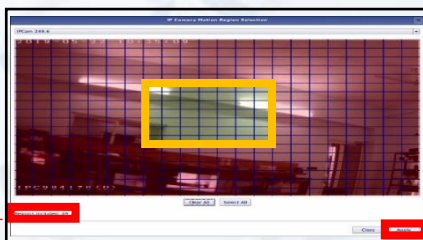
In CMAX-AI, Advanced Settings option has been added to each camera. Single click on this will open IP Camera Advanced Settings window. User can set Bitrate Control, Bitrate, FPS, Encoder and resolution of selected camera as shown in Figure. Changes made in the Advanced Settings is treated as Custom Mode.



Click on '**Apply**' to save selections. Click on '**Cancel**' to discard changes.

Click on '**More Motion Settings**' to set where on the camera's field of view the NVR will detect any motion and shown on the camera's motion sensitivity timeline in the playback interface.

The '**IP Camera Motion Region Selection**' window will appear, as shown in Figure:



VCP Settings

IP Camera (Continued)

Note: Only our professional range of IP cameras will show the level of motion activity on the motion sensitivity timeline in the playback interface. All other cameras will show a constant band.

The camera's field of view will be completely cleared to start off with, but you can click the sectors on the grid where you **WANT** the NVR to register motion activity on the camera's motion sensitivity timeline in the playback interface.

Regions included marked in the Yellow box.

Click on '**Apply**' once you are happy with your motion detection setup.

Recording Schedule

The λ|Cortex NVRs always record all connected cameras at the resolution, frame rate, and quality specified in Camera Settings. The Schedule function is used to modify this behaviour during selected time frames.

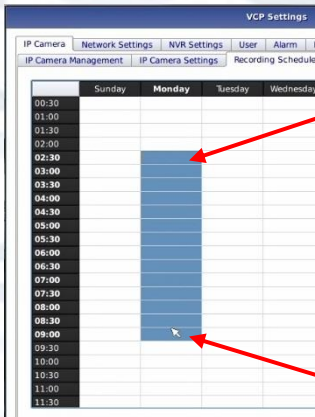
The screenshot shows the 'VCP Settings' window with the 'Recording Schedule' tab selected. The tab is highlighted with a red box. The window contains a table for scheduling recordings across seven days of the week (Sunday to Saturday) and various time slots from Midnight to 11:00. The table is currently empty, with only the headers visible. A 'Close' button is located at the bottom right of the window.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Midnight							
00:30							
01:00							
01:30							
02:00							
02:30							
03:00							
03:30							
04:00							
04:30							
05:00							
05:30							
06:00							
06:30							
07:00							
07:30							
08:00							
08:30							
09:00							
09:30							
10:00							
10:30							
11:00							

VCP Settings

IP Camera (Continued)

1. **To Set Up a Scheduled Recording:** In the '**Recording Schedule**' sub menu you can see a one-week gridded calendar. Each grid represents a specific half hour (listed at the left in 24-hour clock format) on the given day (listed at the top in Sunday-Saturday format).
2. Click in the grid that corresponds to the time the NVR is to begin recording.



Grid that corresponds to the time the NVR is to begin recording.

Grid that corresponds to the time the NVR is to finish recording.

3. Click again in the grid that corresponds to the time the NVR is to finish recording. This brings up the **Recording Schedule Settings** window, which allows customization of this particular scheduling 'block'.

Apply to Day(s): This series of checkboxes allows for duplication of this scheduling block over multiple days of the week. Simply click on the box to apply the newly created block to that day.

Camera Name: This is the user-assigned name of the numbered camera. By default, this is **IPCam 248.1**, **IPcam 248.2**, etc.

The 'Recording Schedule Settings' window shows a table with the following data:

Sl. No.	Camera Name	Use Defaults	Video Quality	Motion Sensitivity	Recording Type
1	IPCam 248.5	☐	Best	Med	Continuous
2	IPCam 31.26	☐	Best	Max	Continuous
3	IPCam 248.4	☐	Normal	Min	Continuous
4	IPCam 248.3	☒	Normal	Off	Continuous
5	IPCam 25.58	☒	Normal	Off	Continuous
6	IPCam 29.105	☒	Normal	Off	Continuous
7	IPCam 25.27	☒	Normal	Off	Continuous

Buttons: Apply, Cancel

VCP Settings

IP Camera (Continued)

Use Defaults:

If this box is checked, the associated camera will record continuously at High Quality video, with Motion Sensitivity turned Off. (These defaults can be changed by using the 'IP Camera Settings' under Settings.) If all cameras are set to 'Use Defaults', we won't be able to create schedule.

If this box is unchecked, the following four options become editable:

Video Quality:

By clicking on the drop-down menu, the quality of the recorded video can be changed to **Best**, **Better**, **Normal**, **Good** or **Fair**. The default value is **Best**.

Motion Sensitivity:

By clicking on the drop-down menu, the motion sensitivity setting of the associated camera can be changed to **Max**, **Med**, **Min**, or **Off**. The default value is **Off**.

Note: To record when even the slightest motion is in the camera's field of view, set to Max. Conversely, to record when only significant motion is present, set to Min.

Recording Type:

By clicking on the drop-down menu, the Recording Type of the associated camera can be changed to **Continuous** or **Motion**. The default value is **Continuous**.

When all values have been properly edited, click on '**Apply**' to save the changes. Click on '**Cancel**' to discard. The Recording Schedule Settings will now look like this:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
00:30							
01:00							
01:30				Red			
02:00				Blue			
02:30				Green			
03:00				Green			
03:30				Green			
04:00				Green			
04:30				Yellow			
05:00							
05:30							
06:00							
06:30							
07:00							
07:30							
08:00							
08:30							
09:00							
09:30							
10:00							
10:30							
11:00							

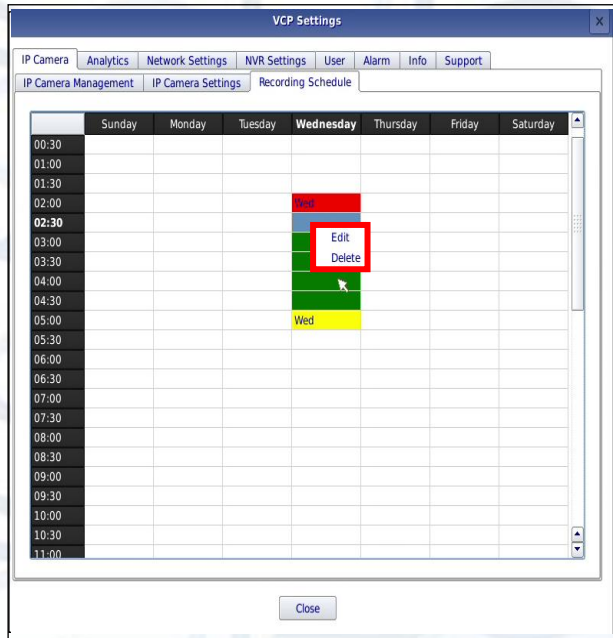
VCP Settings

IP Camera (Continued)

Once a block has been created, the Schedule Details can be edited, or the block can be deleted. Simply right click anywhere on the block to bring up a pop up with two options (as highlighted in the red box below):

Edit: This opens the associated Schedule Details window for editing.

Delete: This deletes the selected block from the schedule window.

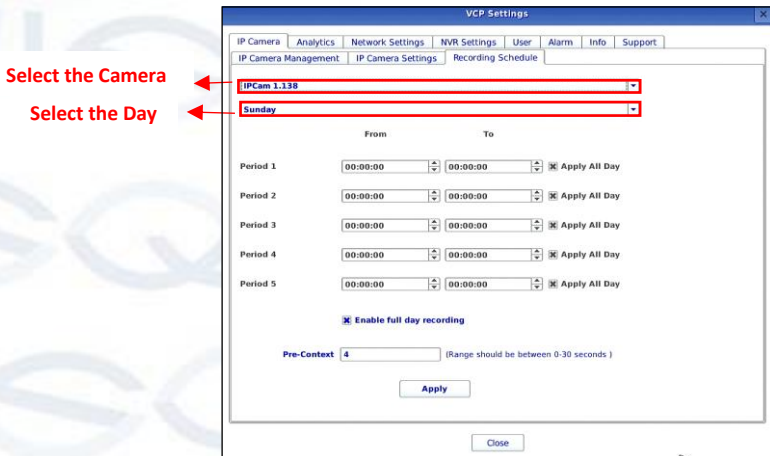


Note: When configuring, there is a maximum scheduling block of 24 consecutive hours. If a block is to be longer than 24 consecutive hours, an adjoining block must be created. If the settings are consistent from one block to the next, there will be no interruption in the recording.

VCP Settings

IP Camera (Continued)

In CMAX-AI, Recording Schedule GUI has changed as shown below.



Key features:

- For full day recording: Select the check box of 'Enable full day recording'.
- Recording can also set five (5) different period of a day. Here de-select the check box of 'Apply All Day'.
- Recording can also set five (5) different period of All the day by selecting the check box of 'Apply All Day'.
- Pre-Context range should be between 0-30 seconds.

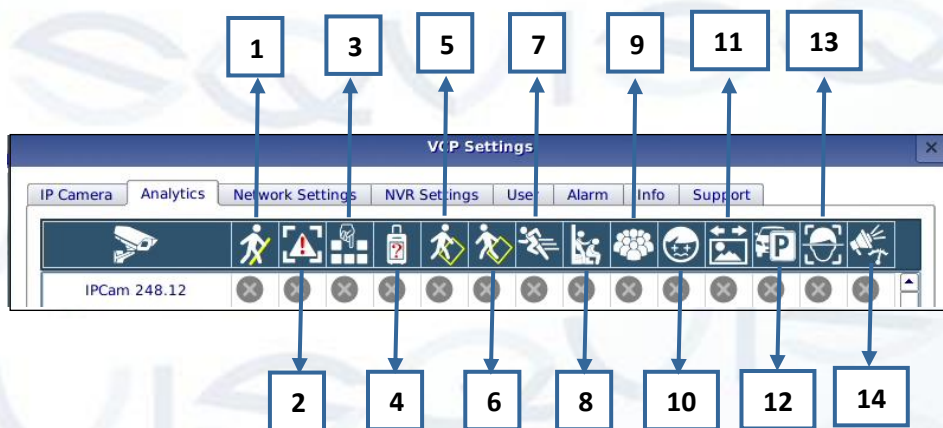
Settings

VCP Settings

Analytics

Analytics:

This menu allows you to configure Video Analytics on Video Analytics capable IP cameras in the λ |Cortex NVRs. This is a smart feature which can be used for analysing the events occurred in real time and alerting the user about the same. There are 14 different analytics features supported in λ |Cortex Max/Lite/Hibernator NVRs.



1. **Line Crossing:** Allows you to add a line or multiple lines on a specific camera that acts as a virtual barrier. If the set line is crossed, then alarm gets triggered. In CMAX-AI, it is called as 'TripWire'.
2. **Area Intrusion:** Triggers an alarm when any object intrudes the defined region. Named as "Intrusion" in CMAX-AI.
3. **Object Missing:** Triggers an alarm whenever an object is removed from a pre-defined region.
4. **Unattended Object:** Triggers an alarm whenever an object is left unattended in the pre-defined region.
5. **Region Entrance:** Triggers an alarm whenever an object enters a pre-defined region.
6. **Region Exit:** Triggers an alarm whenever an object exits a pre-defined region.

VCP Settings

Analytics (continued)

7. **Fast Moving:** Triggers an alarm whenever an object moves fast in a pre-defined region.
8. **Loitering Detection:** Triggers an alarm when people go straight and back at least 3 times, or go not in a straight line in a pre-defined virtual region.
9. **People Gathering:** Triggers an alarm when there are many people in a pre-defined virtual region.
10. **Blurred Detection:** Triggers an alarm when defocus of the lens is detected.
11. **Scene Change Detection:** Triggers an alarm when change of environment affected by external factors is detected, such as the intentional rotation of the camera.
12. **Parking Detection:** Triggers an alarm whenever an object is parked in a pre-defined region.
13. **Face Detection(FD):** FD has only one area of interest to configure where faces are to be detected. Alarm section is same as other analytics. Need to set sensitivity value in configure window.
14. **Audio Exception:** Triggers an alarm when an abnormal sound is detected in the surveillance scene, such as the sudden increase/decrease of the sound intensity. It is also called 'Abnormal Audio Detection'.

In CMAX-AI, camera support only 4 Analytics type. They are TripWire, Intrusion, Face Detection (FD) and Face Recognition (FR). TripWire, Intrusion and FD are already discussed above in Page No.47 and 48.

Face Recognition (FR): FR is possible only if FD is enabled. FR has only one area of interest. In the configure window for FR, sensitivity and similarity have to be set.

Limitation on Usage of AI/Analytics functions on CMAX-AI NVRs:

- a. Maximum 4 cameras (channels) can be used for Analytics.
- b. NVR can supports either 4 cameras for IVS - Intelligent Video Surveillance (TripWire and Intrusion) or 2 cameras FD (Face Detection) / FR (Face Recognition) enabled.

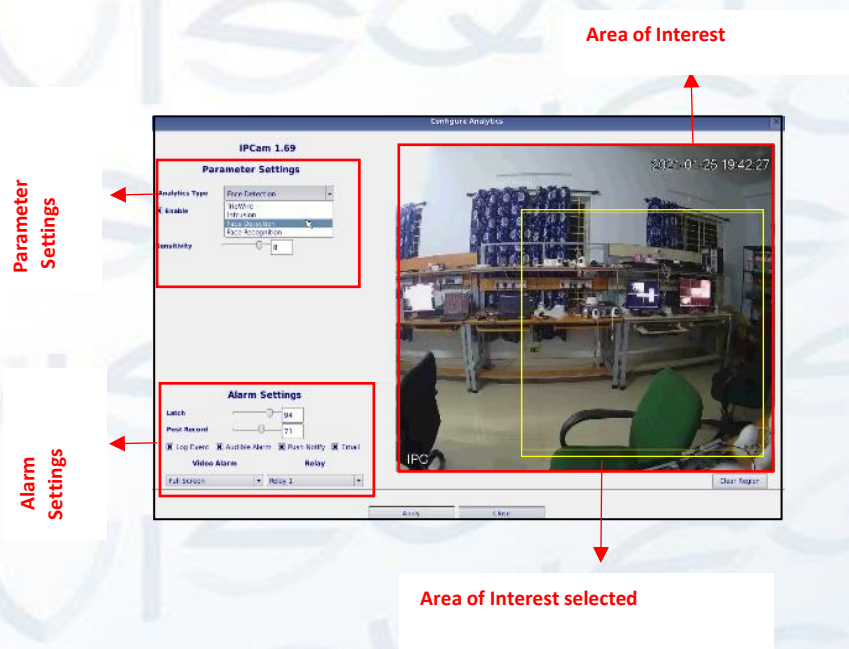
VCP Settings

Analytics (continued)

- c. If FD/FR is enabled on a camera, then IVS supports only for 2 other cameras.
- d. If FD/FR is enabled on two cameras, then IVS cannot be enabled in any camera in the NVR.
- e. If IVS is enabled on 4 cameras, then FD/FR can't be enabled in any camera.

Status of these feature i.e. whether feature is enabled or not can be quickly seen for the particular camera in this menu.

To configure a feature, double click on camera name or single click on camera and then click on '**Configure**' button. This will bring up '**Configure Analytics**' page. '**Configure Analytics**' page has three sections: **Parameter Settings**, **Area of Interest** and **Alarm Settings**.



Parameter Settings:

Parameter settings has drop down menu to select 'Analytics feature' to be configured and its corresponding parameter options.

Enable: Checkbox to enable/disable the analytics feature.

Area of Interest: Dropdown list to select area of interest number to set different alarm area. Each alarm area may have its own parameter options like sensitivity, percentage, time threshold etc depending on feature selected. How to setup alarm area is given under '**Area of Interest**' section below.

Direction:

Dropdown list to select direction for line crossing feature. Directions can be:

- **L->R:** Left to Right (Objects crossing left to right direction, triggers the alarm).
- **L<-R:** Right to Left (Objects crossing right to left direction, triggers the alarm).
- **L<->R:** Bidirectional (Objects crossing both the directions, triggers the alarm).

Sensitivity:

- Higher the value is, the more easily alarm will be triggered.
- Range is [1-5] seconds in Face Detection analytic type.
- Range is [1-100] seconds for other analytic types wherever applicable.

Time Threshold:

- Time that the object must stay in the area to trigger the alarm.
Eg. The time threshold set as '0' means the alarm can be trigger immediately when target object happens in alarm area.
- Range is [0-10] seconds in Area Intrusion and Loitering Detection.
- Range is [0-100] seconds in Parking Detection and it will spend at least 10 seconds to judge an object was an unattended object or not.
- Range is [5-3600] seconds in other analytic types, wherever applicable.

Percentage:

- If the object size reached the percentage set in alarm area, only then it will trigger alarm.
- Range is [1-100] Seconds.

VCP Settings

Analytics (continued)

Event Interval:

- This is the time interval between consecutive alarms.

Eg: When an event occurs, it triggers an alarm and within the next 10 seconds if another event occurs, if the event interval has been set to 10 seconds, then no alarm will be triggered again. The next alarm will be raised for the events only after 10 seconds.

- Range is [1-600] seconds.

Strategy:

3 Strategies can be chosen in Loitering Detection: Journey, Weight and Offset. You can choose one, two or all of them.

- **Journey Strategy:**

It will judge loitering detection based on whole journey of the target object. The distance threshold default is the longest diagonal of the alarm area.

- **Weight Strategy:**

It will judge loitering detection based on number of turn back. The default number of threshold is 3 times.

- **Offset Strategy:**

It will judge loitering detection based on target object degree of offset linear motion. When journey is exceeding the current frame to first frame journey plus the 3/7 width of screen, then it will trigger loitering detection.

Abnormal Audio Input:

If the audio value is less than 20db, then it will trigger the alarm.

Strong Sound intensity:

“Sensitivity” parameter is used to control the audio threshold. If the sensitivity is higher, a slight rise in the audio intensity will trigger the alarm. If the sensitivity is lower, only a heavy noise will trigger the alarm. “Time threshold” indicate that the current audio value exceeds the threshold will trigger alarm.

Sound Intensity Dropped Sharply:

“Sensitivity” parameter is used to control the audio threshold. If the sensitivity is higher, a slight reduce in the audio intensity will trigger the alarm. If the sensitivity is lower, a slight rise will trigger the alarm.

Area of Interest:

Alarm area where detections should work or line to be used for line crossing detection can be defined using displayed snapshot image of camera on left side of **'Configure Analytics'** page.

To setup lines for line crossing detection:

- Choose the number of lines by selecting number from "Area of Interest" dropdown list.
- Click and drag to draw line of desired length on displayed snapshot image of camera.

To setup areas for other analytic detections:

- Choose the number of areas by selecting number under "Area of Interest" dropdown list.
- Click and drag to draw an area of desired size on displayed snapshot image of camera.
- The line / area drawn will be displayed on the snapshot.
- Sensitivity / Percentage / Direction / Time Threshold can be set for each line / area wherever applicable.
- Maximum 4 different lines / area can be configured under **'Area of Interest'** except for Face detection. In Face Detection, only 1 area can be configured.
- For Scene Change detection, Blur detection and Audio Exception, **'Area of Interest'** is not applicable.

To clear the line/ alarm area, Click on **'Clear Region'** button. For features which have option to define line/alarm area, unless line/area is configured, feature won't work even if feature is enabled.

VCP Settings

Analytics (continued)

Alarm Settings:

This menu allows you to setup alarm triggers using the Analytics feature of the λ|Cortex NVRs. When Analytics event is detected on the camera you have selected, you can set up to seven different ways to be alerted.

Log Event: If this box is checked, event will be listed within the '**Event Log**' found in the '**Info**' section of the '**Settings**'.

Audible Alarm: If this box is checked, you can hear the Sound/Buzzer for alarm.

Push Notify: In the event of VA alarm, push notification will be sent to mobile devices.

Video Alarm: This will allow the bottom borders of the video tile to flash on receiving an event. When an alarm occurs, the user is informed about the new Alarm with a flashing label in the camera's Live view and a flashing button in the Playback view. A right click (on Live view) will list all Alarms for that camera. The user can choose to view the Alarm or delete it without viewing.

Relay : You can manually control each of the 4 relays connected to the NVR. In CMAX-AI, it has 2 relays.

Email Settings: You can select any one option from the list box, such as, No Email, Email only, email with 1 snapshot, 3 snapshot, 5 snapshot, 7 snapshot, 9 snapshot to a stipulated email address. This feature allows you to store and distribute the snapshot to external data storage mediums away from the NVR. In CMAX-AI, it has a check box to select Email option. It will email with an attachment.

Email Recipients: An email will be sent to an external email account, which you will be able to setup in the '**Network Settings**' menu section. Event specific recipients can be selected using '**Email Recipients**' button. By clicking on this button, a popup window will appear with list of email IDs.

VCP Settings

Analytics (continued)

Latch:

In CMAX-AI, if user has configured “Relay” option for an analytics event then “Latch” time is the duration for which the relay should be in active/ON state after the event. This is configurable per camera per analytics type.

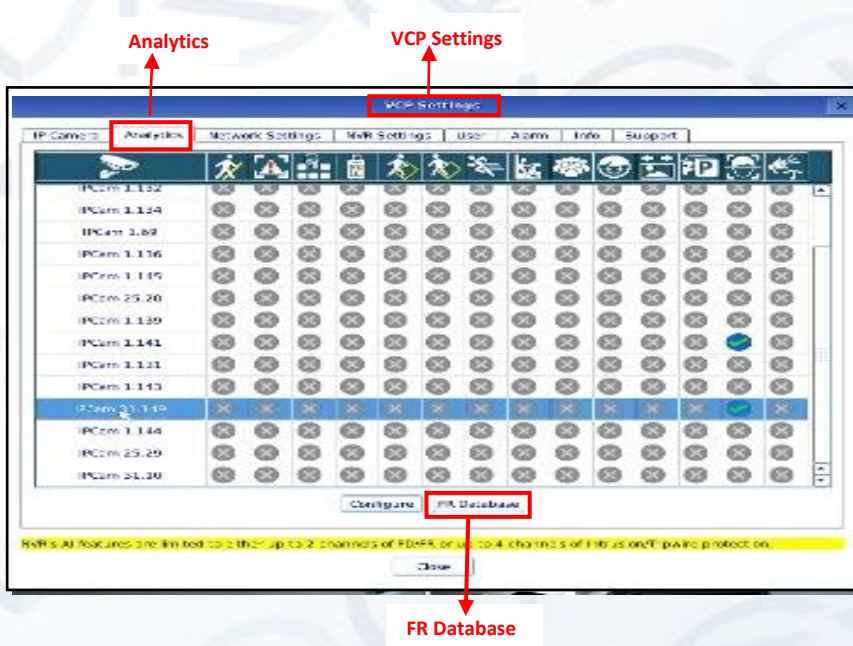
Post Record:

In CMAX-AI, this is for post recording interval after an event trigger, if schedule based recording is enabled. Set a duration between 0-120 seconds.

Click on **Apply/Close** to save/close the settings.

FR Database:

FR Database is mainly using for adding faces from USB to database and also for removing the faces from database.



VCP Settings

Analytics (continued)

Steps to adding the image (*.png, *.jpg, *.jpeg images) from USB to database:

- Click on FR Database button.
- Insert the USB stick to NVR and Click on Find Drive button.
- Click on 'Please Select a Drive From This List' drop down list box and select the mounted USB.
- Click on 'Browse Image' button, it will show the image files on the USB drive.
- Select a file and Click on 'Open' button.
- Face image will open.
- Click on top of the image face. You will get pop up to define the user name and sex (refer Figure A2: Person Info). Then press 'OK' button.
- Once it has saved, it says "Face is stored in the database".
- Repeat the same process to add more faces to the database.

A screenshot of a 'PersonInfo' dialog box. It has a title bar with a question mark icon and a close button. Inside, there is a 'Name' text input field, a 'Sex' dropdown menu currently set to 'Male', and two buttons at the bottom: 'OK' and 'Cancel'.

Figure A2: Person Info

Steps to Removing the image from the database:

- Click on FR Database button (under Analytics tab).
- It will show all saved faces/images from the database.
- At a time 9 images will be displayed in the current window.
- Click on Next/Previous button to see the corresponding images.
- Click on required image to delete the saved faces from the database.
- It says 'Do you want to remove image from the database'
- Click on 'Yes' to proceed or 'No' to cancel.
- On Clicking 'Yes' button, it says 'Face is deleted from the database'.
- After Clicking on 'Close' button, it will show remaining saved images in the window.

A screenshot of a 'Remove Image' dialog box. It has a title bar with a close button. The main area contains a question mark icon and the text 'Do you want to remove image from the database?'. At the bottom, there are two buttons: 'Yes' and 'No'.

VCP Settings

Network Settings

The **Network Settings** Menu has 7 sub menus:

DHCP/Manual and DNS

Ports

Email

DDNS

Time Server

P2P

Sentinel ARC



DHCP/Manual and DNS:

This allows you to configure your network settings and DNS (Domain Name System) settings.

A screenshot of the "DHCP/Manual and DNS" configuration window. The title bar says "VCP Settings". Below it is a menu bar with tabs: IP Camera, Analytics, Network Settings, NVR Settings, User, Alarm, Info, and Support. Below the menu bar is a sub-menu bar with tabs: DHCP/Manual and DNS, Ports, Email, DDNS, Time Server, P2P, and Sentinel ARC. The "DHCP/Manual and DNS" tab is selected. The main area shows the following fields:

- Status: Connected
Your network connection is currently active
- Configure: A drop-down menu with "DHCP" selected.
- IP Address: 192.168.16.129
- Subnet Mask: 255.255.240.0
- Gateway: 192.168.16.1
- DNS: 8.8.8.8
- Ethernet Speed: 1000baseT

At the bottom are "Apply" and "Cancel" buttons.

Status: Displays the status of the network connection.

Configure: Use this drop-down menu to select how the network connection will be configured using '**DHCP**' or '**Manual**'. If you know your IP address, then it is recommended that you select '**Manual**' and insert it into the IP Address bar.

IP Address: Field to view / edit the NVR's IP Address.

VCP Settings

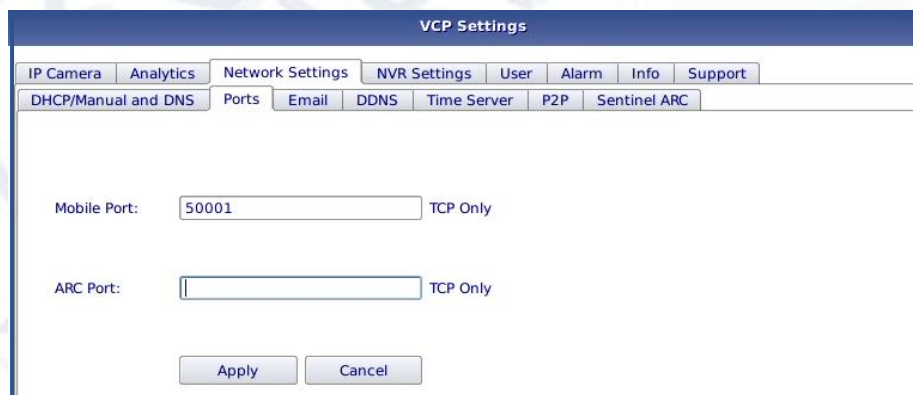
Network Settings (Continued)

- Subnet Mask:** Field to view / edit the NVR's Subnet Mask.
- Gateway:** Displays the Gateway IP Address.
- DNS:** This allows you to change the DNS setting. The DNS setting is automatically detected when connected to a network. If it needs to be changed then you can enter a new DNS setting into the input bar.
- Ethernet Speed:** Displays the speed of the NVR's Ethernet connection.

Click on '**Apply**' to confirm any changes done or on '**Cancel**' to reject.

Ports:

This allows you to change WAN Access - Port settings.



The screenshot shows the 'VCP Settings' window with the 'Network Settings' tab selected. Under 'Network Settings', the 'Ports' sub-tab is active. It displays two port configuration sections: 'Mobile Port' with a text input field containing '50001' and a dropdown menu set to 'TCP Only'; and 'ARC Port' with an empty text input field and a dropdown menu also set to 'TCP Only'. At the bottom of the window are 'Apply' and 'Cancel' buttons.

In CMAX-AI and Hibernator, NVR supports RTSP Port for RTSP streaming.

The NVR uses the above ports to listen for incoming client connections. The protocol type for each port is shown to its right.

If the NVR is inside a firewall, the firewall may need to be configured to pass through traffic on this ports.

In Hibernator, NVR supports 'Maintenance Port' for SSH login.

Note: See your firewall user guide/ instructions to find out how to do this.

VCP Settings

Network Settings (Continued)

Email Settings:

Fill in your email account's details so that the NVR can send notification messages to the email address account you have provided. Email notification messages can include info on hard drive or camera statuses and alarm alerts if you have set up your motion detection configuration correctly. If you are unsure of the SMTP (Simple Mail Transfer Protocol) Port number or Server name; refer to your email address account 'Help' or 'Configuration' options. Entering your email account details will allow you to complete the sensor and alarm events setup.

Input details into these fields:

- SMTP Port:** Simple Mail Transfer Protocol Port, e.g. 587 for Gmail.
- Server Name:** SMTP server name, e.g. "smtp.gmail.com" for Gmail.
- Sender User Name:** The name registered with the email account.
- Sender e-mail ID:** This is the email address which will be used by the NVR to send notifications to the recipients.

The screenshot shows the 'VCP Settings' window with the 'Email' tab selected. The 'Email' sub-tab is also active. The form contains the following fields and buttons:

- SMTP Port:** Text box with value '587'.
- Server Name:** Text box with value 'smtp.gmail.com'.
- Sender User Name:** Empty text box.
- Sender e-mail ID:** Text box with value 'qvisqa47@gmail.com'.
- Password:** Empty text box.
- Confirm Password:** Empty text box.
- NVR Identification:** Text box with value 'qvis-a0000e'.
- Verify Server Config:** Button.

Below the fields, there is a note: "The subject line of emails sent from this NVR will be prefixed with the NVR identification string."

Under the heading "Recipient e-mail IDs", there is a "Configure" button.

A detailed instruction follows: "To specify recipient email IDs, click Configure button. This will open a dialog box to specify recipient email IDs. Multiple email IDs can be specified. Type email ID in the Email ID: text box and click Add button to add it to the list. You can delete the email IDs from the list using Delete button and you can test the email configuration using Test Email button. After specifying email IDs, click OK button to save the list. Note that if a previously configured recipient ID is no longer present in the list being updated, it will also be removed from custom recipients list if configured for any event or alarm under Alarm settings."

At the bottom, there are "Apply" and "Cancel" buttons.

VCP Settings

Network Settings (Continued)

Password: This is the password you use for the sender email account.

NVR Identification: The subject line of emails sent from this NVR will be prefixed with the NVR Identification string.

Recipient e-mail IDs: Email IDs to which the notification emails have to be sent can be added here.

To specify recipients email IDs, click on **Configure** button. This will open a dialogue box to specify recipient email IDs. Multiple email IDs can be added. Type email ID in the **Email ID:** Text box and click on **Add** button to add it to the list.

You can delete the email IDs from the list using **Delete** button and you can test the email configuration using **Test Email** button. After specifying email IDs, click on **OK** button to save the list.

Note that if a previously configured recipient ID is no longer present in the list being updated, it will also be removed from custom recipients list if configured for any event or alarm under Alarm settings.



The screenshot shows a dialog box titled "Configure Recipient Emails". It contains an "Email ID:" text input field with an "Add" button to its right. Below this is a large empty rectangular box for the list of email IDs. To the right of this box are "Delete" and "Test Email" buttons. At the bottom of the dialog are "OK" and "Cancel" buttons.

After entering all email parameter, click on '**Verify Server Config**' button. If all details entered are correct, a self-email will be sent to the sender email ID and success message will be displayed in the bottom of the window.

CMAI-AI, User has to set Encryption type either TLS/SSL. Click on check box for Snapshot attachment will send 1 snapshot on alarms trigger

Click on '**Apply**' to save the configuration details. Click on '**Cancel**' to discard changes.

DDNS Settings:

DDNS (Dynamic DNS) is a technique to deal with an ever-changing (i.e., not static) public IP address at the NVR site (where the NVR is located and setup).

VCP Settings

Network Settings (Continued)

DDNS Enable: Check this to enable the DDNS feature.

DDNS Provider: Choose either DynDNS, qvisddns or No-IP.

User Name: Enter your username as assigned at either DynDNS, qvisddns or No-IP.

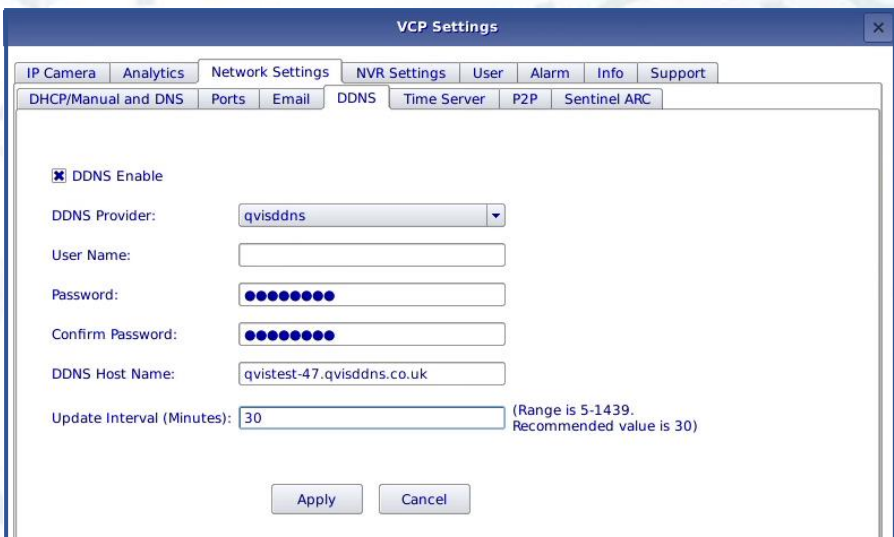
Password: Enter your password as assigned at either DynDNS, qvisddns or No-IP.

Confirm Password: Re-enter password.

DDNS Host Name: Name as chosen from DynDNS, qvisddns or No-IP.

Update Interval (Minutes): Once per day is enough: enter **1439** (minutes in one day).

Click on **'Apply'** to confirm selections. Click on **'Cancel'** to reject selections.



The screenshot shows the 'VCP Settings' window with the 'Network Settings' tab selected. Within this tab, the 'DDNS' sub-tab is active. The configuration options are as follows:

- DDNS Enable:** A checkbox that is checked.
- DDNS Provider:** A dropdown menu set to 'qvisddns'.
- User Name:** An empty text input field.
- Password:** A text input field with 10 dots representing a masked password.
- Confirm Password:** A text input field with 10 dots representing a masked password.
- DDNS Host Name:** A text input field containing 'qvistest-47.qvisddns.co.uk'.
- Update Interval (Minutes):** A text input field containing '30'. To the right of the field, a note states: '(Range is 5-1439. Recommended value is 30)'.

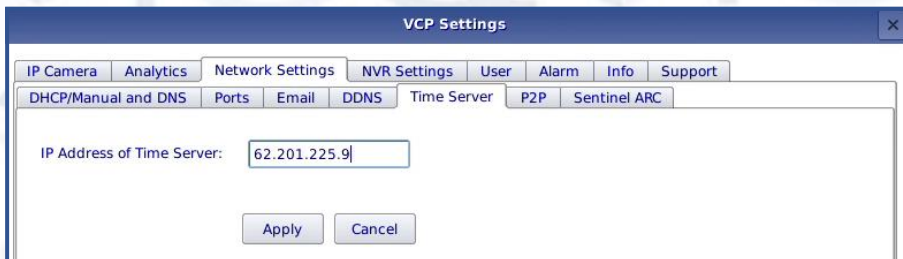
At the bottom of the window are two buttons: 'Apply' and 'Cancel'.

VCP Settings

Network Settings (Continued)

Time Server:

A time server provides an accurate current time and date for the NVR. The NVR will refer to when it needs to constantly keep an accurate time and date on its system. If you need to change the time server IP address, input the new one into the single field provided.

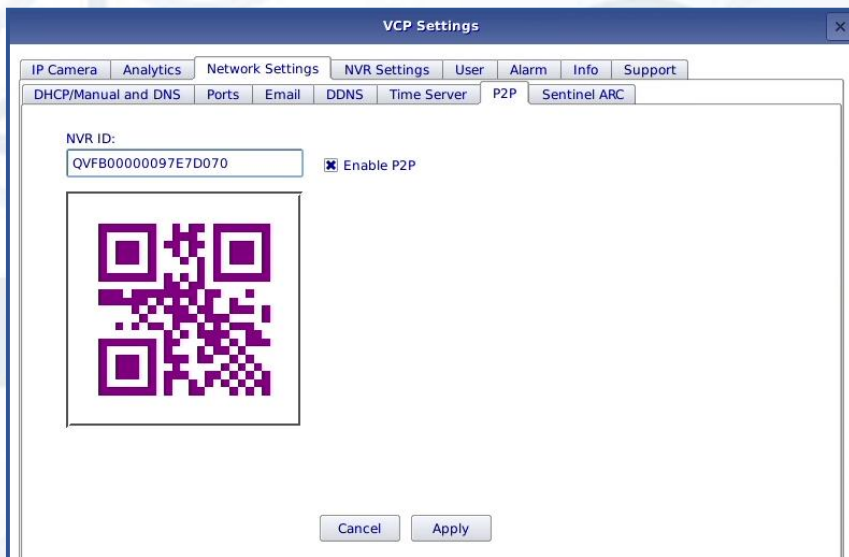


The screenshot shows the 'VCP Settings' window with the 'Time Server' tab selected. The 'IP Address of Time Server' field contains the value '62.201.225.9'. There are 'Apply' and 'Cancel' buttons at the bottom.

P2P:

Enable P2P will help mobile client to access NVR using QR code/ID of NVR. Use generated NVR ID or Scan QR code for remote view of NVR using mobile app.

Click on '**Apply**' to save the changes, click on '**Cancel**' to discard the changes.



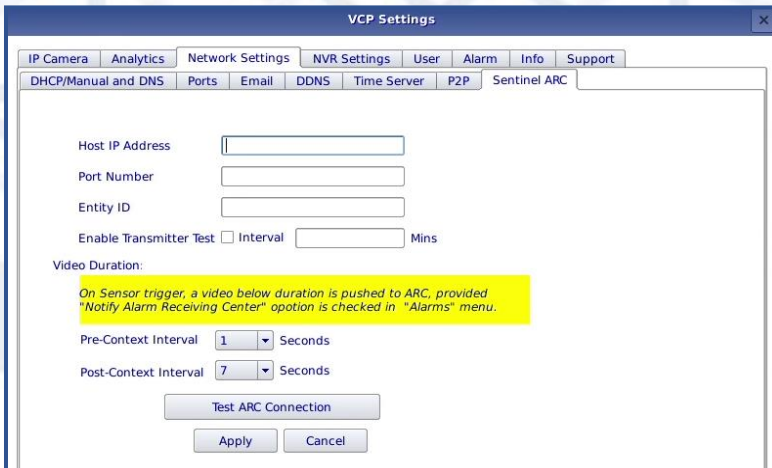
The screenshot shows the 'VCP Settings' window with the 'P2P' tab selected. The 'NVR ID' field contains the value 'QVFB00000097E7D070'. The 'Enable P2P' checkbox is checked. A QR code is displayed below the NVR ID field. There are 'Cancel' and 'Apply' buttons at the bottom.

VCP Settings

Network Settings (Continued)

Sentinel ARC:

If you have a registered account with Qvis Monitoring Ltd you will be instructed on what information needs to be included within this configuration ('Entity ID' is the λ |Cortex NVR's IP address)



The screenshot shows the 'VCP Settings' window with the 'Sentinel ARC' tab selected. The window has a menu bar with options: IP Camera, Analytics, Network Settings, NVR Settings, User, Alarm, Info, and Support. Below the menu bar, there are sub-tabs: DHCP/Manual and DNS, Ports, Email, DDNS, Time Server, P2P, and Sentinel ARC. The main content area contains the following fields and options:

- Host IP Address:
- Port Number:
- Entity ID:
- Enable Transmitter Test: ☐ Interval Mins
- Video Duration:

On Sensor trigger, a video below duration is pushed to ARC, provided "Notify Alarm Receiving Center" option is checked in "Alarms" menu.
- Pre-Context Interval: Seconds
- Post-Context Interval: Seconds
- Test ARC Connection:
- Apply:



The background image shows a stylized eye graphic with the Qvis Monitoring Ltd logo in the center. The logo consists of the word 'QVIS' in a large, white, sans-serif font, with 'MONITORING LTD' in a smaller, white, sans-serif font below it. The background is a dark blue gradient with a grid pattern and a stylized eye shape.

"The most accredited ARC in the UK"

To connect your CCTV system to our Alarm Receiving and CCTV monitoring Centre please contact us on:

TEL: **02393 870057**
Email: sales@qvismonitoring.co.uk

VCP Settings

Network Settings (Continued)

Security:

This option is available only on Hibernator.

There is NO security for level 0 and 1.

In Level 2 and Level 3 having Hibernation Mode (Block remote client) security as shown below.

In Level 4 and Level 5 having MAC filtering in addition to Hibernation Mode security.

The screenshot shows the 'VCP Settings' window with the 'Security' tab selected. The 'Security Level' is set to 3. The 'Hibernation Mode (Block remote clients)' checkbox is unchecked. A note at the bottom states: 'MAC Filtering is available only for NVR with Security Level 4 and 5.' The window has buttons for 'Apply', 'Cancel', and 'Close'.

VCP Settings							
IP Camera	Analytics	Network Settings	NVR Settings	User	Alarm	Info	Support
DHCP/Manual and DNS	Ports	Email	DDNS	Time Server	P2P	Sentinel ARC	Security

Security Level : 3

Hibernation Mode(Block remote clients) : ☐

MAC Filtering is available only for NVR with Security Level 4 and 5.

ApplyCancel

Close

VCP Settings

NVR Settings

The **NVR Settings** Menu has 5 sub menus:

General

Identification and Reboot

Date Time

Recording Parameters

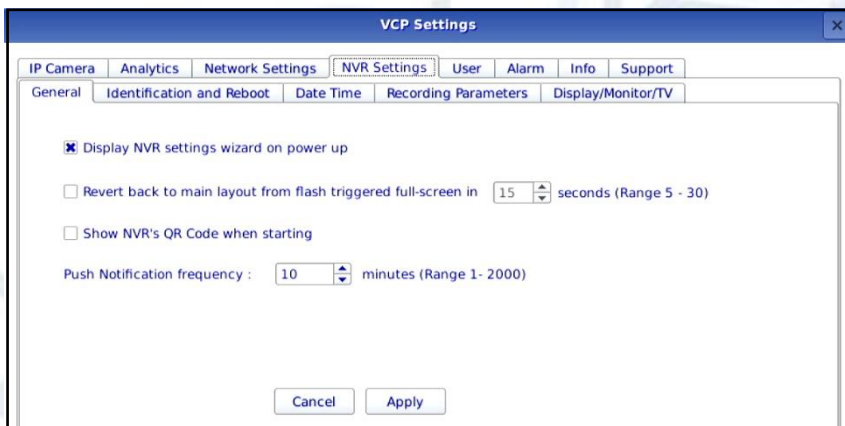
Display/Monitor/TV



General:

Display NVR settings wizard on power up

By selecting this we can get NVR settings wizard on power up of the NVR. It will allow to change NVR settings on power up. Once it has done, it will not show up again.



Revert back to main layout from flash triggered full screen in X seconds:

When Video alarm triggers, that particular video will be pushed to full screen. Time set here will decide the reverting back to main layout.

Show NVR's QR Code when starting:

Displays NVR's QR code required to enable P2P for mobile client on power up.

Notification frequency(minutes):

Push notification frequency can be set here.

VCP Settings

NVR Settings (Continued)

Identification and Reboot:

NVR name and description:

This menu allows you to give a name and description to the NVR. This is useful if you have multiple NVR's in your network.

Auto Reboot Settings:

This allows you to set up an automatic restart at a specific and repeated time.

VCP Settings

IP Camera Analytics Network Settings **NVR Settings** User Alarm Info Support

General Identification and Reboot Date Time Recording Parameters Display/Monitor/TV

NVR name and description

Name:

Description:

Auto Reboot Settings

☒ Set Time

Hour: Minutes: Day:

Last reboot time: Thu Dec 12 11:15:26 IST 2019

'Set Time' Radio Button ☒ : This enables the Auto Reboot function, which can be set up using the Hour/Mins/Day drop down menus below.

In CMAX-AI and Hibernator, **Frequency** option has added. User has 3 options here. User can select either Weekly day or Monthly Date or Never option for Auto Reboot Settings.

Auto Reboot Settings

Set Time

Hour: Minutes:

Frequency

☒ Weekly Day:

☐ Monthly Date:

☐ Never

Last reboot time: Wednesday 13 October 2021 07:28:38 PM IST

Last reboot time:

This states the date and time of the last restart.

Click on **'Apply'** to save selection, click on **'Cancel'** to discard changes.

VCP Settings

NVR Settings (continued)

Date Time:

This allows you to set the date, time and time zone.

The screenshot shows the 'VCP Settings' window with the 'Date Time' tab selected. The 'Date Format Options' dropdown is set to 'mm-dd-yyyy'. The 'Time Format Options' dropdown is set to 'hh:mm 12-hour day'. The 'Date' field shows '12-12-2019' and the 'Time' field shows '2:35 PM'. The 'Current Time Zone' is 'Asia/Kolkata(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi'. The 'Select Time Zone' dropdown is also set to 'Asia/Kolkata(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi'. There are 'Apply' and 'Cancel' buttons at the bottom.

Recording Parameters:

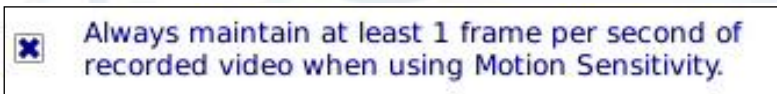
Maximum age for stored videos:

Mention number of days to retain stored video.

The screenshot shows the 'VCP Settings' window with the 'Recording Parameters' tab selected. The 'Maximum age for stored videos' checkbox is checked. Below it is a text input field with '1' entered, followed by 'Days (Allowed 1-99)'. A note at the bottom states: 'Actual age for stored videos could be lower if enough disk space is not available.' There are 'Apply' and 'Cancel' buttons at the bottom.

However actual age for stored video depends on the disk space and also varies if there is motion based recording setup for the cameras.

Minimum FPS with motion enabled Recording:



The option will allow you to capture 1 frame per second when motion is detected by the cameras setup to scan for motion. In CMAX-AI, this feature is not available.

Alarm and Motion Recording Interval settings:

The screenshot shows a dialog box titled 'Alarm and Motion Recording Interval settings:'. It contains two rows: 'Pre-context Interval:' with a value of '0' and 'seconds', and 'Post-context Interval:' with a value of '0' and 'seconds'. There are 'Apply' and 'Cancel' buttons at the bottom.

VCP Settings

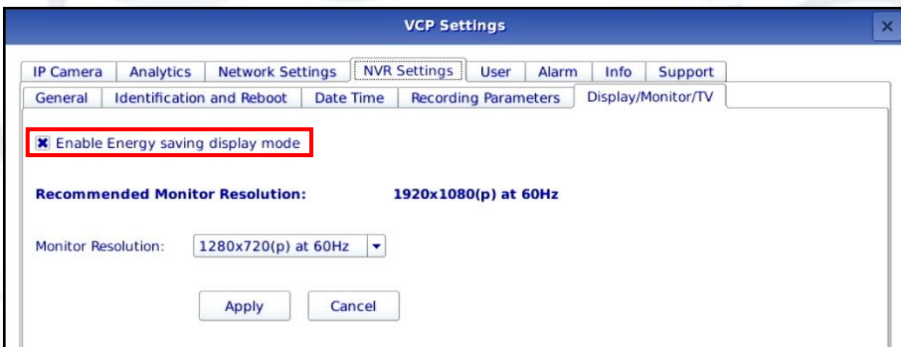
NVR Settings (continued)

Pre-Context Interval: From the drop-down options you can choose how many seconds (max 5 seconds) of pre alarm trigger footage, taken from data store on the NVR memory are added to the beginning of the captured trigger incident. This is how you can view the run up before the trigger incident so you can establish the scene for easier analysis. In CMAX-AI, this feature is in Recording Schedule window.

Post-Context Interval: From the drop-down options you can choose how many seconds (max 120 seconds) of post alarm trigger footage (when there is no movement for the sensors to detect) is recorded. This again is to establish the scene for easier analysis. In CMAX-AI, this feature is moved to alarm under Sensor and Motion Alarm tabs

Display/Monitor/TV:

Monitor Power saving option:



You can enable power saving option of the monitor by selecting this option as shown in the red box.

Monitor Resolution:

Recommended monitor resolution is **1920x1080(p) at 60Hz**.

You can change Monitor Resolution by selecting any of the given resolution in the drop-down menu. The lower the value, lower the resolution will be.

There are two Refresh rates, 60Hz and 50Hz. Refresh Rate is the rate at which screen can refresh itself.

VCP Settings

User

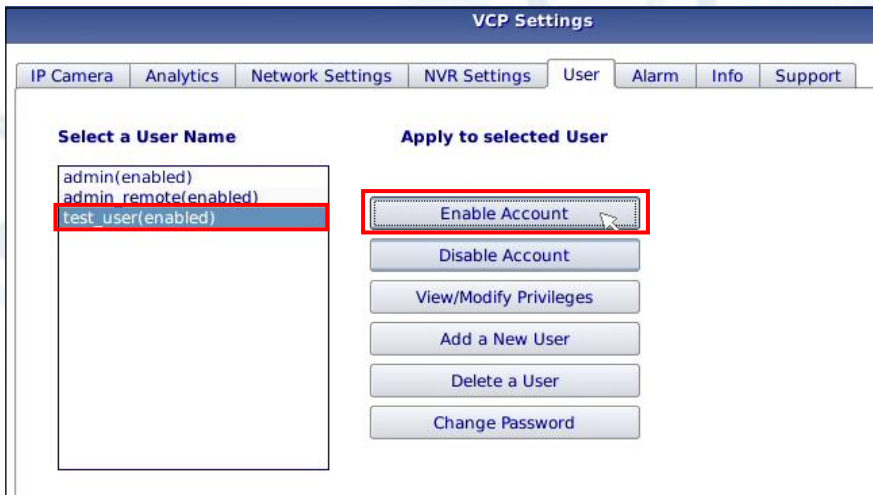
The “User” Menu has 6 sub functions (as highlighted by the red box):

Enable Account
Disable Account
View/modify privileges
Add a new user
Delete a User
Change Password



Enable Account:

This allows you to enable an existing user account.



Select the account you wish to enable in the window on the left-hand side and click on **‘Enable Account’**. If the account is already enabled nothing will happen.

VCP Settings

User (Continued)

Disable Account:

This allows you to disable an existing account.



The screenshot shows the 'VCP Settings' window with the 'User' tab selected. On the left, under 'Select a User Name', a list of users is shown: 'admin(enabled)', 'admin_remote(enabled)', and 'test_user(disabled)'. The 'test_user(disabled)' entry is highlighted with a red box. On the right, under 'Apply to selected User', a list of buttons is shown: 'Enable Account', 'Disable Account', 'View/Modify Privileges', 'Add a New User', 'Delete a User', and 'Change Password'. The 'Disable Account' button is highlighted with a red box.

Select the account you wish to disable in the window on the left-hand side and click on 'Disable Account'. If the account is already disabled nothing will happen.

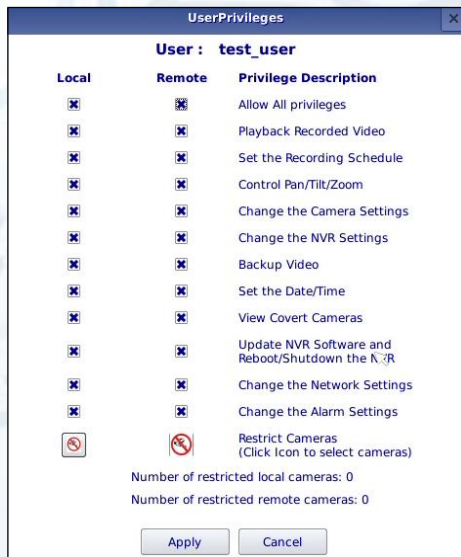
View/Modify Privileges:

This allows you to modify a user's privileges.

In this window, a user's individual privileges can be turned on and off for either local or remote access, simply by clicking on the check box corresponding to the desired privilege.

Clicking on 'Allow All Privileges' automatically fills all check boxes in that column.

Click on 'Apply' to save selections. Click on 'Cancel' to discard changes.



The screenshot shows the 'UserPrivileges' window for the user 'test_user'. It has two columns: 'Local' and 'Remote'. Each column has a series of checkboxes. The 'Privilege Description' column lists the following privileges: 'Allow All privileges', 'Playback Recorded Video', 'Set the Recording Schedule', 'Control Pan/Tilt/Zoom', 'Change the Camera Settings', 'Change the NVR Settings', 'Backup Video', 'Set the Date/Time', 'View Covert Cameras', 'Update NVR Software and Reboot/Shutdown the NVR', 'Change the Network Settings', 'Change the Alarm Settings', and 'Restrict Cameras (Click icon to select cameras)'. The 'Restrict Cameras' privilege has a red 'X' icon next to it. At the bottom, there are two buttons: 'Apply' and 'Cancel'. Below the buttons, it says 'Number of restricted local cameras: 0' and 'Number of restricted remote cameras: 0'.

VCP Settings

User (Continued)

Add a New User:

This allows you to add a new user account.

Enter the new username and password. Re-enter the password to confirm.

Click on **'Apply'** to add the user.

The screenshot displays the VCP Settings application with the 'User' tab active. The interface is divided into two main sections: 'Select a User Name' on the left and 'Apply to selected User' on the right. The 'Select a User Name' section contains a list box with two entries: 'admin(enabled)' and 'admin_remote(enabled)'. The 'Apply to selected User' section contains a vertical stack of buttons: 'Enable Account', 'Disable Account', 'View/Modify Privileges', 'Add a New User' (highlighted with a red box), 'Delete a User', and 'Change Password'. An 'Add New User' dialog box is open in the bottom right corner. It has a title bar with a close button. Inside, there are three input fields: 'Username' with the text 'test_user', 'Password' with masked characters (dots), and 'Confirm Password' also with masked characters. At the bottom of the dialog, there are two buttons: 'Apply' (highlighted with a red box and a mouse cursor) and 'Cancel'.

Note: In the event that either the selected username or password does not conform to the NVR security standards, a list of rules will pop up. Re-enter the username and password as necessary.

Once the username and password meet the standards, clicking on **'Apply'** will bring up the Privilege Selection window. See above for instructions.

Click on **'Apply'** to confirm the new user.

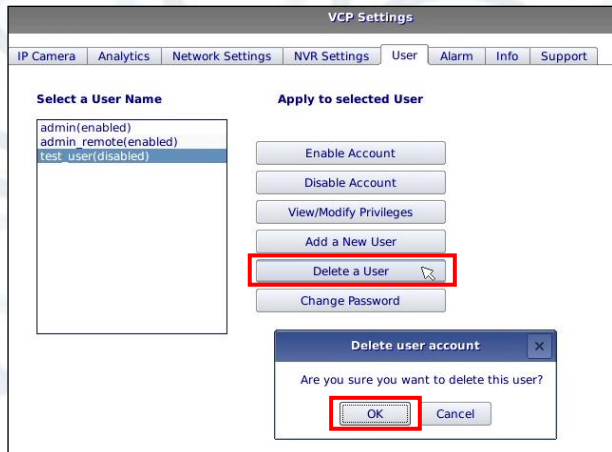
VCP Settings

User (Continued)

Delete a User:

This allows you to delete user account.

Selecting the user by clicking on the user name and clicking on **'Delete a User'** button, confirmation pop up window will appear. Click on **'OK'** to delete account.

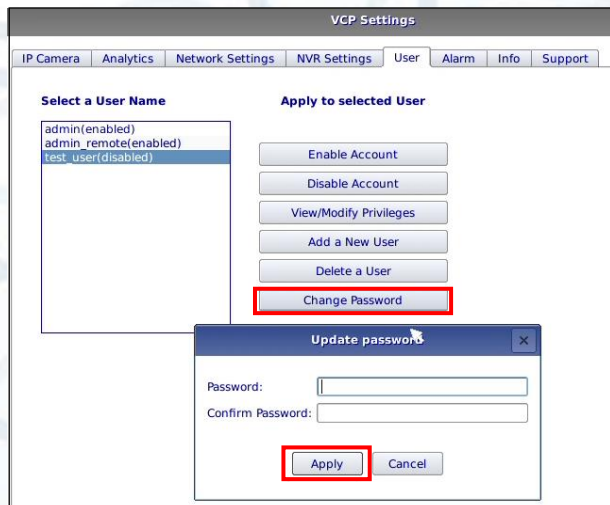


Change Password:

This allows you to change the password of existing user account.

Having clicked on **'Change Password'** button, a **'Update Password'** pop up window will appear. Type new password and confirm the password.

Click on **'Apply'** to continue with new password, **'Cancel'** to discard changes.



VCP Settings

Alarm

The Alarm Menu has 5 sub functions.

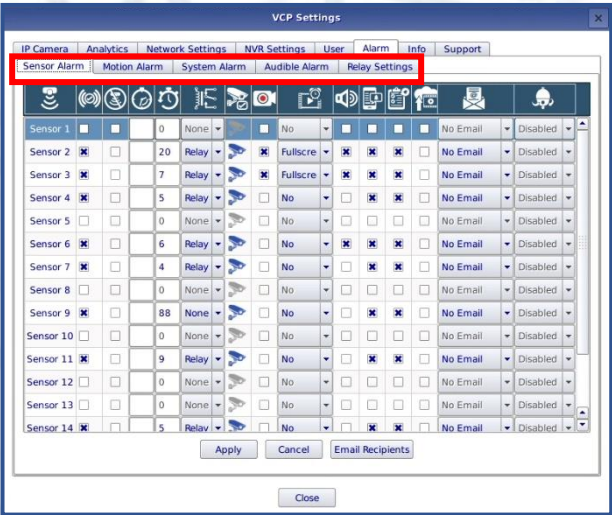
Sensor Alarm

Motion Alarm

System Alarm

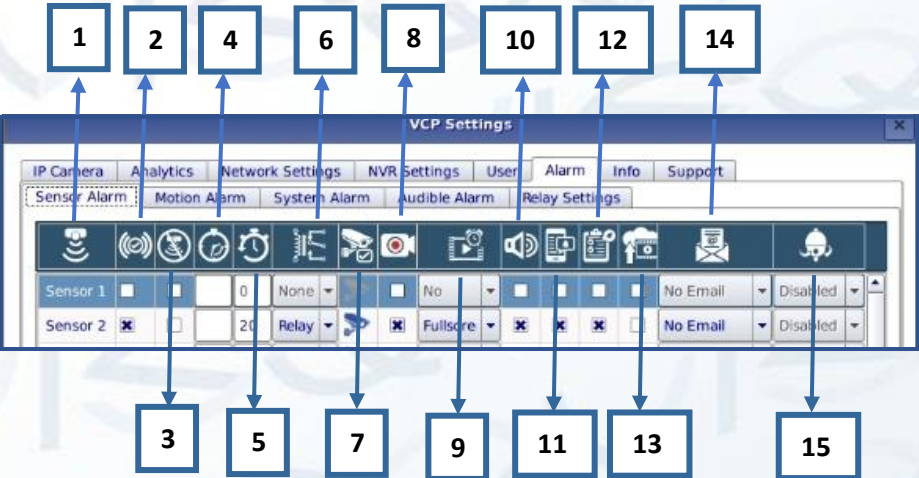
Audible Alarm

Relay Settings



Sensor Alarms:

This menu allows you to setup alarm triggers using the Sensor alarm functions of the λ|Cortex NVRs. When sensors detect any activity (Physical sensors you have selected to use the sensor alarm function), you can set up to fourteen



different ways to be alerted.

VCP Settings

Alarm (Continued)

1. Sensor:

Device that detects activity. You can use up to 16 Sensors.

2. Enable Sensor Alarm:

By checking this box, you can enable sensor alarms for the particular sensor.

3. Temporarily Deactivate Alarm:

You can temporarily deactivate the alarm for a sensor for certain duration of time.

4. Deactivate Duration:

Time duration for temporary deactivation.

5. Alarm Trigger Frequency:

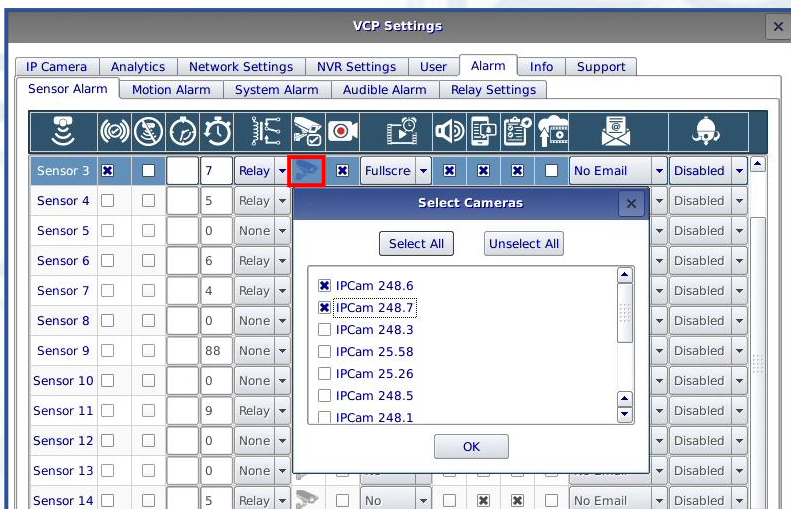
This is the time between two consecutive sensor triggers for a sensor.

6. Relays:

NVR supports max. 4 Relays. Relay can be connected to any of the 16 sensors. Sensor output is used to control the relays. In Hibernator, there are Relay 1, Relay 2, Both or None options.

7. Select Camera:

You can associate up to 32 cameras to a sensor alarm. Any action related to sensor alarm will be applicable to selected camera. When you click on camera symbol a 'Select Cameras' dialogue box will appear. By checking the box, you can select camera for sensor alarm.



VCP Settings

Alarm (Continued)

8. Start Recording:

Start Video Recording when the sensor alarm is triggered.

9. Video Alarm:

This will allow the bottom borders of the video tile to flash on receiving an event. When an alarm occurs, the user is informed about the new Alarm with a flashing label in the camera's Live view and a flashing button in the Playback view. A right click (in Live view) will list all Alarms for that camera. The user can choose to view the Alarm or delete it without viewing.

10. Audible Alarm:

An audible sound will be played when sensor is triggered. You will need to connect an alarm siren to the alarm output on the NVR.

11. Push Notify:

In the event of Sensor alarm, push notification will be sent to mobile devices.

12. Log Events:

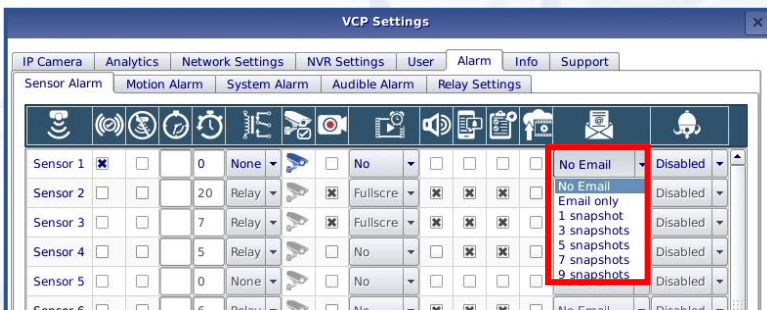
Alarm trigger event will be listed within the 'Event Log' found in the 'Info' section of the 'VCP Settings'.

13. Notify ARC:

On Sensor trigger, a video is pushed to ARC, provided "Sentinel ARC" parameters are duly configured.

14. Send Email:

An email will be sent to an external email account, which you will be able to setup in the 'Network Settings' menu section. Also, event specific recipients can be selected using 'Email Recipients' button. Along with mail, snapshot of the associated cameras will be sent if Snapshot option is selected.

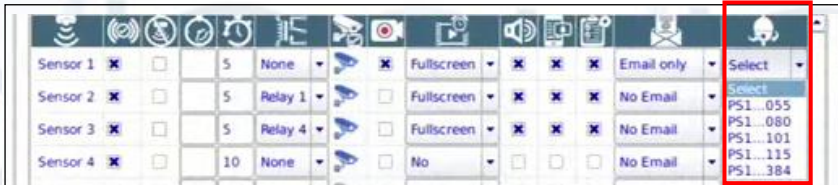


VCP Settings

Alarm (Continued)

15. GoTo PTZ Preset:

When sensor alarm is triggered PTZ camera will be moved to a one of the selected Preset location. This option is enabled if there is only one camera associated with the sensor alarm and that camera is a PTZ Camera.



Email Recipients:

Already configured external email account under 'Network Settings' menu can be used as an event Specific recipient by selecting it under 'Email Recipients' buttons. This button is located below the sensor table.

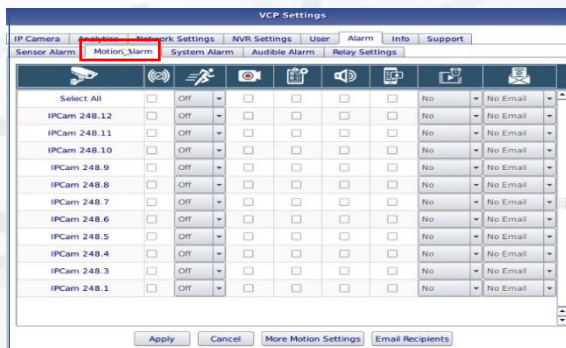
In CMAX-AI, following two columns are added.

- Alarm Trigger Level:** User can select either Normally Open (N.O.) or Normally Closed (N.C.)
- Post context interval:** This is for post recording interval after a sensor trigger, if schedule based recording is enabled.

In Hibernator, following column is added.

Alarm Trigger Level: User can select either Normally Open (N.O.) or Normally Closed (N.C.)

Motion Alarm:



VCP Settings

Alarm (Continued)

This menu allows you to setup alarm triggers using the motion alarm feature of the λ|Cortex NVRs. When motion is detected (on the cameras you have selected to use the motion alarm function), you can set up to seven different ways to be alerted.

Camera Name: This is the NVR / user-assigned name of the numbered camera. By default, this is **IPCam 248.1**, **IPCam 248.2**, etc.

Enable: If this box is checked, Motion Alarm will enable for particular camera.

Motion Sensitivity: By clicking on the drop-down menu to the right of this value, the motion sensitivity setting of the camera can be changed to **Max**, **Med**, **Min**, or **Off**. The default value is **Off**.

Record Video: If this box is checked, when there is motion in front of associated camera, video will be recorded.

Log Event: Event will be listed within the '**Event Log**' found in the '**Info**' section of the '**Settings**'.

Audible Alarm: Sound/Buzzer for motion alarm.

Push Notify: In the event of motion alarm, push notification will be sent to mobile devices.

Video Alarm: This will allow the bottom borders of the video tile to flash on receiving an event. When an alarm occurs, the user is informed about the new Alarm with a flashing label in the camera's Live view and a flashing button in the Playback view. A right click (in Live view) will list all Alarms for that camera. The user can choose to view the Alarm or delete it without viewing.

Send Email: An email will be sent to an external email account, which you will be able to setup in the '**Network Settings**' menu section. Event specific recipients can be selected using '**Email Recipients**' button. By clicking on this button, a popup window will appear with list of email IDs. Select email recipients from the list. '**Email Recipients**' button is located below sensor table.

VCP Settings

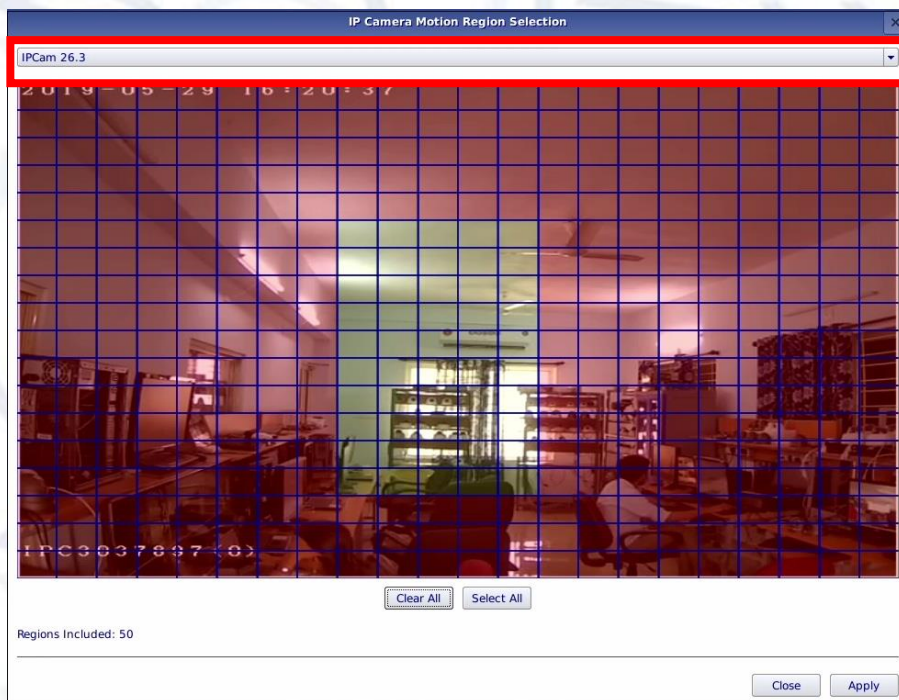
Alarm (Continued)

In CMAX-AI, Post context interval column has been added.

Post context interval: This is for post recording interval after a Motion alarm trigger, if schedule based recording is enabled.

Click on '**More Motion Settings**' to set where on the camera's field of view in the NVR will detect any motion and set up alarm trigger for motion alarm.

The '**IP Camera Motion Region Selection**' window will appear, as shown below:



Select the required camera from drop down menu. (Marked in the red box).

The camera's field of view will be completely cleared to start off with, but you can click the sectors on the grid where you **DO NOT WANT** the NVR to register motion activity to trigger motion alarm.

Click on '**Apply**' once you are happy with your motion detection setup.

VCP Settings

Alarm (Continued)

System Alarm:

This menu allows you to setup alerts if there is a system event in the NVR. When Event is detected, you can set up, up to three different ways to be alerted.

System Events	Log Event	Push Notification	Send Email	Custom Email Recipients
HDD Added/Failed/Removed	☒	☒	☐	Select
IP Camera Added/Failed/Disconnected	☒	☒	☐	Select
Minimum IP Camera disconnection duration	2	Minutes		

Apply Cancel

System Events:

1. HDD Added/Failed/Removed:

If new Hard disk is added or existing is removed / failed then λ|Cortex NVRs will send alert.

2. IP Camera Added/Failed/Disconnected:

If new IP Camera is added or existing is removed or disconnected then λ|Cortex NVRs will send alert.

3. Minimum IP Camera disconnection duration:

You can set minimum time for IP camera disconnection duration. If time exceeds the set limit, then NVR will send alert.

Log Event: Event will be listed within the 'Event Log' found in the 'Info' section of the 'Settings'.

Push Notify: In the event of System event if this box is checked, push notification will be sent to mobile devices.

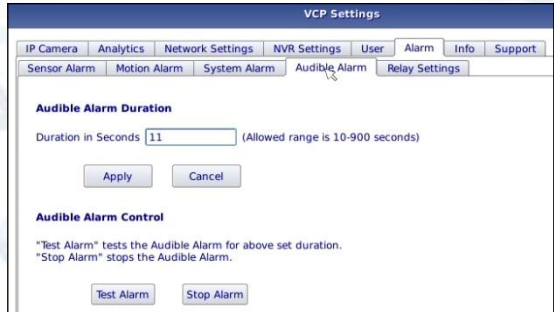
Send Email: An email will be sent to an external email account, which you will be able to setup in the 'Network Settings' menu section. Event specific recipients can be selected using 'Custom Email Recipients' button. By clicking on this button, a popup window will appear with list of email IDs. Select email recipients from the list.

VCP Settings

Alarm (Continued)

Audible Alarm:

If you have selected '**Audible Alarm**' on the '**Sensor Alarms**' or '**Motion Alarm**' options, then you can set the duration of the alarm being sounded when an alarm has been triggered. It also provides manual control over audible alarm.



The screenshot shows the 'VCP Settings' window with the 'Alarm' tab selected. Under the 'Audible Alarm' sub-tab, the 'Audible Alarm Duration' section has a 'Duration in Seconds' input field set to '11', with a note '(Allowed range is 10-900 seconds)'. Below this are 'Apply' and 'Cancel' buttons. The 'Audible Alarm Control' section contains explanatory text: '"Test Alarm" tests the Audible Alarm for above set duration.' and '"Stop Alarm" stops the Audible Alarm.', followed by 'Test Alarm' and 'Stop Alarm' buttons.

Test Alarm:

Test the Audible Alarm for set time duration.

Stop Alarm:

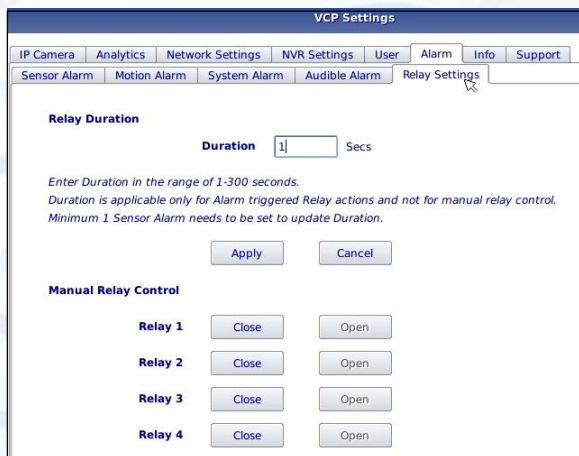
Stops the Audible alarm if it is already triggered.

In CMAX-AI, Audible Alarm settings are not supported.

Relay Settings:

If you have activated the relay(s) then you can set the duration of the relay being opened when an alarm has been triggered. Set a duration between 10-300 seconds and click on '**Apply**' to set the duration for which the relay will be open.

By default, '**Relay Duration**' will be set to 10 seconds. To modify the duration, at least one sensor alarm will have to be set in sensor alarms window. If all sensors are disabled, relay duration will reset back to 10 seconds.



The screenshot shows the 'VCP Settings' window with the 'Relay Settings' sub-tab selected. The 'Relay Duration' section features a 'Duration' input field set to '11' with the unit 'Secs', and a note: 'Enter Duration in the range of 1-300 seconds. Duration is applicable only for Alarm triggered Relay actions and not for manual relay control. Minimum 1 Sensor Alarm needs to be set to update Duration.' Below are 'Apply' and 'Cancel' buttons. The 'Manual Relay Control' section lists four relays, each with 'Close' and 'Open' buttons: Relay 1, Relay 2, Relay 3, and Relay 4.

Using '**Manual Relay Control**' you can manually control each of the 4 relays connected to the NVR. In CMAX-AI and Hibernator, you can manually control each of the 2 relays connected to the NVR.

VCP Settings

Alarm (Continued)

IP Sensor Settings:

This menu allows you to configure IP Sensor Devices in Hibernator NVR. This is a smart feature which are useful to send alarms at different events.

IP Sensors are mainly operated over network using POE interface. So these do not need extra wiring for sensor/relay connections. Existing LAN infrastructure can be used.

IP Sensor devices comes with up to 4 sensors and two digital output(relay)s support. The 4 sensors are -

1. PIR based motion detector
2. Light sensor(Lux meter)
3. Temperature sensor
4. Tamper sensor

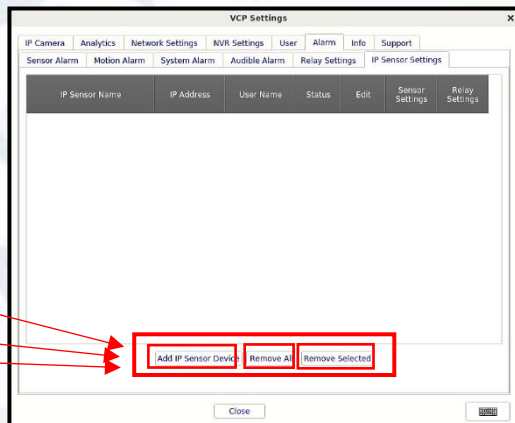
There are mainly 3 options in configure IP Sensor Device.

They are:

Add IP Sensor Device

Remove All

Remove Selected



Add IP Sensor Device:

Click on this option. A new pop up will open



VCP Settings

Alarm (Continued)

In this popup enter valid entries for IP address, Username and Password. Also you can give a IP Sensor Name(friendly name) with which user can identify this device on the NVR. By default NVR will provide a default name. If you do not want to change that NVR will add the device with default name. Now click on OK button to add the device.

Repeat this process for all other IP Sensor devices which are intended to add to this NVR.

All the added devices are listed in the Configure IP Sensor dialog. For each IP Sensor device this dialog will show the status of device, an option to Edit device parameters, Configure sensor parameters and Relay parameters.

VCP Settings

IP Camera Analytics Network Settings NVR Settings User Alarm Info Support

Sensor Alarm Motion Alarm System Alarm Audible Alarm Relay Settings IP Sensor Settings

IP Sensor Name	IP Address	User Name	Status	Edit	Sensor Settings	Relay Settings
IPSensor_23.1	192.168.23.1	admin				

Edit Sensor Settings Relay Settings

Edit:

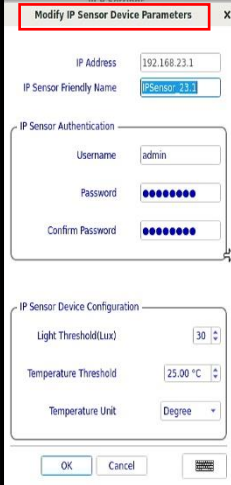
User can edit the device parameters and some configuration parameters by click on Edit icon for particular IP Sensor device.

VCP Settings

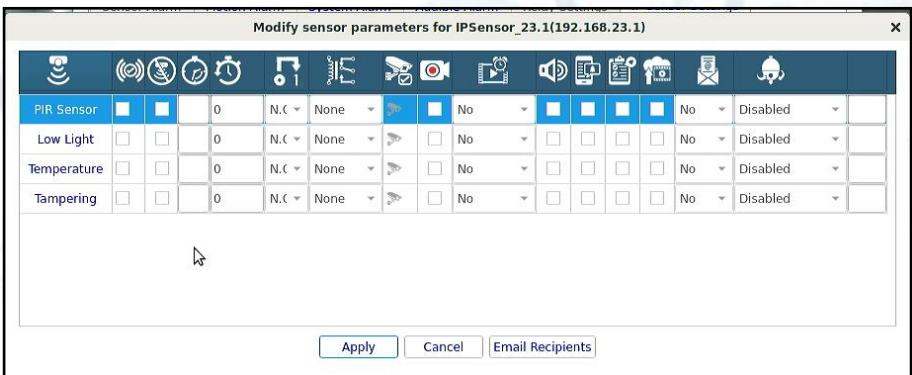
Alarm (Continued)

The Modify IP Sensor Device Parameters dialog will allow you to modify the friendly name given to the device, Username and Password and a few IP Sensor Device Configuration parameters which will help to change the temperature and light thresholds values and the unit of temperature parameters.

The light threshold and Temperature threshold are significant when you configure Light and Temperature sensor alarms in the Modify Sensor Parameters dialog.



Sensor Settings:



Sensor Type	Status	Threshold	Unit	Alarm Settings
PIR Sensor	☒	0	N.C	None
Low Light	☐	0	N.C	None
Temperature	☐	0	N.C	None
Tampering	☐	0	N.C	None

To configure sensor alarm parameters click on Sensor Settings icon. This will open Modify Sensor Parameters dialog for particular IP sensor device. In this dialog you can configure sensor alarm configuration for each of the 4 sensors - PIR Sensor, Low Light, Temperature and Tampering.

VCP Settings

Alarm (Continued)

For each of these sensors there are set of alarm configurations which will help in setting up actions to be taken when a particular sensor alarm is triggered. Currently when IP Sensors are triggered NVR can perform any or all of the following:

Relay Trigger

Start Recording of selected cameras

Video Alarm(video flash) of selected cameras

Audible Alarm

Notify to λ|Cortex Go app

Log an Event

Notify Alarm Receiving Center(ARC)

Send and Email to selected recipients

Goto selected Preset position.

Relay Settings:

To configure relay parameters click on Relay Settings icon. This will open Relay Settings dialog for particular IP sensor device.

In the Relay Settings dialog user can manually change the state of individual relays. Also user can change the relay active duration.

VCP Settings

Info

The **Info Menu** has 3 sub menus:

System Info

Video Info

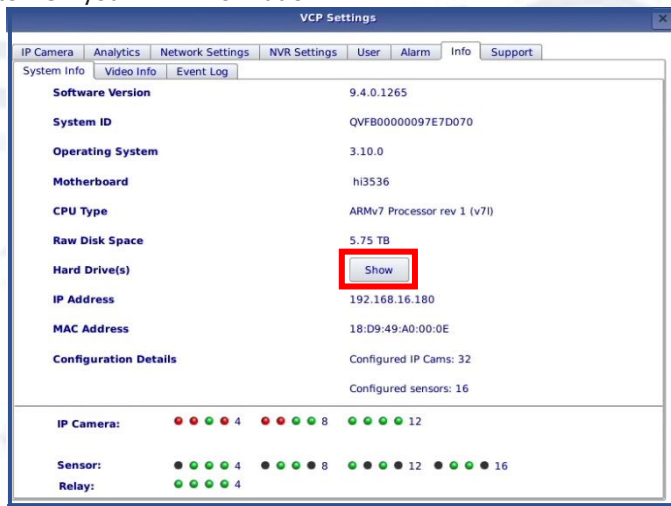
Event Log



No information can be manipulated within these sub menus. It is purely a read-only reference point.

System Info:

This allows you to view your NVR information.



When you click on **'Show'** button, a pop-up window will appear. It will give Hard Disk information. In CMAX-AI, in addition to above information, it also shows 'Disk States' whether good or bad and also 'Disk Usage' information.

HDD Info	
Sl.No.	HDD Model No.
1	sdd 1953Gb ATA ST2000DM006-2DM1
2	sdc 1953Gb ATA ST2000VX008-2E31
3	sdb 1953Gb ATA ST2000DM006-2DM1
4	sda 1953Gb ATA ST2000DM006-2DM1

VCP Settings

Info (Continued)

Video Info:

This allows you to view video recording related information.

Allows more control over how much video data is stored to the NVR's hard disk drives, by being able to change how many available days' worth of footage data can be stored. This is done by adjusting the camera's recorded video quality up or down.

VCP Settings

System Info | Video Info | Event Log

Actual Days Recording on HDD 5.7 days (33.6% HDD used)

Estimated Disk Capacity 12.0 days

Decrease Video Quality One Level 15.7 days

Increase Video Quality One Level 9.8 days

Oldest Video Tue Dec 10 2019 16:59:51 (GMT+05:30)

Camera Name	Date/Time of Oldest Recorded Video
IPCam 248.12	Tue Dec 10 2019 16:59:52 (GMT+05:30)
IPCam 248.11	Tue Dec 10 2019 16:59:54 (GMT+05:30)
IPCam 248.10	Tue Dec 10 2019 16:59:56 (GMT+05:30)
IPCam 248.9	NO VIDEO
IPCam 248.8	Tue Dec 10 2019 17:00:01 (GMT+05:30)
IPCam 248.7	Tue Dec 10 2019 17:00:04 (GMT+05:30)
IPCam 248.6	Tue Dec 10 2019 17:00:07 (GMT+05:30)
IPCam 248.5	Tue Dec 10 2019 17:00:09 (GMT+05:30)

To increase the amount of days' worth of footage to store, click the '**Decrease Video Quality One Level**': '**Accept**' button.

To decrease the amount of days' worth of footage, select the '**Increase Video Quality One Level**': '**Accept**' button.

Increase video quality by reducing video retention days [X]

? This action will make cameras to go offline for a short duration. Do you want to continue?

A pop-up info box will appear, similar to above one, when you select either increase / decrease video quality '**Yes**' button.

Oldest Video: In this menu you will also get information of oldest video recorded in the NVR and also by each IP Camera with Date and Time.

VCP Settings

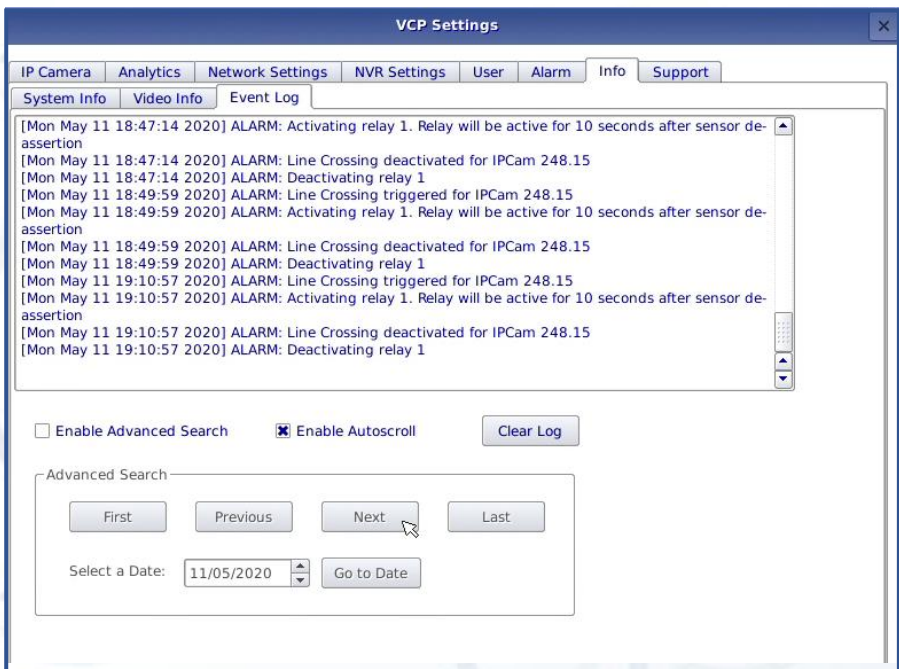
Info (Continued)

Event Log:

This allows you to view NVRs event log.

'**Enable Advanced Search**' will give you Advanced search option in the Event Log. '**First**' button will lead you to initial messages in the Event Log, while '**Last**' take you to latest message in the Log. In between you can use '**Previous**' and '**Next**' button to move through Event Log.

'**Go to Date**' option will show Event Log of set date.



VCP Settings

Support

IMPORTANT: Make sure CCTV recording is switched off during update

This menu enables users to download and install latest update packages. Also, it enables user to contact Qvis labs for support on problems with the NVR.

Auto Software Update:

This enables automatic software update to NVR when updates are available.

NVR will check for updates as set by user. From drop down menu you can set day and time for check software updates.

The screenshot shows the 'VCP Settings' window with the 'Support' tab selected. Under the 'Support' tab, the 'Auto Software Update' sub-tab is active. The 'Update options:' dropdown is set to 'Auto Install (Recommended)'. The 'Check:' dropdown is set to 'Every Thursday' at '11:30'. The 'Event Notification' section has two unchecked checkboxes: 'Notify mobile clients' and 'Send email'. There is an empty 'Email Address' text field. At the bottom right, there are 'Cancel' and 'Apply' buttons.

You can send event notification to Mobile clients. Also send email if Email configurations are set.

Select suitable Update options from the **'Update options'** drop-down menu.

'Auto install' will download and install software when updates are available. Which is recommended by the Qvis.

'Download and Notify' will download the software and will send event notification to Mobile clients/Email asking permission for installation.

'Never' option will not download any software updates, which is not recommended.

Click on **'Apply'** to save the changes, **'Cancel'** to discard the changes.

Manual Software Update:

This option will enable user to update software manually via Internet or using USB.

First, choose the update method by selecting the appropriate radio button:

VCP Settings

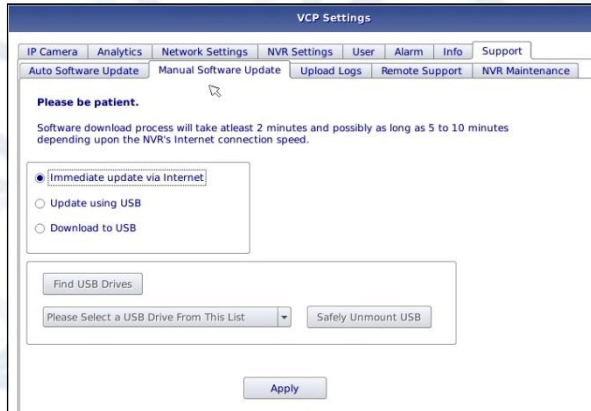
Support (Continued)

Immediate update via Internet:

To download and install the latest update package from the Internet, click here.

Update using USB:

To install the latest update package from a Qvis Labs-provided USB, click here.



The screenshot shows the 'VCP Settings' window with the 'Auto Software Update' tab selected. The 'Please be patient.' message is displayed. The 'Immediate update via Internet' radio button is selected. Below it are buttons for 'Find USB Drives', 'Please Select a USB Drive From This List', and 'Safely Unmount USB'. An 'Apply' button is at the bottom.

Download to USB:

Download latest update package to USB drive.

You can search USB Drives connected to λ |Cortex NVRs by clicking on '**Find USB Drives**'. This will be listed in the drop-down menu. Also, you can safely remove USB from NVR by clicking on '**Safely Unmount USB**' button.

Click on '**Apply**' to continue.

This will cause a confirmation window to pop up. Click on '**OK**' to begin the update process. This can take from 2-10 minutes, or longer, depending on the network connection speed.

Note: In order to use Internet updating, the NVR's network connection must be operational with public domain Internet access.

When the process is complete, the NVR will restart. Please login and resume NVR use.

Note: The NVR software is constantly being enhanced with new functionality and features. Users are encouraged to perform the software update process at least as often as every 2-3 months, to benefit from these new developments.

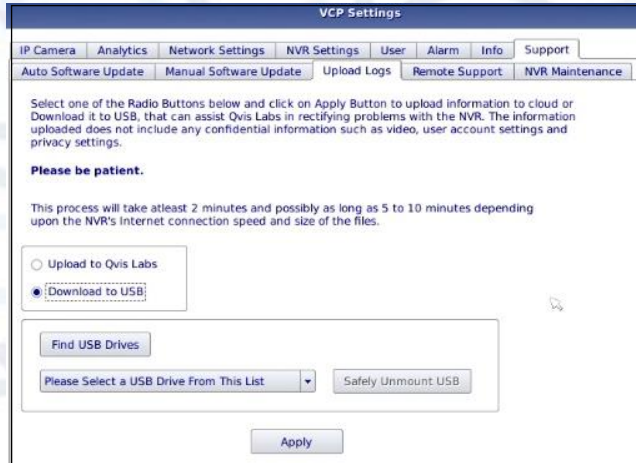
Upload Logs:

This menu enables user to upload information that can assist Qvis Labs in rectifying problems with the NVR. To upload information to Qvis Lab, select radio button '**Upload to Qvis Lab**'. Then click on '**Apply**' and a confirmation popup window will appear, click on '**OK**' to continue.

VCP Settings

Support (Continued)

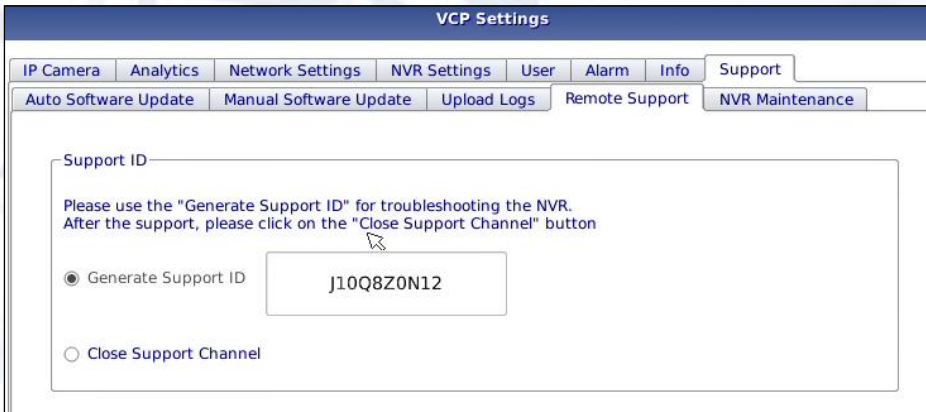
To download to USB drive, select **'Download to USB'** button, then select USB Drive from list and click on **'Apply'**. Popup window will appear asking confirmation. Click on **'OK'** to continue.



The screenshot shows the 'VCP Settings' window with the 'Support' tab selected. The 'Remote Support' sub-tab is active. The main text area contains instructions: 'Select one of the Radio Buttons below and click on Apply Button to upload information to cloud or Download it to USB, that can assist Qvis Labs in rectifying problems with the NVR. The information uploaded does not include any confidential information such as video, user account settings and privacy settings.' Below this, it says 'Please be patient.' and 'This process will take atleast 2 minutes and possibly as long as 5 to 10 minutes depending upon the NVR's Internet connection speed and size of the files.' There are two radio buttons: 'Upload to Qvis Labs' (unselected) and 'Download to USB' (selected). Below the radio buttons is a 'Find USB Drives' button, followed by a dropdown menu labeled 'Please Select a USB Drive From This List' and a 'Safely Unmount USB' button. At the bottom is an 'Apply' button.

Remote Support:

If you experience any issues or technical problems with your NVR that even this user guide fails to resolve, then our Qvis technical support team is always happy to help.



The screenshot shows the 'VCP Settings' window with the 'Support' tab selected. The 'Remote Support' sub-tab is active. The main text area contains instructions: 'Please use the "Generate Support ID" for troubleshooting the NVR. After the support, please click on the "Close Support Channel" button'. Below this, there are two radio buttons: 'Generate Support ID' (selected) and 'Close Support Channel' (unselected). To the right of the 'Generate Support ID' radio button is a text box displaying the generated ID: 'J10Q8Z0N12'.

Support ID:

Please click on **'Generate Support ID'** radio button, which will generate new support ID for the NVR. Share this ID with technical team for troubleshooting the NVR. If generation of support ID fails, please make sure that Internet connection to the NVR

VCP Settings

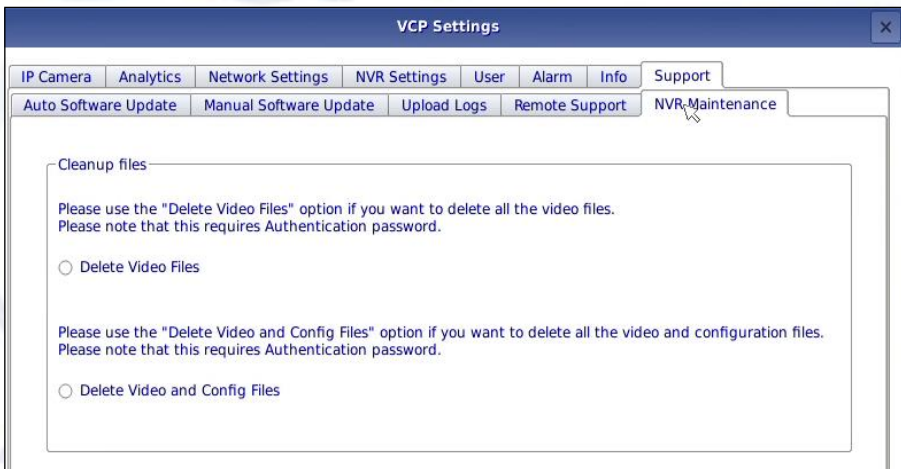
Support (Continued)

is good. After the support operation is completed, please click on the **'Close Support Channel'** button.

In CMAX-AI, there is no radio button or generate new support ID for the NVR. Instead, there is check box. Just Click on check box for 'Enable Remote Support' or 'Disable Remote Support'.

NVR Maintenance:

This menu is not for general users. It is for technical team for NVR Maintenance. Please note that this requires Authentication password.



'Delete Video Files' will delete all the video files in the NVR.

'Delete Video and Config Files' deletes all video and configuration files. Please use this option carefully, as this option resets the NVR to the factory default.

Export Import:

In Hibernator, there is one more option called Export Import as below:

A. Introduction:

The new **Export Import** feature is useful for customers having a Genisys/Terminator NVR and want to upgrade to Hibernator NVR retaining both NVR settings and video data.

B. Export and Import feature compatibility:

1. Export feature is available in Terminator/Genisys software version 7.7.2.12322 or above.
2. Import feature is available in Hibernator/Genisys software version 8.0.3.12332 or above.

C. Export:

1. Connect a USB stick with minimum 500MB free space on to the NVR.
2. Right click on the video wall and click on “Export/Import” option, later select “Export” button(Figure 1). For terminator NVR, right click on the video wall and click on “Export” option

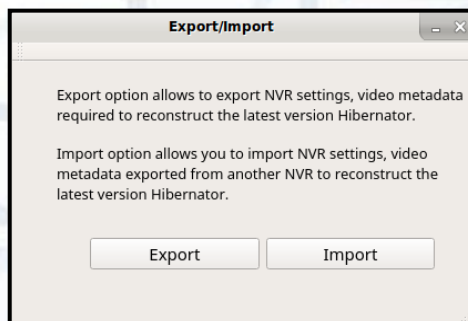


Figure 1

3. Enter file name in field “File Prefix” which is a mandatory field with no space or special character used. However, password field is optional. Select the USB stick in the field “Backup Drive”.

VCP Settings

Support (Continued)

- Now click on “Export Now” button(Figure 2). It takes few seconds for the process to complete and will create a file in zip format.

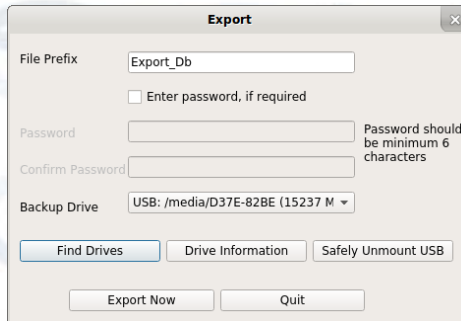


Figure 2

- After completion of export, NVR will reboot.
- Right click on the video wall and click on Shutdown.
- Safely remove the USB stick, hard disk(s) and network card (if any) from the NVR.

D. Import:

- Import operation is expected to be done on a new Hibernator NVR without any hard disk(s).
- Connect the file exported USB stick on to the new Hibernator NVR.
- Switch ON the Hibernator NVR.
- After NVR boots, Right click on the video wall and click on “Export/Import” option.
- Click on “Import” button(Figure 3).
- Press “Find Drive” button and select the USB stick in the field “USB Drive”. Select the exported zip file in the field “File Name”. Enter the password, if the .zip file was password protected.
- Now click on “Import Now” button(Figure 4).
- On successful import, the NVR will reboot. On reboot, the NVR will show the dialog as shown in Figure 5. **Click on “Cancel” button to cancel proceeding with imported data, if the video data needs to be retained.** Click on “OK” to proceed without video data.
- On clicking “Cancel”, the NVR will shutdown. Now connect the earlier removed hard disk(s) and network card, if any, to the Hibernator.

VCP Settings

Support (Continued)

10. Switch ON the Hibernator NVR. On reboot, NVR will show import status dialog as shown in Figure 6. Click on OK and the NVR will be ready for use after reboot.



Figure 3

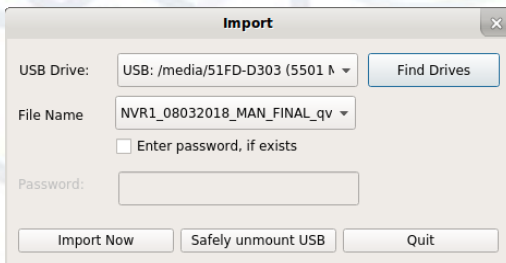


Figure 4

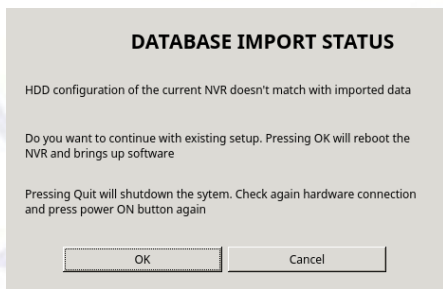


Figure 5

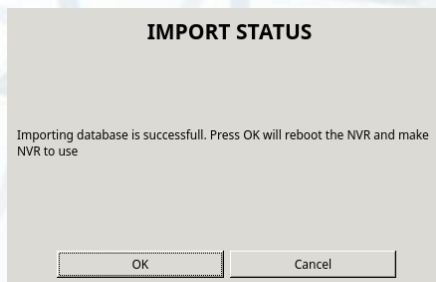


Figure 6

What is ANPR?

As the name suggests ANPR stands for Automatic Number Plate Recognition, which captures the image of a vehicle number plate by digital cameras and the image is processed to get the number plate information.

Camera Installation Recommendation

- Only **ANPR capable IP Cameras approved by QVIS** support this feature.
- Recommended installation height is around 1.5M from the ground.
- Minimum focal length (distance) is 1.5M and not more than 15M.
- Vertical angle range between camera lens and plate number is recommended between 30° & 10° as shown in Figure 1.
- Horizontal angle between camera lens and plate number is suggested between 30° & 8° as shown in Figure 2.

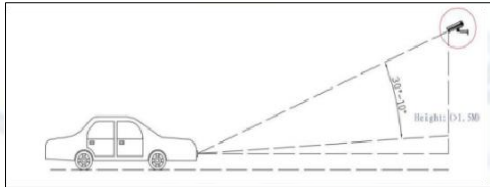


Figure 1

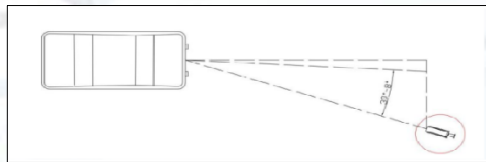


Figure 2

Invoking QVIS ANPR GUI

Cameras that support ANPR will have option “ANPR” on Right-click Menu of Video Wall as shown in Figure 3. Clicking on it will bring up the main QVIS ANPR GUI



Figure 3

QVIS ANPR Main view as shown in Figure 4, will have options like 'Parameters', 'Region Selection', 'Vehicle Info' to setup the ANPR, 'Live', and 'ANPR Events' to view the log of ANPR events. A Section called LPR Cameras will list all ANPR capable cameras.

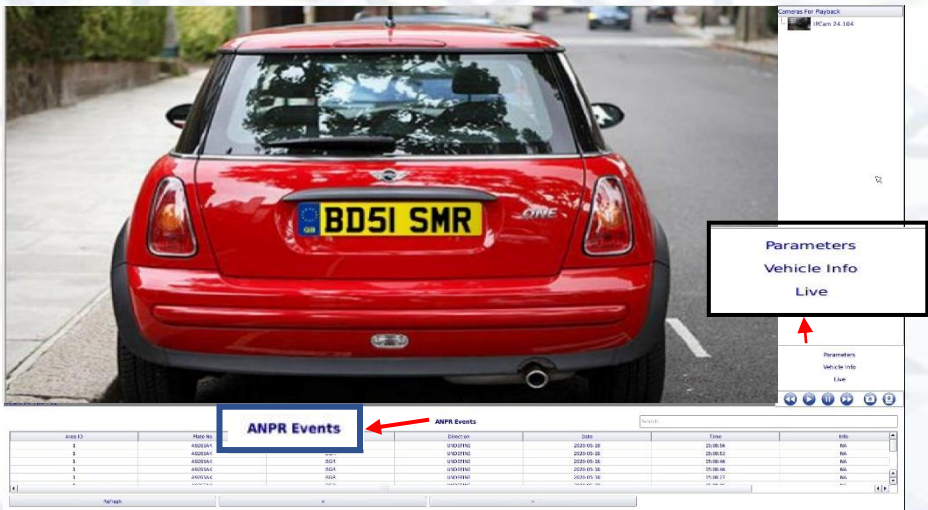


Figure 4

a) QVIS ANPR Parameters

Clicking on 'Parameters' option on QVIS ANPR Main View will bring up the ANPR Parameters window as shown in Figure 5. ANPR Parameter window will have following three Settings windows.

i) Parameter Settings:

- Enable/Disable ANPR feature, by default it is Enabled.
- Maximum two 'Area of Interest' can be set for detecting ANPR.
- Option to set the 'Confidence Threshold' value. Set the Confidence Threshold value between 1-100 for filtering non-numbers.

ANPR (Continued)

- Change the '*Range of plate width*' to adjust the plate size. '*Range of Plate width*' will have options to specify the minimum and maximum plate size value to be used in recognition. Minimal acceptable plate width recommended to set upto not less than 100, 130 by default and Maximum acceptable plate width recommended to set upto not less than 2*Minimum plate width and not greater than 3*Minimum plate width, 300 by default.
- Change the '*Range of Symbol Count*' to adjust the number of license plate characters. Maximum value can be given for range of symbol count is 30.
- Change the '*Result Delay*' i.e Delay between the detection happened and output the recognition result .
- Change the '*Time to Live*' i.e Time between the detection happened and when to stop tracking this plate. If Time to Live milli seconds has passed and the plate was re- detected, it is considered to be a new plate and assigned a new Car-ID.

ii) Alarm Settings:

This menu allows you to setup alarm triggers using the ANPR feature of the λ|Cortex NVRs. When ANPR event is detected on the camera you have selected, you can set up to five different ways to be alerted.

Log Event: Clicking on this option will log all the information related to ANPR alarm Events in events log.

Audible Alarm: If this box is checked, you can hear the Sound/Buzzer for alarm.

Push Notify: In the event of ANPR, push notification will be sent to mobile devices.

Video Alarm: This will allow the bottom borders of the video tile to flash on receiving an event. When an alarm occurs, the user is informed about the new Alarm with a flashing label in the camera's Live view and a flashing button in the Playback view. A right click (in Live view) will list all Alarms for that camera. The user can choose to view the Alarm or delete it without viewing.

Relay: You can manually control each of the 4 relays connected to the NVR.

iii) Region of Selection:

In Region Selection View, region can be selected by click and drag for an ANPR camera to recognize the license plate. Square tile in the Region Selection View will be displayed and the selected area will be highlighted in yellow color border.

Click on '**Save**' the settings. Click on '**Close**' will take back to QVIS ANPR Main view

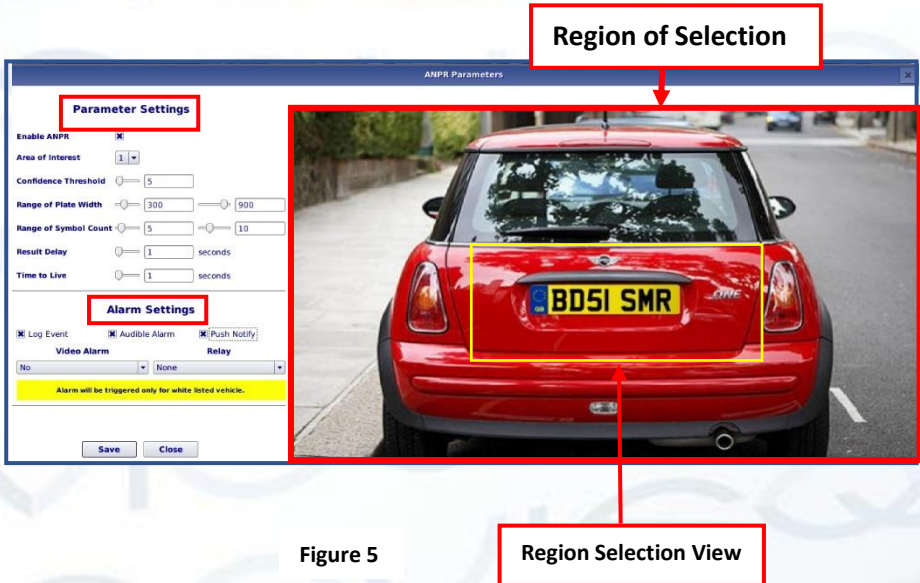


Figure 5

b) QVIS Vehicle Info

Clicking on '**Vehicle Info**' option on QVIS ANPR Main View will bring up the 'LPR Info' window as shown in Figure 6.

'LPR Info' window will allow users to add known vehicle number plates and their owner's info to the database. This information will be used during number plate recognition and if number plate matches, then owner information will be shown along with other number plate information in QVIS ANPR Events log. There is an option called '**Whitelist Vehicle**' in ADD LPR Info which is used to whitelist a vehicle i.e, if camera detects a whitelisted vehicle then relay gets triggered.

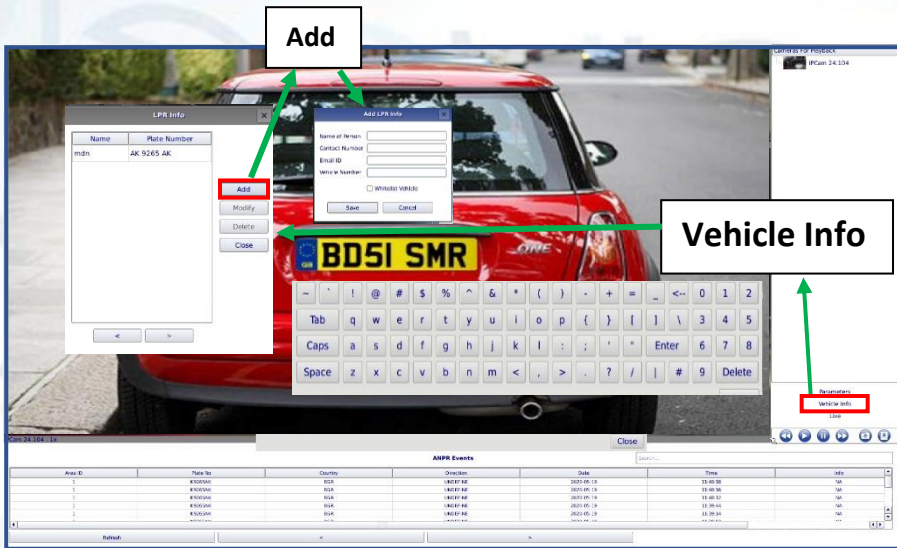


Figure 6

c) QVIS ANPR Playback view

QVIS ANPR Playback View allows to playback the video of recognized number plates from events log.

To playback the video, double click the event on ANPR Events log it will play the video of that event on the display area of QVIS ANPR Playback View as shown in Figure 7.

To exit the Playback View, double click on the camera thumbnail or click on the 'Live' option, which will bring up the latest events.

d) QVIS ANPR Events

In QVIS ANPR Main View, the 'ANPR Events' window displays log of number plate detection events as shown in Figure 8. Users can filter the events log by clicking on search icon which will bring the option to filter 'by name', 'by date' and 'by plate'.

Entering 'plate number' or 'date' or 'name' of the known vehicle users in 'Search' text box will give search result.

QVIS ANPR Main view will also show live view of camera on the display area of the screen. View connected in the right click option will close the QVIS ANPR Main view and take the view back to video wall.



Figure 7

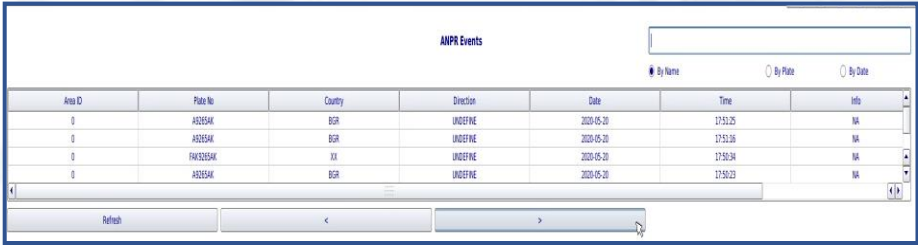


Figure 8

In CMAX-AI, ANPR feature is not supported.

Search Analytics

Search Analytics:

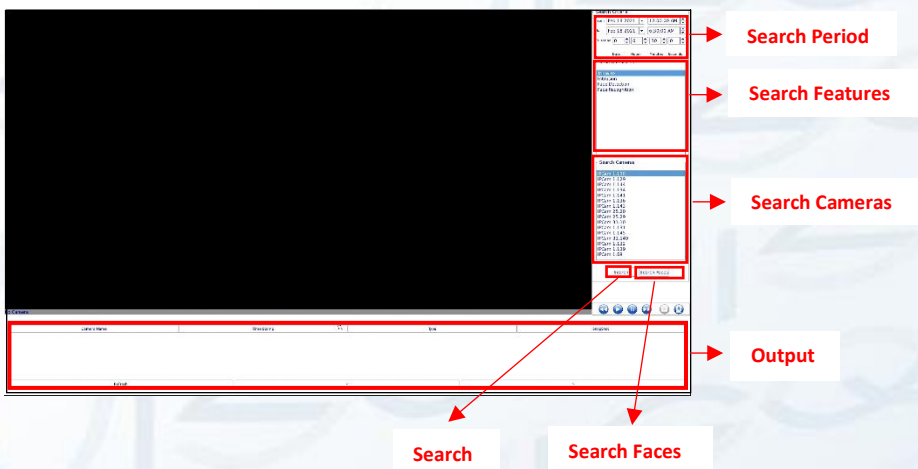
In CMAX-AI, there is a new feature called 'Search Analytics'. Just right click anywhere on the video wall. This will bring up the options as shown in the Figure.



Key functions:

- **'Search'** button in the Search Analytics window is used to search the various analytics events triggered during the selected period.
- **'Search Faces'** button in the Search Analytics window is used to search and add new faces to the Face Recognition database from the detected faces in the given period.

Click on 'Search Analytics' button. It will open 'Search Analytics' window as shown below.



Search Analytics (Contd..)

For 'Search' option:

- a. Enter Search period: From and To date with time.
- b. Select the Analytics Type from Search Features.
- c. Select the Camera from Search Camera list.
- d. Click on the 'Search' button.

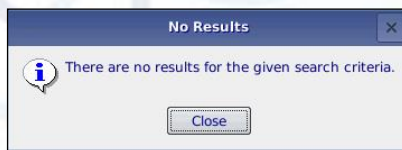
Note: It is possible to search events for only one analytics type at a time.

Output (Search result) is shown at bottom panel of search UI.

- Only 20 outputs are shown at a time in the results window.
- Clicking on Next button (>) will show next 20 output if available in the next page.
- Clicking on Previous button (<) will show previous output if available.
- Clicking on Refresh button will show the latest 20 output.

Note: If you Click on any Snapshot, it will show that events Snapshot.

If there is no event, then you will get a pop-up saying 'There are no results for the given search criteria'. It is possible to search for a maximum duration of 7 days.



Search Faces:

Search faces option displays all the detected faces for a particular search criteria. These detected faces can be added to the Face Database by providing the person info.

Steps:

1. Set the Search period: Set From and To date with time duration.
2. Select the Analytics Type 'Face Detection' from 'Search Features'.
3. Select the Camera from 'Search Cameras'.
4. Click on 'Search Faces' button. It will show first page 9 faces detected by NVR. If no results, it says "There are no results for the given search criteria".
5. To save the faces to database, you need to click on top of the image. You will get pop up to define the user name and sex (refer Figure A2: Person Info). Then press 'OK' button.
6. Once it has saved, it says "Face is stored in the database".
7. Repeat the same process to add more faces in the database.

Smart Search

Right clicking on cell based cameras will bring up Smart Search menu. **Smart Search** feature is available only on Hibernator NVR and also only for cell based cameras.



When you click on the 'Smart Search' option, a new window pops-up to enter search criteria as shown below:



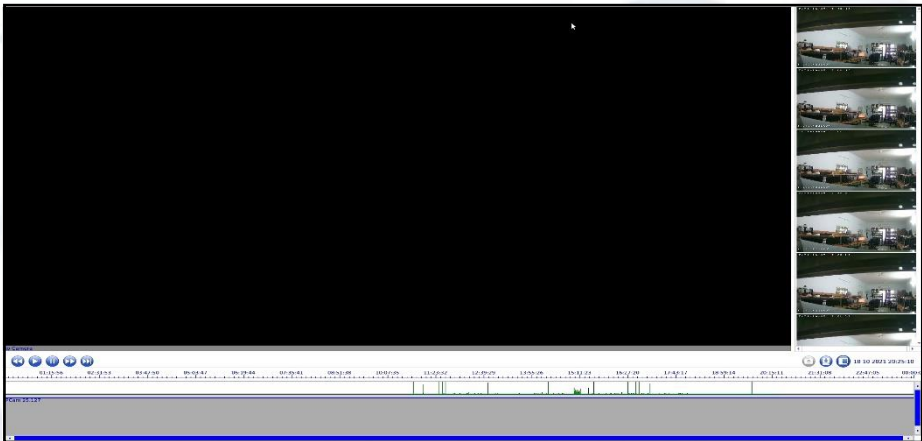
Steps:

- Select the Camera from the drop down list.
- Provide Date, Start Time and End Time.
- Set the motion sensitivity by using sensitivity slide bar. Sensitivity value ranges from 1 – 30. Where 1 is least motion and 30 is highest motion. By default UI sets the sensitivity value as 15.

Smart Search

- d. Select the interested region from the region selection window by dragging the mouse inside the region window. User can click “Select All” button to select the entire region.
- e. Then click on ‘Apply’ button to proceed or ‘Close’ button to exit.

It will generate and show all thumbnails for given criteria as shown below.



To see the video footages, click on required thumbnails.

Revision History

Revision History:

Date	Version	Changes made
07-Dec-2020	1.0	Initial Version
19-Apr-2021	1.1	Updated for CMax-AI
06-Nov-2021	1.2	Updated for Hibernate

Notice

The NVR has been through rigorous testing and customer trials. Nevertheless, you may find a problem. Should you encounter a problem that your NVR Installer cannot remedy, or you have new feature ideas, email.

support@qvislabs.com

If you encounter any issues, hardware or software, please provide as much information as possible about the setup and sequence of events that triggered the problem. We apologize in advance for any inconvenience and thank you for your response.

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